



**Factors that Influence Pharmaceutical Industry
Stakeholders Behavioral Intentions to use Social Media
that Influence Decision Making for Healthcare**

By

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Author's Declaration

I declare that the contents of this research study are composed solely of my own work. The research work has not been submitted for any other application for a degree or qualification, neither whole or in part, and the study is the result of my own research. It is also declared that whilst enrolled in the Master program, I have not been registered as a candidate under any other University program.

Dedication

I dedicate this thesis to God Almighty, my creator and my chief source of strength throughout this research, who guided me and motivated me to deliver my best work . I also dedicate this work to my family members, especially my father and mother, who are the strongest pillars of my strength and the major source of my inspiration, understanding and knowledge.

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Abstract

The aim of the research was to investigate the industry-related factors and their influences on behavioural intention with regard to the acceptance and use of social media for providing increased healthcare care to society, and supporting the decision-making processes of patients, pharmacists and physicians in the pharmaceutical industry in Kuwait, with regard to the healthcare needs of society. The key rationale and motivation for undertaking this research was to understand the industry-related factors that influence the behavioural intention to use social media discussion forums by people making decisions related to healthcare. It also examined how social media is used as a means of providing knowledge and awareness about the ways in which social health and the well-being of people can be increased.

The focus of this research had a social motive, to promote the health of people, as opposed to a technology-related consideration. The research study made use of the positivist paradigm, along with the deductive approach to address the research aim and objectives. The data for the research study was collected in three phases. In the first phase, interviews were conducted with nine respondents, who included physicians, pharmacists and customers of the pharmaceutical companies, as an exploratory phase. This was followed by a survey questionnaire in the second phase, the sample size of which was determined as 440. This was also conducted with physicians, pharmacists and customers of the pharmaceutical companies in Kuwait. In the third phase, a final interview was conducted with seven physicians, seven pharmacists and seven customers, using the information gained from them to derive a logical and valid conclusion for the research study.

The research findings determined that the four key constructs that influence behavioural intention to use social media discussion forums are: effort expectancy, social influence, performance expectancy and trust, while the five moderators in this regard are

gender, age, experience, education level and health condition. Furthermore, the findings revealed that the two pharmaceutical industry-related constructs that influence behavioural intention while using social media discussion forums are: (1) authenticated credibility by industry support and (2) trust. The pharmaceutical industry-related moderators are: (1) educational level, which includes educational stage and medical knowledge, and (2) health conditions.

The findings also revealed that the current practice of behavioural intention in respect of social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers in Kuwait highlights the addition of perceived trust as an industry-related construct, and education level and health conditions as the industry-related moderators. The research modified model BIUSF (Behaviour intention to use social media forums) has been developed on the basis of the primary data findings and analysis with respect to the pharmaceutical industry of Kuwait.

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Glossary of Terms

1. **Social Media:** Social media is platforms that facilitate users to share and create information along with enabling individuals to participate in social networking. It is a recognised to be a strategic tool among business organisations for increasing their business growth by promoting their products in a cost effective manner. Social media includes applications, online platform and mobile technologies.
2. **Effort Expectancy:** The degree or ease of operations relating to the implementation of the system
3. **Performance Expectancy:** The extent to which users perceives or anticipates that using a new system or technology will be helpful in enhancing their job performance
4. **Industry Related Constructs:** Industry specific factors that influence the use and adoption of a new technology and new system.
5. **Behavioural Intentions:** Behavioural and attitudinal traits concerning the use of system
6. **Social Influence:** The extent to which an individual believes that other significant members expect the individual to adopt the new system.
7. **Social Media Forum:** Open Online platform where individuals can converse, discuss and post information in regard to a specific subject to which a discussion site is dedicated to.
8. **Stakeholders of Pharmaceutical industries:** Individuals that can influence or be influenced via actions, policies and objectives of the industry; wherein key stakeholders of pharmaceutical industries include pharmacists, physicians, patients, government and other regulatory bodies. The thesis focuses mainly on three stakeholders, who are pharmacists, physicians as customers and patients as customers.

9. Consumer: The patient or any person needs to buy medicine or any health products.
10. Customer: The pharmacist and physicians.
11. BIUSF Model: research model of pharmaceutical stakeholders Behaviour Intention to use social media forums by using UTAUT model.
12. Dependent Variable: Key variables being examined or measured in the study are known as dependent variables. In this study: behavioural intention in adoption of social media is dependent variable.
13. Independent Variables: Variables that are used or manipulated for assessing the value of dependent variables referred as independent variables. In this study independent variables are gender, age, experience, educational level, health condition

Chapter One: Introduction

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Chapter One: Introduction

1.1 Introduction

In the wake of high Internet usage, social media platforms have emerged as the tools most frequently accessed by the audience. This is an essential factor that promotes the utilisation of social media for business purposes, in order to improve brand awareness and customer retention. With the on-going evolution of social media, it has become easier to target and connect to a larger audience. Social media is, therefore, emerging as a well-equipped and easy to access medium for interaction and communication (Downey, 2012). The use of social media is no longer limited to entertainment, but has proved its wider application within business organisations. The use of social media has fostered the interests of the community and has made them more enthusiastic about society's changes. In this respect, this research focuses on the use and application of social media among the stakeholders of the pharmaceutical industry for effective decision-making in healthcare, and promotes social media as a viable tool to improve the health of society.

The prime focus of the research is to understand the behavioural intention for media usage in the field of communication and knowledge sharing. In recent years, innovation has become an important integral aspect of the long-term strategies of business organisations (Greenhalgh et al., 2008). The in-depth review of different literature revealed that a wealth of literature is available on innovation and its implications in the pharmaceutical industry. In addition to this, the role and impact of social media tools in communication and decision-making have also been well-researched and examined by several authors and researchers, such as Guseo and Guidolin (2009); Landau, Achilladelis and Scriabine (1999); and Morone and Taylor (2010). However, there is a lack of literature, which illustrates the practical implications of social media adoption and its use in the pharmaceutical field (Shadlen and Guennif, 2011). In this regard, this research is helpful in proving the intention for, and

implication of, social media in the pharmaceutical industry, with the help of the application of the Unified Theory of Acceptance and Use of Technology theory.

It is evident that there is a knowledge gap in the field of research related to the behavioural intention of stakeholders to use social media in the development of communication practices in the pharmaceutical industry. The prime quest of this research is to highlight some effective findings related to communication in the pharmaceutical field through various social media tools, such as Facebook and Twitter, which may be helpful in bridging the present knowledge gap (Bergfeld, 2009).

1.2 Research background

The examination of the literature indicated that there are eight key dimensions of the impact of social media on people (Guseo and Guidolin, 2009; Landau, Achilladelis and Scriabine 1999; Morone and Taylor, 2010). These dimensions are: identity and belonging, physical and mental health, play and recreation, formal and informal learning, civic and political engagements, family and intergenerational relationships, consumer practices, and risk and safety (Guseo and Guidolin, 2009; Landau, Achilladelis and Scriabine 1999; Morone and Taylor, 2010). In this respect, the prevailing literature has revealed that social media is very useful in promoting positive norms about the health and wellbeing of people by propagating promotional initiatives (Mahoney and Tang, 2016; Guseo and Guidolin, 2009).

The use of social media is also helpful in Kuwait in fostering the formation of identity, development of the community, and creativity. Social media is also useful in facilitating self-directed learning and the aspirations of marginalised young people by widening the reach of formal and informal knowledge networks and providing social support for young people. Further, social media also opens new avenues for leisure and provides recreational spaces for young people. It can be used to generate awareness about better lifestyles among the people

of Kuwait (Jordan and Romer, 2014). However, the range of content posted on social media exposes the users in Kuwait to a range of risks, which restricts its wide usage and reliability. This is because the rapidly increasing volume of information available online raises questions about the sources and their credibility in the digital age (Coughlan, Cronin and Ryan, 2013; Holtz, 2016). Despite the benefits of social media, children and young people can also experience upsetting and potentially harmful content, or misleading information that might create an adverse impact on their health and social wellbeing. Furthermore, poor and inadequate integration of social media in formal and informal learning networks also poses a threat of reinforcing social exclusion. Social media is sometimes used as a channel to circulate politically extremist messages, which along with other complex factors lead to harmful practices that influence the reliability and credibility of the information (Beasley and Haney, 2015). These issues make it essential to explore the factors that create such challenges and risks and examine how they can be mitigated, in order to help people explore the benefits of social media in healthcare and increase the reliability and authenticity of information on social media.

It has been noted that the United States (U.S.) Food and Drug Administration issued warning to the HA Stores, Ltd in Silver Spring for unlawful selling of misbranded and unapproved products through online platforms to customers in the US (Nasr, Lauterio and Davis, 2011). Further, PharmCash, a pharmaceutical company also received a warning letter for selling unapproved drugs over Internet from the regulatory body. Hence, it indicates that online platforms are being misused for selling unapproved drugs to consumers, thereby reflecting the adverse consequences of social media usage for users (Nasr, Lauterio and Davis, 2011).

The literature review established that there is a knowledge gap in the field of research related to the role of social media in the pharmaceutical industry. This research seeks to

address this gap by undertaking an in-depth exploration of the risks and benefits associated with the use of social media for healthcare related decision-making and identifies the most relevant factors that influence the behavioural intention of the stakeholders in the pharmaceutical industry to use social media for effective decision-making.

1.2.1 Overview of Kuwait

Kuwait is a sovereign Arab Emirate, which gained its independence in 1961. It is located in the north-east of the Arabian Peninsula, in Western Asia. It has six governorates and its capital is Kuwait city. The currency of Kuwait is the Kuwaiti dinar (KWD) and its official language is Arabic. Kuwait is one of the top producers and net exporters of oil in the world and is a member of the Organisation of Petroleum Exporting Countries (OPEC). Despite being the second smallest in terms of geographical area among all of the OPEC member countries, Kuwait is the third largest exporter of oil in the world (EIA, 2013). The economy of the country is largely dependent on the revenues gained from petroleum exports, which contribute about 50% of the country's gross domestic product. With the increased attention given to privatisation and liberalisation by the government, along with the economic growth witnessed by the oil and energy sector, the other services-led non-oil sectors are also exhibiting a significant rate of growth and development (PWC, 2016).

1.2.2 Overview of the health sector of Kuwait

One of the most advanced and modern healthcare systems in the Middle East is housed in Kuwait. According to the statistics released by the World Health Organisation (WHO), the total expenditure by Kuwait on health per capita in 2014 was \$ 2,330, which was approximately 3% of GDP. Furthermore, with the expansion of the population and the increase in the number of older people, the prevalence of non-communicable diseases, such as obesity and diabetes, are increasing in society (Arazy Group, 2016). As a result, advanced healthcare and improvement of the domestic healthcare services are the priority of the

government of Kuwait. In this respect, it has embarked on a US\$108 billion project to provide an increase in the number of hospital beds by 3,500 and additional healthcare professionals by 15,000 to enhance the country's healthcare facilities (Arazy Group, 2016). The Ministry of Health (MoH) is primarily and ultimately responsible for the various parts of the healthcare system in the country. These include public health, regulation of the private sector and facilities for preventive health. However, while the government is the major provider and facilitator of healthcare, a number of private healthcare groups and hospitals also operate to provide advanced and comprehensive healthcare services (Arazy Group, 2016).

In respect of the healthcare system in Kuwait, the pharmaceutical sector also plays a crucial role in the country, which continues to be dominated by multinational drug manufacturers because the domestic firms lack the advanced expertise in manufacturing and research capabilities. Despite considerable measures taken by the Kuwaiti government to strengthen the domestic pharmaceutical industry, the country is dependent on other countries to source a large majority of medicines and drugs (BMI Research, 2017¹). Nevertheless, consistent growth has been witnessed in the pharmaceutical sector of Kuwait, wherein its sales have risen from \$0.997 billion in 2015 to \$1.018 billion in 2016, which indicates significant scope for future growth of the sector (BMI Research, 2017²).

1.3 Research rationale

The literature demonstrates that ensuring complete and adequate social healthcare; safety and the well-being of society are major challenges for governments and the pharmaceutical industry in any country (Armstrong et al., 2007; Coughlan, Cronin and Ryan, 2013; Holtz, 2016). These challenges emerge from the changes in demographics and patterns of diseases as the world population ages and the burden of chronic diseases increases. The increase in research and development activities related to the development of new drugs not

only requires adequate financial and technical assistance, but also necessitates comprehensive, effective and transparent processes for evaluating healthcare technologies (Armstrong et al., 2007; Coughlan, Cronin and Ryan, 2013; Holtz, 2016). The problems of unequal supply, distribution and availability of skilled healthcare practitioners and clinicians for all the members of society also poses a threat for social healthcare, because a large part of society is deprived of good health and medical care (Armstrong et al., 2007). These challenges create pertinent barriers to ensuring effective healthcare for all members of society. In this respect, social media can serve as a highly effective tool and a platform that can facilitate the collection and dissemination of useful, reliable information about healthcare (Holtz, 2016). Such information can be used by pharmacists while undertaking research for new drugs, can increase knowledge about emerging and effective healthcare practices among physicians, can address the queries of consumers regarding new and existing drugs, and generate awareness among members of society about adopting effective healthcare practices and improved lifestyles to improve the overall health of society.

The research investigates the role of social media in making decisions for different stakeholders of the pharmaceutical industry. The prime quest is to propose the use of social media in order to improve the overall decisions undertaken by stakeholders regarding the selection of drugs, which could be useful for addressing health-related complications within society (Rasmussen, 2010). The research discusses the usefulness of innovative measures, such as the social media communication tools used in the pharmaceutical industry, from the perspective of the health status of the entire society. From the perspective of social well-being and the health of individuals, the role of pharmaceuticals is quite prominent as the efficiency of the industry is reflected in the selection of drugs in the most effective manner. Higher levels of operational efficiency in a company will lead to the effective selection of drugs that are capable of mitigating the health-related issues of consumers. In this regard, the

operational efficiency of pharmaceutical companies and the positive public health status of the region can be correlated in a positive manner (Shadlen and Guennif, 2011).

In the pharmaceutical industry, an organisation is required to make several crucial decisions in the process of selecting the most effective drug, which is to the benefit of the whole of society. There are two prime and crucial objectives behind the decision-making, these are: a) profit seeking objectives and b) societal/altruistic objectives. These two objectives are in conflict with each other. The effectiveness of such decisions is indicated by the efficient and fruitful accomplishment of all the processes that result in the selection of an effective drug, which is crucial for the entire society (Amin, Jahi and Nor, 2013).

Innovation in drug selection is also one of the major aspects of pharmaceuticals that enhances the utility of selected drugs (Rasmussen 2010). In this regard, it is essential for a company to ensure proper communication within different departments and to stakeholders of the company (Falls and Deckers, 2011). In order to ensure effective communication and coordination among various stakeholders, the research proposes the use of social media tools. The research investigates the role of social media measures for the purpose of enhancing communication, as well as the efficiency of decision-making skills (Shadlen and Guennif, 2011). It is projected that the research will prove to be useful for future researchers in a similar field.

In this respect, the key rationale and motivation for undertaking this research is to understand the industry-related factors that influence the behavioural intention to use social media discussion forums by those people making decisions related to healthcare, and using it as a means of providing knowledge and awareness of the means to increase the social health and well-being of the population. Therefore, the focus of this research has a social motive to promote the health and well-being of the population; it is not related to technology.

This research endeavours to promote the use of social media as a means to make

useful, reliable and credible information on healthcare, healthy lifestyles, usage of drugs and the latest advances in healthcare and medical science, available to the stakeholders of the pharmaceutical industry and to the society at large. In this manner, the research findings identify the factors that motivate or de-motivate people to use social media discussion forums to make decisions relating to health care. Thus, it is helpful for guiding pharmacists and physicians to make optimal use of these platforms to improve the health of the overall society. For this purpose, the research seeks to identify the factors influencing behavioural intention to use social media and, thereby, promote the benefits of social media and its use as a reliable and authentic tool to improve the health of society.

1.4 Research aim and objectives

Research Aim

The aim of this research is to investigate the industry-related factors and their influences on the behavioural intention to accept and use social media to provide increased healthcare care to society and to support the decision-making processes of consumers (patients) and customers (pharmacists and physicians) in the pharmaceutical industry in Kuwait.

Research Objectives

In this respect, the objectives of the research are:

- 1 To determine a set of industry specific factors associated with behavioural intention of pharmaceutical stakeholders to adopt social media, such as pharmacists, physicians and patients
- 2 To determine the influence of the industry specific factors on the relationship between known independent variables (gender, age, experience, educational level, health condition) and behavioural intention to use social media as communication channels for their decision-making process

- 3 To develop a model (BIUSF) of current practice for social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers in Kuwait

1.5 Research questions

The research intends to answer the following research questions with the help of its findings:

Research Question 1: What are the industry-related factors that affect the intention to use social media for decision-making processes from the perspectives of pharmacists, physicians and consumers?

Research Question 2: What is the influence of the industry-related factors on the relationship between independent variables (gender, age, experience, educational level, health condition) and behavioural intention to use social media within the pharmaceutical industry?

1.6 Research significance

As the key focus of the present research is to highlight some effective findings related to communication in the pharmaceutical industry through various social media tools, such as Facebook, Twitter and YouTube, the research findings may be helpful in bridging the present knowledge gap which exists due to the lack of research in this area (Bergfeld, 2009). Therefore, it is projected that the research may prove to be quite effective for researchers in a similar field, by facilitating their exploration of the pertinent factors that can promote the use of social media to address people's health issues and, thereby, improve the health of society at large.

Moreover, the research reflects the benefits and positive aspects of the diffusion of innovation from the perspective of the long-term success and sustainability of the pharmaceutical industry. Therefore, it assists in decision-making, communication, research and development, and enhances the efficiency of operations. As the research focuses on the factors influencing the behavioural intentions of the customers and consumers of the

pharmaceutical industry regarding the use of social media for decision-making, this research is highly significant in highlighting the key risks associated with the use of social media in the pharmaceutical industry and its benefits in the long run. The research findings will motivate the companies to seek assistance from social media tools to take decisions related to effective drug selection. In addition, the research also incorporates the perspectives of users or non-professionals. In decision-making practices regarding the selection of the most effective drug in pharmaceuticals, the use of social media in determining the relative quality of drugs is one of the major concerns.

Further, it has been proven that social media can serve as a highly useful means of communicating and spreading information regarding effective healthcare practices in society. Social media serves as a crucial dynamic and interactive technology-mediated platform for communication. It has a high rate of penetration in the general population from higher to middle income groups, which indicates its immense potential in disseminating, gathering and sharing information related to healthcare, new and existing drugs, new research in healthcare, diseases, and lifestyle improvement to improve overall health (McMurray and Clendon, 2015). In this respect, this research will be useful in making the stakeholders of the pharmaceutical industry and the general Kuwaiti population aware of the relevance, applications, inherent risks, measures for mitigating risks, and benefits of social media, and promoting its use for effective decision-making in healthcare.

Although the research findings are directed to focus on the trends and practices prevailing in the pharmaceutical industry, the use of social media as a communication tool is vital. It helps all of society to improve their lifestyles and health issues, thereby promoting the improvement of the health of society at large (Guseo and Guidolin, 2009). The findings of the research are not primarily focused on the technical aspects of social media, rather they are intended to examine the larger social benefit to be gained by promoting social media as a

viable tool for improving the health of the population and increasing its usage among the stakeholders of the pharmaceutical industry in Kuwait. Therefore, this research is versatile and applicable to wider aspects of society and industry, and relevant to both professional and academic purposes.

The research will present a modified model (BIUSF) on the basis of the qualitative and quantitative findings that can further provide pivotal contribution in existing literature. The model will provide information about pharmaceutical related factors influencing the intention to use social media for decision-making processes from the perspectives of pharmacists, physicians and consumers. Additionally, the final model (BIUSF) produced via conducting the study will be helpful in understanding relationship amidst independent variables, behavioural intention to use social media and pharmaceutical industry specific factors.

1.7 Summary of Contribution

The major contribution of this research has been in respect of the development of a conceptual model (BIUSF) for the acceptance and use of social media forums. This was developed with the help of the critical review of the existing literature on the acceptance of technology. These findings have been determined after testing the initial model through the opinions and perceptions of the consumers and customers. The modified model thus contributed towards the identification of the five independent moderators: gender, age, experience, and health condition and education level.

The research findings are beneficial in three areas. Firstly, this research can improve and increase the academic understanding of the use of social media. The literature review found that with the advancement of science and technology, the opportunities for communication and networking have undergone considerable changes. During the last

decade, there has been an explosion of social media websites on mobile telephones and other internet-based devices, through websites such as Facebook, Instagram and Twitter, each of which have become highly integrated into our daily lives

1.8 Organisation of the research

It is essential to have a structured approach in order to complete successful and effective research. For this purpose, the overall content of the research has been organised into different chapters, each of which has facilitated a thorough and in-depth exploration and discussion of the different aspects of the research topic. Brief details of the content of each chapter are discussed below:

Chapter 1: Introduction -The first chapter of the research is the introduction chapter, which seeks to familiarise the readers with the social purpose-based focus of this research. This chapter provides the aim, objectives and research questions together with a discussion of the background, rationale and significance of the research.

Chapter 2: Literature Review -The literature review chapter undertakes a detailed and in-depth examination of the literature available on the different aspects of the research topic. The opinions and perceptions of several scholars and academics are discussed from a comprehensive range of literary and academic sources such as books, journals, reports, articles, scholarly papers and magazines related to the research topic.

Chapter 3: Theoretical Framework - The theoretical framework chapter is an extension of the literature review chapter. It provides a detailed overview of the UTAUT model (The Unified Theory of Acceptance and Use of Technology theory), and the rationale for selecting it as an appropriate model for evaluating the industry-related factors influencing behavioural intention to use social media discussion forums by the stakeholders, by examining its constructs and moderators.

Chapter 4: Research Methodology - This chapter presents the methods, tools, and techniques applied in this research for gathering and analysing the data. These tools and techniques are explained along with the key underlying logic and assumptions followed while applying them in the research.

Chapter 5: Data Analysis - This chapter presents the findings of the survey with the help of graphical and descriptive analysis. It also presents the findings of the interviews, with the help of thematic analysis. The research findings are discussed and presented in three different phases: the exploratory study as the first phase, the first round of the in-depth semi-structured face-to-face interviews and survey questionnaire in the second phase, and the final round of the in-depth semi-structured face-to-face interviews as the last phase of data collection.

Chapter 6: Discussion of Final Findings - This chapter provides a detailed and elaborate discussion of the overall findings of the research in the light of the literature review and other prevailing literature to address the aim and objectives of the research.

Chapter 7: Final Discussion and Conclusion - This chapter presents the overall conclusion of the research along with the contribution of the research towards the theory, practice and society, and the limitations and recommendations for future research.

The structure of the thesis is summarised and depicted in the figure below:

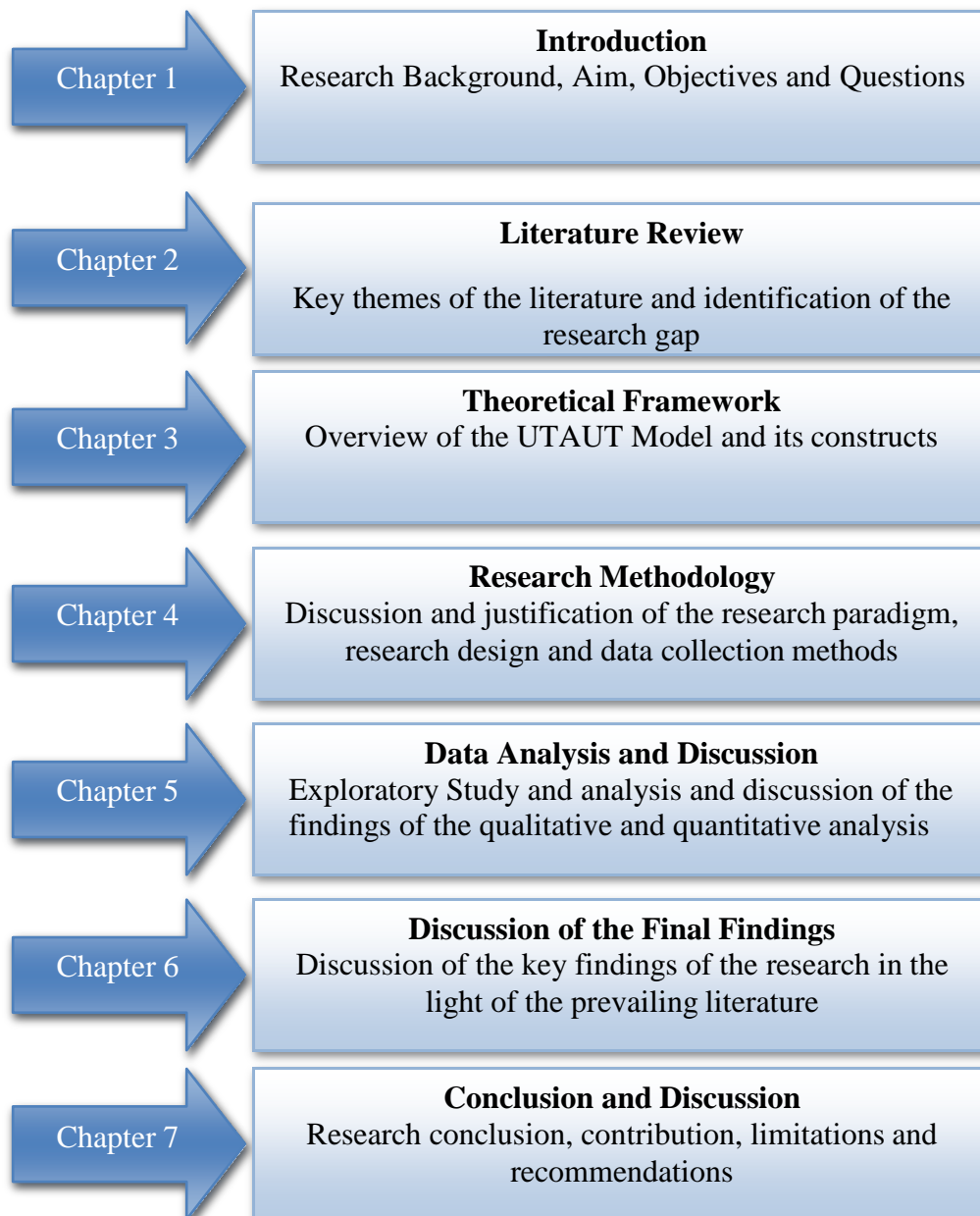
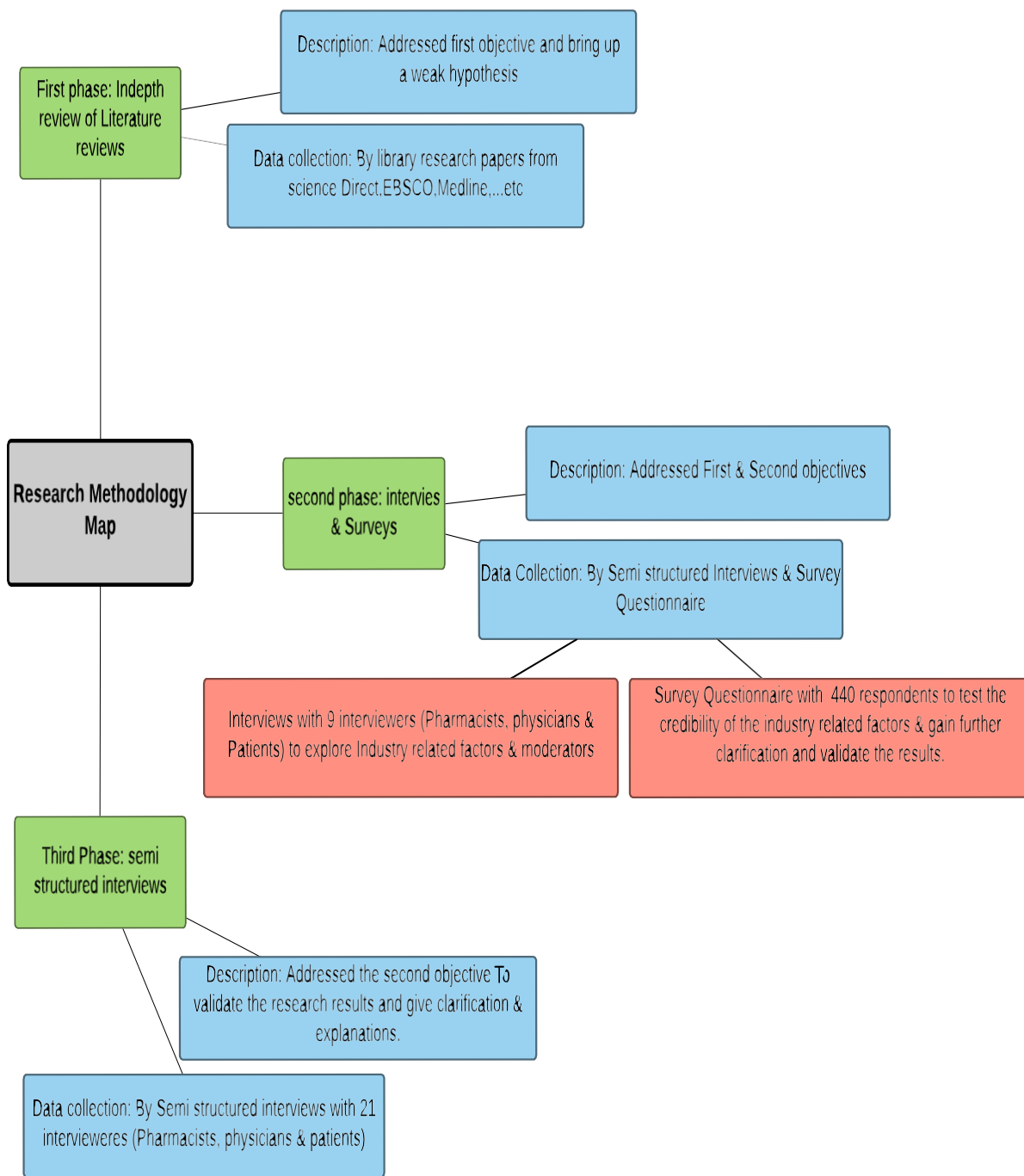


Figure 1.1: Structure of the research



Methodology Map of the Research Phases

Figure 1.2: Components of the Research Methodology Used in the Research

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Chapter Two: Literature Review

2.1 Introduction

A review of the literature related to the research provides a strong basis upon which the researcher can form conclusions from the findings of the study undertaken. In this chapter, a review of the existing literature was undertaken, covering the various aspects pertaining to the use of social media discussion forums in the decision-making process in the pharmaceutical industry in Kuwait. The literature review provides the theoretical and conceptual foundation for the research and is considered to be essential for validating the findings of the research; therefore, this chapter assumes a position of great importance in the research study.

In this chapter, the literature review is segregated into two categories: part one and part two. Part one includes a discussion and articulation of the views of scholars about the background to social media, its implementation and adoption from an organisational, as well as an individual context. Scholars' views have also been collected on the extension of social media use in recent years to every sphere of human life. The second part of the literature review consists of scholars' views on the Unified Theory of Acceptance and Use of Technology (UTAUT). The primary aim of this chapter is to collect the views of scholars about the influence of social media on the behavioural intention of the decision maker.

2.2 Key themes of the literature review

2.2.1 Overview of social media

2.2.1.1 Significance of social media

In the view of Al-Essa et al. (2015), it has been evident that the use of social media is vital in the current climate of increased competition. It is a tool, which promotes online communication so that content sharing, collaboration and interaction among the users

increases. The use of social media has helped individuals to overcome barriers and gain access to information. The increasing use of social media is helping to create more awareness among individuals regarding the community's inputs and outputs (Al-Essa *et al.*, 2015). In the wake of high internet usage, social media platforms are the tools most frequently accessed by the audience. They are an essential element that promote the utilisation of social media for business purposes, to improve brand awareness and customer retention. With the evolution of social media, it is easier to target a larger audience and to connect with more people. Thus, social media has become a well-equipped and easy to access medium (Downey, 2012).

It has been evaluated from considering the viewpoints of scholars that social media platforms are one of the most frequently accessed popular means of communication in the contemporary that provide the opportunity to business organisations to drive business growth. It is analysed from the literary sources that businesses can use social media for increasing customer retention and improving brand awareness.

2.2.1.2 Application of social media in business organisations with emphasis on its Advantages and Disadvantages

The use of social media is not limited to entertainment, but has also proved its wider application in business organisations. The use of social media has fostered the interests of the community and has made them more enthusiastic towards society's changes. Moreover, it is also evident that social media has helped business organisations to improve their performance and efficiency (Downey, 2012).

Social media tools, techniques and channels help to target a larger audience and attract new customers in abundance, due to the greater reach and popularity of the social media sites, which is beneficial for the sustainable growth of business. In addition, the social media channels improve the quality of communication between customers and business organisations. This enhances the efficiency of the feedback mechanism and, hence, improves

the performance and effectiveness of the customer's interaction (Guffey and Loewy, 2014). Nick (2015), however, disagreed with the above view and highlighted a number of pertinent shortcomings and disadvantages of relying on social media for customer and market-related information. He emphasised that social media is not useful for every organisation and cannot bring success to each one. He asserted that in a globalised and highly competitive economy, merely following the customers is no longer sufficient. Furthermore, the ideas, feedback and experiences of customers obtained from the social media websites are useful for the organisation only if they are relevant (Nick, 2015).

It is essential for the organisation to go beyond just listening to the customers, something that social media cannot facilitate (Nick, 2015). The research argued that many companies have still not been able to achieve the expected advantages from the interaction with their customers through web portals. In this context, the disadvantages associated with social media are highlighted in these companies, demonstrating that social media raises a number of issues for customers, such as an inability to articulate the information, issues related to intellectual problems, and issues related to unbalanced target group orientation and the absence of secrecy (Nick, 2015).

Kommers, Isaias and Issa (2014) provided an overview of social media and its use for business and commercial purposes in various industries, including the pharmaceutical industry. This study provided reliable and authentic information about social media and its implementation and adoption. It is highlighted in the study that the current research in the field of social media plays a crucial role in widening its application and effectiveness across sectors (Kommers, Isaias and Issa, 2014). In the similar context, it is mentioned that social media optimisation has grown as a tool. This helps to improve brand awareness, products and service awareness through the active and massive utilisation of the social media platforms to

promote and publicise. It helps by gaining customer attention and improving customer awareness, which is essential to improve brand loyalty and image (Shreves, 2015).

In the viewpoint of Smith (2011), social customer relationship marketing involves utilising the social media platforms, techniques and tools effectively and efficiently to improve customer services, customer engagement and customer relationships with the organisation. It enhances the level of communication with the customers and helps to satisfy the requirements and queries of the customers in a more effective manner (Smith, 2011). On the other side Greener and Rospigliosi (2014) disagreed with this perception and argued that social media's capacity to facilitate impromptu and informal communication on a real-time basis also encourages the third-party abuse of the trademarks and copyrights of the business. Such business personalisation not only damages the perceptions of the customers towards the brand, but also hampers the reputation and brand name of the organisation for a very long time (Greener and Rospigliosi, 2014).

It has been analysed from the inclusion of multiple perspectives of eminent authors that social media tools provide various advantages to the organisations in terms of maintaining effective relationship with the customers and building brand equity. However, it is found out that third-party abuse, copyright issues, privacy and security issues associated with online platforms hinder growth of businesses, thereby creating obstructions in leveraging the benefits of social media tools.

From the perspective of Lin and Lu (2011), social networking sites have emerged as a major platform through which people can develop their virtual personal network and communicate and interact with many people. Network externalities and motivation theory have been used to understand the factors that motivate employees to join and use social media (Lin and Lu, 2011). The findings of the research emphasised that enjoyment, usefulness of the information available, perceived benefits of the information accessible

through the internet and the number of peers and relatives on social media are the most pertinent factors that influence the intention to increase the usage of social media among business organisations (Lin and Lu, 2011).

Social media crowd-sourcing is a new and fast way to obtain customer requirements, online ideas and content, to publicise and promote the products and services. It makes an effective use of the social media channels to obtain inputs from the existing customers to discover new ways to motivate customers towards the brand (Barnes, 2015). This study was beneficial on the grounds of providing a clear concept about social media and its emerging dimensions and, hence, the study has created an awareness of the benefits of social media in the business world. However, in the research conducted by Nadaraja and Yazdanifard (2013) there was considerable disagreement regarding such benefits of social media. It is asserted that social media can also serve as a platform for creating a negative image and damage the reputation of the company, along with its product and services. One negative or unsatisfactory experience of a consumer can trigger ripples of negative feedback against the products and services offered by an organisation and discourage other prospective customers from using those products and services in the future. Unhappy customers and even industry competitors can post offensive or disparaging reviews, images and tags, or upload negative videos regarding the products and services offered by a brand. Such negative feedback is never ignored by prospective or existing customers and has a highly significant impact on customer loyalty and market share (Nadaraja and Yazdanifard, 2013).

Overall, it has been examined from review of the literature sources that sometimes a company might be too vigilant against malicious content and prevent the display of negative feedback to customers, or itself post fake information with highly positive opinions of its products and services, which leads to manipulated and incorrect information regarding the

products and services being given to the customers. This further hampers the reliability and trust associated with social media as a means of gathering information.

2.2.1.3 Emerging applications of social media in the pharmaceutical industry

Kommers, Isaias and Issa (2014) emphasised that the progress in enhancing the areas of application of social media relies on the difficult task of integrating the available media technologies into fields such as marketing, health, pharmaceuticals, learning and the service industry. In the similar aspect, Ding, Eliashberg and Stremersch (2013) discussed the emerging role of social media in the pharmaceutical industry as a useful tool for marketing. Their study emphasised that for the pharmaceutical firms, social media marketing provides a number of advantages over conventional media, by serving as a more reliable platform to engage and communicate with customers about the product, company and brand. Thereby, it facilitates the organisation in building relationships with online influencers, obtaining feedback and understanding the needs of customers (Ding, Eliashberg and Stremersch, 2013). It is also apparent from the literature that the healthcare and pharmaceutical industry is no longer immune from the growing influence of social media. Increasing number of physicians are exploring the usefulness of this tool to share their knowledge, gain new knowledge, and discuss clinical and management issues. In addition, patients are also increasingly making active use of social media to manage their health knowledge (Ding, Eliashberg and Stremersch, 2013).

Yang and Wu (2009) investigated whether pharmaceutical companies had increased their social media presence and moved towards the acceptance of this technology to improve the quality of their decision-making (Yang and Wu, 2009). In contrast, Ding, Eliashberg and Stremersch (2013) further highlighted that pharmaceutical companies often own a corporate Facebook page and are also present on Twitter, YouTube and corporate blogs. Pharmaceutical companies believe that the best way of creating social influence or network

value is the use of the word of mouth strategy (Ding, Elishberg and Stremersch, 2013; Yang and Wu, 2009). However, according to the findings of Shoemaker and Reese (2013), some pharmaceutical companies are reluctant to use social media in their marketing and advertising strategies. This is because they have a fear of incurring liability and are not clearly aware of the communication guidelines that should be kept in mind while using social media for promotion and publicity. The study has justified its findings, because the use of comparative analysis and facts have made the results more authentic and reliable. Nevertheless, Peters (2010) emphasised that social media can be useful and effective in facilitating communication for the pharmaceutical organisations, however it entails significant time investment. A mere cursory investment in the social media resources with an expectation of realising huge returns is fanciful. It is essential that the organisations realise the need for the necessary time commitment and the cost of the investment to derive the maximum benefit out of this platform (Peters, 2010).

It has been analysed from review of literature pertaining to the use of social media platforms in the pharmaceutical industry that the industry has recognised the potential of social media platforms and employed social media tools for marketing and advertising purposes. On the contrary, it is explored that social media tools are not preferred mode of communication and marketing for organisations operating in the pharmaceutical industry due to unawareness of communication guidelines and security and accountability issues.

2.2.1.4 Challenges and difficulties of using social media

In respect of the application and use of social media in an industrial and business context, the literature also highlighted the challenges and difficulties in using extensive social media. Kommers et al. (2014), stated that although social media has emerged as the most accepted technology, the adoption of the new information system in the form of social media has faced many challenges. The basic reason behind this notion is that people are unable to

identify which technology is beneficial and which technology is not beneficial for the users (Kommers et al., 2014). On the other side, Ziska (2016) emphasised that the use of social media for promoting products, services and brands can also create major issues related to trust, privacy and security of data (Ziska, 2016).

The literature has highlighted issues such as fear of online credit card fraud and public relations fiascos triggering the perceptions that the internet is an unsafe, unreliable and dishonest market place. This not only hampers customer loyalty, but also results in substantial erosion of the brand image.

In this regard, Mousavi and Demirkan (2013) have highlighted the key success factors in the implementation of social media solutions and the relative significance of each success factor. Their research emphasised that the most crucial factor in the implementation of social media solutions is the commitment of senior management, along with customer engagement in the implementation project (Mousavi and Demirkan, 2013). In this regard, the study further emphasised that organisations must focus on the engagement of their customers in the social media campaigns undertaken by them, not only to increase sales, but also to make social media implementation successful and effective. The research explored the significance of other factors, such as project and technology-based factors, individual factors, organisational factors and environmental issues (Mousavi and Demirkan, 2013).

Overall, it has been assessed that effective implementation of social media tools within business organisations require managing privacy and security issues with utmost adequacy for building a loyal customer base.

2.2.1.5 General measures to monitor and prevent the risks and challenges associated with social media

Despite the advantages of social media, there are many are as in which social media presents pertinent challenges and complications. Greener and Rospigliosi (2014) asserted that the transparency of, and easy access to, the web makes online information available to a large

audience and demands the need for consistency in planning, design, implementation, and use. It is necessary for companies to control and monitor their online communications for marketing and gathering information (Greener and Rospigliosi, 2014). From the perspective of Stewart (2013), surveillance of social media and the messages posted on such sites has emerged as a serious requirement to overcome the challenges related to social media and improve its application across industries. As individuals and entities from across business organisations, industries, government agencies, marketers and households have increased their use of social media, the need to ensure its reliability along with the authenticity and credibility of information provided on social media has increased (Stewart, 2013).

Amerland (2015) has highlighted the significance of social media policies as a crucial means to control the use of social media by employees and minimise the risks associated with this media. Social media policies vary from organisation to organisation as per their own specific requirements and the nature of customers. Social media policies are defined as the control of social media usage by the employees of the organisation (Amerland, 2015).

It has been examined from the review of literary source that designing social media policies and taking strict measures enable generating awareness of the risks associated with the use of social media, and serves as a crucial means of keeping a check and control on the content published and the privacy of the users. In this respect, such an understanding is helpful in increasing the reliability and trust in social media, thereby enhancing its use and application among the stakeholders of the pharmaceutical industry and society at large.

2.2.2 Impact of social media on stakeholders

2.2.2.1 Critical evaluation of the use and benefits of social media for stakeholders

From the perspective of Quaddus and Woodside (2015), stakeholders in pharmaceutical companies must make several crucial decisions based on the available information. These stakeholders mainly include employees, shareholders, users, and

investors. Their involvement in the business, research and development and decision-making varies depending on the nature of their stake holding. The internal stakeholders who include employees, shareholders and investors, have input into business decisions and research and development. The external stakeholders, which include consumers, users and competitors, do not have any input in decision-making, but they may influence the decision-making process with requirements and critical information, however, they are not directly involved in the decisions (Quaddus and Woodside, 2015).

Social media has emerged as a recent technology that aids in the promotion of stakeholders' interests. It has diversified its dimensions, which include the establishment of social media analytics, social media marketing, social media optimisation, social customer relationship marketing, social media policies and social media crowd-sourcing (Al-Essa et al., 2015). Similarly Zarrella (2009) stated that social media marketing is the latest marketing tool used to obtain massive traffic and gain attention of the organisational social media profiles and official websites. This helps to improve brand image, customer retention and brand loyalty. It is a technically updated move to attract and obtain new customers, to retain the existing customers and for the potential and sustainable growth of the business (Zarrella, 2009).

However, Bertino and Matei (2014) disagreed with the above view and argued that a large amount of unmanageable, irrelevant and vague information may cause problems in the innovation process undertaken by organisations. Relying only on the customer's voice cannot be sufficient for undertaking successful product development and the huge amount of irrelevant data generated by social media in the form of customer feedback might not only be unmanageable, but may also affect the appropriate decision-making in the process of new product development (Bertino and Matei, 2014). In the similar context, Keller and Fay (2012) argued that social media still 'sits in a silo' and fails to realise its maximum potential. Their

study asserted that there is little to no evidence to indicate that social media drives sales and claimed that the majority of the sales for e-commerce providers, such as GSI Commerce, online holiday shoppers such as Forrester, and others, come from digital marketing, while only a very small portion of sales could be related to social media marketing.

It is highlighted in the literature sources that social media marketing tools and social networking platforms cannot be considered highly beneficial for business organisations as various risk factors are associated with its use.

Wyrwoll (2014) supported these findings and claimed that although platforms such as Twitter and Facebook can serve to be highly useful channels for communication, in order to access useful, viable and trustworthy information from the consumers, customers must be willing to talk about the brand and the products through that channel. It has been recognised that it is a key problem that online customers are not equally interested in all the brands and all product categories offered under a brand. In this regard, the research findings asserted that online conversations and product searches are primarily restricted to technology, entertainment and fashion. Most consumers who connect with a company to feel associated with the brand community might not be motivated brand advocates, which indicated the restricted significance of customer interaction as facilitated by social media (Wyrwoll, 2014).

2.2.2.2 Critical evaluation of the use and benefits of social media by stakeholders of the pharmaceutical industry

In the context of stakeholders of the pharmaceutical industry, Zarrella (2009) stated that among the external stakeholders, the investors and the customers require access to considerable information about the organisation and its products for effective decision-making regarding the use of products and investments in the pharmaceutical industry. His research asserted that adequate access to social media is very useful for these stakeholders in providing crucial, relevant and up-to-date information regarding these issues. This can help

them to make rational decisions (Zarrella, 2009; Hoffmann and Lutz, 2014). Waters et al. (2009) supported these findings and revealed that social media has proved to be an efficacious tool in providing pertinent information for stakeholders to make rational decisions and it can be helpful for them to plan their tasks regarding marketing, investments, use of products, exploring the on-going research being undertaken in the pharmaceutical industry, and gain knowledge about healthy lifestyles (Waters et al., 2009).

The literature also highlighted the importance of social media for generation of knowledge, which assists in the development of a valuable aspect of the decision-making process in pharmaceuticals. In this context, Antheunis, Tates and Neiboer (2013) highlighted that social media provides information for the generation of knowledge through the description of factors which can affect the decision-making process of the people concerned with pharmaceuticals. Social media is also able to instigate effective coordination among people concerned with pharmaceuticals, because it provides all the required information and data to people at the right time and in the right place (Antheunis, Tates and Neiboer, 2013; Snyder et al., 2011; Soliman, 2012). Wienstein, Sadman, and Blalock (2008) also supported these findings by asserting that a social media approach enhances the efficiency of the communication channels between the customers and the pharmaceutical companies

In contrast, Lau et al. (2012) argued that the information provided by customers regarding the appropriateness of drugs cannot be relied upon by other customers or by the pharmaceutical companies for making decisions related to marketing, because such information is provided by the general public, who neither possess the required medical qualifications nor the knowledge to provide adequate information regarding the usefulness, quality and suitability of the drugs. Therefore, reliance upon and use of such information would not only lead to misleading results for the pharmaceutical companies, but may also have a harmful impact on the health of the consumers who follow that incorrect information

(Lau et al., 2012). In this regard, Tyranwski and DeAndrea (2015) asserted that the majority of the top searches on the social media websites are enquiries relating to drug efficiency, and it is troubling that most of the claims regarding drug efficiency and quality are made by non-expert sources or the general public. The majority of the sources mention only the benefits of the drugs instead of presenting balanced or advisory information. This study also claimed that approximately 20% of internet users use online forums for checking online reviews of specific drugs, and the consumers are likely to obtain incomplete information through social media. The potential credibility afforded to the information on social media is also problematic because of the continued presence of illegal pharmacies in the top search results. Such illegal pharmacies are highly prominent on social media, which might be potentially quite dangerous and demands strict monitoring and control of the information posted on these platforms (Tyranwski and DeAndrea, 2015).

The prevailing literature also highlights the emerging role of social media in the pharmaceutical industry. In the study of Alkhateeb et al. (2010), it was found that pharmacists are increasingly using social media, and this present's new professional, ethical and time challenges. The research also found that social media assists effective communication among different departments of the companies within the pharmaceutical industry and this enhances decision-making. The most widely used social media applications among the pharmacists include YouTube, Wikipedia, Facebook and blogs. In contrast, tools such as Bebo, Flickr, and Friendster are rarely used by pharmacists (Alkhateeb et al., 2010).

The study of Peres and Mesquita (2015), found that the implementation and adoption of social media were undertaken by considering factors such as customers, advertising, and the need for business. It was further evident that in order to incorporate the use of social media as a technology in the business to promote decision-making quality, it was essential to have a community group with absorptive capacity. Absorptive capacity can be referred to as

the ability of an organisation to identify and absorb appropriate, relevant and valuable knowledge or information regarding a certain point, topic or field (Peres and Mesquita, 2015). Their research also analysed the adoption of social media and found that it provides enormous benefits to the organisation by promoting areas such as marketing, customer relationship management, recruitment and engagement. Ultimately, it was also inferred that the adoption of social media is fostered if brand loyalty among the customers subsequently increases.

Basset, Stuart and Silber (2012) disagreed with these findings and asserted that while a large number of pharmaceutical companies have increased the use of alternative channels such as social media for marketing communication, they continue to rely on push marketing rather than communicating with the customers about the issues they encounter. They also claimed that the content of the different websites is usually out-dated and mono-directional and, thus, fails to be effective in gathering relevant responses about the drugs from the market (Basset, Stuart and Silber, 2012). A study by Davison (2011) examined the hypothesis that although doctors and healthcare practitioners believe that social media is useful for managing information, they are apprehensive about the reliability of the information obtained from this media. Practitioners are concerned about the issues that arise because of technological problems, such as lack of accessibility and connectivity in rural areas, and believed that there is a great risk of misinterpretation of information (Davison, 2011). In a similar context, the study undertaken by Katsanis (2015) highlighted that doctors were concerned about the authenticity of the information posted on social media, because it might motivate the patients to improper or irrational self-medication, which might have a serious influence on their health (Katsanis, 2015). The literature also highlighted that social network content is primarily in the form of user generated content and, worldwide, there is no relevant regulation that expressly deals with the social networks.

This highlights the major problem of the absence of a particular moderator to address the problem of incorrect or misleading information on social media. In this respect, the literature emphasised that to overcome identified shortcomings, it is essential that appropriate measures are adopted by the pharmaceutical companies to prevent the misuse of information. Research highlighted the need for constant review and revision of the information posted on social media (Katsanis, 2015).

From the perspective of Deverka et al. (2012), the activities related to planning and decision-making in the pharmaceutical industry are crucial tasks for the stakeholders, such as clinicians, employees, administrators, professional colleges, the Ministry of Health, investors and others. For effective decision-making, it is essential that proper coordination and communication is ensured among all the key stakeholders associated with the respective decision (Deverka et al., 2012). In the similar aspect, it is stated that the processes related to information and gaining feedback from people in the pharmaceutical industry should facilitate the stakeholders in making appropriate and effective decisions (Antheunis, Tates and Neiboer, 2013; Deverka et al., 2012; Buthion, 2013).

Grajales et al. (2014) asserted that social media serves as dynamic and interactive technology-mediated tools for communication that has a high rate of penetration in the general population from higher, as well as middle income groups. However, the application of such tools is underused in the pharmaceutical industry. In this respect, the literature has highlighted that a large number of stakeholders associated with the pharmaceutical industry are still unaware of social media's relevance, potential applications, inherent risks and their mitigation measures while using them for decision-making (Grajales et al., 2014).

An understanding of social media and web-based tools can be highly effective in maintaining and improving peer-to-peer and clinic-to-patient communication. It can improve the speed of interaction across different stakeholders associated with the pharmaceutical

industry and enhance institutional branding (Grajales et al., 2014; Antheunis, Tates and Neiboer, 2013; Bridges et al., 2011). Grindrod et al. (2014) stated that the use of social media enables non-experts to access and interpret the necessary medical information so that they can take care of themselves and others. In pharmacy education, in order to have control over social media and to use it as a new source of business promotion, it is essential to have student engagement, e-professionalism and boundaries. In addition, social media has become a significant platform to obtain the patients' experiences and physicians' reviews regarding drugs, which helps to improve the quality and effectiveness of the drugs in fulfilling their purpose (Grindrod et al., 2014).

It has been critically evaluated from review of literature sources that social media approach enhances the efficiency of the communication channels between the customers and the pharmaceutical companies. Further, it is mentioned in the literature sources that online platform plays a significant role in improving the quality and effectiveness of drugs, as well as enhancing the quality of health care services. Through social media platforms individuals can obtain information regarding the patients' experiences and physicians' reviews in regard to specific drug that increase the awareness among users concerning its use. However, it is investigated that credibility and reliability of the information posted on the social media is questioned due to presence of illegal pharmacies.

2.2.2.3 Evaluation of the barriers associated with the use of social media

The examination of the literature has also revealed the barriers associated with the use of social media. In this respect, Akhtar et al. (2015) believed that apart from the positive aspects, negative aspects such as privacy issues are also associated with the use of social media by some of the pharmaceutical organisations. Therefore, they restrict the utilisation of social media to personal purposes rather than professional purposes. Nee (2016) supported this opinion and asserted that privacy is a major factor that prevents the utilisation of social media by pharmaceutical companies, as many cybercrimes relating to data theft, piracy and

identity theft have been reported. This has created a negative image of social media among some pharmaceutical companies. Improper or incorrect descriptions of a patient's case on social media can violate the privacy of the patient, even when no name has been released and no harm was intended. Numerous issues have been identified where hospital staff post inappropriate information about patients or doctors comment on public forums. Such posts can be seen as a serious compromise of the privacy of the patient's information while providing medical advice, which presents regulatory or liability issues (Nee, 2016). Generally, the younger users are unaware or are unconcerned about the privacy setting provided by the social networking sites. There is a constant threat of hacking of accounts and the theft of personal confidential information from social networking sites, which further increases the threat to the privacy of users.

Sattikar and Kulkarni (2011) further asserted that the risks, such as identity theft, profiling risk, phishing and fake information about the products have been critical issues encountered by users that demotivate people from using social media. From the perspective of Malagi Angadi and Gull (2013), security and privacy issues related to social networking sites are primarily fundamental behavioural issues rather than technological issues. There is a constant threat that more the information a person shares the more he becomes vulnerable to potential compromise by those with malicious intentions (Malagi Angadi and Gull., 2013).

The examination of the literature indicated that despite the emerging role of the different social media applications for gaining information and supporting rational decision-making, the prevalence of risks related to privacy and theft create pertinent barriers to the widespread use of social media by stakeholders in the pharmaceutical industry. It was apparent that considerable research has been conducted on the risks associated with the use of social media; however, the research on the risks associated with the use of social media in the pharmaceutical industry is still limited. The research on such risks has been conducted

irrespective of specific industry implications. This indicates that there is a pressing need for a deeper exploration to examine the risks associated with the use of social media in the pharmaceutical industry and the factors that limit its usage among the stakeholders.

It is highlighted in the literature sources that fear of data theft, privacy and identity theft limits the use of social media platforms among users, thereby requiring pharmaceutical industry to take strict measures in ensuring confidentiality of users' information.

2.2.2.4 Need for the pharmaceutical industry to use social media

In addition to the above findings, the examination of the prevailing literature on social media also found that there is a need for growth and progress of social media in the pharmaceutical industry because of the emerging challenges for the industry. In this respect, Ding, Elishberg and Stremersch (2013) argued that the use of social media is the only choice left to the pharmaceutical companies to progress in a deliberate manner. Research has observed that pharmaceutical companies suffered in their performance and awareness among the community because they have a lack of communication channels. In this respect, Touray, Salminen, and Mursu, (2013) reflected that it becomes necessary for an organisation to provide sufficient training to its employees so that they understand the associated benefits of social media adoption in the organisation as a new tool of technology. Moreover, the individuals who use social media in their personal lives should be encouraged to discuss their opinions regarding technology usage in the entire workforce (Touray, Salminen, and Mursu, 2013). This will help to generate more confidence and enthusiasm among the employees regarding social media use in promoting the business. In conjunction with this, social media officers could be appointed to control and monitor social media utilisation among the workforce (Touray, Salminen, and Mursu, 2013).

Palmer (2012) also found that some pharmaceutical companies have suffered because of negative brand image and reputation, and they were blamed for preferring revenue and profits over the healthcare interests and requirements of patients. In this regard, the use of

social media will help the company to establish their place in the health market in a more positive manner. Social media can, furthermore, help pharmaceutical companies to improve their corporate social responsibility, as it will enable customer interaction and provide easy access to a larger audience to promote products and services. This will enhance brand image and loyalty (Barnes, 2015). Hence, it is inferred that social media tools can be used by pharmaceutical companies for improving their brand value and corporate reputation among prospective customers.

2.2.3 Social media at the initial stage in the pharmaceutical industry

2.2.3.1 Critical evaluation of the use of social media in the pharmaceutical industry

Social media has grown in importance with the increase in the number of health care institutions, professional organisations, and industries, because there is a need to share information and knowledge among these parties (Benetoli, Chen and Aslani, 2015). There is also a need to place information about the products before customers in the market to increase business growth. Pharmacists can utilise social media to access their customers' information and send information about the existence of new products in the market. The utilisation of social media has provided enormous benefits to pharmaceutical companies in terms of obtaining critical information regarding the acceptance of drugs, customer expectations and experiences (Benetoli, Chen and Aslani, 2015).

Tyrawski and DeAndrea (2015) claimed that such websites provide unreliable information regarding the ways in which the public can improve their health by improving their lifestyle and eating habits. These online sources are in the form of informal websites, blogs or healthcare forums, which lack authenticity and the credibility of the information posted on them is doubtful. There is still an absence of organised and formal social media forums to provide information or advice regarding drugs, medicines or other pharmaceutical industry products on social media. This indicates an absence of authentic social media forums through which people can address their health-related issues, take advice regarding the use of

medicines and use the information to make decisions regarding their health. These sources lack reliability and trustworthiness, not only for pharmacists and physicians, but also for the general public (Tyrawski and DeAndrea, 2015).

In contrast to the above argument, Aitken (2014) opined that social media provides facilities for accessing information about the professional practices of the pharmaceutical companies. Social media facilitates communication with highly qualified experts who help to improve the quality of drugs and other products, and it leads to sustainable growth of the organisations. The research also highlighted the need for the development of suitable models that can be helpful in facilitating an effective use of social media (Aitken, 2014). However, these studies do not present a detailed understanding of the ways in which social media tools and applications can be useful for the pharmaceutical industry. There is a significant need to examine the engagement of pharmacists with social media tools (Tyrawski and DeAndrea, 2015). This highlights a gap in the prevailing knowledge, which requires further examination to understand the factors that influence the behaviour regarding the use of social media among the stakeholders of the pharmaceutical industry. In addition, Griffiths (2012) stated that the emerging benefits of social media were as a means of gaining information about the drugs in the pharmaceutical industry. His research revealed that drug information can have a huge impact on the user's decision regarding the use and consumption of the drugs. However, such information is largely posted by the general public who are unaffiliated to the pharmaceutical company. It is based on personal testimonials and drug efficiency claims. This factor highlights the threat posed for the users of such information as it might lead to serious impacts on their health (Griffiths, 2012).

The literature has also highlighted a theory to explain the implications of social media use for improving communication and interaction among people. In the view of Reddick (2010), gratification theory depicts that, by using social media, a company can easily achieve

its goals, as people using social media are more oriented toward communication and they also take an active part in the process of communication. Moreover, this theory also states that the users of social media have one more option to satisfy their needs and demands for products and services (Reddick, 2010).

It has been suggested in the literature sources that there has been an increase in the use of social media for healthcare, wherein a number of websites have been developed to address basic health issues, lifestyle concerns, fitness, diet and exercise. It is highlighted that gratification theory can be incorporated by pharmaceutical companies for interacting with consumers and foster effective relationship with the target audiences.

2.2.3.2 Critical evaluation of the use and benefits of social media for the pharmaceutical industry of Kuwait

The study of current literature also revealed information regarding the application of social media in the pharmaceutical industry of Kuwait. In this respect, according to the report by IBP, Inc. (2015), the pharmaceutical sector in Kuwait aims to improve the quality of the drugs manufactured and enhance the information regarding the health structure, processes and techniques involved, so as to ensure significant outcomes. In addition, innovation is a growing sector. Therefore, the pharmaceutical companies have adopted methods to innovate in the sector to improve economic growth and health care situations (IBP, Inc., 2015).

Grindrod et al. (2014) explained the emerging role of social media in the pharmaceutical industry and stated that the Kuwaiti pharmaceutical companies use social media to advertise their products and create awareness of their products among the mass population of Kuwait. Social media plays a crucial role in creating awareness about the medicinal products offered by those companies. Nair, Ibrahim and Celentano (2013) stated that awareness programmes through social media networks can reduce the complexities and problems of people in relation to medicines in different countries, as it educates them about these products.

The report by the IMS Institute for Healthcare Informatics (2014) dismissed these opinions and asserted that the reality is that the investments in social media by the pharmaceutical industry continue to be low in comparison with other industries. The strategies adopted by the pharmaceutical companies regarding social media use were also found to be less innovative than those employed by other industries (IMS Institute for Healthcare Informatics, 2014). The literature asserted that the industry is still described as a laggard in respect of its speed in the adoption of virtual technologies. Such reluctance and slowness to adopt digital media can be attributed to the insecurity associated with social media technologies, privacy concerns and the lack of credibility and correctness of the information displayed on social media (IMS Institute for Healthcare Informatics, 2014).

Moorhead et al. (2013) further claimed that, at present, the pharmaceutical companies use social media tools only for personal use and its application for professional use is still limited. Currently, there is also a lack of significant information about the uses, benefits and limitations and relevance of social media for communication in the pharmaceutical industry (Moorhead et al., 2013). In the opinion of Downey (2012) and Tyrawski and DeAndrea (2015) there are some disadvantages to social media as it is exposed to online fraud through spam content and the content can be misinterpreted, which might lead to some negative impact on the brand image of the organisation and the drugs.

2.2.4 Industry-related factors that influence the behavioural intention of stakeholders

2.2.4.1 Evaluation of the factors that influence behavioural intention of stakeholders while using social media

From the perspective of Abubakar and Ahmad (2014), the most crucial element that determines the user's acceptance and application of technology is their behavioural intention. The literature highlighted that there are a number of factors that influence behavioural intention. These factors include perceived risk, perceived ease of use, perceived relative benefit, perceived usefulness, perceived system quality, compatibility, computer self-

efficiency, subjective norm, and self-efficiency (Abubakar and Ahmad, 2014). Other factors include service quality, impulse purchase orientation, brand orientation, perceived enjoyment, performance expectancy, perceived security, quality orientation, social influence, effort expectancy and disturbance concerns.

2.2.4.2 Critical evaluation of the moderating factors that influence the behavioural intention to use social media

The study of the existing literature also revealed the moderating factors that influence the behavioural intention to use social media and highlighted their impact. Touray, Salminen and Mursu (2013) have undertaken research to examine the impact of the moderating factors on behavioural intention regarding the usage of technology and social media tools. The findings revealed that experience has a direct impact on behavioural intention, while gender, income and education also have considerable impact on behavioural intention regarding the usage of technology.

Payne et al. (2015) further explained that different individuals have different preferences and perceptions regarding change. Social media has helped to replace the traditional technologies available in the pharmaceutical industry, but it is an addition to the existing technologies and is used for easy information access. It is not necessary that every person accepts every change in a positive manner. For instance, it is not necessary that older people who are working in an organisation perceive social media as a useful tool. They may prefer traditional methods of communication to create awareness in society. This study has proved quite effective in demonstrating the impact of individual perception on the adoption of technology. The various age groups' acceptance of social media varies and their behavioural intentions play a significant role in determining the level of acceptance shown toward a new and innovative technology such as social media (Payne et al., 2015).

Abubakar and Ahmad (2014) explained that the use of social media can affect the outcomes and lifestyles of stakeholders in the pharmaceutical industry due to the influence of

their behavioural aspects. Social media can reveal different behaviour patterns regarding the sharing of information. The behavioural intentions can be defined as the probability or the likelihood about the perceptions that leads to a certain type of behaviour shown by individuals. The determinants of behavioural intentions are usefulness, easy access, content, accuracy, reliability, responsiveness and assurance of the products and services (Zeng et al., 2009).

The types of behaviour can be highlighted as social, psychological, physical and mental, which includes aggressive, passive and assertive behaviour. The reliability of social media is still not adequate in the field of pharmaceuticals to influence all of the stakeholders to use it for accessing and obtaining information, knowledge, and views (Abubakar and Ahmad, 2014). The literature also found that the use of social media cannot be easily undertaken by healthcare professionals because there is a fear of a negative impact due to potential breach of patient confidentiality (Abubakar and Ahmad, 2014). In this respect, Mousavi and Demirkan (2013) stated that one of the major barriers to the use of social media in the pharmaceutical industry is the concern regarding the unreliability of privacy of information. Furthermore, the fear of the unknown is another key barrier against the adoption of social media in healthcare settings. Some individuals consider the use of social media to be an appropriate method to explore new areas of an investigation, while some consider it to be a tool that leads to a negative influence on both society and the individual (Mousavi and Demirkan, 2013; Phichitchaisopa and Naenna, 2013).

Kim, Shim, and Ahan (2011) revealed that the application of technology like social media in the pharmaceutical industry affects the use and behaviour of the user only if it provides possible solutions to complex problems. In addition, the technology user's behaviour or decision-making may change if the technology provides them with a substantial

advantage. Moreover, organisational readiness also represents a contributory factor in governing the decision regarding the adoption of technology.

In the views of Basset, Stuart and Silber (2012) people at different stages reveal different patterns of behaviour regarding the usage of technology. In this context, the literature also asserted that the adoption of social media in the pharmaceutical industry is relatively low and inadequate due to factors influencing the compatibility of technology with work practices, values, experience and the needs of the user. In this respect, Ansell (2016) asserted that evaluation of the perception and behavioural intention regarding the usage of technology in healthcare settings is largely influenced by external variables and control variables. The external variables have been identified as perceived usefulness, price, variety of social media techniques, perceived ease of use, payment type, occupation and service quality, while the control variables are the critical factors that influence the intention to use social media by the stakeholders of the pharmaceutical industry (Ansell, 2016; Yang et al., 2009).

Wimmer et al. (2013) stated that the social media participation model was proven to be effective for the acceptance of technology. The model helps to establish a link between social media participation and community participation. Although the research tried to provide a contrary statement regarding the technological context in the pharmaceutical industry, due to the lack of clear understanding of the method used, the study cannot be considered to be high in terms of quality (Wimmer et al., 2013).

Mousavi and Demirkan (2013) stated that the adoption and implementation of social media in the pharmaceutical industry depends upon three aspects: the technological context, the organisational context and the environmental context. The technological context involves consideration of the internal as well as external technologies that are required by the firm. Moving ahead to the organisational context, the factors and the resources that prevail in the

organisation will help to assess the need for technology implementation and adoption. In addition, there are a number of particular environmental factors that also influence the decision regarding the adoption and implementation of technology. These factors are generally beyond the companies' control and include an unstable market, increasing competition at the global level, and many others. These three aspects, technology, organisation and environment, represent a framework, generally referred to as the TOE framework (Mousavi and Demirkan, 2013; Phichitchaisopa and Naenna, 2013). The literature represents an excellent demonstration of the dimensions that are needed at the time of technology acceptance and, hence, it has raised the knowledge level significantly. The major issue regarding the adoption of social media in the pharmaceutical sector is the acceptance of technology. However, the issues of trust, the informal behaviour of social media as a communication channel, and its acceptance, contribute to the issue of technology acceptance in pharmaceutical companies.

An effective understanding of these factors can help to increase the adoption of these technologies to obtain health information. In this regard, the literature has also highlighted the significance of factors such as exchange, social and emotional support, decision-making, health information seeking and behavioural change among patients in predicting behavioural intention for the use of social media in healthcare (Wu, 2016). In this respect, it was apparent that while Hanson et al. (2014) emphasised the ways in which the different applications of social media can be helpful in creating an effective channel of communication between the patients and the healthcare providers, Wu (2016) focused on the factors that predict the behavioural intention of the users of social media.

The examination of these two sources in the literature was highly useful for this research because they helped to determine the benefits of social media in facilitating

decision-making by the stakeholders of the pharmaceutical industry. They also enabled the identification of the fundamental and primary factors that influence people to use social media for taking decisions related to healthcare. However, there is still a knowledge gap regarding the most pertinent factors that influence the behavioural intention of the stakeholders of the pharmaceutical industry in making use of social media to improve the health of society at large. It is necessary to obtain a clearer understanding of the risks associated with social media and the ways in which they can be mitigated.

The current literature also highlighted the theoretical foundations regarding the prevalence of factors influencing the behavioural intention to use social media. In this respect, according to Harrington (2014), communication theory plays an important part in the decision-making process of different companies, including pharmaceutical companies. This theory emphasises the use of communication techniques to collect various information regarding marketing and promotional activities. According to the literature, communication regarding health care products by a company will lead to an effective and efficient creation of awareness among the public. This communication can be through social media in a country like Kuwait, where social media has emerged as a basic part of the lives of the majority of people (Harrington, 2014; Xiaoge, 2014).

2.2.5 Behavioural intention regarding the use of social media in healthcare

Social media is useful for effective communication and coordination among all stakeholders (Kim et al., 2016). An evaluation of their behavioural intentions requires consideration of several factors which can influence the intention of the stakeholders. The main factors include perceived risk, benefits, compatibility and system quality. It is necessary to evaluate behavioural intention to increase the use of social media in pharmaceutical companies (Kim et al., 2016).

Pasick and Barker (2009) reflected that undoubtedly there are several other factors that also contribute significantly to influence the behavioural intentions of the technology user regarding the acceptance of technology, such as social media for the promotion of the pharmaceutical industry. These factors include organisational culture. This can be defined as the fact that diverse people from different backgrounds exist in an organisation, and they have different views and opinions regarding the organisation's change (Pasick and Barker, 2009).

Khan, Saleh and Nivarthi (2015) have undertaken research by synthesising the prevailing theories proposed and testing main stream technology adoption. The findings revealed that the amount of existing literature in the field of social media in healthcare is relatively low and there is a considerable gap in the availability of literature in respect of the enablers and barriers to acceptance and use of technology.

2.2.5.1 Barriers to the behavioural intention to use social media in healthcare

The literature highlighted that there are numerous benefits to the adoption of social media for health communication for patients, the general public and healthcare practitioners (Khan, Saleh and Nivarthi, 2015; Barry and Pearson, 2015). However, there are barriers to the accessibility of health information and barriers to understanding the technologies used in social media. An understanding of these can help to determine the behavioural intentions of the stakeholders associated with the pharmaceutical industry. The literature has highlighted the lack of quality and reliability of health information as the key barriers to behavioural intention regarding the use of social media (Khan, Saleh and Nivarthi, 2015). In this respect, research has found that people are reluctant to rely on any piece of information for decisions related to their health. The uncertainty regarding the correctness and truthfulness of the information available on the internet is a subject of anxiety and concern for the users and, thus, creates a barrier to the reliability of social media. However, the role of trust and credibility of information available on social media has only been examined briefly, without a

detailed analysis of its wider implications in influencing the intention to use social media in the pharmaceutical industry (Barry and Pearson, 2015).

2.2.5.2 issues of reliability of the information available on social media

The literature highlights that health-related information on the internet is often believed to be inaccurate, misleading, dangerous, incomplete or based on inadequate scientific evidence, which makes the reliability and credibility of internet information a key factor regarding the intention to use it. The literature also found that the more experienced users of the internet are more critical about the quality of health-related information in comparison to less experienced users (Phichitchaisopa and Naenna, 2013). These findings highlight that reliability and trustworthiness of information on social media is not only a concern for new users and adopters, but also for existing users of social media when obtaining health-related information. Research shows that a large majority of internet users are concerned about the quality of the online information on health and drugs (Phichitchaisopa and Naenna, 2013). Fischhoff (2012) also stated concern regarding the unbalanced views and information with little referencing to scientific evidence about issues such as euthanasia, the medical use of marijuana and other advancing alternative therapies.

Nevertheless, the literature also asserted that not all studies conducted in the past contend that the internet is replete with inaccurate or unreliable information. In this respect, Coskuncay (2013) argued that the internet does not suffer from error and inaccuracy in comparison to other traditional information sources of health-related information such as pamphlets, popular press articles and acquaintances, where cross-checking of the information and obtaining multiple opinions has been difficult. Cline and Hynes (2001) have also emphasised that not all studies regarding the quality of information on the internet raise concerns regarding quality. In this respect, their research found that internet sources for ten popular paediatric neurosurgery topics were correct, with some exceptions in the information provided by online chat rooms. Likewise, some internet sites providing prescription drug

information revealed approximately 98% accuracy in the information. However, not all of the websites examined provided information on all the drugs examined (Cline and Hynes, 2001).

Rolls et al. (2016) explained that there is emerging evidence that healthcare professionals and experts from the pharmaceutical industry use social media to develop virtual communities to share knowledge regarding healthcare, by increasing communication with patients and related stakeholders. However, various aspects of behaviour related to trust continue to influence behavioural intentions regarding the use of social media and related technologies to develop virtual communities, which limit knowledge sharing. In this respect, Rolls et al.'s findings considered that there is a need for an in-depth understanding of the behavioural intention regarding the use of social media for knowledge distribution by the stakeholders of the pharmaceutical industry to improve knowledge sharing.

2.3 Conclusion derived from the literature findings and the knowledge gap in the prevailing literature

2.3.1 Role of social media

The literature has highlighted the emerging role of social media as a key platform and tool to facilitate content sharing, collaboration and interaction among the users, thereby serving as a useful tool for information gathering, sharing and dissemination. It was found that the use of social media is no longer restricted to entertainment; rather, it has also proved its use in applications for enhancing the efficiency of business (Downey, 2012; Guffey and Loewy, 2014). The tools and applications of social media have emerged as useful means for targeting larger audiences, attracting customers, communicating with customers and stakeholders, and obtaining customer feedback and market information in a cost and time effective manner, thereby enhancing the sustainability of organisations.

With such wider applications of social media, it has emerged as a useful tool for business and commercial purposes across a wide range of industries. The literature has highlighted the significance of social media in organisations as a pertinent means for

improving customer services, customer engagement and improving the overall level of communication with customers (Al-Essa et al., 2015; Zarrella, 2009; Shreves, 2015; Kommers et al., 2014; Isaias and Issa, 2014). While the literature has emphasised some relevant benefits of social media for the pharmaceutical industry and organisations, it has also highlighted the risks and shortcomings associated with its use. In this respect, the behavioural intention of the public to use social media, the impact of social media on civic life and issues related to privacy have been examined as the key issues and risks associated with the use of social media (Kommers et al., 2014; Mousavi and Demirkan, 2013; Amerland, 2015).

Social media is an effective tool to share information frequently among all those concerned. It enables regular association between the public and the pharmaceutical companies (Grindrod et al., 2014; Snyder et al., 2011; Soliman, 2012). It has allowed the possibility of the generation of rational, effective, and well-informed decisions for the overall growth of the pharmaceutical business. For the pharmaceutical companies, social media platforms can be beneficial as communication channels to improve the frequency and efficiency of interaction between consumers and companies. Social media further enhances sustainable growth and profitability and, thus, acts as a critical factor for organisational success (Lipschultz, 2014).

The literature highlighted a number of benefits associated with the use of social media by the stakeholders in the pharmaceutical industry. It can be concluded from the literature that it is an effective and highly useful platform to gather a vast amount of information about the markets, pharmaceutical products and emerging research in healthcare. Thus, social media is useful for improving the healthcare of the public. Nevertheless, the prevailing literature failed to present the implications of the benefits of social media in improving the healthcare of society at large (Grajales et al., 2014; Antheunis, Tates and Neiboer, 2013).

Therefore, it can be concluded that in the pharmaceutical industry, the application of social media helps to align the skills, competencies and perspectives of the public and generates knowledge which can be utilised for making informed, prompt, rational and effective decisions (Wienstein, Sadman and Blalock, 2008; Bridges et al., 2011; Touray, Salminen and Mursu, 2013). However, the examination of the literature revealed an absence of focused research on the specific benefits of social media for addressing the issues related to healthcare and the stakeholders of the pharmaceutical industry. Despite several research studies that have examined the emerging role and significance of social media as a means for communication and interaction with organisational stakeholders, there was an absence of substantial research on the use and application of social media for the pharmaceutical industry and addressing the healthcare issues of society (Antheunis, Tates and Neiboer, 2013; Snyder et al., 2011; Soliman, 2012). This indicates a significant knowledge gap, which this present study seeks to address by undertaking an in-depth examination of the role of social media in the pharmaceutical industry. In this respect, this research will help by exploring the factors that motivate and demotivate the stakeholders of the pharmaceutical industry in making use of social media to address their health-related issues, thereby improving the health of society overall (Grindrod et al., 2014; Snyder et al., 2011; Soliman, 2012).

2.3.2 Risks and negative effects associated with the use of social media

The findings of the literature review have also highlighted the risks and negative effects related to the use of social media. The literature has revealed the risks and issues related to privacy, theft, cybercrime, and personal theft, which influence the application and use of social media among the public. In addition, the examination of the literature has also revealed the emerging challenges for the pharmaceutical industry, because of the danger of a negative brand image and the lack of useful communication channels. In view of these factors, it is essential for the pharmaceutical industry to use social media as a tool for

decision-making (Akhtar et al., 2015; Nee, 2016; Sattikar and Kulkarni, 2011; Malagi Angadi and Gull, 2013; Touray, Salminen and Mursu, 2013). The prevalence of such risks demotivates the stakeholders of the industry in relying on the information provided by social media and prevents the public from using social media as a reliable and trustworthy source for sharing and gaining knowledge for decision-making.

The literature has also argued that a number of pharmacists are still not willing to use social media platforms for business purposes. Social media can enable products to reach public awareness and thus increase business growth. This reluctance to engage further highlights the shortcomings in the application of social media in the pharmaceutical industry (Kukreja, Sheehan and Riggins, 2011; Jiang and Chen, 2015).

The literature review indicates that the application of social media tools in the pharmaceutical industry can be very helpful for the industry in overcoming issues of communication, marketing, brand management and identity, and enhance its position in the market. Therefore, it can be concluded that while it is useful and essential for the growth and success of the pharmaceutical industry, there are some pertinent issues, challenges and difficulties that restrict its effective implementation.

Until now, these risks in relation to social media have only been researched in general terms, and no industry specific implications have been identified, thus, there is a gap in the prevailing knowledge. In addition, the existing literature has also found that social media is a crucial requirement of the pharmaceutical industry and it can be used to overcome issues related to identity, marketing and communications.

How social media can be used beneficially and misused	
<p>For Business to improve performance and efficiency. Improve the quality of communication between customers and business organisations (Downey,2012)</p> <p>Facilitates the organisation in building relationships with online influencers, obtaining feedback and understanding the needs of customers (Ding,Eliashberg and Stromersch,2013)</p> <p>By providing crucial, relevant and updated information to help stakeholders to make rational decisions (Zarella,2009)</p> <p>Authenticated forums, provides all required information and data to people at right time and right place (Antheunis,Tates and Neiboer,2013)</p>	<p>By Irrelevant and vague information available (Bertino and Martel,2014)</p> <p>Information is provided by general public, who neither possess the required medical qualifications nor the knowledge to provide adequate information regarding the drugs (Lac et al,2012)</p> <p>illegal pharmacies are highly prominent on social media, which might potentially quite dangerous and demands strict monitoring and control of the information posted on these platforms (Tyranwski and DeAndrea,2015)</p> <p>Unauthenticated information posted on social media, might motivate the patients to improper or irrational self medication, which might have a serious influence on their health (Katsanis,2015)</p>

Table2.1: Summary table for Evaluation of social forums usage

2.3.3 Emerging role of social media in the pharmaceutical industry

The utilisation of social media in the pharmaceutical industry has grown but its use is still at an initial stage because pharmaceutical companies do not understand the benefits and reliability of social media to disseminate information about their products (Benetoli, Chen and Aslani, 2015; Reddick, 2010; Aitken, 2014). The pharmaceutical companies are not interested in social media use because they still consider it to be an unreliable source of information for their customers. Likewise, the customers do not trust information provided through social media regarding use of pharmaceutical products (Grindrod et al., 2014; Moorhead et al., 2013; Nair, Ibrahim and Celentano, 2013). Social media is still in its nascent stage for the pharmaceutical companies who are exploring how it can be utilised for their business in the market in Kuwait. There is clearly scope to increase the reach of products

with the use of social media by the pharmaceutical industry in Kuwait (Grindrod et al., 2014; Moorhead et al., 2013).

The pharmaceutical companies need to increase the use of social media for their business activities, this will increase the reach of their products and provide feedback from customers which will help the overall growth of their business. The trust issues can be resolved by improving the accuracy and reliability of the content the companies share on social media; this will develop customer trust. However, the existing research does not provide any clear implications or findings in this context (Nair, Ibrahim and Celentano, 2013; Moorhead et al., 2013; Aitken, 2014).

From the overall findings of the literature review, it was also concluded that there are some disadvantages associated with the use of social media, which create a negative influence on customers and, thus, restrict the pharmaceutical companies' use of social media. The most significant reason identified in the literature is the belief that social media is an unreliable platform for communication. Although the prevailing literature has highlighted the emerging benefits of social media for the pharmaceutical industry, and the ways in which the industry is adapting to its use for marketing products and communication with customers,

In addition, although the existing literature discusses the disadvantages related to social media, there are no significant studies regarding the implications of such disadvantages on the growth of the pharmaceutical industry. The absence such research restricts the scope of gaining an understanding of the factors that influence behavioural intention to use social media in the pharmaceutical industry. Therefore, there is a need for detailed exploration of this area, to explore the underlying factors that influence the use of social media in this area.

The findings of the literature review effectively present the rise of social media, with a huge potential to facilitate the stakeholders of the pharmaceutical industry in making decisions related to healthcare (Benetoli, Chen and Aslani, 2015; Reddick, 2010; Aitken,

2014). However, there is a need for future research to examine the ways in which the correct social media tools can be used appropriately to make effective decisions related to healthcare.

The literature has revealed that social media is useful in providing considerable, effective information regarding customer needs, preferences, and marketing trends to guide decisions regarding marketing and product development. However, the literature has also argued that there is such a large amount of information that it becomes irrelevant and is too vague to provide logical guidance for decision-making (Bertino and Matei, 2014; Wyrwoll, 2014; Lau et al., 2012). Furthermore, there are also problems related to intellectual property, unbalanced target groups, and the absence of secrecy, which further increases the ineffectiveness of the information gathered from social media for organisational decision-making. Also, the opinions of the customers posted on social media regarding the effectiveness of the products and services offered by a brand might be so negative that it tarnishes the brand's image and the reputation of the company to such an extent that it has long-term implications on the growth, sustainability and customer loyalty of the company (Peters, 2010; Ziska, 2016; Greener and Rospigliosi, 2014). These findings highlight the concerns regarding the usefulness and reliability of the information available on social media to facilitate decision-making.

Another issue of concern is that some companies might also be involved in posting fake, manipulated or misleading information about the benefits of its products and services. This hampers the reliability of the information on social media and creates concerns among customers regarding the use of social media for making health-related decisions. This highlights the need for further research on reliability. It has also been stated in the literature that the information on drugs and pharmaceutical products on social media is usually posted by non-experts and consumers, who do not possess the medical qualifications or skills to provide accurate information (Tyranwski and DeAndrea, 2015; Davison, 2011; Katsanis,

2015). Therefore, the accuracy and reliability of such information is negligible and indicates a need for further research to evaluate the role of reliability and trust in influencing the behavioural intention of the stakeholders to use social media for effective decision-making.

The findings of the literature review also highlight the fact that the reliability and trustworthiness of information on social media is not only a concern for new users and adopters, but also for existing users of social media wishing to obtain health-related information (Hanson et al., 2014; Wu, 2016; Phichitchaisopa and Naenna, 2013). This further indicates that despite the lack of reliability people refer to the internet to access information related to health and take measures to cross-check the information before using it to make health-related decisions (Abubakar and Ahmad, 2014; Payne et al., 2015; Kim, Shim and Ahn, 2011). This suggests that trust and reliability can be considered as specific barriers to the intention to use social media for making health-related decisions and highlights the need for further research in this area.

It has been evaluated that all health-related information on the Internet is not reliable and correct. It has highlighted some studies that have revealed the accuracy and reliability of information regarding health and drugs on the Internet. These findings relate to all internet-based sources, however, the findings regarding the accuracy of information in chat rooms and online support groups, which form social media, are still questionable with regard to reliability and, thus, demand further research in this area.

2.3.4 Industry-related factors that influence behavioural intention of stakeholders

The literature reviewed showed that behavioural intention is one of the key elements that determine the extent to which the user accepts and adopts technology in day-to-day activities. In this respect, various factors that influence behavioural intention have been identified from the literature discussed. These factors include perceived risk, perceived relative benefit, self-efficiency, perceived usefulness, service quality, brand orientation,

performance expectancy, and quality orientation (Payne et al., 2015; Kim, Shim and Ahn, 2011; Rader et al., 2014).

The discussion also found that educational level, occupation, perceived usefulness, perceived ease of use and income have significant impacts on behavioural intention regarding the use of technology and social media (Abubakar and Ahmad, 2014; Payne et al., 2015; Kim, Shim and Ahn, 2011). Higher price has a negative impact on behavioural intention, while the impact of gender on behavioural intention could not be clearly identified. McGowan et al. (2012) emphasised that the frequency of use of social media for decisions related to healthcare is influenced by several factors, such as a positive attitude towards the use of technology, perceived usefulness of the technology to attain improved performance outcomes and perceived ease of use of the technology. The literature also asserted that these are the most significant factors that influence the use of social media by the public for decisions related to healthcare (McGowan et al., 2012). In contrast, factors such as demographic variables including gender, age and years of qualification are not associated with internet-based communication technologies such as social media (George, Rovniak and Kraschnewski, 2013; Cline and Hynes, 2001; Rolls et al., 2016)). Therefore, from these findings, it can be concluded that there is a comprehensive range of factors related to the perceptions and attitudes of stakeholders that influence their behavioural intentions while adopting technology. There is a need for further research to determine the exact impact of the factors identified on behavioural intention in terms of positive, negative, and the extent of, influence.

The examination of the literature discussed identified that there has been limited study understanding the factors that influence the behaviour of stakeholders associated with the pharmaceutical industry regarding the application of information technology and social media (Abubakar and Ahmad, 2014; Mousavi and Demirkan, 2013). The factors that influence

behavioural intention in the pharmaceutical industry include organisational readiness, ability to provide solutions to complex problems, technological, and environmental contexts. Other factors also include exchange, decision-making, behavioural change and health information seeking (Mardikyan, Besiroglu and Uzmaya, 2012; Payne et al., 2015; Kim, Shim and Ahn, 2011). Research found that the gradual acceptance and use of social media technology has been increasing among underserved primary care patients and has been helpful in facilitating coordination between these patients and healthcare providers (Weinstein and Sandman, 1992; Wimmer et al., 2013; Mousavi and Demirkan, 2013).

However, the literature has also revealed that there are some pertinent barriers that restrict the adoption and acceptance of social media in the pharmaceutical industry. There is a lack of adequate knowledge of privacy norms and disclosure norms to gain full advantage of the sharing of information on social media (Mousavi and Demirkan, 2013; Phichitchaisopa and Naenna, 2013). The factors creating barriers to the usage of technology include the fear of negative impact due to breaches of confidentiality, issues of privacy, unreliability of information, fear of the unknown, incompatibility of technology with values, work practices, experiences and the needs of the user (Hanson et al., 2014; Wu, 2016; Phichitchaisopa and Naenna, 2013).

It can also be concluded that although there is scope for the use of social media in healthcare, its usage is limited because of these factors, which influence the behavioural intention among stakeholders associated with the pharmaceutical industry. There is, thus, a need for further research that focuses on the compatibility of the technology with the functioning of the pharmaceutical companies in order to obtain optimal benefit from social media use (Hanson et al., 2014; Wu, 2016; Wimmer et al., 2013).

The literature review revealed an absence of research on the factors influencing behavioural intention to use social media, specifically for stakeholders in the pharmaceutical

industry. There is a considerable amount of research on the factors influencing the intention to use technology and its adoption, but limited studies that provide a detailed and in-depth explanation of the factors influencing behavioural intention to use social media, particularly in the pharmaceutical industry. While the models used in the past for determination of such factors have limited significance and implications in the pharmaceutical industry (Phichitchaisopa and Naenna, 2013; Coskuncay, 2013; Cline and Hynes, 2001). This highlights the need for further research to examine the exact factors influencing the use of social media in the pharmaceutical industry. Among the studies undertaken to date, some factors such as performance expectancy, social influence and trust have been examined and highlighted as the key factors influencing intention to use technology. However, there is a lack of significant research to evaluate the implications of these factors regarding the use of social media in the pharmaceutical industry for making decisions regarding health (Barry and Pearson, 2015; Phichitchaisopa and Naenna, 2013). Therefore, there is a need for research in this area to examine these factors.

2.3.5 Behavioural intention regarding the use of social media in healthcare

Social media use is dependent upon the intention of the stakeholders. This is affected by several factors which should be evaluated. The literature review found that behavioural intention can be moderated by different factors under diverse conditions (Kim et al., 2016; Khan, Saleh and Nivarthi, 2015; Barry and Pearson, 2015). There has been a great deal of research to identify the factors affecting the behavioural intention of stakeholders to use social media. The attainment value, trust, attitude, and gender are some main factors which can affect the behavioural intention of users of social media (Khan, Saleh and Nivarthi, 2015; Barry and Pearson, 2015; Edwin et al., 2005).

There is a need to evaluate the industry factors related to behavioural intention to use social media in the case of pharmaceutical companies (Abubakar and Ahmad, 2014; Payne et

al., 2015; Rolls et al., 2016; Agrawal and Kaur, 2015). This has given rise to the research question regarding the evaluation of the industry factors that affect behavioural intention to select social media for business purposes. The research gap in relation to the factors influencing behavioural intention indicates that there is a need for an evaluation of the factors that are capable of affecting the relationship of dependent variables and behavioural intention to use social media within the pharmaceutical industry. There is also a research gap regarding the decision-making process involved in making crucial business decisions in pharmaceuticals, which is significantly affected by social media and the information and knowledge shared on it.

2.4 Research questions

2.4.1 Final conclusion and knowledge gap for the determination of research question 1

There is a need to evaluate the industry factors related to health that affect the behavioural intentions of stakeholders to use social media. The research question arises from the need to evaluate the factors that affect the behaviour of stakeholders when accepting and adopting social media tools and applications (Hanson et al., 2014; Wu, 2016; Phichitchaisopa and Naenna, 2013). The research gap in relation to factors influencing stakeholders indicates that there should be an evaluation of the reasons and relevance of the factors for adoption of social media in order to increase its use and to facilitate increased knowledge sharing. The business decisions made by all stakeholders are influenced by social media and its content helps to enhance the efficiency of business decisions (Hanson et al., 2014; Wu, 2016; Wimmer et al., 2013).

2.4.2 Final conclusion and gap for the determination of research question 2

There is a need to evaluate the industry factors related to behavioural intention to use social media in the case of pharmaceutical companies (Abubakar and Ahmad, 2014; Payne et al., 2015; Rolls et al., 2016; Khan, Saleh and Nivarthi, 2015; Barry and Pearson, 2015; Kim, Shim and Ahn, 2011). The research question arises from the need to evaluate the industry factors that affect the behavioural intention to select social media for business purposes. The research gap that exists in relation to factors influencing this behavioural intention indicates that there is a need for the evaluation of factors capable of affecting the relationship of dependent variables and behavioural intention to use social media within the pharmaceutical industry.

2.5 Summary

This literature chapter was divided into sections to provide a detailed and comprehensive examination of the issues. The major aspects of the current research were categorised into different themes in order to extract and evaluate the required information thoroughly.

The literature review provided useful assistance to establish current knowledge of the influence of social media on stakeholders' behavioural intention to use social media for health-related issues in the pharmaceutical industry in Kuwait. The collective views of the authors infer that the use of social media has brought about changes in the decision-making process in every business. The pharmaceutical business is not untouched by the influence of social media. According to the majority of researchers' views, social media is used extensively in the advertising and promotion of pharmaceutical products and services (Ding, 2013). The individual context, organisational context, technological context and the cultural context are all important in framing decisions regarding the acceptance of technology such as social media.

As regards the use of social media by individuals in Kuwait, the literature review revealed that this is affected by three factors: performance, expectancy and social influence. Furthermore, there are other moderators such as age, gender, and experience and educational level, which affect the use of social media by individuals. The literature discussed in the preceding sections found that the use of social media by individuals depends to a considerable extent on the perception of an individual about its utility.

In the views of Holzinger and Simoncic (2011), the role of cultural values is also quite significant in the adoption and use of information technology. Different cultures have varying views on the use of social media as a means of communication. As regards the organisational perspective on the adoption and use of social media, studies found that this is affected by the organisation's internal structures. In this regard, authors also stated that support from senior management is essential for the adoption and use of social media (Mousavi and Demirkan, 2013).

Another issue faced while introducing social media into practice is resistance from the employees. The authors stated that the employees fear of coming out of their comfort zone due the change that would be caused by the introduction of social media into business (Mousavi and Demirkan, 2013). Furthermore, the authors went on to comment that the implementation and adoption of social media is dependent upon the technology. Thus, the technological aspects, such as the availability of technology, at present as well as in the future, must be taken into account while implementing the use of social media into the business.

Considering all the aspects and factors influencing the use and adoption of social media in the pharmaceutical business, it is apparent that social media has a far-reaching impact on society. Therefore, it will be helpful for the pharmaceutical firms to use social media as a platform for the advertisement and promotion of their products and services.

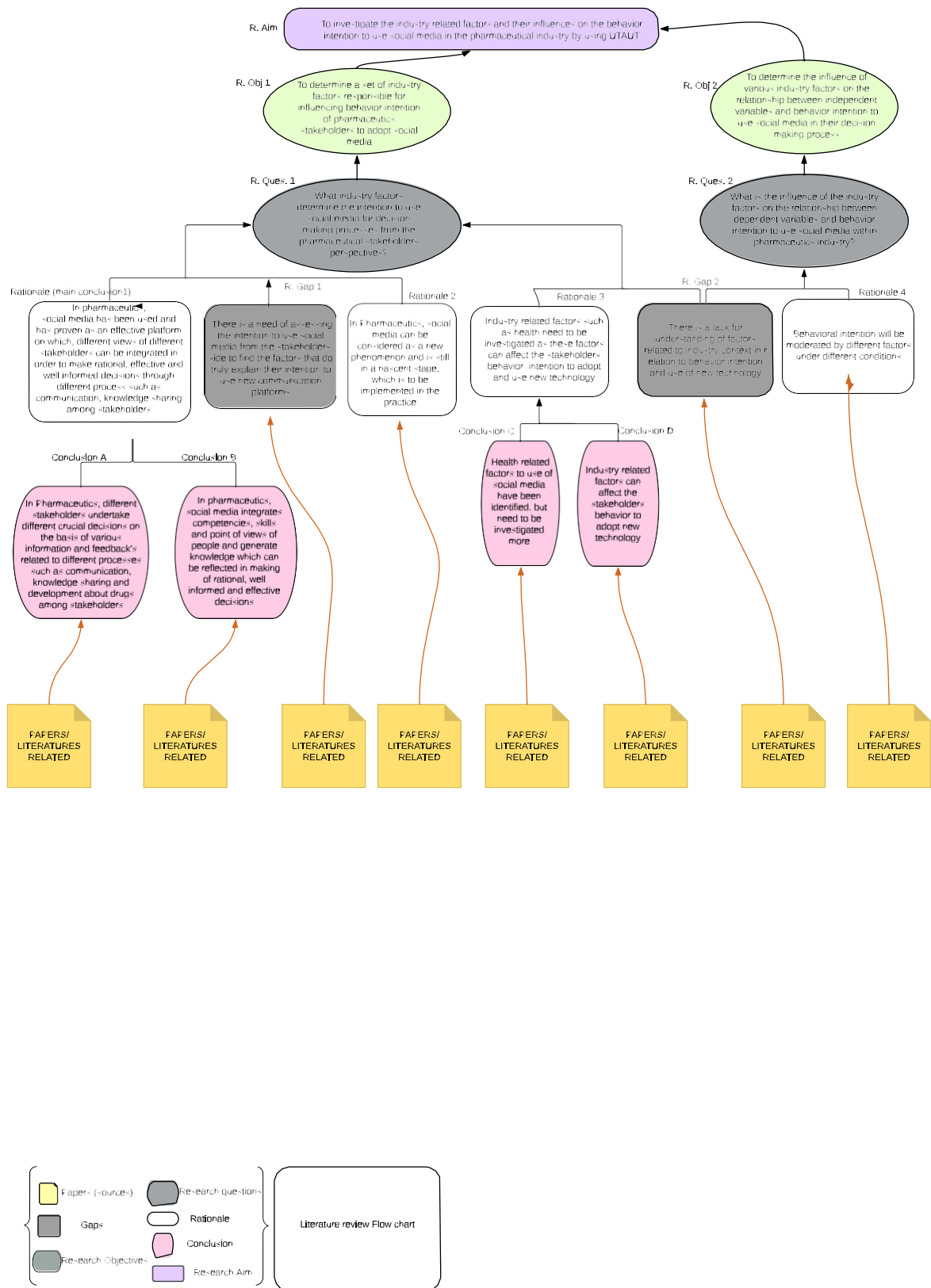


Figure 2.1: Flowchart of the literature review themes and ideas

Chapter 3: Theoretical Framework

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Chapter Three: Theoretical Framework

3.1 Introduction

Information and communication technology is changing the way businesses are conducted and is enabling them to achieve higher efficiency and improved productivity. However, merely increasing investment in ICT technology by organisations does not necessarily guarantee higher benefits and returns from technology. This highlights the fact that it is essential that an investment in technology is supported by some essential complementary assets in the form of incentives for management innovation and collaborative team work, and a clear understanding of the issues surrounding the acceptance of technology by stakeholders in the industries concerned (Attuquayefio and Addo, 2014). In this regard, technology acceptance by stakeholders in different contexts has been addressed by numerous academics and scholars in the past by proposing different models. These enable the examination of behavioural intentions towards different technologies and develop an understanding of their diffusion, adoption, acceptance and usage.

Payne et al. (2015) and Kim, Shim and Ahn (2011) further elaborated on the factors influencing the use of social media by the pharmaceutical industry and stated that it is making extensive use of social media in order to fulfil its occupational role. In this respect, the literature has highlighted the application of the Technological Acceptance Model (TAM), which explains that an individual accepts the new technology only if it can fulfil certain aspects. These individual aspects vary according to the adoption requirements and resistance. Therefore, with the help of the TAM model, the pharmaceutical companies can observe the major aspects and customer expectations, which can be beneficial for their business activities. These aspects include the availability of possible solutions for complex problems and the usefulness of the technology (Payne et al., 2015; Kim, Shim and Ahn, 2011).

According to research, the TAM model helps to understand the factors influencing the application of technology from extrinsic and intrinsic motivational perspectives, wherein the

hedonist nature represents intrinsic motivation, whereas extrinsic motivation is represented by the utilitarian nature. The literature asserts that intrinsic motivation and extrinsic motivation together serve as powerful determinants for the factors that influence behavioural intention. In addition, the literature explains that behavioural intentions to use social media in an individual are linked to three factors: performance expectancy, voluntary nature of use, and social influence (Payne et al., 2015; Kim, Shim and Ahn, 2011).

The significance and effectiveness of the TAM model can further be examined in the literature. Mardikyan, Besiroglu and Uzmaya (2012), explained the factors influencing behavioural intention with the help of the TAM Model and stated that gender and payment type does not influence behavioural intention. However, education level has a considerable impact on behavioural intention regarding the use of social media and related technology. In this respect, their research findings explained that with the increase in the level of education, people have increased tendencies to use technology and adopt it in their lives. Occupation is yet another factor that indicates differences between the groups regarding behavioural intention (Mardikyan, Besiroglu and Uzmaya, 2012).

The research also highlights that perceived usefulness is a crucial determinant of the user's adoption, acceptance and usage behaviour. There is also an intrinsic relationship between perceived usefulness and perceived ease of use. In this respect, the literature also explained that the higher price of the technology related to social media might create a negative impact on the behavioural intentions regarding its use (Mardikyan, Besiroglu and Uzmaya, 2012). These findings indicate that there has been significant, useful research regarding the use of the TAM model for determining the factors influencing the behavioural intention to use social media. Nevertheless, these findings also highlight that these studies provided only general factors and moderators that influence the behavioural intention to use social media.

In this respect, an extensive meta-analysis on the existing literature on TAM and its applications was conducted by Khan and Woosley (2011). It highlighted some pertinent concerns with the model. These included, firstly, that these studies lacked the implications of the TAM model for the business environment; secondly, the application of the TAM model had been studied only with regard to the introduction of office software or development applications; and lastly, self-reporting was a key issue associated with the TAM model, because the measures of variance in self-reported use are not precise (Khan and Woosley, 2011). From the perspective of Li (2010), TAM does not include the factors influenced by the organisational dynamics during the process of IT adoption. Li's research also indicated that there is a lack of relevance and rigour regarding the factors and an inadequate implementation of the considerations regarding the social factors influencing the adoption of IT. His research concluded that TAM is a useful model but it requires considerable expansion to include social and human factors.

The examination of these findings also highlighted that there was an absence of evaluation of the factors influencing the behavioural intention to use technology in the healthcare sector. No major studies have been conducted in the past in which the TAM model has been used to evaluate the factors influencing intention to use technology in the healthcare or the pharmaceutical industry (Li, 2010). Schnall and Bakken (2011) argued that the TAM model indicates subjective factors and in comparison, the UTAUT model (the Unified Theory of Acceptance and Use of Technology theory) includes both the subjective and the objective factors, thereby highlighting the wider scope and relevance of the UTAUT model to determine the factors influencing intention to use technology in the healthcare and pharmaceutical industry. The literature further emphasised that the TAM model is affected by the issue of self-reporting and low explanations of variance. This has highlighted the potential to introduce bias into the study and, thus, it is not a suitable and effective model for

evaluating the factors influencing intention to use technology in the pharmaceutical industry (Schnall and Bakken, 2011).

3.2 The UTAUT model and its constructs and moderators

The Unified Theory of Acceptance and Use of technology (UTAUT) model postulated by Venkatesh et al., (2003) the most relevant key factors that influence the acceptance of information technology and its usage, has been used in this research. Under this model, four exogenous variables: effort expectancy, performance expectancy, social influence and facilitating conditions, have been determined along with two endogenous variables: intention to use behaviour and use technology; and four moderator: age, gender, voluntariness and experience (Oye, Iahad and Ab. Rahim, 2012). These determinants or variables have been identified by condensing all of the 32 constructs found in the prevailing eight models (See Table 3.1).

Table 3.1: Definitions and the root cause

Construct	Definition	Root Constructs
Performance expectancy	The degree to which an individual believes that using the system will help him or her to attain gains in performance	'Perceived usefulness from TAM and C-TAM-TPB, 'extrinsic motivation from MM, 'Job-fit' from MPCU, 'relative advantage' from IDT, and 'Outcome expectation' from SCT.
Effort expectancy	The degree of ease associated with the use of the system	'Perceived ease of use' from TAM, 'Complexity from MPCU, and 'ease of use' from IDT
Social influence	The degree to which an individual perceived that important others believe he or she should use the new system	'Subjective norm' in TRA, TAM2, TPB and C-TAM-TPB, 'social factors' in MPCU, and 'Image' in IDT
Facilitating conditions	The degree to which an individual believes that an organisation and technical infrastructure exists to support use of the system	'Perceived behavioural control' from TPB, C-TAM-TPB, 'Facilitating conditions' from MPCU and 'compatibility' from IDT

(Source: Oye, Iahad and Ab. Rahim, 2012)

It has been analysed that UTAUT model helps in examining the core factors exerting influence on the acceptance and usage of information technology. As per this model four crucial exogenous variables impacting technological adaptation in a particular domain include effort expectancy, social influence, performance expectancy and facilitating. Apart from this, two endogenous variables include intention and behaviour for use of technology. The four moderators that can be considered for prediction about the level of technology acceptance are age, gender, voluntary engagement and experience. Apart from this, it is examined that consideration of this model can provide necessary direction about implementation of a particular plan encompassing use of advanced technology for accomplishing any defined motive.

3.2.1 Performance expectancy

Performance expectancy is the belief that an individual or a company can expect maximum benefits with regard to its better performance. With regard to performance expectancy, expectancy theory can be taken into consideration. The expectancy theory depicts that a person or a company will act in a certain way, in which it expects the results to be achieved. The behaviour of an individual is guided by his expectancy, and thus, he undertakes his tasks. It has been explained as the degree to which an individual believes that the use of a system can be helpful to improve job performance. The literature has highlighted that performance expectancy has a highly significant influence on behavioural intention (Miner, 2015; Pauly, McGuire and Barros, 2012; Suls and Wheeler, 2013). Therefore, in order to satisfy specific needs, different individuals and companies undertake different activities and seek specific means to carry out their activities and operations. In this regard, gratification theory can be studied to understand the pattern of activities carried out by different companies so as to fulfil their expectations. According to the theory of gratification, people always seek specific media and means for their operations so as to achieve specific

objectives. It is an audience-centred approach that aims to target a large audience through some specific media (Miner, 2015). The literature has further argued that despite examination of a relationship between performance expectancy and behavioural intentions, some studies have stated that there is no significant association between the two factors. This highlights the need for further investigation because the relationship between performance and behavioural intention continues to be inconclusive (Abubakar and Ahmad, 2013; Miner, 2015; Suls and Wheeler, 2013). Therefore, it is analysed that as per expectancy theory an individual or an organisations acts in way as essential for achieving desired outcomes. An individual's or an entity's behaviour is regulated by its expectations in accordance to which they modify their practices and performances.

Lin and Lu (2011) further highlighted that the use of social media by the pharmaceutical companies of Kuwait can enhance their online networks. Social media has emerged as an important means to expand the network of stakeholders in industries in recent years (Lin and Lu, 2011). This can be studied from the perspective of network externalities and motivation theory, which states that people use social networks to develop their knowledge, by making contact with the maximum number of sources available on social media. For this purpose, the pharmaceutical industry can incorporate the tools of social media for advertising, product research, patient recruitment, collaboration and marketing (Lin and Lu, 2011; Cronan, and Al-Rafee, 2008). It is inferred from this instance that promotional campaigns organised over different social media platforms can offer variety of benefits in triggering development of the pharmaceutical industry. Social media can be used by different organisations functioning in the pharmaceutical industry for promotional purpose, expanding their reach, stimulating admission of patients and forming relationships with the key stakeholders.

3.2.2 Effort expectancy

Kaba and Toure (2014) explained that effort expectancy is the belief that the efforts applied by an individual or a company lead to the achievement of the desired results or expectations. From the perspective of Abubakar and Ahmad (2013), effort expectancy refers to the degree of ease related to the application and adoption of a system. The literature asserts that the influence of effort expectancy on behavioural intentions is higher among older workers and younger females and thus gender, experience and age are moderators to the relationship between the two constructs.

Abubakar and Ahmad (2013) stated that efforts lead to the performance and performance leads to the results. The effort expectancy theory has a great role to play in the pharmaceutical industry in countries such as Kuwait. Utilising this theory, pharmaceutical companies can develop, produce and market products directed at their target audience. Depending upon the effort they must use, they can integrate information from different sources and improve their performance (Kaba and Toure, 2014). For example, in relation to pharmaceutical product marketing activities, they can collect current information about trends followed in the market in a more convenient, easy and cost-effective manner with the help of social media tools. This information, accessed via information and communication technology, is applicable to all product lines of the pharmaceutical industry, and is not just confined to beauty products, supplements or medication. However, the literature also highlighted that it is the physician who determines the medicines that are to be prescribed to patients and, thus, they are responsible for choosing between the medicinal products of competing brands.

Magalhaes, Jahankhani and Hessami (2010) found that companies and people are rational and can control their efforts as per their goals and objectives. The authors emphasised the application of effort expectancy on the pharmaceutical companies in the same

and equal manner. The efforts applied by different companies also depend upon the intention of the company to apply effort. In this research, the authors, however, did not find a direct relation between expectancy and intention to perform.

3.2.3 Social Influence

From the perspective of Harrington (2014), the use of social media for the promotion of the pharmaceutical industry is largely influenced by the lifestyle, thinking and behaviour pattern of the audience and the emerging trends in the surrounding environment. Social media has the ability to be influenced by the lifestyle of people in society. Nowadays, social media has become an important part of any industry for marketing its products and services. Social media is a tool that can be used to gather information about a number of aspects of the world. In this respect, Mardikyan, Besiroglu and Uzmaya (2012) asserted that intention to use a new technology is largely influenced by the social context and environment of the people. These further highlights that there might be a significant relationship between behavioural intention and social influence. Their research stated that using social media people can learn about different things that can change their life pattern or the way in which they live, and the kind of social environment that surrounds the behavioural intention (Harrington, 2014; Mardikyan, Besiroglu and Uzmaya, 2012; Matook, Brown and Rolf, 2015).

According to Muhlen and Machado (2012), social media use has increased among the younger clinicians, which indicates that their interest is increasing over time. There is a need to increase awareness and interest among the pharmaceutical companies to use social media to increase their business efficiency (Muhlen and Machado, 2012). In this respect, McFarland and Wehbe-Alamah (2014) explained Leininger's Culture Care Theory, which emerged as a nursing theory. This theory is also used in pharmaceutical companies in Kuwait to provide care and cater for the health needs of individuals and families. This theory is entirely based on the belief in providing care and sympathy to the patients. Bringing culture and care

together is the main idea of this theory, which can be effective in providing emotional support and generating confidence in the use of social media among the patient-customers group of the external stakeholders (McFarland and Wehbe-Alamah, 2014; Muhlen and Machado, 2012; Jiang and Chen, 2015).

3.2.4 Facilitating Conditions

Facilitating conditions are those conditions that make the use of technology easy for the users. Facilitating conditions have a direct behavioural effect on the usage pattern and attitude of the users of technology in their daily life. It refers to those situations in which an individual believes that the facilities and infrastructures of the organisation are sufficient to support the technology systems used in the organisation (Panagopoulos, 2010). In regard to the subject area of the research, it is explored and assessed that to encourage productive use of social media domains in the supporting sustainability of the pharmaceutical industry; it is important to inculcate facilitating condition in the environment to inspire people for accepting advancements.

According to Panagopoulos (2010), there is a relationship between facilitating conditions and the performance of individuals and organisations. His research explained that with the increase in age and experience, the relationship between facilitating conditions and performance of the individuals and organisations increases. According to the author, a facilitating condition can be hypothesised to exert an influence on the usage behaviour in a direct manner (Panagopoulos, 2010). From the perspective of Im, Hong and Kang (2011) facilitating conditions are equally applicable in the health care industries and pharmaceutical companies. Facilitating conditions are those aspects that make the operations easy and convenient, in relation to the use of technology. Therefore, technical support should be provided in the company so as to make the use of technical tasks easy. The use of technology in a pharmaceutical company will be facilitated if there is access to technical support (Im,

Hong and Kang, 2011). The research findings further explained that facilitating conditions are key determinants of adoption of technology, because when the users do not have sufficient time for training, or when they experience considerable difficulties regarding compatibility with technology, they tend to demonstrate less intention to use technology. The research literature also highlighted that facilitating conditions have a positive relation with perceived usefulness and perceived ease of use (Yang and Forney, 2013).

3.3 Adopted Unified Theory of Acceptance and Use of Technology (UTAUT) Model

The Unified Theory of Acceptance and Use of Technology Model (UTAUT) were propounded by Venkatesh as a technology acceptance model. The theory explains the overall behaviour and intentions of users of an information system. This theory is the result of eight technology acceptance theories and models. In this model, the intention and behaviour of a person while using information technology is explained through four different aspects including performance expectancy, effort expectancy, social influence, and facilitating conditions (Al-Suqri and Nasser, 2015).

According to Al-Suqri and Nasser (2015), the UTAUT model can be applied in social media in order to understand the tools used for the purposes of communication and marketing activities. In the view of Abubakar and Ahmad (2014), UTAUT can be used to extend the customers' relationship at a wide level because of the understanding of their behavioural intention. It helps the managers to understand the importance of the 'point of sale' to extend the customers' relationship by enlarging the reach of the products to the customers, as well as gaining an understanding of the market trends by facilitating examination of the analytics and readership statistics at a granular level. This plays a key role in enabling the pharmaceutical industry to undertake informed decision-making (Abubakar and Ahmad, 2014). Thus, it is evaluated that UTAUT model can provide needed assistance in incorporation of social media tools in marketing and promotional context of pharmaceutical companies in Kuwait,

especially in enlarging customer base, attaining customer loyalty and understanding requirements of the target audience.

According to Moorhead (2013), social media is useful tool for the pharmaceutical companies because it is used by patients, the public, and others. It is a good platform on which to share medical information through marketing and advertising. However, there is a need to establish effective communications with the internal and external stakeholders to improve the pharmaceutical products' quality and performance (Grajales et al., 2014; Bell, Douglas and Cutts, 2014). Therefore, it is essential to understand the risks and perceived risks associated with social media marketing to increase the stakeholders' trust in the use of social media to obtain health-related information (Moorhead et al., 2013).

According to Resatsch (2010), through the use of the UTAUT model in pharmaceutical companies, the overall qualitative aspects and quantitative aspects of its operations can be examined. This can be done through the four aspects of this model which are discussed above (Resatsch, 2010).

3.3.1 Reviewing the UTAUT indirect constructs

According to Livermore and Celia (2012), in the UTAUT model performance expectancy is a construct in which a company believes that by using a particular technology they will obtain an expected output. In effort expectancy, the company believes that the new system adopted will be easy to use. In social influence, the company considers the pressure exerted by some external source to use a new technology, and facilitating conditions are the infrastructure and other resources that will help the company to adopt the new system. The moderators of the model, which are gender, experience, voluntary use and age, influence the model because they act as the main factors that determine whether or not people will use the technology (Livermore and Celia, 2012).

Technology usage has increased over the years. Children and adolescents use technology in many forms to fulfil their needs. People also use technology for communication purposes, which may include websites such as Facebook and Twitter. The attitude of people may vary towards the usage of technology on the basis of gender or age group (Lee, 2014). According to the report of Ofcom (2014), children in the age group from 5 to 15 years like to use online media rather than watch TV. This increase in the use of online media can help a company to promote its product, as children will be directly influenced (Ofcom, 2014). Generally, children prefer to use their personal devices to access the internet. The age group of 12 to 15 years are more inclined to use tablets or mobile phones to access the internet (Ofcom, 2014). Ofcom has used data to prove that the usage of the internet among the age group of 5 to 15 years gives the correct information on the topic. Thus, it is analysed that the widespread use of digital technology especially social media platforms for different needs by adolescents, as well as, children is a profitable opportunity that can be availed by a pharmaceutical company for spreading its market reach and ultimately foster profitability.

According to Lee (2014), people use social media more often nowadays. Social media helps the user to reach out to a large number of people around the world, simply by connecting into a network. The younger generation seem to be familiar with the functionalities of social media websites. It was found that the younger generation spends up to 6.5 hours per day on different social media websites (Lee, 2014). In this review, Lee's literature review of different authors proved that social media usage is increasing, and that usage depends upon people's attitudes and intentions. Lee found that people are emotionally attached to social media websites at their workplaces. Companies spend a great deal on social media websites to promote their brand or image, but the companies are not aware of the behavioural changes of people from these websites. Therefore, the companies sometimes

target the wrong group of people, which leads to major losses. It was also found that people use social media websites according to the ease provided to them, their attitude and intention (Lee, 2014).

3.3.2 Removing facilitating conditions as not directly affecting behavioural intention

Facilitating conditions make the use of the technology easy so that customers can use and understand it easily. These conditions do not affect the behavioural intentions of the customers, who are only concerned with the results associated with the technology they are using. If the results are according to their expectations, the technology is suitable for the customers.

According to Gasco (2012), the facilitating conditions can affect the behaviour of the user, but do not affect their behavioural intention. The facilitating conditions include the way in which a particular technology is designed for its users. The design can attract customers, but if the technology does not give proper results, it is not used. In the pharmaceutical industry, technology can help to promote a company's products (Gasco, 2012). However, note that this research seeks to examine behavioural intention regarding the usage of social media in the pharmaceutical industry, it does not aim to explore behaviour or usage of technology, which are more directly related to facilitating factors.

3.3.3 Additional construct for the modified model

According to Huang and Kao (2015), hedonistic motivation is something that gives users internal satisfaction from using technology. The hedonistic motivation of different users can vary; therefore, it can be said that every person has individual behaviour and as a result of this their choices change. If a company wants to promote its brand or image, the company needs to explore the hedonistic motivation of individuals, so that the company can gain advantage by promoting itself appropriately (Huang and Kao, 2015). Hence, in order to elevate productivity and inflate profitability of the pharmaceutical industry it is necessary to

investigate and examine hedonistic motivational aspects for target individuals to identify possibility of deviation in their choices likely to impact efficacy of a company's promotional and management efforts diverted via technological means.

3.3.4 Authenticated credibility

According to Jabbour and Yamout (2012), maintaining public health is very important for the pharmaceutical industry. Nevertheless, the industry is often accused of preferring profits over patients' health. In this respect, the literature emphasises that the health of the public can only be maintained if the quality of pharmaceutical products never fails. The pharmaceutical companies must verify that their products are good for health and implement systems that maintain a regular check on quality assurance. If a company wants to build trust, they should provide the best quality products (Jabbour and Yamout, 2012).

Uncertainty Reduction Theory (Dainton and Zelle, 2010) is a theory related to communication. This theory focuses on people's initial communication, which influences the actual communication process. The theory states that while communicating people need information so that uncertainties can be removed. This information will be helpful to predict the behaviour and the resultant actions that will lead to the development of a relationship between the two parties (Dainton and Zelle, 2010). This theory can benefit the pharmaceutical industry as, if a company provides correct product information during the sales process, people will trust in the company's product and a relationship is maintained (Samovar, Porter and McDaniel, 2011).

3.3.5 Trust

It is also important for any pharmaceutical company to communicate its innovations through the use of technology. This is because there are numerous risks associated with the pharmaceutical industry, such as the risks related to the potential loss of competitive advantage and industrial espionage. Thus, it is essential for the industry to be cautious while making use of social media for communication. This can help the company to gain a

competitive advantage (Edwards, Fox and Stonier, 2011). In their study, Edwards, Fox and Stonier used the example of different countries and the importance of trust in the pharmaceutical industry. According to Hajli (2014), with the emergence of advanced technologies that facilitate social interaction over time and distance, there are inherent risks and uncertainties associated with the use of virtual environments. This indicates that development of user trust in the virtual world is highly significant in the usage of technology by users in the pharmaceutical industry. The literature explains that trust exists when an individual has confidence in the integrity and reliability of the entity that offers the technology. Users' trust has been subjected to empirical testing and has been verified for IT usage behaviour in different contexts (Hajli, 2014). The literature in relation to the online environment has also revealed that user trust is an important factor, not only for the adoption of technology, but also for behavioural intention and usage of technology. It is also considered to be a crucial salient feature for developing positive behavioural intention towards the usage of technology. These findings reveal that there is a considerable relationship between trust and behavioural intention for the usage of social media among the stakeholders of the pharmaceutical industry (Hajli, 2014).

This type of trust is built with a customer if the information provided by the company during any communication is always true. This type of trust builds confidence in the customer and they rely on the product willingly (Riyad, 2013). Affective trust theory is related to emotions. According to this theory, the company is able to generate a level of care for the company. This feeling of care provides strength to the company in the market. In order to build trust, customers should be motivated and be provided with the correct information (Riyad, 2013). Trust can also be related to Uncertainty Reduction Theory because this theory states that the company should provide correct information to maintain a

relationship between the two parties (Dainton and Zelle, 2010). This also indicates that there is a positive relationship between trust and credibility.

3.4 Adopted Unified Theory of Acceptance and Use of Technology (UTAUT) Model

The determinants of the UTAUT ((the Unified Theory of Acceptance and Use of Technology theory) model, performance expectancy, effort expectancy and social influence, have an effect on the use of the internet by customers. Performance expectancy and the behavioural intention of the customer are strongly related because pharmaceutical industry customers have expectations about the technology they are using, which can change their behaviour. Therefore, the companies should introduce features into their technology to attract customers and increase their use of technology (Kamara, 2013).

According to Wang and Wang (2010), the three additional constructs or determinants to the UTAUT model (perceived playfulness, perceived value, and palm-sized computer self-efficacy) also use behaviour, facilitating conditions, and experience. These determinants in the third stage determine the acceptance of the internet by the customers. Perceived playfulness does not have a major influence on the behavioural intentions of the users (Wang and Wang, 2010).

3.5 Unified Theory of Acceptance and Use of Technology Moderators

The UTAUT model states that an individual uses personal perceptions and intentions in order to modify their behaviour regarding the acceptance or rejection of technology. All the three core areas of this model suggest that there will be an impact on the usage intention and behaviour of the stakeholders. Figure 3.1 below depicts the UTAUT structure.

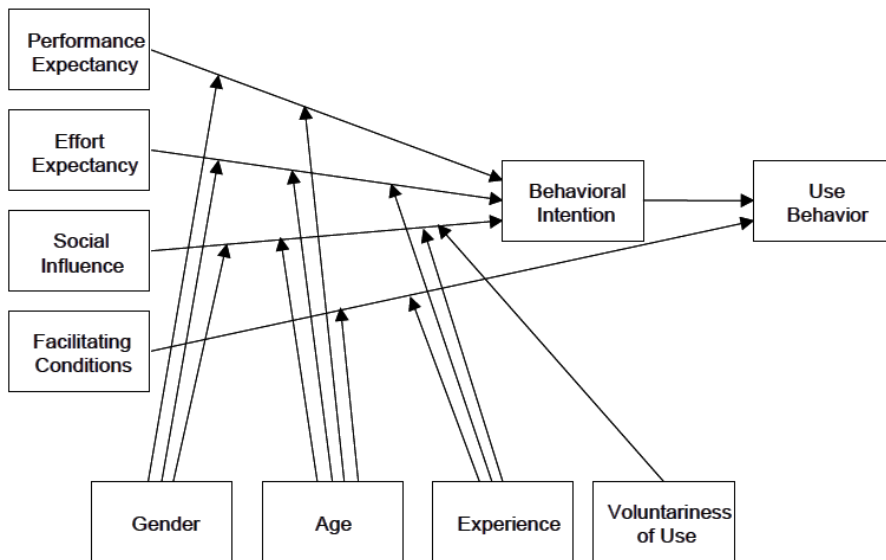


Figure 3.1: Constructs of the UTAUT Model

(Source: Venkatesh, 2003)

According to Wu, Yu and Weng (2012), gender, age, experience and voluntariness of use play a significant role in determining the behavioural intention with regard to social media of the stakeholders associated with the pharmaceutical industry. The impact of the four constructs on behavioural intention is mediated by gender, age, experience and voluntariness of use (Afonso et al., 2012). In addition, with regard to behavioural intention to use social media, Huang, Choi, Chengalur-Smith and Indushobha (2010) stated that the moderator, gender, has a direct impact on the three constructs of performance expectancy, effort expectancy and social influences. The moderator, age, has a direct impact on the four constructs of performance expectancy, effort expectancy, social influences and facilitating conditions. The moderator experience has a direct impact on the three constructs of effort expectancy, social influences and facilitating conditions, and the moderator, voluntariness of use, has a direct impact on the third construct which is social influences. Hence, in the context of the pharmaceutical industry, the behavioural intention of the stakeholders is determined based on some of these moderators.

3.5.1 Age

According to Reuter et al. (2010), there is a difference in the stakeholders' behaviour and intention due to the age factor. The age differential changes the intentions, planning, and physical activities of all types of related stakeholders. The most important stakeholder in the pharmaceutical industry is the customer because their age differential necessitates change in the planning of social media strategy and planning for the effective use of information technology. It is necessary to make different mechanisms for dealing with the various age groups of the stakeholders (Abubakar and Ahmad, 2014; Reuter et al., 2010). The younger consumers, middle-aged consumers and older consumers all have differences in their acceptance or rejection of technology, due to different intentions and behaviour. This indicates that the industry should create different strategies for social media used to disseminate crucial and essential information across the different stakeholder groups (Abubakar and Ahmad, 2014).

3.5.2 Gender

According to Im and Lim (2008), the gender factor is important for consideration of the stress, cultural hesitance, distrust, and ethical issues. Gender difference affects three core areas of the UTAUT model: performance expectancy, social influence and effort expectancy. Males and females have a difference in their preferences, which means that the pharmaceutical industry must utilise different mechanisms, strategies and planning regarding the use of information technology in the form of social media to have better platforms for communication (Im and Lim, 2008).

Furthermore, Calisir, Atahan and Saracoglu (2013) stated that gender difference affects all stakeholders due to changes in preferences, stress, cultural hesitance, distrust, and ethical issues. The industry cannot use the same social media strategy to address all the stakeholders. Social media can be beneficial to the industry if it ensures that all the factors mentioned

above are considered in its planning and strategy to address the stakeholders (Calisir, Atahan and Saracoglu, 2013).

From the perspective of Ansell (2016), the industry needs to change the planning and strategy for the same products due to differences in the ethical issues among stakeholders based on gender. The use of technology, such as social media, to address health-related issues of different genders is quite difficult due to the inability to describe some features which are best suited to all the concerned stakeholders (Ansell, 2016). It will be helpful for the industry to create different strategies and plans for the use of social media for male and female stakeholders, because of their different preferences, stress, cultural hesitance, distrust, and ethical issues (Ansell, 2016; Mazman and Usluel, 2011).

3.5.3 Experience

According to Mao and Zhang (2015), social media is an ever growing realm due to the increase in the length of time various stakeholders have spent on social media. The pharmaceutical industry in Kuwait is also taking advantage of social media, but the industry has to focus its attention on the differences between the experiences of the stakeholders. It is important for the industry to understand the multi-faceted factors of the stakeholders in order to turn their attention towards the use of social media. The role, content and media should also be considered by the pharmaceutical industry so as to gain advantage from the stakeholders' experience (Mao and Zhang, 2015).

In the view of Appel and Milch, (2011), the difference between the experiences of the stakeholders causes different issues relating to performance expectancy, social influence and effort expectancy. These differences play an important role in the effective use of social media requiring particular strategies and planning. There is a need to change the approach of the industry with the changes in the experience of the stakeholders.

Enkel and Bader (2007) reflected that motivation theory is also a matter of concern for

the pharmaceutical industry in Kuwait, because experience makes a difference in the performance expectancy and facilitating situations factors. It requires that social media should be used with a consideration of the experiences of all the groups of stakeholders, in order to familiarise them with the products and processes of the company. Stakeholders with different levels of experience are a main concern for the industry, in respect of motivational theory, because the use of social media to collect and distribute information should consider their thinking processes according to the level of experience (Enkel and Bader, 2007).

3.5.4 Adding educational level as moderator

According to Rahman, Osmangani, Daud and Fattah (2015), there is a difference between the attitude and behaviour of non-academic and academic people. These differences relate to sharing of opinions, knowledge, thoughts, and observations. There is also a difference between the critical psychological factors among non-academic and academic people, which means that they have different perceptions regarding the pharmaceutical industry's products. It is also important to understand the nature of knowledge sharing behaviour among academics and non-academics in order to predict the intention and behaviour of people in relation to the proper use of social media (Rahman, Osmangani, Daud and Fattah, 2015).

3.5.5 Adding health condition

According to Wu (2016), the intention of an individual is affected by reciprocity, activity and experience, as their intention is greatly affected by health conditions. The stakeholders' intentions change according to their health condition, thus, different health conditions generate different intentions towards technology usage by the stakeholders. The pharmaceutical industry must focus its attention on different health conditions for the use of social media to communicate its message across the industry (Wu, 2016).

In the view of Abubakar and Ahmad (2013), health condition should be used as a mediator of the UTAUT model as it can describe the different intentions and behaviour of

patients at various phases of health conditions. From the perspective of Antheunis et al. (2013), the use of social media has increased implications in health care. The use of social media is increasing and enhances knowledge, doctor-patient communication, social support, exchanges of advice, and self-care. Moreover, patients are also willing to use social media to remain updated about new developments that are taking place in health care. Furthermore, increased awareness of diseases and the ability to express feelings and emotions about health are some of the other motives encouraging the increased use of social media (Antheunis et al., 2013).

However, Benetoli et al. (2015) stated that social media works as a tool or delivery channel in providing health-related services. The technological improvements taking place in the form of the emergence of social media use have assisted the easy retrieval and use of health information. Social media is transforming passive recipients into active recipients (Benetoli et al., 2015).

The industry needs to have different strategies and plans according to the health conditions of different stakeholders. This is clearly evident from their attitude towards the products and processes within the industry. The mechanisms of communication should be in a manner that each group with a particular health condition feels an association with the products advertised (Al-Essa et al., 2015). The use of social media should address all groups with health conditions to meet their performance expectancy, social influence and effort expectancy. The industry must focus on health conditions in order to develop a valuable mechanism to address all the stakeholders with different modes of social media in respect of advertising and other forms of communication (Al-Essa et al., 2015).

Every stage of health should be of concern to the pharmaceutical industry. Social media can be used to distribute essential information, taking into consideration the thinking processes and nature of the various stakeholders at different stages of health conditions, in

order to communicate the most suitable features of products related to their concern. Therefore, the industry should change the planning and strategy used for the same products according to the health conditions of all the stakeholders at all of the different stages used to sell the products. Social media can be used as a mediator with different mechanisms, because of the ability to describe features which are best suited to all the concerned stakeholders.

3.6 Adopted UTAUT model final stage (implications for practice)

The UTAUT model adopted by the pharmaceutical industry can be a highly suitable means to reach the stakeholders. At present, the industry has no other choice to ensure messages are communicated to customers and other stakeholders. The industry should adopt this model with the creation of different mechanisms to meet the expectations of performance expectancy, social influence, and effort expectancy in the most suitable manner. The industry can use this model to focus its attention on the use of different strategies and planning to influence the intention and behaviour of the stakeholders.

The UTAUT model is the most suitable model for the industry because it considers the three main core areas. These areas are performance expectancy, social influence, and effort expectancy. In addition, additional significant, relevant areas that have been identified from the literature review findings are trust and credibility, together with moderators such as educational level and health conditions. These issues are a matter of concern for the future growth of the pharmaceutical industry in Kuwait by increasing the power and collaboration of the stakeholders. This model is able to consider the needs of pharmacists, physicians and patient stakeholders, which govern the pharmaceutical market including the performance and growth of the industry. These factors are a matter of great concern for stakeholders. The industry can use social media to address the stakeholders' issues by considering the main areas of the model for the improvement of the pharmaceutical industry's performance. The provision of more credible and trustworthy information on social media forums can increase

the stakeholders' intention to use social media forums confidently, and overcome the barriers or main factors that affect their intention to use social media forums for decisions related to their health.

From the above discussion, it is evident that the UTAUT is a beneficial model that is recommended to be applied by the pharmaceutical segment of Kuwait to proficiently utilise different social media tools for accomplishment of marketing and promotion goals. The core areas embraced by the model; performance expectancy, effort expectancy and social influence can provide substantial directives for promoting use of social media networks for business purpose. Other advantageous dimensions reflected by the model include trustworthiness and credibility accompanied with moderators such as educational qualification and health status.

3.7 Reasons for selecting UTAUT over other models

The UTAUT model is beneficial for the pharmaceutical industry because it provides effective use of information technology to ensure the distribution of information about its processes and products to all stakeholders. With the assistance of information technology, different advertising methods can communicate information to stakeholders that is most appropriate for their use and behaviour (Khechine et al., 2014).

This model was identified as the most suitable to meet the aim of this research work to use information technology for increasing awareness of processes and products. Other models focus on the increase of productivity and processes without the use of information technology. Therefore, the use of models other than UTAUT cannot meet the needs of the research. This model was also selected as the optimum model for this research because it helps to explain the variance in usage intention more effectively than other models. In this respect, Attuquayefio and Addo (2014) explained that separately the TAM model is capable of predicting technology adoption with a success rate of 30% and the TRA model can achieve

40%, while the combination of the constructs of all models into the UTAUT have increased the predictive efficiency to 70% (Attuquayefio and Addo, 2014). This highlights the significance and effectiveness of the UTAUT model over the other models. Khechine et al. (2014) further asserted that UTAUT serves as a definitive model that synthesises the prevailing knowledge and concurrently provides a foundation to guide future research. The literature also stated that the UTAUT model has a global and justified approach and incorporates a comprehensive range of explanatory variables from all models developed to explain acceptance and use of technology (Khechine et al., 2014). On the basis of these reasons indicating the superiority of UTUAT, it was identified as the most suitable and useful model to address the aim of this research.

3.8 Research conceptual Model

The conceptual model explains the connection between the main theories used in the study, which are the social influence theory, communication theory, information integration theory and expectancy theory. Social influence theory states the influence of one person's thoughts and views over others. In support of this, appropriate communication channels are required, which are based on the study of communication theory. This theory places emphasis on clear communication among people. On the basis of information integration theory, individuals can devise new information to influence the minds of others. The expectancy theory places emphasis on the selection of the right skills and knowledge to understand the information. It is assessed that proper alignment of the integration theory, communication theory and the expectancy theory can facilitate a development of a efficacious base of talents, knowledge and tactics for evoking use of social media platforms in driving profits of the Kuwait pharmaceutical industry as a whole. Thus, all these theories are related to each other, as lack of communication may affect the transfer of new information. Therefore, on the basis of the overall findings of the literature review, the following conceptual model has been

developed. It is based on the constructs and moderators determined to influence the behavioural intention to use social media discussion forums while making decisions related to health (see figure 3.2).

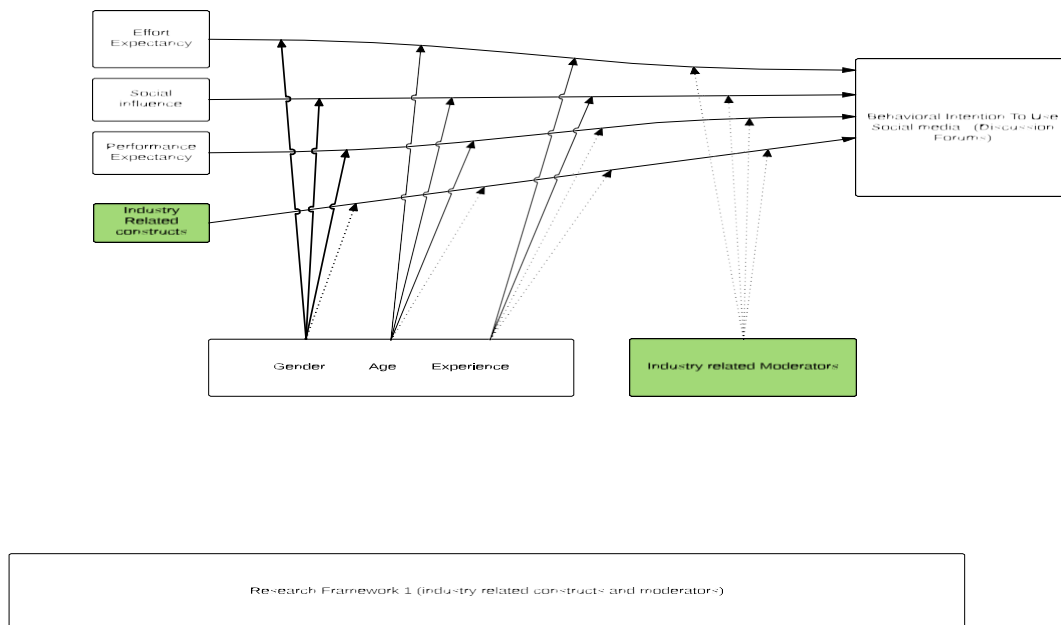


Figure 3.2: Research framework

3.9 Summary

In this chapter, the Unified Theory of Acceptance and Use of Technology (UTAUT) have been reviewed in order to address the aim of this research. According to this theory, three constructs: performance expectancy, effort expectancy and social influence, are used to explain the intention of the user to use information technology (Livermore and Celia, 2012). There are also some additional constructs in the UTAUT, such as hedonistic motivation, price, value and habit (Huang and Kao, 2015).

When considering the implementation and adoption of social media, the use of the Unified Theory of Acceptance and Use of Technology (UTAUT) model is suggested (Khechine et al., 2014; Attuquayefio and Addo, 2014). This model was considered to be the

most suitable model for firms, as it provides comprehensive coverage on the use and adoption of social media. The pharmaceutical companies operating in Kuwait should apply the UTAUT model to measure performance expectancy, social influence, and effort expectancy, along with the industry-related factors that will be explored in this study, in relation to the use of social media. The use of this model is considered to be in the interest of the stakeholders, which is the ultimate goal of any business.

Another important objective of the literature review was to ascertain the factors that influence decision-making behaviour in terms of the use of social media to make health-related decisions. The literature identified certain organisational-specific and technology-specific factors, and some factors based on social influence. From the overall conclusion of the discussion of the literature, it is apparent that the use of social media is essential for the pharmaceutical industry. Social media has emerged as a new technology that promotes the stakeholders' interests effectively. Furthermore, the literature review has been useful in understanding that social media has caused drastic changes in every sphere of human life. It has also helped to confirm that pharmaceutical companies should adopt social media as a decision-making tool to enable future progress. These findings have identified the gaps in the prevailing literature which determined that factors such as facilitating conditions were not suitable for this research, while factors such as trust and authenticated credibility, and moderators such as age, gender and experience are crucial factors, as determined from the UTAUT model, to address the aim of this research. The literature review also determined that there has been no significant research on factors such as trust, authenticated credibility, and level of education in relation to understanding the behavioural intention to use social media among the stakeholders of the pharmaceutical industry, which highlights a gap in the existing literature.

Furthermore, the literature has stated the need to investigate the industry factors affecting intention in terms of the model itself, as there is the potential for the UTAUT model to have more factors based on the industry, organisation type, or the technology itself. The third gap identified from the examination of the prevailing literature was the need to assess the use of social media from the perspective of the stakeholders, in order to make effective use of it as a crucial means of communication. Therefore, on the basis of these gaps identified in the literature review, this research seeks to examine the health-related factors in the pharmaceutical industry and their influences on behavioural intention to use social media in decisions using the UTAUT model.

Summary of Theoretical Literature sources

The literature has stated the need to investigate the industry factors affecting intention in terms of the model itself, as there is the potential for the UTAUT model to have more factors based on the industry, organisation type, or the technology itself. The third gap identified from the examination of the prevailing literature was the need to assess the use of social media from the perspective of the stakeholders, in order to make effective use of it as a crucial means of communication.

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Chapter 4: Research Methodology

4.1 Introduction

The literature review undertaken in the previous chapter has presented a detailed and in-depth evaluation of the current research on the role of social media, the benefits and risks associated with social media for the pharmaceutical industry, the prevailing models for examining actors including behavioural intention to use social media, and the industrial factors influencing the use of social media by the stakeholders of the pharmaceutical industry. The examination of the literature has, thus, highlighted some major disagreements and critical areas in the literature, which indicate pertinent knowledge gaps in respect of the research topic and demand further, detailed research (Hanson et al., 2014; Wu, 2016; Phichitchaisopa and Naenna, 2013). In this respect, it was found that there is a need to evaluate the role of reliability and trust as a factor influencing the behavioural intention of stakeholders to use social media for health-related decisions (Wu, 2016; Wimmer et al., 2013).

In addition, there is also a need to evaluate the other factors that can influence the relationship between dependent variables and behavioural intention to use social media among the stakeholders of the pharmaceutical industry (Abubakar and Ahmad, 2014; Payne et al., 2015; Rolls et al., 2016). In this regard, an empirical study based on the tenets of the positivist philosophy and mixed methods research design was conducted with the help of a survey and semi-structured interviews as data collection methods to explore the most relevant factors that influence this behavioural intention. This enabled a clear picture of the factors which influence the use of social media by people making health-related decisions to be obtained, and identified the ways in which the pharmaceutical industry can promote the use of social media for the provision of effective and widespread healthcare to all (Creswell, 2014).

This chapter integrates the key aspects of the research methodology including the research questions, rationale, methods, approaches and methodology, in order to develop the most suitable research methodology to address the aim of the research in the most logical, objective and meaningful manner (Bolt, 2014). This chapter, thus, discusses the research process, and focuses on the critical aspects of the data collection. It explains the different data collection tools and methods applied in this research, along with the key underlying logic and assumptions for their application. In this regard, Chesnay (2014) defines research methodology as a “plan of action, the strategy, design or process was undertaken to explore particular methods by selecting and showing a relation between the use and choice of the methods to attain relevant results” (p. 147). Research methodology, thus, explains the primary tools, methods and procedures followed in the research, together with the key underlying rationale and assumptions made for their use. This assists in identifying and exploring the appropriate and relevant data to answer the research questions and address the aim of the research (Flick, 2011).

This chapter is composed of ten sections. The first section presents the research’s philosophical view, with specific attention to the positivist philosophy followed in this research. The second section defines and discusses the mixed methods research design selected for this study. The third section presents an elaborate discussion of the significance, rationale and application of the different data collection methods in the research. The fourth section explains the three phases of the research and presents the details of the data collection methods and research approach used in each phase. The fifth section explains and justifies the sampling techniques and sample size used for the different data collection methods. The sixth section presents the modifications made to the data collection plan and tools following the pilot study, while the seventh section explains the qualitative and quantitative data analysis methods used in the research. The eighth section discusses the issues in the research

methodology with respect to the bias, reliability and validity of the research data; the ninth section focuses on the ethical considerations followed to present an authentic and credible research study and the final section summarises the overall chapter.

A brief overview of the research methodology applied in the present research is demonstrated in the table given below:

Research Method	Mixed research methods
Research Paradigm	Positivist paradigm
Research Approach	Deductive approach
Data Collection Method (Primary Data)	Qualitative data collection: In-depth semi-structured interviews Quantitative data collection: surveys
Data Collection Method (Secondary Data)	Library Research
Data Analysis Technique	Qualitative Analysis: NVivo technique Quantitative Analysis: Statistical Package for the Social Sciences (SPSS).

Figure: 4.1 Overview of the research methodology

4.2 Research paradigm

Research paradigm refers to the research perspective that is based on a particular set of commonly shared assumptions, beliefs, concepts and practices (Johnson and Christensen, 2010). Maxwell (2005) defines a paradigm as an integrated cluster of substantiates, assumptions, concepts, problems and variables associated with the research tools and approaches applied in the research. On the basis of this definition, a research paradigm can be explained as a pattern, a framework of a structure of scientific and scientific ideas, beliefs and values (Maxwell, 2005). Research paradigm can also be explained as a specific way of thinking and a set of rules to be followed while conducting a research process. It provides a

direction and a foundation to the research, thereby serving as the primary step of conducting research, because it provides an effective and logical direction for perceiving and understanding a social phenomenon and justifies the theoretical assumptions and fundamental beliefs underpinning the research (Johnson and Christensen, 2010). Research paradigm indicates the structure of the inquiry and methodological selections made by the researcher to study and evaluate the research problem and address the research objectives. Thus, the research paradigms inherently reflect the beliefs and perceptions regarding the world in which we live and seek to live (Levers, 2013).

Howell (2012) supports the explanation of research paradigm as a technique that guides and directs the research work, wherein the researcher's beliefs and mental model helps in determining the various factors that need to be considered while conducting the research. The practical considerations and assumptions adopted in the research philosophy are essential to underpin the design and methods used in the research. Research philosophies can be differentiated on the basis of their common values and assumptions, which has led to the development of different research paradigms. The main research paradigms are: epistemology, ontology and pragmatism (Howell, 2012).

Epistemological research philosophy determines the ways in which knowledge is acquired, developed and transferred and is classified into three types: positivist, interpretivist and realist. Under positivism, the researcher ensures the independence of the findings of the research and generates a hypothesis, which is tested with the help of quantifiable observations or statistical methods. On the contrary, in the interpretivist paradigm the researcher integrates his perceptions, values and experiences with the findings of the research and addresses the research aim through multiple interpretations. The realist paradigm involves research processes based on reality, wherein the researcher is independent of the findings and follows quantitative methods to produce unbiased results (Calcaterra, 2011). The examination of

these paradigms indicates that the positivism approach under the epistemological paradigm is suitable to examine the factors influencing behavioural intention to use social media by the stakeholders of the pharmaceutical industry because this paradigm focuses on testing the hypothesis that has been developed with the help of information gathered from the theory.

The second type of research paradigm is ontological. This focuses on the understanding of existence and thus constitutes reality. It can be classified into constructivism and objectivism. Under objectivism, the researcher is independent of his experiences and beliefs, whereas under constructivism the research findings are based on the views and experiences of the researcher. As this research seeks to examine factors influencing the behavioural intention of stakeholders while using social media and to test the relevance of the relationship between these factors, objectivism could be suitable for this research (Calcaterra, 2011). Furthermore, as this research requires the identification of the cause and effect relationship between the constructs and moderators and behavioural intention to use social media discussion forums, with the help of fundamental laws that explain regularities in human social behaviour, positivist research is more suitable for this research.

On the other hand, the interpretivist philosophy seeks to use social science to understand what is happening without exploring the cause and effect relationship between the research variables. As this research has used fundamental laws of hypothesis testing by implementing observation and check the validity of such hypothesis, which further suggests the appropriateness of the positivist philosophy in contrast to interpretivist philosophy, which does not assist hypothetic-deductive reasoning and develops ideas with the help of induction from evidence.

These factors motivated the use of the positivist paradigm to examine the factors influencing the behavioural intention to use social media by stakeholders of the pharmaceutical industry, as this paradigm enables the research hypothesis to be tested. The

hypothesis is “industry-related factors and moderators influence behavioural intention to adopt and use social media discussion forums in the pharmaceutical industry”. Mixed methods were used to effectively analyse the stakeholders’ behavioural intention to use social media for making decisions related to healthcare (Saunders, Lewis and Thornhill, 2007; Farquhar, 2012).

4.2.1 Positivist paradigm

According to the positivist paradigm, human behaviour is assumed to be passive and controlled. It makes use of empirical and objective methods of observation and data collection to explore and present the facts and prevailing knowledge. The fundamentals of the positivist paradigm are derived from science. The key feature of this paradigm is its assistance in testing the research hypothesis that has been developed after the examination of the prevailing theories and observation of the social realities (Levers, 2013). The proponents of the positivist paradigm make use of scientific methods and approaches to systematise the generation of knowledge for the research. For this purpose, the gathered data is quantified in order to describe the parameters and the relationships between them. The positivist paradigm focuses on four considerations: it emphasises phenomenalism and rejects all abstractions; it adheres to the rules of nominalism, which state that generalisations and abstractions cannot give a detailed insight into the reality; it utilises an alignment of the scientific methods and approaches, and it makes a distinction between facts and values (Krauss, 2005). Each of these aspects of the positivist philosophy made it highly suitable for the current research into behavioural intention. The utilisation of the UTAUT model assisted in testing the hypothesis and deducing logical results in an objective and empirical manner.

4.2.2 Rationale for using positivist paradigm

This research followed the positivist research paradigm because it required the investigation of the relationship between industry-related factors and the behavioural intention to use social media in the pharmaceutical industry. It used the UTAUT model, which tested the hypothesis to deduce observations that demonstrate its correctness or falseness through an objective and deductive approach (Klenke, Martin and Wallace, 2015). This paradigm has been highly effective for this research, because it has facilitated testing of the research hypothesis in an objective analytical study. The resultant critical evaluation of the data helped to derive logical and pertinent results for the research (Howell, 2012). Furthermore, this paradigm was suitable for the research as it enabled some extensions to the prevailing UTAUT model, by exploring factors, such as trust, which were critical to the behavioural intention of stakeholders to use social media discussion forums for health-related decision-making (Bacon, 2014).

The application of the positivist paradigm has provided a robust foundation enabling the research to avoid engagement with issues of insignificance and to focus on the issues of trust and reality. Thus, it is intuitively appealing (Johnson and Clark, 2006; Gava and Stern, 2015). It has, thus, allowed the research questions to be addressed, which could not have been completely answered with a wholly interpretivist approach. It has provided a basis for practical research by facilitating a detailed evaluation of the different theoretical perspectives and supporting them with quantitative interpretations to help in drawing logical and credible answers to the research questions (Ihuah and Eaton, 2013).

4.3 Research design

A research design is the construction of the entire research process through which the research problem is aligned with the empirical research findings. It can also be considered as a comprehensive framework to address the research problem that states the behaviour to be followed while conducting the research (Wimmer and Dominick, 2010). It is a plan wherein

the different steps of the research process are stated and followed to attain the end results of the research. The research design involves the choices about the types of questions that must be asked to generate the desired data, the methods of data collection, sampling techniques, tools for data analysis, and piloting and revising the research questions (Creswell, 2013). From the perspective of Yin (2013), the primary role of a research design is to minimise the probability of deriving wrong causal inferences from the data. It is a logical task that is undertaken to ensure that the evidence gathered with the help of different data collection methods assists in answering the research questions or testing the theories. It thus seeks to structure the research process in a manner that the evidence bears on alternative arguments and helps in identifying the most competitive explanation drawn from the empirical findings (Yin, 2013).

There are three types of research design: qualitative, quantitative and mixed methods. A quantitative research design uses cause and effect thinking, and measurement and observation, employs empirical strategies for inquiry and gathers data on the predetermined instruments through which statistical data can be drawn (Creswell, 2009). Alternatively, a qualitative research design involves claims based on multiple meanings of individual experiences or perceptions to develop a theory or pattern. It also makes use of ethnography, phenomenology, and grounded theory studies as strategies of inquiry to collect open-ended data and develop themes to address the research question (Maxwell, 2012). Finally, a mixed methods research design seeks to draw claims on pragmatic grounds by employing strategies for inquiry that involve data collection, either sequentially or simultaneously, to gain a detailed understanding of the research problems. For this purpose, it involves the collection of qualitative, as well as quantitative, data to address the research aim (Creswell, 2009). This research has followed a mixed methods research design.

4.3.1 Mixed Methods research design

A mixed methods research design can be regarded as a systematic method for dealing with any critical research problems. In this method, both qualitative and quantitative method will be used to collect and analyse the data. The fundamental premise of the mixed methods research design is to ensure that such integration allows for a more effective and synergetic utilisation of the available data in comparison to either qualitative or quantitative data collection and analysis methods (Tashakkori and Teddlie, 2010). Williams (2007) explained that the roots of the mixed methods research design were explored in the 1960s, as a research concept that involved combining the qualitative and quantitative methods within the same study. It has primarily emerged in the social science research, which are having some crucial implications and employ some highly in depth research requirements.

In respect of the meaning and concept of the mixed methods research design, Creswell and Clark (2011) stated that the key features of this design are that it involves collection and analysis of both qualitative and quantitative data, either concurrently or simultaneously. It uses rigorous procedures for collecting and analysing data, and integrates the data while collecting, analysing and discussing it. The application of this research design is highly effective in comparing qualitative and quantitative data to reflect comprehensive perspectives from the research respondents. Fostering scholarly interaction provides flexibility in the methodology and allows for the collection of rich and comprehensive data to address the research aim (Creswell and Clark, 2011).

Nevertheless, there are concerns regarding the complexity associated with the use of a mixed methods design in research. In this respect, Lisle (2011) asserted that the mixed methods design is complex to conduct and plan and requires cautious planning to state all the critical aspects of the research. The integration of qualitative and quantitative data during analysis involves considerable challenges for the researcher. In addition, the use of a mixed

methods design is labour intensive and requires larger resources and time in comparison with the single method studies (Lisle, 2011). However, Wisdom and Creswell (2013) argued that if undertaken carefully and correctly, the mixed methods design can be highly beneficial for social research because variation in the data collection and answers to the research question from multiple perspectives increases the validity of the research findings. It also ensures the absence of gaps in the data gathered and pre-existing assumptions, thereby, it enhances the validity of the research (Wisdom and Creswell, 2013). Therefore, these factors motivated the use of the mixed methods research design in this research.

4.3.2 Rationale for using mixed methods research design

The mixed methods research design has been used in this research because it serves as a bridge between the paradigms and methods, and increases the diversity in the research methods, which is useful when dealing with complex problems. The integration of the qualitative and quantitative findings provides more support and certainty to the research findings and, thus, leads to increased authenticity of its outcomes (Williams, 2007). It facilitates drawing from the strengths and minimising the weaknesses of the qualitative and quantitative methods. This helped to build and test the appropriate factors in the UTAUT model that influenced the intention of the stakeholders to use social media for healthcare.

The application of mixed methods in this study was crucial to understand the behavioural intentions of the stakeholders of the pharmaceutical industry while using social media. These could not have been examined critically without the help of quantitative methods (Williams, 2007). The use of qualitative methods was thus highly beneficial for gaining a deeper understanding of the implications of the factors influencing the behavioural intention of stakeholders to use social media. The quantitative methods helped to ensure the objectivity and credibility of the findings. Furthermore, the use of the mixed methods design was more suitable for this research as it is healthcare-based social research. The mixed

methods design facilitated the study of new questions, including complex phenomena related to the behaviour of people in respect of factors such as gender, age, health conditions and experience. It examined difficult to measure constructs and interactions in everyday settings of the stakeholders of the pharmaceutical industry (Wisdom and Creswell, 2013).

4.4 Data collection methods

Data collection methods are required to gather the relevant data to address the research questions. The methods used for data collection help to achieve valid and credible outcomes for the research. Data collection is considered to be the most crucial part of the research because it provides the central theoretical and empirical data that can address the research aim and objectives (Sapsford and Jupp, 2006). There are primarily two types of data collection methods: primary and secondary data collection. Primary data collection methods gather a type of data that is collected for the first time and analyses and interprets it with the help of objective or mathematical data collection methods. Primary data collection methods were applied in this research to gain first-hand information from the respondents (Wetcher-Hendricks, 2011). For this purpose, a survey and a semi-structured interview were conducted with the stakeholders of the pharmaceutical industry. On the other hand, secondary data refers to data that has been gathered in the past for some other purpose, but is closely related to the current research. It provides the perceptions and beliefs of a comprehensive range of scholars and academics on the research topic. Library research methods have been used in this research as a part of the secondary data collection method (Vartanian, 2010).

The study begins with a qualitative approach through in-depth semi-structured interviews followed by a quantitative approach wherein questionnaire surveys were conducted..

4.4.1 Secondary data: Library Research Method

4.4.1.1 Meaning, significance and rationale for using the library research method in this research

The library research method is a form of structured inquiry involving specific rules, tools and techniques. It involves the process of identifying and locating the appropriate sources that can provide specific and factual information to address the essential components of the research being conducted. The key steps involved in the library search method include a keyword or subject searches in online and print sources, database searches and website searches, citation searches in printed sources, searches with the help of published bibliographies and systematic browsing (Mann, 2015). Watzlawik and Born (2007) explained that the key advantage of the library search method is that each of the methods involved can be applied in any subject area, and the information gained can provide crucial support and credibility to the empirical findings. Furthermore, the weakness of one method can be compensated by the strengths of the other methods. However, caution is required while using the data because it is secondary data and involves a threat of out-dated data (Watzlawik and Born, 2007).

4.4.2 Primary data: in-depth semi-structured interview

4.4.2.1 Meaning, significance and rationale for using in-depth semi-structured interviews in this research

The first primary data collection method used in this research for gathering first-hand information was the interview method. This refers to a systematic method to talk and listen to people and gathers data by examining their perceptions, experiences and beliefs (Alshenqeeti, 2014). From the perspective of Nind (2008), semi-structured interviews are conversations that aim to gather a description of the perceptions of the interviewee on a specific subject that can be helpful in addressing the aim of the research. His research also highlighted some advantages associated with the interview method. In this regard, the major benefits can be understood from the illustration below (see figure 4.2):

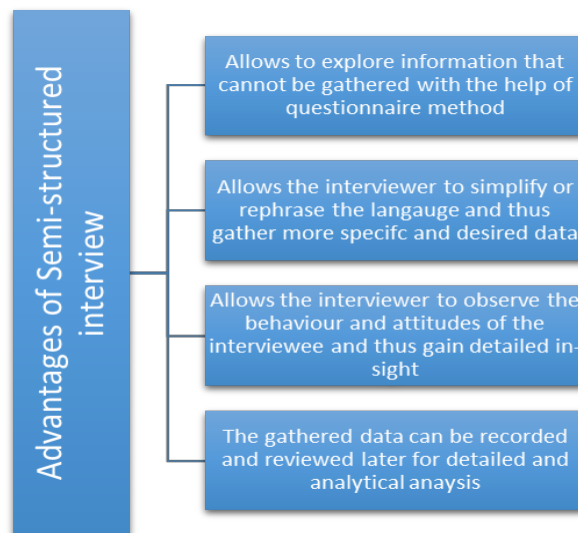


Figure 4.2: Advantages of semi-structured interview

Source: Nind, 2008; Alshenqeeti, 2014; Stacks, 2010.

As the semi-structured interview is suitable for gathering highly personalised data about the factors influencing behaviour for an examination of the experiences and perceptions of the respondents, semi-structured interviews have been used to enable an in-depth investigation into the factors influencing interviewees' intention to use social media for making decisions related to healthcare (Nind, 2008). The use of the interview method allowed the interviewer to converse comfortably with the respondents while talking about the sensitive aspects of using social media for health-related information, and added a human dimension to the impersonal data (Stacks, 2010). This helped to gain a deeper understanding of the social and behavioural aspects of the research topic. Therefore, it was identified as an appropriate method for gathering primary data in an effective manner for objective analysis.

4.4.3 Primary data: Questionnaire Survey Method

4.4.3.1 Meaning, significance and rationale for using questionnaire survey method in this research

The questionnaire survey is one of the most popular methods for gathering quantitative data. It is a primary data collection method and enables data to be gathered that is directly related to the research topic. It is undertaken in an organised and methodical manner by gathering data on the key aspects of the research from a small part of the total population with the help of survey questionnaire. The key phases of the survey method include planning, sampling, implementing, disseminating and documenting (Athanasidou, Debas and Darzi, 2010). This method is also highly effective in gathering data related to the research from a large population within a small timeframe.

The questionnaire survey method was used in this research to obtain quantitative data whose validity can be tested with the help of statistical methods (Cargan, 2007). Therefore, the application of the survey method has helped to increase the credibility and validity of the research, by allowing the researcher to test the relationship between the key factors and moderators for the UTAUT model in an objective and empirical manner.

4.5 Phases of the research

4.5.1 Phase I

4.5.1.1 Description of phase I

During the first phase of the research, an in-depth review of the literature was undertaken to examine the use and adoption of social media in the pharmaceutical industry. The literature review aimed to gain a detailed overview of the prevailing application of social media in the pharmaceutical industry, the factors influencing the behavioural intention to use social media for effective health-related decision-making and the relationship between the factors and moderators identified in the UTAUT model. Further, as this phase was guided by a weak initial hypothesis, which was “industry related factors and moderators influence

behavioural intention to adopt and use social media discussion forums in the pharmaceutical industry”, it sought to gain additional evidence from the current literature without drawing conclusions from the study of the qualitative and secondary sources of data.

The purpose of this stage was to identify the key knowledge gaps in the existing literature and to determine the areas that demanded further research, which could be addressed with the help of this research. For this purpose, a comprehensive range of theories was examined and critically evaluated to study their suitability for the research and to identify the gaps in the prevailing literature. Out of these theories, the UTAUT model was identified, after critical evaluation of other models such as TAM, to develop a conceptual framework for the research that identifies the key constructs affecting social media adoption by different stakeholders in the pharmaceutical industry. The findings of the literature review helped to determine the specific questions for the research and served as a preparatory stage for the large scale questionnaire study, in which a detailed study of the industry-related factors could be undertaken.

This phase also addressed the first objective, which sought to determine a set of factors responsible for influencing the behavioural intention of the pharmaceutical stakeholders to adopt social media such as pharmacists, physicians and patients; however, this phase only provided a generalised overview of the factors. Therefore, there was a need for a second phase, wherein the relevance of the determined factors could be tested in the pharmaceutical industry.

4.5.1.2 Data collection in phase I

The library research method was followed in this research work because it assisted in providing an effective theoretical framework for the research work. In this method, different types of academic sources, such as books, journal articles, research papers, online databases and websites providing information about the use of the UTAUT model, its adoption and the

implications in different industries were reviewed in the most effective manner to identify secondary data. The entire process was directed to explore the existing behavioural intention in relation to social media adoption in the context of decision-making in the pharmaceutical industry (Katsirikou and Skiadas, 2010). The library research method used a keyword search in online and print data, database searches, and website searches. The main keywords used were: social media, risk in social media, benefits of risk media, pharmaceutical industry, stakeholders, behavioural intention, UTAUT model and TAM model. The databases used for this research were Science Direct, EBSCO, Medline, Lexis-Nexis, ProQuest and Google Scholar.

4.5.1.3 Research approach in phase I

The research approach seeks to provide an effective direction to the research and helps to reach a logical and meaningful conclusion. It facilitates the researcher in studying, examining, analysing and deriving suitable conclusions in order to address the research question in a successful manner. This phase of the research employed a top-bottom approach. This was used as it begins from a generalised research idea and develops more specific ideas on the research topic to modify and develop the theory. As this phase involved an in-depth examination of the literature from a general research idea (use of social media discussion forums among the consumers and customers of the pharmaceutical industry) in order to develop more specific ideas to identify the research questions (behavioural intention of people to use social media discussion forums for making decisions related to healthcare), this phase of the research followed the deductive approach.

This phase has drawn heavily on the findings from the theoretical perspectives, interpretations and models to build a strong and comprehensive theoretical foundation for the research, which also serves as a key basis of the research. Moreover, to support the model developed in this phase and validate its relevance and credibility, the other phases of the

research have been conducted with the help of primary data collection methods. The conclusion of this research approach was generated through deductive reasoning derived from the general concepts and theories. Furthermore, the examination of the literature was undertaken through an induction of the outcomes of the reasonable hypothesis around the UTAUT model, and helped to explore new variables such as trust, health conditions and education level, which were facilitated with the help of the deductive approach (See Appendix 2: Hypotheses).

4.5.1.4 Limitations of phase I

There was some difficulty in accessing the data about the pharmaceutical industry because limited research has been conducted on the use of social media and the factors influencing behavioural intention to use social media in the pharmaceutical industry. These limitations were addressed by conducting the second and third phases of the research.

4.5.2 Phase II

4.5.2.1 Description of phase II

The first phase of the research provided a comprehensive and generalised overview of the industry-related factors influencing behavioural intention to use social media among the stakeholders of the pharmaceutical industry. However, there was a need for a more in-depth evaluation of the relevance of the factors identified in the UTAUT model. There was a need to clarify the understanding of the discussion forums' terminology and the factors that affect its usage. There was also a need to determine the relationship between the factors and moderators of the UTAUT model to identify their relevance in the pharmaceutical industry. The second phase of the research thus helped to address the first and second objectives of the research.

The first objective aimed to determine a set of factors responsible for influencing the behavioural intention of pharmaceutical industry stakeholders (consumers and customers) to adopt social media. Stakeholders included pharmacists, physicians and patients. The second

objective sought to determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels and sources of information for their decision-making processes. To address the two objectives stated above, in-depth semi-structured interviews and survey questionnaires were conducted with the stakeholders of the pharmaceutical industry in Kuwait.

4.5.2.2 Data collection in phase II: Interview

Interviews were conducted to explore the moderators' effect with an explanation for the presentation of new factors and moderators. The first phase of the interview was conducted with pharmacists, physicians and customers to explore the factors that affect their intention to use social media discussion forums. The purpose of conducting the interview was to explore the industry-related variables (factors and moderators) that affect intention to use social media. During this phase, face-to-face in-depth semi-structured interviews were conducted with the respondents for 30-45 minutes each. In this phase, there was three interview questionnaires for the three different stakeholders interviewed: physicians, pharmacists and customers.

4.5.2.3 Questionnaire design for the interview method used in the research

The interviews were conducted with a questionnaire, which was developed using the data gathered from the literature review and from prevailing literature for UTAUT adaptation in new technologies. The questions related to main factors of the UTAUT model were developed from previous study related to the use of UTAUT in Internet banking acceptance as new technology. The research thesis written by Tabsh (2012) was used as the fundamental and the primary source that was referred to understand, develop and structure the questionnaire for this research. This thesis was referred because it has also undertaken an in-depth exploration and examination of the factors influencing the behavioural intention of the customers to use of Internet banking with the help of the UTAUT model (Tabsh, 2012). This

made it highly similar to my research, which also seeks to examine the factors influencing behavioural intention to use social media for making decisions related to healthcare with the help of the UTAUT model. In addition to that, Tabsh (2012) also made use of a mixed method research wherein survey questionnaire and interview were used in combination to address the aim of the research and thus was in alignment with the research methodology of my research.

Table 4.1: Questions for the Interview & questionnaire

Sections of the Interview Questionnaire	Purpose and the questions stated in each section	Academic sources referred to develop the questions for each section.
Section 1	The purpose of this section is to gain a general overview of the use of social media for health related decision among people	General questions of demographic questions were adopted from the previous study of Internet banking acceptance but modified to serve this study. Industry related constructs and moderators questions were developed and added as new questions.
Section 2	The propose of this section was to explore the factors such effort expectancy, performance expectancy, facilitating conditions, trust in influencing behavioural intention to use social media for healthcare	Section 2 about (performance expectancy, effort expectancy, social influences and general questions) were adopted from the construct measurements from Tabsh (2012) study with removing some questions that not related to UTAUT original model such as attitude related questions and modified to fit to the social media usage context in pharmaceutical industries and Venkatesh (2003). New questions for the factors and moderators related to the industry were developed

		with the help of Tabsh, (2012) and the literature review
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To develop the new questions in the questionnaires and to obtain guidelines for the modification and alteration in the questions and their structure, some additional literature were also referred to. These included Lorenzo-Romero, Alarcon-del-Amo and Constantinides (2014); Pontiggia and Virili (2008); Chunxiang (2014); Salim (2012); Suki and Ramayah (2010) and Venkatesh et al., (2003). This was modified in order to be suitable for the pharmaceutical industry and social media discussion forums for the adoption of new technology.

Three different sets of interview questionnaires were developed for the three types of respondents: physicians, pharmacists and consumers. The differences in the questions and reasons for these differences are stated in the table below:

Table 4.2: Differences in the questions for the three categories of respondents

Interview Questions for physicians	Interview Questions for pharmacists	Interview Questions for consumers	Purpose of using differences in questions
<p>Name----- ----- ----- ----- ----- Age----- ----- ----- ----- Education level (Experience by years)----- ----- -----</p>	<p>Name----- ----- ----- ----- ----- Age----- ----- ----- ----- Education level (experience by years)----- ----- -----</p>	<p>Name----- ----- ----- ----- Age----- ----- ----- ----- Education level----- ----- ----- ----- Health condition----- ----- -----</p>	<p>The questionnaire for the consumers included a question about their health condition. The purpose of including this factor was to determine the level of health conditions for different consumers who use social media. This question also helped in determining if health conditions influence intention to use social media for health-related decision-making</p>
<p>Do you as a physician use social media channels in drug-related decisions? What kind of decisions? -In buying a medicine? Yes/No -Recommending a medicine? Yes/No -Increasing your background and knowledge -Updating your medicine information</p>	<p>Do you as a pharmacist use social media forums in medicine-related decisions? What kind of decisions? -In buying a medicine? Yes/No -Recommending a medicine? Yes/No -Increasing your knowledge or information? Yes/No</p>	<p>Do you as a consumers use social media channels in medicine-related decisions? What kind of decisions? -In buying a medicine? Yes/No -Recommending a medicine for a friend? Yes/No -Increasing your knowledge? Yes/No -Searching for information regarding a particular medicine? Yes/No</p>	<p>The questionnaire for the consumers included an additional question for ‘searching for information regarding a particular medicine’. This question was asked of the consumers to understand if they use social media channels to search for information about specific medicines and thereby understand the intention of consumers to use social media discussion forums</p>

Do you think that using social media should be voluntary or mandatory for physicians? Are there any short-term or long-term plans to develop social media and motivate physicians to use it?	Do you think that using social media should be voluntary or mandatory for pharmacists? ----- ----- ----- Are there any short-term or long-term plans to develop social media and motivate customers to use it? ----- -----		These two questions were only asked of the pharmacists and physicians and not the consumers. The purpose of these questions was to gain an understanding regarding the perceptions of pharmacists and physicians and their intention to use social media discussion forums for making decisions related to health
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Table 4.3: Questions in the semi-structured interviews and their link with the research objectives (full details of the development of the questions have been stated in Appendix 1e: Development of the questions for the questionnaires used in the different phases of the data collection)

Questions	Purpose of the Question	Means of Interpretation and Evaluating Questions	Objective addressed with the help of the Stated Question
Do you as physician use the social media channels in drug-related decisions? What kind of decisions?	This question aimed to explore whether the physicians use the social media channels to make decisions related to drugs and what kind of decision they are able to make with the help of the information obtained from social media channels.	The answers were interpreted with the help of NVIVO analysis	Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media
Do you think that the usefulness of social media influences your intention towards using it?	This question was developed to explore whether performance expectancy is a factor that influences the stakeholders while using	The answers were interpreted with the help of	Objective 1: To determine a set of factors responsible for influencing behavioural intention of

	social media for health-related decisions	NVIVO analysis	pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media
Does the social aspects (privacy, trust, thoughts, attitudes) affect your intentions to accept and use social media? Explain?	This question was developed to explore whether social influence is a factor that influences the stakeholders while using social media for health-related decisions	The answers were interpreted with the help of NVIVO analysis	Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media
To what extent do you believe that the facilitating conditions affect your intentions towards accepting the use of social media in your medicine-related decisions?	This question was developed to explore whether facilitating conditions is a factor that influences the stakeholders while using social media for health-related decisions	The answers were interpreted with the help of NVIVO analysis	Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media
Do you think that health condition can affect your intention to use social media for decision-making?	This question was developed to explore whether health conditions is a factor that influences the stakeholders while using social media for health-related decisions	The answers were interpreted with the help of NVIVO analysis	Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media

<p>From your point of view, who are more willing to use social media according to the following categories?</p> <ul style="list-style-type: none"> -Age (Younger/Older users). -Gender (Male/Female users) - Education level (Low/High education level). - Health condition (out of prescription medicines/ prescription medicines). 	<p>This question was developed to examine the influence of the moderators such as age, gender, education and health conditions in influencing the intention of the stakeholders in using social media for health-related decisions</p>	<p>The answers were interpreted with the help of NVIVO analysis</p>	<p>Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients to adopt social media</p>
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4.5.2.4 Limitations of the interview method

The interview questions were not translated, which limited the number of interviewers. Furthermore, the findings gathered from the interview could not be generalised because they were limited to the specific factors and moderators related to the pharmaceutical industry. Therefore, to overcome this limitation and to explore more generalised and objective findings, the survey questionnaire was also conducted in the second phase.

4.5.2.5 Data collection in phase II: Survey questionnaire

In addition to the interview, a survey was conducted during January and February 2015. The survey questionnaires were distributed manually to the respondents identified and involved questions based on the acceptance of social media discussion forums and behavioural intentions shown by people. The surveys were conducted with pharmacists, physicians and patients. Before mailing or distributing the surveys, consent forms were distributed to the potential respondents manually, and after the respondents had provided their consent to participate in the research, the questionnaire was sent to them.

The purpose of conducting the survey was to investigate the industry-related factors identified in the semi-structured interviews and test validity and credibility of those factors in respect of the research aim. The survey assisted the investigation of the hypotheses related to

the UTAUT model, and tested and validated the newly explored variables, such as trust, health conditions and education level. Therefore, the second phase formulated more specific hypotheses for each construct and moderator, which were tested and validated with the survey questionnaire. However, there was a need for further validation and evaluation of the relationship between the constructs and intention, and the ways in which the moderators affect this relationship, for which a third phase was undertaken.

4.5.2.6 Questionnaire design for the survey questionnaire method used in the research

The questionnaire was developed with the help of the data in the literature review and the findings of the first phase of the interview with the help of some questions related to the UTAUT constructs from previous PhD studies questionnaire of Internet banking adoption Tabsh, (2012) the questions modified to be suitable for the study and new questions were added related to industry context. The process for the development of the questionnaire for the survey was a critical task because it involved a series of logical steps to ensure the data collection process was systematic and effective (Brace, 2008). For this research, close-ended questions were developed for the research because these were more suitable for gathering specific data that could be quantified and generate objective data. For this purpose, a simple and clearly structured questionnaire was developed in simple English language (See Appendix 1c: Survey Questionnaire). Some questions are given below to explain the relevance of the questions in addressing the research objectives (Full details of the development of the questions are stated in Appendix 1e: Development of the Questions for the Questionnaires used in the Different Phases of the Data Collection).

Table 4.4: Questions in the questionnaire and their link with the research objectives

Questions	Purpose of the Question	Means of Interpreting and Evaluating Questions	Objective addressed with the help of the Stated Question
<p>Does the use of social media mean that you visit your doctor less often? If No, what are the main reasons that prevent you from using social media discussion forums? (Please tick all that apply)</p> <p>** Never heard about it before</p> <p>** Too complicated (explain what is complicated.....)</p> <p>.....)</p> <p>** I am concerned about security and privacy</p> <p>** Too new, I would like to see how it works with others and then I may use it</p> <p>** Other (Please specify)</p> <p>** I am not familiar with computers and the Internet forums</p> <p>** The human touch is very important for me</p> <p>** My health condition needs to be referred to physicians.</p> <p>** Trust issue I can't trust using it.</p>	<p>This question was developed to examine the factors influencing the intention of the stakeholders to use social media for making decisions related to health.</p>	<p>ANOVA method was used to identify industry-related factors and their influence on individual behavioural intention to use social media. This helps in exhibiting homogeneity and differences between people's thoughts, views and ideas.</p>	<p>Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients. to adopt social media</p>
<p>Section 3: Customers beliefs about the adoption and use of social media discussion forums-</p>	<p>This question was developed to examine the extent to which the stakeholders agree</p>	<p>Analysis of Variance (ANOVA), reliability testing, principle</p>	<p>Objective 1: To determine a set of factors responsible for influencing behavioural intention</p>

<p>Social media discussion forum and ease of use</p>	<p>or disagree regarding the effort expectancy associated with the use of social media forums for health-related decisions</p>	<p>component analysis (PCA) and factor analysis.</p>	<p>of pharmaceutical stakeholders such as pharmacists, physicians and patients. to adopt social media</p> <p>Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making process</p>
<p>Section 3: Customers beliefs about the adoption and use of social media discussion forums- Social influences on use of social media discussion forum</p>	<p>This question was developed to examine the extent to which the stakeholders agree or disagree regarding the factor of social influence associated with the use of social media forums for health-related decisions</p>	<p>Analysis of Variance (ANOVA), reliability testing, principle component analysis (PCA) and factor analysis.</p>	<p>Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients. to adopt social media</p> <p>Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making process</p>

<p>Overall, I feel that using media discussion forums is secure; Social media discussion forums guarantee that all health information are complete and relevant</p>	<p>This question was developed to examine the extent to which the stakeholders agree or disagree regarding the reliability and trust associated with the information provided on the social media forums for health-related decisions</p>	<p>Analysis of Variance (ANOVA), reliability testing, principle component analysis (PCA) and factor analysis.</p>	<p>Objective 1: To determine a set of factors responsible for influencing behavioural intention of pharmaceutical stakeholders such as pharmacists, physicians and patients. To adopt social media.</p> <p>Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making process</p>
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Justification: Development of Questions for the Questionnaires of the Interview and Survey used in the Different Phases of the Research

Originally from Previous PhD thesis studies on Internet banking adoption (for Tabsh thesis, (2012) see appendix 8), which is originally adopted from previous studies of technology acceptance, and adoption. But Modified for this study and questions related to industry were added

For questionnaire survey

Section 1: general information 1.1,1.2,1.3 adopted from Tabsh, (2012) thesis

1.4 was modified to ask the respondent about his/her health condition and medical educational background

Section 2: information regarding the technology (bank experience) were formulated and modified to fit for this study and modified to be about social media experience but some of the choices formulated from the previous thesis study Tabsh, (2012) (see appendix 8)

Section 3: adopted to fit for this study by using the construct of social influences measurements, which were in main Venkatesh (2003) model article for using technology

And some of the choices were adopted from Tabsh (2012) questionnaire but modified to fit the research context. (See Appendix 8)

All new related questions to the new factors and moderators related to the industry were formulated and modified from the literature and main article of the general theory papers of UTAUT model for Venkatesh 2003 and the literature papers.

Inside the interviews of first phase of exploratory phase:

-The questions of original main constructs of UTAUT model were adopted and modified for this study from previous phd study attached questions (second section which was mainly about the original constructs of UTAUT model) Tabsh, (2012).

-General questions of demographic questions were adopted from the previous study of Internet banking acceptance but modified to serve this study.

Industry related constructs and moderators questions were developed from Tabsh thesis (2012) and added as new questions.

In details: Section 2 about (performance expectancy, effort expectancy, social influences and general questions) were adopted from the construct measurements from Tabsh, (2012) thesis study with removing some questions that not related to UTAUT original model such as attitude related questions and modified to fit to the social media usage context in pharmaceutical industries Plus to the main article of the general theory papers of UTAUT model for Venkatesh (2003) page 448 to 455 (table 9-table 13)

Table 4.5: Development of the Questions for the Survey Questionnaire

Findings of the last phase of data collection (interview)	Source of Literature	Question designed for the questionnaire
<p>It has been analyzed from the study that social media is a good source of providing information about the medical products however, not all the sources provide the correct information. According to the physicians, the information supplied by the social media is not trustworthy.</p>	<p>Previous study questionnaire designed For adoption of internet banking in the Sultanate Of Oman. The questions were adopted from past studies on technology acceptance and internet banking as a technology from (Compeau and Higgins, 1995; Venkatesh et al., 2003; Compeau, et al., 1999)</p>	<p>Does use of social media mean that you visit your doctor less often? If No, what are the main reasons that prevented you to not use the social media discussion forums? (Please tick all that apply) ** Never heard about it before ** Too complicated (explain what is complicated.....) ** I concerned about security and privacy ** Too new, I would like to see how it works with others and then I may use it ** Other (Please specify) ** I am not familiar with computers and the Internet forums ** The human touch is very important for me ** My health condition needs to refer to a physician. ** Trust issue I can't trust using it.</p>
<p>According to the pharmacist that social media is resourceful because information can quickly be accessed from social media. Moreover, up to date information about the products can be obtained from it. However, according to physicians, the information supplied by the social media can be regarded as credible as social media.</p>	<p>Previous PhD study questionnaire designed For adoption of internet banking in the Sultanate Of Oman Tabsh, (2012). The questions were adopted from past studies on technology acceptance and internet banking as a technology from (Compeau and Higgins, 1995; Venkatesh et al., 2003; Compeau, et al., 1999)</p>	<p>Customers beliefs about the adoption and use of social media discussion forum- Social media discussion forum and ease of use</p>

<p>It has been also being analyzed from the interview findings that culture plays a very important role in changing the people's views towards the acceptance and use of social media in health related decision making. Opinions of the people influence each other. Therefore, if the people become more aware of the social media and share their media knowledge and skills to others, the chances of acceptance of social media can increase.</p>	<p>Previous phd study questionnaire designed For adoption of internet banking in the Sultanate Of Oman Tabsh, (2012). The questions were adopted from past studies on technology acceptance and internet banking as a technology from (Compeau and Higgins, 1995; Venkatesh et al., 2003; Compeau, et al., 1999)</p>	<p>Customers beliefs about the adoption and use of social media discussion forum- Social influences on use of social media discussion forum</p>
<p>For the security purpose, people are willing to use social media. According to the physicians, social media is not reliable because the information's present by social media is not in a reliable way. On the other hand, pharmacists believe that social media can be a good source of information if the information is supplied from reliable sources where reliable refers to the specific and relevant sources related to the topic</p>	<p>Previous phd study questionnaire Tabsh, (2012)</p>	<p>Overall, I feel that using media discussion forum is secure; Social media discussion forum guarantees that all health information are complete and relevant</p>

4.5.2.7 Research approach in phase II

This phase involved the testing of the preliminary hypothesis that was developed in the first phase, after the evaluation of the prevailing literature regarding the relationship between the independent variables and behavioural intention on the basis of the qualitative and quantitative findings (See Appendix 2: Research Hypothesis for the Three Phases of Research). Therefore, to deduce a valid and logical hypothesis and to test it in an objective and rational manner, the deductive approach was applied in this phase while gathering and evaluating the data (Williams, 2009). The application of the deductive approach enabled further additions to the model developed in the first phase and validated the assumptions and assertions made in the first phase. It allowed the operational hypothesis to be tested using statistical tools and scientific inquiry based on the findings gathered from the interviews and survey questionnaires. The operational hypothesis for the research was whether industry-related factors influence behavioural intention to use social media in the pharmaceutical industry examined through the UTAUT model. The outcome of this phase, in the form of the analysis findings and the survey questionnaire, were used to make modifications and revisions in the theory related to the UTAUT model, and to gain further clarification of the relationship between the factors and moderators and the behavioural intention of the stakeholders in the pharmaceutical industry to use social media (Williams, 2009).

The process of deduction applied in this phase contributed to explaining the relationship between the factors such as effort expectancy, performance expectancy, social influence and trust, and behavioural intention to use social media, along with the association between these factors and moderators such as gender, age, health conditions and education level (Reyes, 2004). The analysis undertaken using the deductive approach thus determined the key factors associated with behavioural intention to use social media among the stakeholders of the pharmaceutical industry. In addition, the application of the deductive

approach also added scientific rigour and generalised the regularities in human behaviour in respect of the use of social media for making decisions related to healthcare (Reyes, 2004).

Phase I- Weak initial hypothesis

H₁: Industry related factors and moderators influence behavioral intention to adopt and use social media discussion forums in the pharmaceutical industry

Phase II – Testing of the Relationship between Each Construct, Moderator and Behavioral Intention (Table 4.6: Relationships & Hypothesis of the research)

Key relationships	Hypothesis
Effect of Experience on Performance Expectancy and Intention Relationship	<i>H₁: Experience influence Performance Expectancy and Intention Relationship</i> <i>H₀: Experience does not influence Performance Expectancy and Intention Relationship</i>
Effect of Education Level on Performance Expectancy and Intention Relationship	<i>H₁: Education Level influence Performance Expectancy and Intention Relationship</i> <i>H₀: Education Level does not influence Performance Expectancy and Intention Relationship</i>
Effect of Educational Level on Effort Expectancy and Intention Relationship	<i>H₁: Educational Level influence Effort Expectancy and Intention Relationship</i> <i>H₀: Educational Level does not influence Effort Expectancy and Intention Relationship</i>
Effect of Gender on Social Influence and Intention Relationship	<i>H₁: Gender influences Social Influence and Intention Relationship</i> <i>H₀: Gender does not influences Social Influence and Intention Relationship</i>
Effect of Health Condition on Social influence and Intention Relationship	<i>H₁: Health Condition influences Social influence and Intention Relationship</i> <i>H₀: Health Condition does not influences Social influence and Intention Relationship</i>
Effect of Educational Level on Social Influence and Intention Relationship	<i>H₁: Educational Level influences Social Influence and Intention Relationship</i> <i>H₀: Educational Level does not influences Social Influence and Intention Relationship</i>
Effect of Age on Trust and Intention Relationship	<i>H₁: Age influences Trust and Intention Relationship</i> <i>H₀: Age does not influences Trust and Intention Relationship</i>
Effect of Experience on Trust and Intention Relationship	<i>H₁: Experience influences Trust and Intention Relationship</i> <i>H₀: Experience does not influences Trust and Intention Relationship</i>

Effect of Health Conditions on Trust and Intention Relationship	H ₁ : <i>Health Conditions influences Trust and Intention Relationship</i> H ₀ : <i>Health Conditions does not influences Trust and Intention Relationship</i>
Effect of Education Level on Trust and Intention Relationship	H ₁ : <i>Education Level influences Trust and Intention Relationship</i> H ₀ : <i>Education Level does not influences Trust and Intention Relationship</i>
Effect of Age on Authenticated Credibility and Intention Relationship	H ₁ : <i>Age influences Authenticated Credibility and Intention Relationship</i> H ₀ : <i>Age does not influences Authenticated Credibility and Intention Relationship</i>
Effect of Experience on Authenticated Credibility and Intention Relationship	H ₁ : <i>Experience influences Authenticated Credibility and Intention Relationship</i> H ₀ : <i>Experience does not influences Authenticated Credibility and Intention Relationship</i>

Phase III- Further validation of the initial hypothesis

Further explanation for the relations between: *Industry related factors and moderators influence behavioral intention to adopt and use social media discussion forums in the pharmaceutical industry hypothesis.*

4.5.3 Phase III

4.5.3.1 Description of phase III

On the basis of the findings of the semi-structured interviews and the survey questionnaire it was found that age, health conditions, education level, experience and gender were the key moderators that influence the behavioural intention of the stakeholders of the pharmaceutical industry while using social media for health-related decisions. However, there was a need for further validation of the relationship between the constructs and behavioural intention, and to examine the ways in which the moderators affect this relationship. This was the second objective of the research. Furthermore, the validation of the relationship between the constructs and moderators was also essential to address the third objective of the research, which sought to develop a model of the current practice of behavioural intention for social

media adoption and usage by the stakeholders of the pharmaceutical industry. In this respect, a second round of in-depth semi-structured interviews was conducted with pharmacists, physicians and patients.

4.5.3.2 Data collection in phase III: In-depth semi-structured interviews

The interviews were conducted to obtain an explanation of how different moderators affect the relationship between the new constructs and behavioural intention to use social media discussion forums. The second phase of the interviews also determined the validity of the quantitative results and contributed to enhancing the credibility and validity of the research findings. The findings gathered during the interviews enabled the determination of a logical and credible relationship between the constructs and moderators, with specific reference to the behavioural intention of the stakeholders in the pharmaceutical industry. Then, using this, a model of the current practice of behavioural intention for social media adoption and usage by the stakeholders of the pharmaceutical industry was developed. During this phase, face-to-face in-depth semi-structured interviews in the form of meetings were held in different places, such as hospital clinics and private pharmacies. The consumer meetings were held in hospitals whilst the respondents were waiting for physician appointments. Each interview lasted for approximately 30-40 minutes.

4.5.3.3 Questionnaire design for the interview method used in the research

The questionnaire for the second phase of the interview method was developed on the basis of the areas which required further evaluation and validity, utilising the findings obtained in the second phase (See Appendix 1e: Development of the Questions for the Questionnaires used in the Different Phases of the Data Collection). Some questions used in the semi-structured interview in the third phase are discussed below to explain their relevance and association with the research objectives (See table 4.7: Final Interview Questionnaires). On the basis of the findings obtained from the exploratory factor analysis study, some pertinent modifications and changes were made in the question design and structure.

Table 4.7: Questions for the Survey Questionnaire for the Second Phase

Sections of the Questionnaire	Purpose and the questions stated in each section	Academic sources referred to develop the questions for each section.
Section 1	This section sought to gather general information about the respondent in respect of their age, gender, qualification and occupation to determine the impact of these factors on their behavioural intention to use social media for health related decisions.	Tabsh, (2012)
Section 2	This section sought to examine the extent and ways in which people use social media for health-related decisions to explore the perceptions and opinions of the people towards social media.	Tabsh, (2012)
Section 3	This section sought to examine the beliefs of the people regarding the use and adoption of social media to explore the factors that influence their behavioural intention to use it for health-related decision making.	<p>Questions regarding construct of social influences measurements which referred from Venkatish (2003)</p> <p>Some questions and choices were modified from Tabsh, (2012) thesis</p> <p>New questions for the factors and moderators related to the industry were developed with the help of Tabsh, (2012) thesis and the literature review</p>

Table 4.8: Questions in the semi- structured interviews of the third phase and their link with the research objectives

Questions	Purpose of the Question	Objective addressed with the help of the Stated Question
How influential is the credibility of the information from discussion forums, such as official drug companies, and does it affect your intention to use social media discussion forums?	The purpose of this question was to evaluate the impact of the credibility of social media information on the intention to use it	Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making processes
In what way does your educational level encourage you to use social media tools? And how much does your education level help you to overcome the difficulties of using social media tools?	This question sought to examine the relationship between the moderator education level and behavioural intention to use social media to be able to develop a model for current practices of behavioural intention to use social media	Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making process Objective 3: To develop a modified model of behavioural intention for social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers
In what way does your health condition affect your intention to use social media tools?	This question sought to examine the relationship between the moderator health condition and behavioural intention to use social media to be able to develop a model for current practices of behavioural intention to use social media	Objective 2: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making process Objective 3: To develop a modified model of behavioural intention for social media adoption and usage by pharmaceutical

		customers (pharmacists, physicians) and consumers
Do you face any issues related to trust based on your experience of using different social media discussion forums? Explain	This question sought to examine the relationship between trust and behavioural intention to use social media to be able to develop a model for current practices of behavioural intention to use social media	Objective 3: To determine the influence of various factors on the relationship between independent variables and behavioural intention to use social media as communication channels for their decision-making processes Objective 3: To develop a modified model of behavioural intention for social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers

4.5.3.4 Research approach in phase III

The deductive approach was applied in this phase of the research to identify and analyse the patterns in the data gathered during the last phase of interviews conducted with the pharmacists, physicians and patients. The application of the deductive approach in this phase was required to test the conceptual and theoretical structure and assumptions made in the previous two phases of the research by applying empirical observations. It thus enabled credible additions to be made to the prevailing theoretical model of UTAUT, by explaining its relevance to the use of social media in the pharmaceutical industry and by analysing and then synthesising the ideas, assumptions, concepts, theoretical perspectives and findings developed in the previous two phases of the research (Pathirage, Amaratunga and Haigh, 2008). The deduction of the overall research findings was beneficial in developing a modified model of UTAUT of behavioural intention to use social media by the stakeholders of the pharmaceutical industry. Therefore, the application of the deductive approach in this phase of

the research has enabled useful, rational and plausible additions to be made in the prevailing theory related to the UTAUT model for examining behavioural intention to use social media, with the assistance of intuitively and empirically developed findings that were systematically and logically tested and validated (Pathirage, Amaratunga and Haigh, 2008).

4.6 Sampling technique and sample size

4.6.1 Sampling technique

Sampling refers to the process of selecting a sample from the total population by certain characteristics. Although sampling does not follow any fixed rule, it should be based on the type of research, aim and objective of the research and the judgement of the researcher. There are primarily two sampling techniques: the probability sampling technique and the non-probability sampling technique. With the probability sampling technique, each member of the sample population has an equal chance of being selected, while under the non-probability sampling technique, every member does not have an equal chance of being selected (Lim and Ting, 2013).

Probability sampling is applied in research when the researcher aims to obtain a strong link between the research populations and needs to ensure the objectivity of the research findings. The stronger the link, the greater is the degree of confidence that trends, patterns and variations found in the sample represent the trends of patterns and variations present in the research population (Daniel, 2011). Thus, this factor motivates the use of probability sampling in quantitative studies. The methods used in probability sampling include simple random sampling and the stratified sampling method. On the other hand, the non-probability sampling technique includes convenience sampling, quota sampling, judgement sampling and snowball sampling. This technique focuses on convenience and is thus more flexible in nature. However, it tends to introduce bias in the research (Lohr, 2009).

Under convenience sampling, researchers select individuals to be included in the sample population on the basis of easy access. Although, this sampling technique is easiest to

reach but it does not adequately represent the traits of entire target population set due to which it is regarded as a bias approach (Flick, 2015). On the other side, random sampling provides assurance that every element in the whole population has equal chance to become a part of the sample set due to which it eliminates chances of any bias selection (Flick, 2015).

4.6.2 Sample size and population

The various methods of data collection use different sampling techniques. In this research, the sample population for the first round of semi-structured interviews was made up of nine respondents comprised of three pharmacists, three physicians and three customers from Kuwait (Appendix 3: Participant Information Sheet). The respondents were identified using the convenience sampling method. The sample size and population for the method is illustrated below:

Table 4.9: The sample size and population for the first phase of interviews

Data collection method	Sample Population	Sample Size
First phase of semi-structured interview	Pharmacists	3
	Physicians	3
	Customers	3
	Total Respondents	9

The sample for the questionnaire survey method comprised pharmacists, physicians and patients from Kuwait. The sample for the survey method was identified using the simple convenience sampling method to remove research bias and increase the credibility of the research. Convenience sampling technique, in this context, can be defined as non-probability sampling tactic wherein the researchers select the respondents as per their convenience, proximity and accessibility (Etikan, Musa and Alkassim, 2016). Using this technique the data collection process was simplified to some extent as only easily approachable physicians, customers and pharmacists were selected to contribute in the present research project. The sample size and population for the method is illustrated below:

Table 4.10: The sample size and population for questionnaire survey method

Data collection method	Sample Population	Questionnaire Distributed	Questionnaire Received
First phase of questionnaire survey	Pharmacists	190	121
	Physicians	90	85
	Customers	234	234
	Total questionnaires distributed and total questionnaires received	514	440

The qualitative approach or the last phase of the semi-structured interview method was conducted with pharmacists, physicians and consumers. The group was composed of seven pharmacists, seven physicians and seven consumers from Kuwait. Among these respondents there were eleven males and ten females. The sample size and population for the method is illustrated below:

Table 4.11: The sample size and population for the second phase of interview method

Data collection method	Sample Population	Sample Size
Second phase of semi-structured interview	Pharmacists	7
	Physicians	7
	Customers	7
	Total Respondents	21

4.7 Exploratory factor analysis study

To determine the research reliability and validity, an exploratory study took place during January and February 2015. Subsequently, messages and emails were sent to arrange face-to-face interviews with pharmacists and physicians. The meetings were held in different places, such as hospital clinics and private pharmacies. The consumer meetings took place in the hospital while they were waiting for their physician appointments. Each questionnaire lasted approximately 30–45 minutes. These questionnaires enabled the researcher to formulate the main questionnaire questions for this study. The questionnaire developed from

the exploratory study was further revised to develop the final questionnaire after extracting the answers from the exploratory factor analysis study (See Appendix 1a: Questionnaire for exploratory Study). Using the findings of the exploratory factor analysis test, the following measures were taken to improve the data collection process:

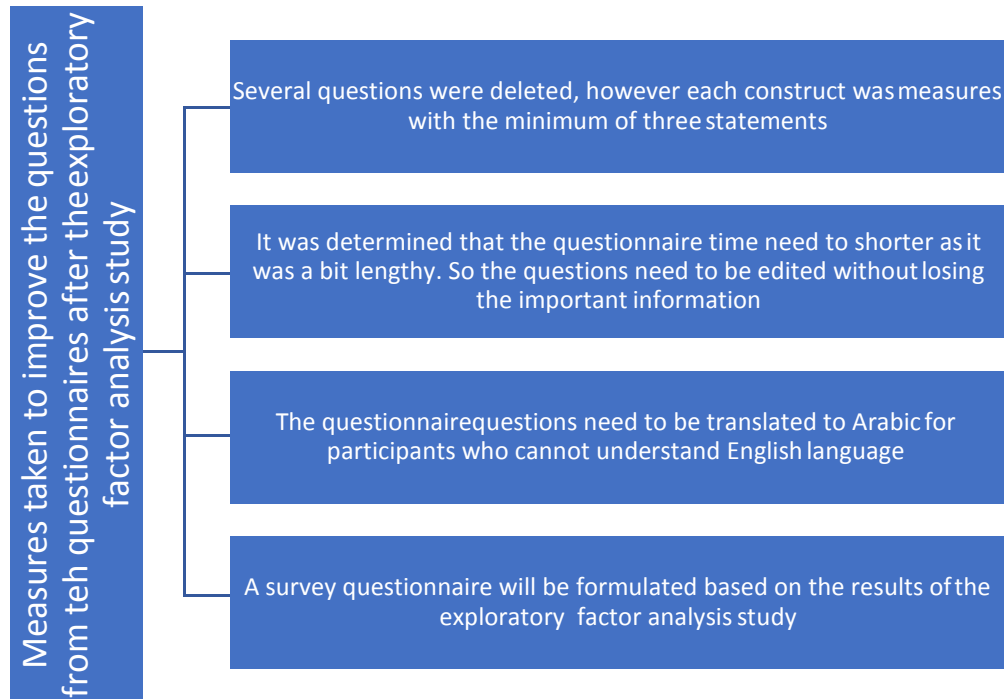


Figure 4.3: Measures that were taken to improve the questions for questionnaire after the exploratory factor analysis study

4.8 Data analysis

The mixed data analysis method was used in this research including qualitative and quantitative methods. Qualitative data analysis was used to analyse the interview and literature data, while quantitative data analysis was used for the analysis of the survey data (Bernard, 2012). The details specific to the qualitative and quantitative data analysis are presented below:

4.8.1 Qualitative data analysis

An analysis of the qualitative data in the research focused on presenting detailed and comprehensive information to address the research aim and objectives (Rubin and Rubin, 2011). The research aim of identifying industry-related factors and their influence on behavioural intention was addressed by analysing the interview results by the application of the Nvivo analysis technique. In qualitative data analysis, this is one of the most commonly used computer software packages. The Nvivo technique involves multi-dimensional areas to facilitate the interpretation of qualitative data. It enables the researcher to manage data, explore, and find patterns from complex text-based data (Bazeley and Jackson, 2013). The rationale for using the Nvivo technique was to extract in-depth facts from multimedia information, because it is able to analyse a large volume of information with high profundity.

In-depth semi-structured interviews were conducted with relevant people to discover and identify the information pertinent to the subject area of the research study (Bazeley and Jackson, 2013). Analysis of the interview results using the Nvivo technique involved determining each construct or theme from the nine interviews... The key themes of this research study with respect to the research topic emphasised covering broad ideas, such as performance expectancy, information quality, effort expectancy, social influence, facilitating conditions, social influence, culture, power distance, personal decision-making, uncertainty and social confidence, trust, security and absence of risk, and health condition.

4.8.2 Quantitative data analysis

The quantitative data was gathered using a survey with a sample size of 514 people, including 90 physicians, 190 pharmacists and 234 customers as patients. Out of the total sample population, the response rate of the survey was 85%, as only 440 completed questionnaire entries were received. Data analysis of the survey responses was executed using the Statistical Package for the Social Sciences (SPSS). This is a computer software

package that facilitates statistical analysis of batched and non-batched variables of the research (McBurney and White, 2009). Within this statistical analysis package, different statistical analysis methods are used, such as Analysis of Variance (ANOVA), reliability testing, principle component analysis (PCA) and factor analysis.

The ANOVA method was used to identify industry-related factors and their influence on individual behavioural intention to use social media. This helped to exhibit homogeneity and the differences between people's thoughts, views and ideas. This method of analysing quantitative data reflects the extent to which several groups in the survey process have similar or different opinions (Simonton, 2003). The reliability testing method ensures reliability in the collected quantitative data that may ultimately affect the research results. Reliability testing is an important part of data analysis and demonstrates the extent to which the collected data is reliable at a significant level (Lancaster, 2005). However, the use of PCA in this research was useful to demonstrate a linear relationship between the observed variables of the research that are interlinked (Jackson, 2012). A factor analysis of survey responses expresses the observed data values in respect of functions. The use of factor analysis in the research identified the industry-related factors and their influence on behavioural intention to use social media networks for decision-making. This effectively reflected the most important factor among the varied factors that influenced behavioural intention (Jackson, 2012).

4.9 Bias, reliability and validity procedures

Bias: It is essential to identify bias issues in a research study in order to ensure the originality and authenticity the data. A bias factor in the data collection does not ensure that the responses are given in their original context, as per the experience, without manipulation of information (Bernard, 2012). In the research study, an issue of bias must be prevented by avoiding personal intervention in the process of selecting research participants. Bias in the process of selecting participants may raise an issue of conflict between group opinions that

impedes the generation of viable results from the participants' responses. In order to avoid bias issues in the research project, the proper selection process to select participants is essential for the researcher without any personal interest or intervention. Therefore, a random sampling strategy was used to select respondents with equality. As per the random sampling, every participant in the research has the right to be involved in the survey process at an equal level without any discrimination, so that they can also share experiences in respect of industry-related factors affecting behavioural intentions to use social media for decision-making (Bernard, 2012).

Reliability and Validity: Reliability and validity are the two integral elements that must be valued in this research. The validity of the research must be maintained in relation to the presentation of valid facts and information that is realistic in nature and universally applicable. Research is valid when it is informative and knowledge enhancing. The reliability of the research study was maintained through the use of reliable information sources for information retrieval. Secondly, reliable research work should not use any vague information or unethical practices that are prohibited in the academic arena (Baumgarten, 2013). For the purpose of reliability and validity, this research used pilot testing to determine any flaws in the questionnaires used for collecting qualitative and quantitative data. Pilot testing is a procedure to determine whether questions in the questionnaire can be easily understood by the participants without any ambiguity (Cargan, 2007). In addition, the reliability and validity of this research were asserted by organising meetings with participants at specified locations. For example, physicians and pharmacists were approached for face-to-face interviews, while surveys with customers were conducted at the hospital. Altogether, the aspects of reliability and validity were considered by paying significant attention to the factors that impacted the reliability and validity of the data in the research.

4.10 Ethical considerations

In research work, follow-up of ethical aspects is an essential requirement to prevent the occurrence of unethical activities. A research project involves multiple tasks, including data collection and data analysis that relates directly or indirectly to the interests of concerned people (Hammersley and Traianou, 2012). It is important to consider the inclusion of ethical norms to ensure the research activities' compliance. The high probability of raising complex ethical issues that might affect the research results is to be avoided by following ethical considerations. Ethical issues not only arise in the context of primary data collection, but can also arise in the secondary data collection process. In the research related to investigating the industry-related factors and their influences in the pharmaceutical industry, data was collected through primary and secondary methodology. In this respect, the following ethical considerations were primarily considered to avoid ethical issues. An Ethics Form was also used to address all of the ethical issues associated with the research (See Appendix 6: Ethics Form).

Information privacy and confidentiality: The information collected during the survey and interview method was secured with regard to privacy and confidentiality. This ethical consideration helps to secure participants' interests against any harm due to sharing personal and official experiences (Jackson, 2010). Information privacy and confidentiality is secured by maintaining information anonymity and data records were kept in password-protected documents. Moreover, the survey and interview questions did not ask for any personal information, such as name, telephone number, address and email. However, the questionnaire for the survey and interview process did involve pertinent questions related to the industry-related factors and their influences on the behavioural intention with regard to the acceptance and use of social media in supporting decision-making processes. It also involved certain general questions, such as gender, experience, management level and working sector.

Voluntary Consent: Before approaching participants for survey and interview purposes, participants' permission and consent to their voluntary participation were obtained by sending a cover letter and consent form. This ethical consideration prevented the occurrence of an issue of unjustified pressure to participate that may affect the research results in relation to manipulative or fake information, and incomplete questionnaire entries. Within this ethical consideration, participants were allowed to withdraw their participation with no obligation to give a justification or explanation for the same (Jackson, 2010).

Fair/Equal Selection Process: In this research, the participants' selection process was undertaken in a fair way giving all an equal chance of selection. The selection process for the survey and interview participants was kept free from personal intervention and involvement, to maintain equality. This ethical consideration contributed directly to collecting viable and relevant data (Kimmel, 2009).

Originality: This is a key ethical area that enables valid and true conclusions to be reached. The originality of information was given consideration in the research, by stating true information without manipulating the data. In respect of this ethical aspect, interview transcripts (direct quotes of interviewees) and sample questionnaire entries are reflected in this research project. This ensures the originality of information is not harmed in this research study (Miller et al., 2012).

Plagiarism-Free: All of the secondary data collected and used in this research are plagiarism free, as data is presented with original ideas without copying from others' work. This ethical consideration leads to improving data originality and authenticity (Kimmel, 2009).

4.11 Summary

This chapter has examined the research methodology implemented in this study. In order to accomplish the research objectives and answer the research questions effectively, the study used the positivist research design. This research design was selected as it provides opportunities to use specific theories: the Unified Theory of Acceptance and Use of Technology, to explore a real-life phenomenon, decision-making in the pharmaceutical industry. In addition, the research work was accomplished using both primary and secondary data. Primary data was retrieved using an interview method, whereas for the purpose of collecting secondary data, the library research method was utilised.

The industry-related factors were explored in relation to the intention to use social media by using the Unified Theory of Acceptance and Use of Technology theory. For this purpose, interviews and questionnaires asking some questions regarding the experience of patients, pharmacists and physicians and their intentions for using social media were explained.

The practical approach can be classified into research methodology and methods. Three different methods were used to gather secondary data (library-research), interviews (in-depth semi-structured interviews) and a survey (questionnaire). The library research method was proposed to provide an effective theoretical framework for the research work. In this method, different types of academic sources, such as books, journal articles, and research papers, which have been written in the context of the UTAUT model, were reviewed in the most effective manner to reveal the secondary data. In addition, quantitative information was obtained via the survey questionnaire method. This has proved to be quite crucial and effective for the research work. The survey involved pharmacists, physicians and patients. Interviews were conducted at the beginning of the research to explore the factors that affect the intention to use social media and were conducted for a second time in the final stage of

data collection to explore the moderators' effect and to explain the presence of new factors and moderators. This study thus combined qualitative and quantitative approaches in a sequential and equal way to present an in-depth evaluation of the research problem.

Table 4.12: Synthesise the analysis in the methodology chapter with explanation:

Mixed Research Method	Mixed methods research design has been used in this research because it serves as a bridge between the paradigms and methods, and increases the diversity in the research methods, which is useful when dealing with complex problems
Exploratory Design	Exploratory design is utilised to explore the factors impacting the intention to use social media and for discovering the moderators' effect. Additionally, it also helped in understanding the presence of new factors and moderators to be considered while implementing use of social media in pharmaceutical sector of Kuwait.
In-depth interviews for collection of qualitative data	Interviews are organised with 9 respondents research for gathering first-hand information and access extensively personalised data about the key factors influencing behaviour regarding the adoption of technology and employment of

	<p>social media in accelerating growth of the industry.</p> <p>at stage 21 respondents were interviewed to confirm the results and give explanations.</p>
Survey questionnaire for quantitative data collection	<p>Questionnaire survey is used in this research for gathering quantitative data. It is a primary data collection technique which helped to gather pertinent data directly related to the research purpose. Survey method significantly contributed to increase the validity, accuracy and authenticity of the research by allowing the researcher to determine the relationship between the key factors and moderators for the UTAUT model in an empirical and objective manner. The survey has been conducted with 440 pharmacists, physicians and patients.</p>
Data Analysis	<p>Nvivo technique is used to analyse qualitative information obtained through semi-structured interview while SPSS is used to interpret quantitative data obtained through survey.</p>
Ethical Considerations	<p>All ethical responsibilities are fulfilled including informed consent, confidentiality, avoidance of plagiarism and credibility to authors whose work is referred in the research.</p>

Chapter Five: Data Analysis and Discussion

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Chapter Five: Data Analysis and Discussion of Findings

This chapter presents an analysis of the findings of the primary data gathered during an exploratory factor analysis study and the three phases of the research. The analyses of the findings are presented to determine the extent to which the findings agree or disagree with the hypotheses for the different phases of the research. This chapter has been divided into four sections covering: the exploratory qualitative phase (interviews) with the exploratory factor analysis before the quantitative analysis (survey questionnaire) and data analysis of final qualitative interviews.

5.1 Data analysis and discussion of qualitative data analysis

In order to determine the research's reliability and validity, a pilot and exploratory study was undertaken in the period January–February 2015. The aim of this phase of the data collection was to determine the validity of the preliminary hypothesis, which was: “Industry-related factors and moderators influence behavioural intention to adopt and use social media discussion forums in the pharmaceutical industry”. For this purpose, messages and emails were sent to arrange face-to-face interviews with pharmacists and physicians. The meetings were held in various places such as hospital clinics and private pharmacies, and the consumer meetings were held in hospitals while they were waiting for their physician. Each interview lasted approximately 30–45 minutes. The transcripts were reviewed within 24 hours of the interview (See Appendix 1a: Questionnaire with new themes).

The interviewees were three pharmacists, three physicians as customers and three patients as consumers. In-depth semi-structured interviews were conducted to discover and identify the industry-related factors that affect or influence their intention to use social media discussion forums in their health-related decisions. From the findings of this phase of the study, the first model (figure 5.1) originally constructed from the literature was developed. This is illustrated below:

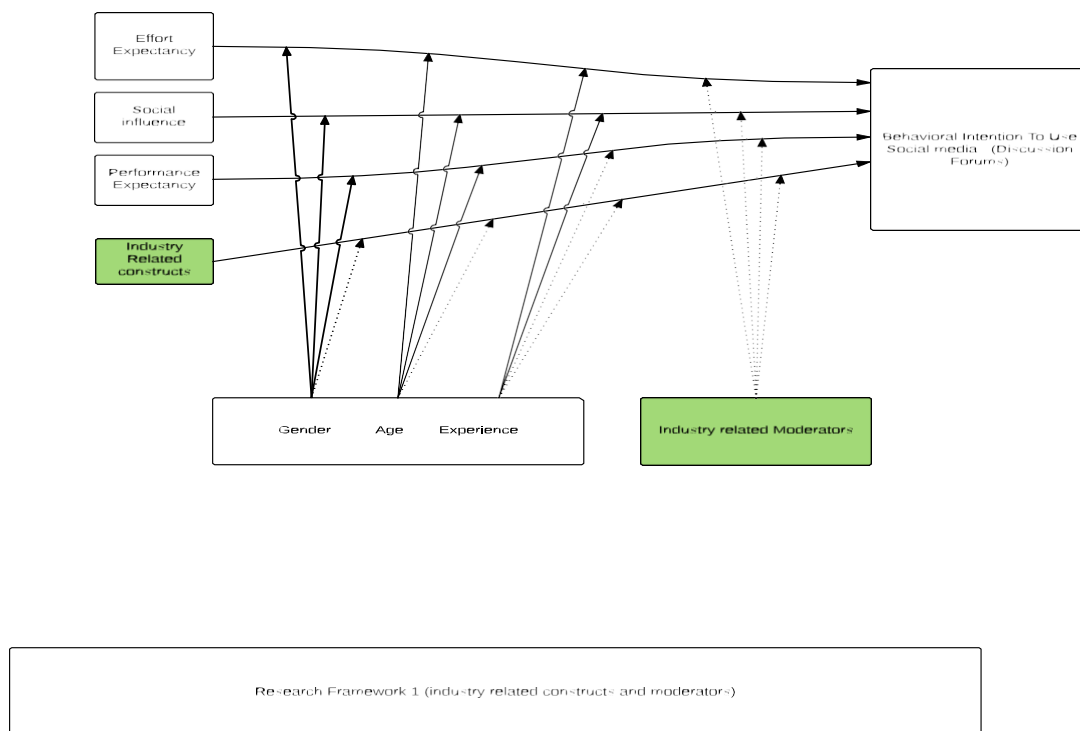


Figure 5.1: Research framework 1 (expected model from the literature) industry-related constructs and moderators

The analysis has established that social media forums are good sources for providing information about medical products. However, not all sources provide the correct information. According to the physicians, the information supplied by the social media forums is not trustworthy. One should take health-related decisions based upon authenticated medical books and physicians. From the pharmacists' perspective, social media discussion forums are very helpful in decision-making, as customers can compare the merits and demerits of the products directly using social media. Thus, according to the pharmacists social media forums are resourceful, because information can be accessed quickly. Moreover, up-to-date information about the products can be obtained. However, according to physicians,

the information supplied by the social media forum can be regarded as only as credible as the social media forum itself. The exploratory study analysis also confirmed that social influences, mainly on a culture theme, play a very important role in changing people's views about the acceptance and use of social media forums in health-related decision-making. People's opinions influence each other. Therefore, if people become more aware of social media forums and share their media knowledge and skills to others, the chances of acceptance of social media forums can increase. However, it has been observed that the majority of people prefer to consult physicians before taking health-related decisions (Gibson and Jagger, 2009).

In Kuwaiti society, it is apparent that people are close to each other and are easily influenced by each other's opinions. They believe in the culture of collectivism and thus, the negative and positive experiences of using social media forums of one person can affect the decisions of a large group of people (Bwalya and Joseph, 2012). According to the physicians, people should not have to take health-related decisions based on the suggestions given to them by others who are not professionals but rather, they should consult a doctor or physician.

From the study, it was also found that if people do not have enough information about the products, then they take health-related decisions based on the information available in social media forums. Therefore, some people are willing to use social media for knowledge purposes. According to the physicians, social media forums are not reliable because the information presented is not reliable. On the other hand, pharmacists believe that social media forums can be a good source of information if the information is supplied from reliable sources, i.e. specific and relevant sources related to the topic (Brown, 2012). In order to gain the confidence of the customers, the pharmaceutical industry has to make some rules and

regulations, so that information about products can be shown and promoted in the correct way and from credible sources.

The findings of the interviews provide evidence that both the consumers and pharmacists use social media forums, but possibly for different purposes. The pharmacists use social media forums to obtain updated information about health products. On the other hand, the consumers use social media forums to make comparative analysis between the health products, so that they can discover their advantages and disadvantages. They can ascertain details about new medicines that have been released onto the market and if there any new side-effects related to existing medicines. The consumers interact with other users of social media, such as their friends and family, to discuss aspects of health. However, in the case of serious diseases, customers are more likely to prefer to consult physicians, rather than accessing social media. Many consumers also use social media forums to check health-related products before visiting the physician, in order to become familiar with the treatments and medicines taken for curing the same disease by other users of social media.

The Nvivo analysis produced the following results for each construct or theme from the nine interviews with three pharmacists and three physicians as customers, and three patients as consumers, respectively. In-depth semi-structured interviews were conducted to explore and identify the industry-related factors and moderators that affect their intention to use social media forums in health-related decisions.

5.1.1. Performance expectancy through qualitative analysis

From the pharmacists' and consumers' perspectives, it was considered to be a factor. Three out of three pharmacists and two out of three consumers agreed that they found social media useful, but remarked, however, that not all forums are reliable.

“It is good as it is helpful and provides users with sufficient information, but some are not that reliable” (P. 3).

The theme is based on the concept of helpfulness and usefulness, which refers to the value of information provided to the users.

This statement demonstrates that the social media forums are helpful and useful for people, but many times there are negative consequences as well. The views stated that the social media forums are helpful in the pharmacy sector, but many people have experienced negative outcomes from these forums, also. The literature sources explored the security and information loss issues and other threats, and found that these have minimised the value of social media forums in the life of people (Cheal, Coughlin and Moore, 2012).

5.1.1.1 Helpfulness

Helpfulness refers to providing useful assistance to a person in need. It is a form of the sense of happiness or belongingness that is shared with others. The way in which a particular goal helps to attain other goals is referred to as helpfulness. The standards and quality maintained by a goal in the context to our needs is referred as usefulness (Martin, 2011).

All pharmacists agreed that the users access the required information in a short time with the use of social media, which is helpful, and advantage of its use.

“Sure, social media has brought better choices as it gives the user a choice to compare between different brands and gives the user the advantages and disadvantages of each product to provide the chance to choose...” (P. 2)

The theme is based on the comparison between the benefits or merits of one product with another over the social media platform. Social media has various benefits as it helps people to make the correct and appropriate choice of products and services. The views of people reflect that social media forums familiarise people with good products and brands in the market. In this context, the literature sources highlighted that users generate awareness and enhance their knowledge of the different brands, products and services available in the market with the support of social media (Cheal, Coughlin and Moore, 2012).

The social comparison theory can be used in this context. It states that people have the

drive within themselves to gain accurate self-evaluations (Brown, 2009). The social media forum users can apply this theory, as they can evaluate and compare their own thoughts and perceptions with others to ensure the minimisation of their uncertainty level (Brown, 2009).

In this context, the social influence theory presented by Ioanas and Stoica (2014) provide a contrasting viewpoint that people learn with the help of social interaction and communication with the users of social media forums. The three factors that help to enhance learning with the support of social influence are compliance, internalisation and identification (Ioanas and Stoica, 2014). In light of this theory, people can largely incorporate the use of social media research, as it will enhance their learning and raise their awareness of new products in the market. The theory suggests that social learning is the most effective type of learning as compared to individual learning, where people work on their own to enhance their knowledge of the use of social media forums (Ioanas and Stoica, 2014). Personal beliefs are the ideas, thoughts and perceptions of a person about a particular situation that they believe are true. These are based on their own experiences along with the societal norms (Bar-Tal, 2000).

“The usefulness of social media has influenced my intention towards using it” (P. 8)

The above qualitative analysis shows that the performance expectancy of social media forums affects people’s intention towards its use. Respondents stated that they have successfully changed their intentions and perception with the help of social media forums. The literature review highlighted that there are many benefits of using social media forums in current times, which have helped to change the attitude and thoughts of the public from negative to positive perspectives (Cheal, Coughlin and Moore, 2012). Also, Pikkarainen et al. (2004) recognised that the usefulness of new technology would bring more users to accept it.

5.1.1.2 Information quality

The inaccuracy of information was noticed by the physicians, whereas the pharmacists’

views were divided into two groups. One group supported the physicians' opinion and the other did not, as they found that the information is reliable and accurate on many social media forums. One of the physicians stated that

“I believe that decisions should be based on accurate sources such as literature, physicians and medical books. Moreover, social media is spoon-feeding the health service staff in general” (P. 4)

It is apparent from this statement that the works of literature, medical books and opinions of the physicians are important for making the correct decision. People agree that the use of accurate sources for gaining knowledge is necessary before making a particular decision. Social media can make the health service staff dependent upon it for their decision-making. The literature sources state that decision-making is important in the pharmaceutical sector, so the use of relevant sources is important (Dijck, 2013).

Spoon-feeding refers to the information which is communicated to another person in such a way that the person does not require any additional effort or thinking. The person need not think or analyse the information communicated to him. Health service staff members take the information provided on social media directly, and do not make an effort to check whether the information is correct. They do not ensure the relevance and appropriateness of the information gained from social media (Andretta, 2005). Similar to this finding, Vroom (2014) also believed in his expectancy theory, which reflects that performance is directed to increase with increasing efforts of individual. Moreover, there should effective tools given to the person with the help of right tools. Moreover, it enhances the expected outcomes up to a significant and desired level. That support may come from their boss, or just being given the right information or tools to finish the job.

5.1.2. Effort expectancy

The ease of use of social media has made it more attractive for the pharmacists and

consumers, as three pharmacist and three consumers agreed that they find social media easy to use and this affects their intention to accept and use it.

“It is very easy to use as normal person and it is accessible to everyone” (P. 2)

Social media forums can be used by any person from anywhere in the world, due to its wide global coverage. The literature sources explore the fact that a normal person can use social media and can make the maximum use of its benefits (Dijck, 2013).

In contrast to consumers, physicians are not willing to accept and adopt social media forums for decision-making, as they believe that more effort expended on obtaining information will yield better performance or decisions. This can be supported by Vroom’s Expectancy Theory, which is based on three components. One of these components is expectancy, which can be described as the belief that greater or increased effort will yield better performance. (Vroom, 2014).

The interviewees found that social media is a clear and understandable method of communication and easy to learn. Plouffe et al. (2001) and Venkatesh et al. (2003) have stated that the technology should be easy to adopt for having high degree of acceptance of users.

5.1.3. Social influence

The pharmacists were not all in agreement; they reported that some do not support the use of social media forums, as they consider that it is not a trustworthy source.

“Not all pharmacists but more than 90% of pharmacists are willing to support the use of media” (P. 1)

Most of the pharmacists supported the use of social media forums across the globe. Their views showed that most pharmacists use social media in their work activities. The literature sources support the view that pharmacists can enhance their knowledge and communication in their field with the help of social media (Ding, Eliashberg and Stremersch, 2013). On the

other hand, the consumers noticed,

“Most of the physicians do not support the use of social media forums” (P. 7)

Social media forums are not fully accepted by physicians worldwide. The views stated that many physicians disapprove of the use of social media forums because of the potential negative consequences involved. The literature sources supported the view that physicians have a fear of losing personal information and access to important files and folders, which influences them to avoid social media (Ding, Eliashberg and Stremersch, 2013).

Both pharmacists and consumers, in general, were agreed that the use of social media forums is more prestigious as “Its use is increasing with the rapid pace of life” (P. 3)

Social media forums play a significant role in today’s fast lifestyles. The respondents’ views show that social media forums are a useful tool for people to stay connected with their friends and family despite their busy schedules and fast-moving life. The literature sources found that people do not find the time to stay connected with others, so they choose the option of social media forums to stay connected (Kabani, 2013; Mandiberg, 2012). Timeliness is an important aspect of social media use.

“Sure, as it updates the users with new information” (P. 3)

This theme is based on the concept of timeliness, which is defined as the ability to obtain useful information within the required time. Social media forums are the best tool for people to become familiar with new information that enhances their knowledge. The views show that information is passed from one person to another in social media forums, which helps people to gain new knowledge and understanding. It is highlighted in the primary findings that information about new products, organisations and brands can easily be obtained with the help of groups and blogs in the social media forums and websites.

The information integration theory can be applied in this context. It states that the thoughts and beliefs of one person can form or be changed on the basis of integration,

combining or mixing of new information with existing thoughts of views (Kabani, 2013; Mandiberg, 2012). In light of this, the thoughts of users of social media forums can change due to the new information generated by other people on these websites.

5.1.3.1 Culture

Acceptance of social media forums is not easy. The interviewees explained that culture is an important issue and can be a factor that influenced the acceptance and use of social media forums. Based on the literature, the consumer's acceptance of a new technology directly depends upon the culture they follow (Slowikowski and Jarratt, 1997; Png et al., 2001).

Based on our study, physicians preferred to use traditional methods to obtain information by using medical books and literature, as these are the most reliable and useful sources of information. They also preferred the consumers to attend their clinics and take their advice. However, pharmacists preferred to use the new methods of social media, as it can amalgamate all the information to enable a comparison between different products and medicines, and view their advantages and disadvantages. They also accept that thoughts and beliefs can affect the intention to use social media forums. For instance, one of the pharmacists confirmed this by stating that: "Yes, everyone has their own thoughts and, sure, he believes in them and no one can change his fixed thoughts" (P. 7).

The theme is based on the concept of personal beliefs where a person believes in his existing knowledge and experience to make his future decisions. People have different thoughts and views regarding the use of social media in today's world. The respondents' views show that it is very difficult to change the fixed thoughts of people towards the use of social media forums. In addition, literature sources support the view that most people have different perceptions towards the use of social media that restrict them from using these forums and websites (Newson, Houghton and Patten, 2008).

All pharmacists confirmed that culture is an important factor that affects their intention

to use social media forums: “As culture is awareness about media and sharing skills” (P. 7). The culture of a specific country or society can motivate people to use social media forums and can even discourage them. The views of the respondents stated that a flexible and adaptable culture in a country or society enabled them to gain new skills and knowledge of media, which is different in the conservative and socialist countries. Literature sources show that the use of social media is based on the culture in many countries. People may have permission to access such websites and many do not have permission (Sigala, Christou and Gretzel, 2012). The study findings are similar to those described by Levy (2007) that the motivating culture of some countries helps people to devise new ideas and introduce new technologies. On the other hand, the countries which do not influence or motivate people to produce new ideas have low scope for the introduction of new technologies.

In this context, the cultural evolution theory is suggested. This relates to an individual’s focus on maintaining relationships between beliefs, material change and social institutions. Individuals adopt changes that take place in the global environment or their surroundings as per the current trends. It is important for individuals to take the necessary changes positively. It is beneficial for an individual to adopt changes, such as technological changes, structural changes and communication changes, prompted by the motivation received from others and within (Mesoudi, 2011).

An analysis of the above section shows that social influences, such as culture, play a very important role in changing people’s views towards the acceptance and use of social media forums in health-related decision-making. If people develop greater awareness about social media forums and share their knowledge and skills to others, the chances that social media forums will be used in a useful and correct way can increase.

5.1.3.1.1 Power

Some of the consumers reported that Kuwaiti culture involves powerful figureheads. People tend to live in family groups, with a leader. If one member of the family has a bad experience using social media then this will have an influence on the family or friends.

“If there is one person in the family who had a good experience using the media then he will go and tell his group or family, therefore the other people may possibly use that media forum” (P. 6)

People’s experiences enable others to become familiar with the benefits and disadvantages of using social media forums. The views stated that good experiences of another person in using social media will motivate other people whom they know to join and use these forums and websites. The literature sources explored the fact that encouragement and positive comments of a known person help to change the mind set of many people and motivate them to take advantage of social media forums and websites (Wankel, 2011). According to Nelson and Quick (2003) and Martinsons et al. (2009), there is direct impact of cultural dimensions including power distance over members of community as this transfers from parents to children.

5.1.3.1.2 Personal decision-making

Most of the consumers reported that they like to ask someone before taking any decisions, as the Kuwaiti culture is not an individualist culture. As people live together, most media users will have heard about social media from friends or a member of their family.

5.1.3.1.3 Uncertainty and society confidence

Most of the interviewees agreed that users who have low uncertainty and avoidance characteristics are more willing to use social media forums to obtain information regarding

products before making any decision and seek others' experiences.

“People do not trust on any brand immediately until they get more information regarding it, and that has happened many times” (P. 7).

The theme is based on the concept of sufficiency and uncertainty, where people make their decision to purchase a product when they are sufficiently confident of their decision. Most people make their decisions regarding the purchase of products on the basis of experiences of others, and they learn about these experiences from the social media forums. The respondents' answers show that many people share their experiences of a particular product on social media forums and websites. This influences and helps others to make their own purchasing decisions. The literature sources demonstrated that social media can enable people to be confident in their purchasing decisions and help them to share information and experiences about the products and services in an easier way (Wankel, 2011).

On the other hand, factors like fear of unknown can be considered as barriers in adopting social media tools in medical setting (Francisco, 2014). This statement was supported by one of the interviewees who confirmed that the high level of uncertainty could also negatively influence the acceptance and use of social media forums. The uncertainty reduction theory can be used in this context. This states the initial interaction among different people before the actual process of communication. Social media forum users need information from the person with whom they are interacting in order to minimise uncertainty (Francisco, 2014).

“If a consumer has high uncertainty avoidance then he is more willing to get all the information and instructions from the physician and is not willing to trust media sources” (P. 7)

Consumers prefer direct contact with the physician to avoid the side-effects of any medicine or treatment. The respondents' views stated that when people have to obtain the

correct information on any particular medicine or treatment, they prefer direct communication with the physician rather than social media forums and websites, because they want to ensure the credibility of the treatment or medicine undertaken by them. The literature sources show that people do not prefer the opinions of people on social media websites for any prescription or treatment (Wankel, 2011). The quality of being trusted or believed to be honest, real or true is known as credibility. Expertise and trustworthiness are the main elements of credibility as they have both subjective and objective components (Kouzes and Posner, 2011). In this context, the source credibility theory can be used. This states that users prefer only the content on social media forums in which they have trust or faith.

This can also be based on the user's thoughts and beliefs. All pharmacists made it clear that the acceptance and use of social media forums was more prevalent amongst knowledgeable users, as consumers who do not have any idea about trustworthy websites and channels would have negative thoughts towards using the social media forums. In this respect, their educational level and medical background knowledge has an important role in using social media forums.

5.1.4. Trust

According to Eisenstadt (1995) trust can be defined as the belief of any individual regarding, strength, ability and reliability of any organization. All the pharmacists and consumers agreed that trust is about the reliability of information from media sources and it is the most important construct (factor) that affects their intention to use social media forums. When consumers consider health issues and decisions they begin by thinking about security, privacy and their safety.

“Because of the security and privacy issues, consumers and physicians are not willing to use media forums” (P. 4)

The physicians and consumers avoid the use of social media forums and websites because of

the negative effects involved, such as the privacy and security issues. The views of the respondents reflected that security and privacy issues are increasing in respect of the social media forums, and this encourages the consumers and physicians to stay away from them. The literature sources showed that the fear of losing personal information or information about confidential treatment or reports is the major concern with regard to social media (Newson, Houghton and Patten, 2008).

Trust was a major issue facing the physicians' intention to use social media forums. The trustworthiness of social media is still a significant question as,

“It's always wise to get advice, information and receive educational material through trustworthy sources, which in my opinion will never be the social media” (P. 4)

Most people do not consider social media to be trustworthy websites. Their views show that social media forums are still not considered as reliable and authentic sources of the relevant information. The literature sources highlighted that important and useful information is difficult to access from the social media sources as it involves a number of issues (Newson, Houghton and Patten, 2008). Trust refers to the reliance on the ability, integrity, surety and strength of a thing or person. It is also known as the confidence of a person in another person. When a person relies upon another person or thing, it is known as trust (Peppers and Rogers, 2012). It is important to control the risks that may arise in the communication of information from one user to another over social media forums.

Another physician agreed that he is not willing to use social media forums for health decisions, as he cannot trust the accuracy and reliability of the information.

“I will never rely on information based on the social media forums. I will not use it until I feel that it has become a reliable and trustworthy source of information” (P. 4)

It is difficult for physicians to rely on the information accessed from social media forums. The respondents' views show that most of the physicians do not favour information obtained

from social media, as it may be inaccurate and irrelevant. The literature sources show that people find the information on social media to be inaccurate and unreliable, which creates a negative impact on their mind set and thoughts (Kabani, 2013).

“I will never rely on social media because the information on social media is biased and based on preconceptions” (Peppers and Rogers, 2012).

Reliable sources are those on which a person can easily rely or have faith in. The person develops an inner trust or faith towards reliable sources, and is sufficiently confident to use those sources (Kabani, 2013).

“There is a growing body of health information resources in social media. However, assessing the accuracy of this information or advertisements is not reliable. They cannot be trusted, for that I believe that the decision should be based on accurate sources such as literature, physicians and media books.” (P. 5)

There is a need for people to access information from reliable and useful sources to obtain valid and meaningful information. The views show that social media forums may not always provide relevant information as many times people also post fake and irrelevant information. The literature sources demonstrate that many people have experienced the communication of incorrect information on social media, which restricts their use of these forums and websites in a positive way. Accuracy refers to information that is free from any kind of error or issue. It is the exact, true or correct information. Reliability refers to the situation, thing or person in whom a person has confidence and will rely, without any further checking. Trust refers to the faith or belief in a situation, person or thing (Dijck, 2013).

However, some of the pharmacists have different views as they reported that:

“Not all sources are reliable and trustworthy, but when the information is watched by responsible bodies and professional staff then the user will feel safe about using social media”. (P. 6)

Overseeing the content that is posted on the social media forums will help people to share useful information in an easier way. The analysis of the views suggests that the professional staff and responsible bodies can be monitored by people, which will help to minimise the number of issues relating to social media usage. The literature sources support the view that overseeing the content and users will help to improve the usefulness of social media websites (Dijck, 2013). Monitoring refers to overseeing or checking the information provided by different sources. In this context, people gather information from social media either by reading the content available on the websites or by interacting with others (Dijck, 2013). It is important to introduce norms and laws to regulate social media forums. This will increase the trust of people in social media content.

In the text search query undertaken in the Nvivo analysis shown below, almost all of the interviewees mentioned that trust can influence their intention to use social media forums in health-related decisions.

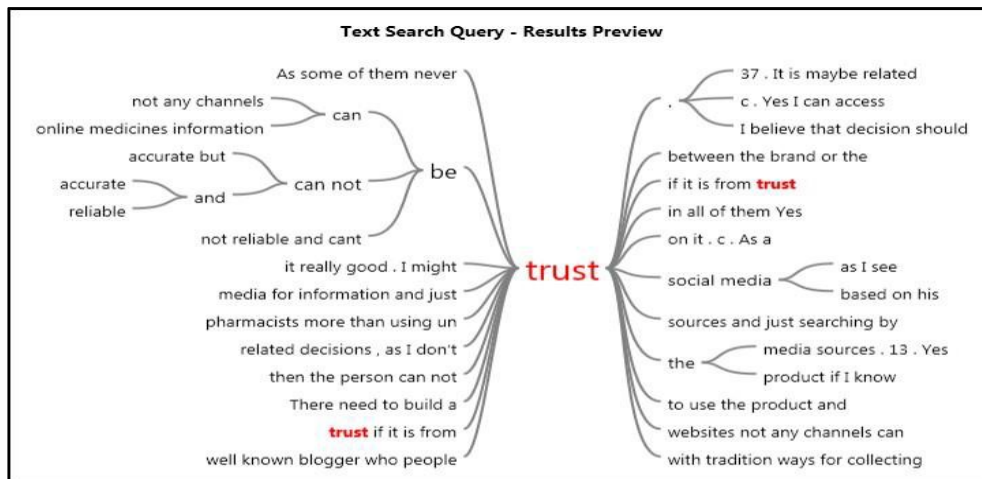


Figure 5.2: Findings of NVIVO analysis for trust construct

5.1.4.1 Security and absence of risk

Security and absence of risk refers to a particular person, thing or place, which is free from any kind of threat or obstacle. The security on social media forums is defined in terms of the increasing cases of account hacking and fake information. People endeavour to remain

alert and use strong passwords to avoid such issues (Albarran, 2013). All of the pharmacists agreed that it is the industry's responsibility to convince consumers that social media forums are secure and risk-free by implementing some security measures

“Putting in place rules for these social media forums controlling their way of promoting and showing the customers the right uses of the products to ensure their safety and security and to prevent the risk of misuse” (P. 3)

Rules and regulations will help the social media forums to minimise the risk of major issues. The views of the respondents showed that rules will help people to use the social media websites safely and will ensure they only obtain the necessary information. The literature sources supported the suggestion that rules will help to minimise the misuse of social media and help in the easy sharing of information (Albarran, 2013).

All consumers agreed that they would feel safe when responsible bodies oversee the information. With the application of rules and regulations, crimes and other issues will be minimised, which will motivate users to freely join these forums and websites.

5.1.5. Health condition

Consumers confirmed that their intentions were to use social media for health awareness and to improve their knowledge to enable better choices. On the other hand, the pharmacists confirmed that their intention was to use social media to update their knowledge with regard to new products and medicines. Both the pharmacists and consumers use the social media forums and websites for personal use in simple health conditions and to confirm a point or obtain information.

“My health condition and seriousness has a role in my intention to use social media as not all websites are accurate and reliable. For that reason I do not recommend using the media forums for taking decisions related to my health” (P. 7)

The respondents' views showed that people are concerned about their health, so they take the

necessary steps in the context of their health. Literature sources show that people avoid obtaining information from social media forums and websites if it is related to their health. They do not take any risks in the context of their health (Albarran, 2013).

5.1.5.1 Sincerity

“Social media forums and websites can be a source for communication and knowledge sharing but not to make a decision for serious conditions. It can have a role to confirm existing information, but I cannot know if that information is accurate or just for advertising matters” (P. 7)

Thus, this theme is based on sincerity, as the information gathered should be taken in a sincere way. Sincerity refers to the dedication presented by a person in relation to the related subject (Ellis, 2010).

In some cases, where people face serious illness or disease then they do not favour the social media forums. The views showed that people obtain help from their physicians in the case of serious illness or disease. Literature sources showed that social media may not always help people in the case of serious illness (Albarran, 2013). In this context, the social business model can be used to understand the concept of social media, where people make use of their social networking behavioural standards and social media tools in various functional areas to communicate and engage with other users of social media. This model focuses on the combination of social networking etiquettes, such as authenticity, transparency and fairness, with user engagement on Facebook for content sharing, LinkedIn for one-to-one interaction and Twitter for immediacy. This helps the users of social media to become fully involved with the other users (Solis and Breakenridge, 2009).

One of the consumers reported her intention to use social media by saying:

“Yes, I would use the media to have an idea about my case and condition and obtain knowledge before visiting the physician. Sometimes, if it is a simple case I try to view all the information that is available and see the advantages and disadvantages of the

product before deciding to have it” (P. 7).

Thus, the theme is based on informing oneself, where a person makes an effort to become familiar with or aware of the new information (Kadushin, 2012).

5.1.5.2. Relevance

Many people use social media forums to obtain an overview of their case before visiting a physician. The respondents’ views showed that social media can help people by providing a brief scenario of the case along with the benefits and demerits of using a particular product. Literature sources showed that social media is still used by people to learn from the experiences of others and use these in their personal life (Al-Deen and Hendricks, 2012). However, none of the physicians supported the use of social media forums health-related decisions. One mentioned:

“No, I am not a supporter of social media, in particular with patient’s health, as each person has his own case and cannot view another’s experiences and try it on himself” (P. 4).

Thus, the theme is based on the concept of uniqueness and lack of relevance. Every patient’s case is different from others and the treatment of one person cannot be undertaken by another, unless it is prescribed by the physician (Fuchs, 2013). Physicians generally do not favour social media forums for issues concerning their patients. The views showed that physicians avoid using the social media forums, as they do not want to take any risks with the health of their patients. The literature sources demonstrated that physicians avoid viewing the experiences of others and trying them, in order to avoid risks to the lives of their patients (Al-Deen and Hendricks, 2012).

Based on the interviewees’ answers, their health condition is one of the main issues that affect their intention to accept and use social media forums. Pharmacists and physicians were agreed that the seriousness of health issues can affect their intention to use social media

forums. Social media can be good for simple conditions and for collecting or confirming information.

5.1.6 Educational level

At the end of the interviews most of the interviewees agreed that social media forum usage should be voluntary. They noticed that younger people and users with a high level of education are more willing to use social media forums as they suit their hectic lifestyle. Also, they agreed that the educational level could be an important issue for the acceptance and usage of social media forums, as one of the consumers reported his intention to use social media forums by saying:

“Yes, I would use the media to have an idea and obtain knowledge but I think it’s better to take the physicians’ or pharmacists’ advice as they have got more knowledge in their field. And, of course, if I was a pharmacist or physician, I would be able to understand most of the information regarding any product in social media.”

5.1.7 Summary

In summary, most of the pharmacists and consumers supported the intention to accept and use social media forums as a result of their ease of use, time saving, and the fact that they are understandable, clear, and contain up-to-date data. However they reported some relevant factors that can affect and influence their intention such as security and absence of risk, trust, information quality, social influences, culture, industry support, health condition and educational level issues.

From the physicians’ perspectives, they were not willing to support the intention to accept and use social media, based on reliability, accuracy of the information, and mainly, trust issues that they considered were not found in social media forums. From the findings obtained from this phase, the following research modified frameworks (8 and 9) were developed. These illustrate industry support for authenticated credibility and trust as industry-

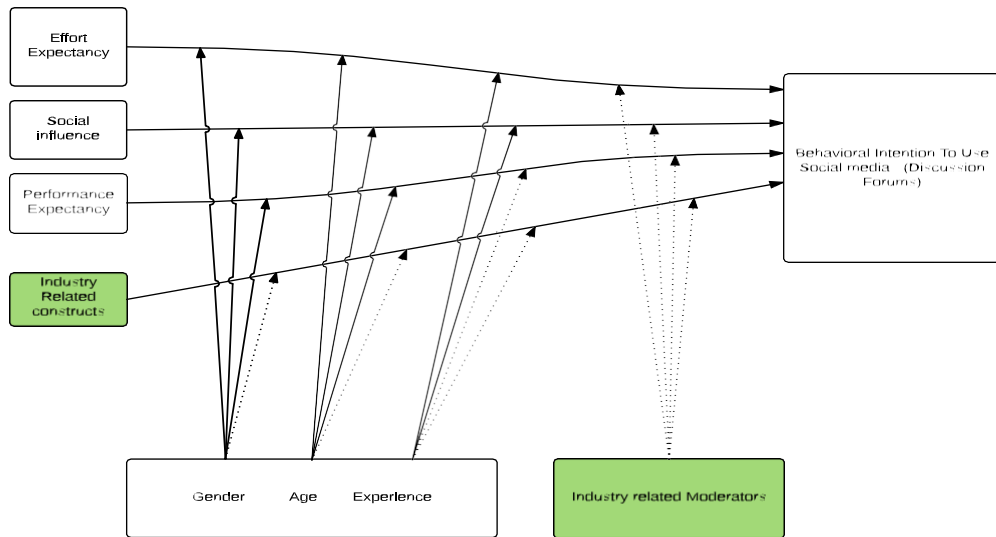
related constructs and education level, including educational stage and medical knowledge, and health condition as industry-related moderators.

5.2 Exploratory factor analysis with the final questionnaire questions and procedures.

The questionnaire used in the main quantitative phase of the study was formulated from previous studies of UTAUT model questionnaires Tabsh (2012), but the questions were modified and edited in response to the suggestions from the exploratory factor analysis study quantitative phase as follows:

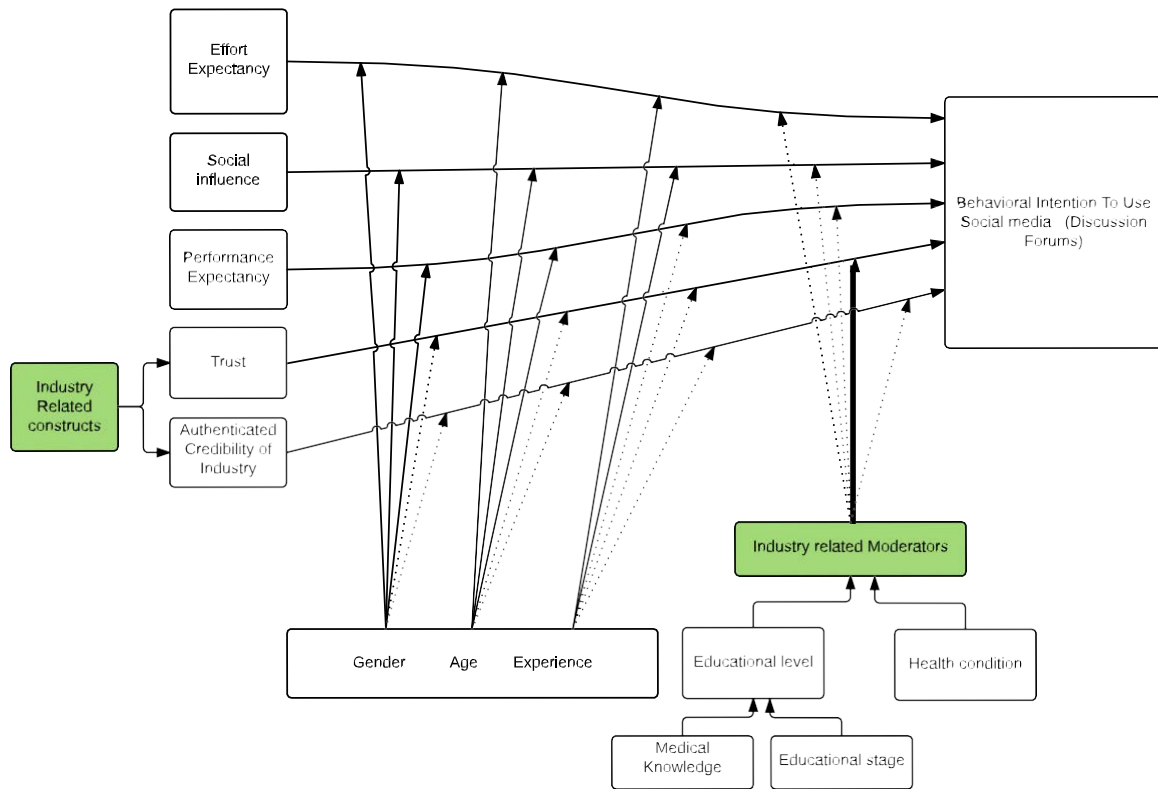
- Several questions were deleted; however, each construct was measured with a minimum of three statements.
- New questions were added to measure the industry-related constructs and moderators that were found in the qualitative phase (See Appendix 1a: Questionnaire for the exploratory study).
- The questionnaire questions were translated into Arabic for participants who were unable to understand the English language.

The survey questionnaire was formulated and edited based on the exploratory analysis study results without losing the important information needed for this study. The questionnaire was distributed to fifty respondents to determine the reliability and validity of the questions before the main quantitative phase of the research. Some questions were deleted and edited based on the factor analysis results for the quantitative phase.



Research Framework 1 (industry related constructs and moderators)

Figure 5.3: Research Modified Framework



Research Framework 2 (industry related constructs and moderators) After Qualitative Phase1

Figure 5.4 Research framework 2: after interview for phase II

5.3 Data analysis and discussion of quantitative analysis

5.3.1 Introduction

The data analysis section plays a very important role in a research study. The research study's conclusion and interpretation depend upon the analysis and the results drawn from the collected data, by using different techniques and methods for the purpose of analysis. The data analysis section is one of the most crucial sections, because it is a comprehensive understanding of the collected data for the purpose of providing a brief description of the particular phenomenon (Langdridge and Johnson, 2009).

The objective of the research study is to investigate the industry-related factors as per the UTAUT model. In this regard, this phase of data collection sought to determine the validity of the relationship between the constructs and the moderators of the UTAUT model and have a model (BIUSF) which is a model for behaviour intention to use social media forums in health decisions by pharmaceuticals industry in respect of the hypotheses developed from the interview findings (See Appendix 2: Hypotheses).

Table 5.1: The Sample Size and Population for Questionnaire Survey Method

Data collection method	Sample Population	Questionnaire Distributed	Questionnaire Received
First phase of semi-structured interview	Pharmacists	190	121
	Physicians	90	85
	Customers	234	234
	Total questionnaires distributed and total questionnaires received	514	440

In this section, the collected data is analysed using various statistical methods: reliability testing, factor analysis, principal component analysis (PCA) and Analysis of Variance (ANOVA). For this purpose, the variables that are the main focus in the study for data analysis are: performance expectancy, effort expectancy, social influences, and industry

support for credibility, behavioural intention and trust. The moderators are gender, age, experience, health condition, and educational level.

5.3.2 Descriptive statistics

Table 5.2: Characteristics of respondents, N = 440

		Research Sample (n=440)	
Demographic Variables	Category	Frequency	Percentage (%)
Gender	Male	278	63%
	Female	162	36.7%
Age	<20	31	7.0%
	21-30	195	44.3%
	31-50	166	37.6%
	>51	48	10.9%
Category	Consumers	234	53.1%
	Pharmacist	121	27.4%
	Physician	85	19.3%
Health Condition	Simple (Without Prescription)	249	56.5%
	(With Prescription)	151	34.2%
	Serious condition	40	9.1%

Age

The table above indicates that the total number of respondents of an age less than 20 years is 31, 195 respondents are from the age group 21 to 30 years, 166 respondents lie in the age group 31 to 50 years, and remaining respondents (48) are all over 50 years of age.

Gender

As shown in the table above, out of a total 440 respondents, 278 are male and the remaining 162 respondents are female.

Category

Out of the 440 respondents, 234 are customers, 121 are pharmacists and the remaining 85 are physicians.

Health Condition

Of the 440 respondents, 249 have simple health conditions, 151 respondents have prescriptions from their doctors according to their health conditions and the remaining 40 respondents have serious health conditions.

5.3.3 Reliability testing

The term reliability means the value and quality of the phenomenon at a specific time (Wasserman, 2002). Reliability testing is defined as the performance measure of the variables on the basis of which the variable's reliability is checked and the conclusion is drawn as to whether it is reliable or not. Therefore, in this context, the data collected was tested by using reliability testing with the statistical software, Statistical Package for Social Science (SPSS) and the results drawn are explored in the following section:

5.3.3.1 Reliability testing for performance expectancy

Cronbach's alpha table:

The most important table of SPSS output for the purpose of reliability testing that provides the value of Cronbach's alpha is shown in the table below:

Table 5.2: Reliability

Statistics

Cronbach's Alpha	N of Items
.939	5

This table shows that the value of Cronbach's alpha is 0.939, which means that there is high-level internal consistency for the sample taken. Therefore, the data is reliable because the value of Cronbach's alpha is very high (Meeker and Escobar, 2014).

Item total statistics:

This particular table indicates the consistency of a specific variable. This table provides the value of Cronbach's alpha for all the variables.

Table 5.3: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PE1	6.03	3.623	.843	.924
PE2	5.96	3.793	.758	.939
PE3	6.07	3.617	.846	.923
PE4	6.13	3.606	.865	.920
PE5	6.03	3.584	.867	.919

5.3.3.2 Reliability testing for effort expectancy

Cronbach's alpha table:

Table 5.4: Reliability Statistics

Cronbach's Alpha	N of Items
.880	5

The table shows that the value of Cronbach's alpha is 0.880 thus there is high-level internal consistency for the sample taken. It means that the data is reliable because the value of Cronbach's alpha is very high. In the table below, a question was deleted as it had a different value and mixed with the performance expectancy factor.

Item total statistics:

This table provides the value of Cronbach's alpha for all the variables.

Table 5.5: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EE1	6.90	4.852	.906	.811
EE2	6.89	4.830	.915	.808
EE3	6.89	4.903	.882	.816
EE5	6.87	4.716	.820	.827
EE4	5.95	6.207	.233	.973

5.3.3.3 Reliability testing for social influences

Cronbach's alpha table:

Table 5.6: Reliability Statistics

Cronbach's Alpha	N of Items
.895	6

The value of Cronbach's alpha is 0.895; hence, there is high-level internal consistency for the sample taken. It means that the data is reliable because the value of Cronbach's alpha is very high.

Item total statistics:

This table provides the value of Cronbach's alpha for all the variables.

Table 5.7: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
S.I11	8.55	10.581	.782	.867
S.I2	8.51	10.793	.742	.873
S.I3	8.54	11.246	.654	.886
S.I4	8.35	10.612	.734	.874
S.I5	8.39	10.834	.717	.877
S.I6	8.48	11.016	.679	.883

5.3.3.4 Reliability testing for industry support of credibility

Cronbach's alpha table:

Table 5.8: Reliability Statistics

Cronbach's Alpha	N of Items
.883	4

The value of Cronbach's alpha is 0.883; hence, there is high-level internal consistency for the sample taken. It means that the data is reliable because the value of Cronbach's alpha is very high.

Item total statistics:

This table provides the value of Cronbach's alpha for all the variables.

Table 5.9: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SUP1	4.63	2.672	.822	.819
SUP2	4.68	3.054	.773	.840
SUP3	4.64	3.252	.713	.863
SUP4	4.56	2.999	.690	.872

5.3.3.5 Reliability testing for behavioural intention

Cronbach's alpha table:

Table 5.10: Reliability
Statistics

Cronbach's Alpha	N of Items
.901	4

The value of Cronbach's alpha is 0.901; hence, the data is reliable because the value of Cronbach's alpha is very high.

Item total statistics:

This table provides the value of Cronbach's alpha for all the variables.

Table 5.11: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BEI1	4.32	2.588	.763	.878
BEI2	4.38	2.714	.816	.861
BEI3	4.28	2.684	.710	.897
BEI4	4.31	2.487	.835	.851

5.3.3.6 Reliability testing for trust

Cronbach's alpha table:

The most important table of SPSS output for the purpose of reliability testing that provides the value of Cronbach's alpha is shown below:

Table 5.12: Reliability Statistics

Cronbach's Alpha	N of Items
.899	4

The above table gives the value of Cronbach's alpha as 0.899; this means that the data is reliable because the value of Cronbach's alpha is very high (Meeker and Escobar, 2014).

Item total statistics:

This particular table indicates the consistency of a specific variable. This table provides the value of Cronbach's alpha for all the variables.

Table 5.13: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TU1	9.42	5.278	.793	.865
TU2	9.38	6.017	.729	.885
TU3	9.39	5.460	.839	.845
TU4	9.40	6.272	.752	.879

5.3.4 Factor analysis

This is a statistical method used to extract the factors that participate in explaining the maximum variation. The extracted variables are the most important variables that have the maximum importance in the study. Factor Analysis is used to reduce the redundancy of the data present in the data set (Child, 2006). In this context, a set of variables in the research study is extracted from a large number of variables; it has greater importance and explains the maximum variation. The interested components for the research study are: performance

expectancy, effort expectancy, social influences, trust, and industry support for credibility. The following are the results drawn by using SPSS after applying the factor analysis method:

5.3.4.1 Communalities

The table of communality of SPSS output given in the appendix 4.2 is used to determine the variation of the individual variables accounted for by the extracting factors. Communalities explain the amount of variance described by the retained factors after extraction. The value 1 in the initial column in the table (See Appendix 4.2) provides the information confirming that communalities before extraction are 1. Furthermore, 69.2% of variation is explained by the first factor (S.II), that is, social influences and similarly interpreted for the other variables (Basilevsky, 2009) (See Appendix 4.2).

5.3.4.2 Total variance explained

The table in appendix 4.3 provides the percentage of variation explained by the individual factors. The eigenvalues for each factor before extraction and after extraction are also provided in the table. The data set has a total of five factors and, including all the subparts of all five factors, comprises 24 components in total. Applying the factor analysis method, the factors are reduced to just five components. The eigenvalue associated with each factor is used to determine the variation explained by each factor and these eigenvalues are displayed in SPSS output in the form of percentage of variance explained. Therefore, the total variables are reduced to five variables that account for maximum variation and thus, in this way, it removes the redundant variables (Bryman and Cramer, 2011) (See Appendix 4.3).

5.3.4.3 Component Matrix

SPSS provides the component matrix that aims to represent the loading associated with each of the factors (See Appendix 4.4).

5.3.5 Principal Component Analysis

Principal component analysis is the statistical technique used for the purpose of emphasising variation and for determining the strong variables from the data set. This method is used to reduce the dimension of the data set that includes large interrelated variables into the set of factors that describes the maximum variation (Jolliffe, 2013). The main objectives of applying principal component analysis (PCA) on a set of components are:

- Data Reduction
- Data Interpretation

Principal component analysis is the statistical procedure used for the purpose of explaining the covariance structure of a set of components. In this context, the interested sets of components for the research study are performance expectancy, effort expectancy, social influence, trust, and industry support for credibility. In the analysis of the data using principal component analysis (PCA), a set of five components in the present research study were taken and out of these components, a reduced set of components were extracted. SPSS was used and the output and results produced are described below:

5.3.5.1 KMO and Bartlett's Test

Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy are two very important measures to determine and analyse data using Principal Component Analysis (PCA). The value of KMO lies between 0 and 1. If the value of KMO is 0 this means the addition of a partial correlation coefficient is largely related to the sum of correlation (Norris et al., 2014). This signifies that there is diffusion in the set of the correlation, and it implies that the Principal Component Analysis method is inappropriate and should not be applied. Furthermore, the value close to 1 indicates that the method is appropriate and will give the most significant component after extracting the variables. In this context, the KPO value is 0.809, which is quite good and implies that the PCA method is appropriate.

Table 5.14: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	11594.040
	Df	276
	Sig.	.000

Bartlett's Test of Sphericity is used to examine the hypothesis below:

Null Hypothesis H_0 : Correlation matrix is an identity matrix

Alternative Hypothesis H_1 : Correlation matrix is not an identity matrix

The significance value or p-value of the Bartlett's Test of Sphericity is 0.000. This means the null hypothesis is rejected because the p-value is less than 0.05. Hence, the test is significant, which indicates that the correlation matrix is not an identity matrix. Therefore, it can be concluded that there is some relationship between the variables or components undertaken. Moreover, Bartlett's Test of Sphericity is highly significant and, thus, the Principal Component Analysis is the appropriate method to use for the data.

5.3.5.2 Component Matrix

The two tables given below are the component matrix before rotation and component matrix after rotation. The component matrix provides the factor loading of all the components onto each component. Before rotating the component matrix, it is apparent that most of the components are loaded highly onto the first component as compared to the other two components that are extracted. These tables are compared with each other. The comparison between the two matrices clarifies that the components are extracted and explains the maximum variation in the data.

Table 5.15: Rotated Component Matrix^a

	Component				
	1	2	3	4	5
S.I1				.778	
S.I2				.702	
S.I3				.722	
S.I4				.736	
S.I5				.717	
S.I6				.767	
EE1	.769	.342			.304
EE2	.784		.385		
EE3	.742	.339			.391
EE5	.810		.387		
EE4	.784		.385		
PE1	.314	.739			.353
PE2		.849			
PE3		.749			.337
PE4	.424	.758			
PE5	.309	.731	.349		
TU1	.310		.797		
TU2	.320		.805		
TU3		.302	.715		
TU4			.872		
SUP1					.818
SUP2					.864
SUP3					.727
SUP4					.693

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Table 5.16: Component Transformation Matrix

Component	1	2	3	4	5
1	.540	.509	.430	.285	.428
2	-.103	-.252	-.181	.945	-.019
3	.096	-.187	.710	.083	-.667
4	-.641	.724	.067	.132	-.208
5	-.527	-.344	.524	-.038	.573

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

From the analysis of the rotated component matrix, all the variables from the components are taken into account for further calculations. The reason for this is that each of the individual factors has a correlation of more than 0.30, which is meaningful for the results. All the variables have correlations of more than 0.30, so they are considered for further analysis that is conducted through ANOVA (See Appendix 4.5)

5.3.6 Analysis of Variance (ANOVA)

ANOVA is another important statistical method used to test the significant difference between the various specified groups (Sheskin, 2003). Here, one way ANOVA is the appropriate method that tests the significant difference between the groups on the basis of the moderators (experience, educational level, category, age, health condition) and the statistical hypotheses: null hypothesis against the alternative hypothesis, on which basis the result is drawn as to whether a significant difference is present between the groups or data set (Nishisato, 2006). Here, the objective was to apply the ANOVA for the purpose of testing the significant difference among the means of several groups of moderators: experience, educational level, category, age, and health condition, with the variables performance expectancy (PE), effort expectancy (EE), social influence (SI), industry support for credibility (SUP), and trust (TU).

The null and alternative hypotheses to be tested by using the ANOVA are stated as below:

Null Hypothesis H_0 : There is no significant difference for the means of specified groups.

Alternate Hypothesis H_1 : There is a significant difference between the means of specified groups.

The above hypotheses demonstrated the findings of difference among the groups of moderators for EE, PE, TU, S.I and SUP. There was a comparison among all the groups by combining two groups each time. Thus, there was an evaluation of the difference of each group against other groups to find the significance level of the difference. The statistical software, Statistical Package for Social Science (SPSS) was used to analyse the data using ANOVA to test the significant difference between the specified groups. The results drawn from the SPSS software are explored in the following section:

5.3.6.1 ANOVA for education level

The null hypothesis is rejected for the variables whose p-value in the table below is less than 0.05 (Langdrige and Johnson, 2009). Thus, it can be concluded that there is a significant difference between the various groups and the moderator education level for EE, PE, TU and SI, with the exception of SUP. This is because the p-value corresponding to the four variables is less than 0.05, and greater than 0.05 for the factor industry support for credibility. This indicates that education level is vital for transforming the social media usage among people.

Table 5.17: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
S.I	Between	279.194	4	69.799	6.371	.000
	Within Groups	4765.678	435	10.956		
	Total	5044.873	439			
EE	Between	189.432	4	47.358	5.103	.001
	Within Groups	4037.148	435	9.281		
	Total	4226.580	439			
PE	Between	105.837	4	26.459	4.884	.001
	Within Groups	2356.742	435	5.418		
	Total	2462.580	439			
TU	Between	46.759	4	11.690	2.633	.034
	Within Groups	1931.184	435	4.440		
	Total	1977.943	439			
SUP	Between	30.371	4	7.593	1.489	.205
	Within Groups	2218.517	435	5.100		
	Total	2248.889	439			

By applying a post-hoc test, a significant difference was also seen between school certificate holders and other degrees, which means that both of the groups have different perspectives for social media forums. There is no significant difference between Master's and the PhD group. With respect to the social influence, the table above shows that there is significant difference between the diploma and school certificate holders. A significant difference exists between the PhD and diploma degree holders' perspectives towards social media applications.

For the construct effort expectancy, there is a significant difference between the diploma holders and less-educated people. Additionally, school certificate holders and other

degrees also show a significant difference. For the construct performance expectancy, there is a significant difference between the school certificate holders and other degree holders because this has a p-value less than the significance level. For the construct trust, there is a significant difference between school certificate holders and other degree holders due to a p-value of less than 0.05.

There is a significant difference in the level of understanding of participants with different educational status. This reflects the relative level of understanding about applications of social media forums. The differences in the utility of various social media applications for the highly educated and less-educated people also stimulate variation in their perspectives. In addition, diploma holders and school certificate holders have different social interaction needs as compared to highly educated people, so they perceive the constructs differently.

These findings comply with the social presence theory, which signifies that people have different orientations in order to meet their social interaction needs (Lydia, 2015). Social presence denotes measuring the belief of oneness or community that a learner or user witness while using online platforms (Nata, 2007). However, it is stated that social presence is a subjective phenomenon with inclusion of varied objective constructs; thereby its perception and acceptance among individuals vary. Overall, it is suggested that social presence is a useful phenomenon for boosting learning and interaction among student (Lydia, 2015). These all are the extractions of the theory and these results are also supported by the test results. The test results also showed that the level of social interaction differs from one age group to another and, hence, the usage of social media also differs between the various categories of people who have different knowledge and backgrounds.

The people who have had less education remain satisfied with the performance of social media forums by using them actively. There are significant differences as people who

have had more education are positive about the effort expectancy of using social media discussion forums when compared to less-educated respondents. This can be justified by considering the ANOVA results of the groups that indicated a significant difference in the means corresponding to social influence, trust, effort expectancy, and performance expectancy. Hamilton and Chou (2014) also found that the higher the education, the higher will be the usage of social media forums (Hamilton and Chou, 2014). This is in agreement with the social presence theory, which emphasises the utilisation of computer-mediated communication channels among the users, which is facilitated through their strong orientation towards social media forums. Individuals enhance their social presence over multiple networks for interacting with one another.

The key postulations of the theory reflect that highly educated people have a presence over multiple networks, due to their active involvement in personal and professional activities. Their relative level of awareness about the effective utilisation of applications of social media also contributes towards their high involvement in using social media for interaction with others. The motivating factors for educated people are their professional needs, knowledge about using the different applications available on the social media, and task-oriented communication (Lee, 2014). In this respect, it has been claimed that people's level of awareness for the use of social media forums is affected by their educational level and knowledge background.

The analysis revealed that social influence is the least significant factor that affects the social media forum usage of people from different educational backgrounds, but there is a significant difference between PhD, Master's degree and Diploma degree holders. The behaviour of highly educated and less-educated people towards social media forums reflects the significance of social presence theory in understanding their approach. In terms of the theory, highly educated people are well aware of the norms of information disclosure to the

other people, which restricts their behaviour towards using discussion forums. It was also agreed by Chanasuc and Praneetpolgrang (2008) and Quesenberry (2015) that the relation between behavioural intentions and social influences can be got affected moderately by the education level of people as less educated people show high probability to get affected by social influence.

5.3.6.2 ANOVA with regard to experience

In this aspect of the results, the value 0 represents no response for the respective questions about the key variables. The null hypothesis is rejected because the p-value in the following table is less than 0.05. Thus, it can be concluded that there is a significant difference between the various groups of people having different experiences for EE, PE, SI, TU, and SUP. This is because the p-value is less than the significance level (0.05). These factors are significant towards influencing the perspective of people to make use of social media forums.

Table 5.18: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
S.I	Between	635.022	4	158.756	15.660	.000
	Within Groups	4409.851	435	10.138		
	Total	5044.873	439			
EE	Between	715.042	4	178.760	22.144	.000
	Within Groups	3511.538	435	8.073		
	Total	4226.580	439			
PE	Between	323.546	4	80.887	16.449	.000
	Within Groups	2139.033	435	4.917		
	Total	2462.580	439			
TU	Between	164.370	4	41.092	9.856	.000
	Within Groups	1813.573	435	4.169		

	Total	1977.943	439			
SUP	Between	364.942	4	91.235	21.066	.000
	Within Groups	1883.947	435	4.331		
	Total	2248.889	439			

For the construct social influence, a significant difference exists between the individuals having no experience and four to six years' experience, as well as more than six years of experience. In addition, there is a significant difference among the individuals having experience of one to three years and more years. For the construct effort expectancy, a significant difference exists between the individuals' perspectives for those having an experience of one to three years and more years. For the constructs performance expectancy, trust, and industry support for credibility, there is a significant difference between the perspectives of individuals with no experience and those with experience, because the p-value corresponding to these groups is less than 0.05.

On the basis of ANOVA and multiple comparison tests the research determined that the difference between the usages of social media forums is significant for the above-identified constructs. This is because individuals having more experience are aware of the practical implications of using social media forums. In this regard, a claim has been made that these are the beliefs and norms of individual people based on their experience, which direct them to use social media platforms. They have knowledge about the efforts required to trust specific platforms and the relative implications of using a specific application to protect their account. However, less experienced individuals lack knowledge about the relative impact of social media platforms. They just experience the new applications without knowing about their trust status. This indicates that individuals with experience adapt towards using social media forums by complying with Leininger's Culture Care Theory and transform their approach accordingly. But, individuals with no experience remain negligent about the possible threats

associated with disclosure of personal information on social media platforms. Experienced and knowledgeable people use the theory to plan their social presence and utilise social media applications, whereas inexperienced people do not have this ability.

Social media platforms enable the expression of identity and social involvement by the users, which vary due to the predictive ability of the subjective norms and beliefs of people. In relation to this, the following hypothesis can be proposed, Behavioural aspects of people direct them to have use of social media platforms at different extents based on their experience.

Using post-hoc results, in relation to the experience level of four to six years, the result is significant. These users support social media and think that social media forums are easy to use; this affects their intention to accept and use them. This notion has also been supported clearly in the studies of Hamilton and Chou (2014). The authors specified that the perception of individuals towards using social media extends and they become supportive of using it actively within their routine activities. Furthermore, It is apparent that respondents with more experience of using discussion forums are more willing to use different applications of social media (Hamilton and Chou, 2014). Moreover, the research found that people from the category of experience level of four to six years have a high degree of trust in social media, which has also been reflected critically in the study of Hamilton and Chou (2014).

This reflects the intention of individuals to engage in a specific behaviour at a specific time and place. This indicates that people behave according to their subjective norms and beliefs about using social media applications. It demonstrates differences in the level of trust and perceived usefulness of the social media platforms for individuals. The Integrated Theory of Health Behaviour Change helps to build trust between people by minimising their negative thoughts and changing them into positive ones. It acts as a guiding and motivating tool for

individuals (Hamilton and Chou, 2014). The theory is used to adopt systems facilitating change and to provide guidance to others in the workplace. This theory supports health behavioural change through the support of practitioners. It becomes easy to enhance health behavioural change by enhancing social facilitation, increasing self-regulation and fostering beliefs and knowledge. It helps people to improve their health status and ensure their health improvement at each level (Dunphy et al., 2015). The assumption of the theory focuses on the idea that with different types of positive theoretical aspects, the health behaviour of individuals can be improved effectively. In relation to this, the hypothesis can be suggested; Individuals feel a good degree of improvement in their health behaviour through having positive influences of social media based on their experience.

5.3.6.3 ANOVA with regard to age

The null hypothesis is rejected for the variables whose p-value in the following table is less than 0.05. Thus, it can be concluded that there is a significant difference between the various groups of people in different age groups with the variables EE, TU and SUP except PE and SI. The p-value corresponding to the constructs EE, TU and SUP is less than 0.05, and more than 0.05 for PE and SI. This indicates that with an increase in the age of individuals, their effort expectancy increases and this encourages trust and support in respect of social media-based discussion forums.

Table 5.19: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
S.I	Between	50.431	3	16.810	1.467	.223
	Within Groups	4994.442	436	11.455		
	Total	5044.873	439			
EE	Between	87.594	3	29.198	3.076	.027
	Within Groups	4138.986	436	9.493		
	Total	4226.580	439			

PE	Between n	19.544	3	6.515	1.163	.324
	Within Groups	2443.036	436	5.603		
	Total	2462.580	439			
TU	Between n	87.918	3	29.306	6.760	.000
	Within Groups	1890.025	436	4.335		
	Total	1977.943	439			
SUP	Between n	111.077	3	37.026	7.551	.000
	Within Groups	2137.811	436	4.903		
	Total	2248.889	439			

By applying the post-hoc test, it is clear that the people in the age group less than 20 years or 21 to 30 years found it difficult to use, because the table shows that PE is not significant. However, the people from these groups found it easy to use with effort expectancy, as the p-value is less than 0.05. Chou et al. (2009) revealed that people in a lower age group show more affinity towards the use of social media. This fact is a significant aspect of the current research results, because young people remain actively involved in using the social media platforms in the health sector. It is also concluded that people of 31 to 50 years do not agree with all constructs. In view of the above results for the construct trust, it is clear that people in the age group more than 20 years have a significant difference in their views regarding the usage of social media when compared to people in the age group less than 20 years, and older people do not support the use of social media. Moreover, people over 51 years of age have different perspectives towards using social media platforms.

For the construct industry support for credibility, individuals belonging to the age group of 31 to 50 years show a significant difference to people of 21 to 30 years, and more than 50 years. Individuals from the age group of 31 to 50 years ask for less support when compared to people from the age groups of 21 to 30 years, and more than 50 years. This is because

middle-aged people experience the social media applications in their jobs and social interactions, which reduces the relative need for industry support. In comparison, people from the age groups of 21 to 30 years and more than 50 years require more industry support to learn the skills to make effective use of social media applications.

These findings can be explained through the gratification theory (Larson, 2009), which highlights the different needs of people and their approach to satisfying them by using social media forums. Through the support of this theory, it is easy to fulfil the individual needs of using social media for older people, as they can share jokes and funny pictures with their friends, they can reduce boredom or become familiar with new techniques and current knowledge. This theory focuses on different ways in which people can enhance their knowledge, ensure diversion or escape, maintain relaxation and enhance their social companionship or interaction. People try to integrate media into their lives and their experiences with the support of this theory. It reassures them about their active roles in society by using media. It generates self-awareness about the use of social media to satisfy their personal needs and improves their inner satisfaction level (Renckstorf, 2004). The assumption of the theory focuses on the fact that social media has wider implications in the routine life of individuals and, hence, people are becoming more aware of its applications. In this respect, the hypothesis can be suggested that, "People with different ages and conditions pursue different needs and expectations while using new technologies such as social media."

Chou et al. (2009) also supported these findings of the current study, as their results are very similar. They reflected that the prevalence of social media is higher in the younger generation. The research identified the high affinity of youngsters towards using social media forums as an active mode of communication in their day-to-day activities, when compared to the older age groups. It is evident from the gratification theory, as used by Kuss and Griffiths (2011) in their study, that difference in the use of social media forums exist because of

differences in the approach of individuals to satisfy their social interaction oriented needs. Gratification theory enables an understanding of people's approach to the utilisation of specific sources of media for meeting their needs. It provides assistance in analysing the approach to use social media to satisfy people's needs and expectations.

These findings can also be justified through the gratification theory because young and older people have different needs to become engaged with social networks. High usage of social media platforms by youngsters highlights their active involvement in the establishment of their own identity and belongingness. This theory supports the fact that young people generally make updates or post new pictures to create their identity in their friend circle. They want to become popular among their groups and with other new friends (Larson, 2009). The key assumption of this theory is that the usage of social media is more common in the younger generation. The hypothesis answer is, People of different ages have different perceptions about trust and behavioural intention to use social media forums.

5.3.6.4 ANOVA with regard to health condition

The null hypothesis is rejected for the variables whose p-value in the following table is less than 0.05. Thus, it can be concluded that there is a significant difference in various groups having different health conditions with the variables SI and TU except EE, PE and SUP. The p-value corresponding to the test statistic is less than 0.05 for SI and TU, whilst it is more than 0.05 for EE, PE, and SUP. This implies that cultural context and level of trust are significant towards affecting the usage of social media by people from different constructs.

Table 5.20: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
S.I	Between Groups	92.483	2	46.242	4.080	.018
	Within Groups	4952.389	437	11.333		
	Total	5044.873	439			
EE	Between Groups	2.604	2	1.302	.135	.874
	Within Groups	4223.976	437	9.666		
	Total	4226.580	439			
PE	Between Groups	15.478	2	7.739	1.382	.252
	Within Groups	2447.102	437	5.600		
	Total	2462.580	439			
TU	Between Groups	112.566	2	56.283	13.185	.000
	Within Groups	1865.377	437	4.269		
	Total	1977.943	439			
SUP	Between Groups	17.858	2	8.929	1.749	.175
	Within Groups	2231.030	437	5.105		
	Total	2248.889	439			

By applying the post-hoc test, the results conclude that there is a significant difference between people in various groups with different health conditions, and more specifically, serious and prescribed patients have different perspectives on social media forums. The use of forums is not supported other than by people with simple non-prescribed conditions. The reasons for this is that the p-value is less than 0.05 and the mean differences vary significantly among the defined groups. It is evident from the p-values corresponding to the trust factor that patients with simple non-prescription based health conditions are different from the patients with prescriptions. In regard to the trust and social influence variables, prescription consumers and those with serious conditions faced difficulty in trusting the forums, which is evident from the p-value that is less than 0.05. Some of the potential difficulties are related to accessibility to social media forums and lack of trust about sharing of information on the health care provider's website. This indicates that it is important to

improve the trust construct in the health institutions' use of information technology to support patients using social media platforms. For these findings, the hypothesis result here can be proposed as; People with different health conditions give importance to media content in social media forums differently.

Tufekci and Wilson's study (2012) also found that the level of trust in firms generated by the patient is affected according to their health-related conditions. In the case of highly critical conditions, people's trust is quite low. Furthermore, those with simple conditions and non-prescription consumers had no problem with using forums to obtain information or make a decision that would not affect their health. The literature supported that health condition does impact the use of social media forums (Chou et al., 2009). Social influences, especially cultural constructs, have not been explained at all by the moderators, as it has quite a low significance value, i.e. 0.018, which shows that there is a significant impact of the culture construct over the study. Tufekci and Wilson (2012) also revealed similar findings and considered culture as a significant factor in the determination of social media usage by the population. Their study emphasised the role of social media in motivating people to participate in political protests, with respect to the use of Facebook and Twitter for sharing of information, blogs, photographs, etc. The results presented by the authors emphasised culture to be a significant factor of social influence, affecting the patterns of using social media forums due to differences in the perspectives of individuals in accordance to their cultural orientation and values. Digitally mediated communication platforms play a pivotal role in demonstrating the motive towards social change in communities.

On the basis of the previous table 5.2, the research analysis found that culture and trust are key variables, which have a direct influence on the behavioural intention of people from the healthcare industry. These variables are significant for people with simple non-prescription conditions, serious conditions and simple with prescription conditions when

people seek treatment from healthcare providers. In this respect, Kuss and Griffiths (2011) explained that Leininger's Culture Care Theory focuses on the need for supportive and facilitative decisions and acts for improving the health of people within cultural dimensions. It focuses on the need for improved health outcomes for people belonging to different or similar societies, cultures or backgrounds. Apart from this, the findings are in agreement with the agenda setting theory, as explained by Matei and McDonald (2010). This theory emphasises the premise of exposure and the media content for processing and acceptance of social media by the users. The theory supports the importance of individual autonomy in selecting and using the social media applications (Matei and McDonald, 2010). This theory implies that media coverage is helpful in exposing an issue on a large scale. It helps to create a powerful impact on the thinking of people in society. It helps to influence their mind set and change their perceptions. It also helps to generate familiarity with the current issues occurring in society, along with the creation of public awareness towards that issue (McFarland and Wehbe-Alamah, 2014).

The theory implies that the health of people can be affected by their cultural backgrounds. It helps to set guidelines or agendas within which people can improve their health while functioning within the boundaries of the society. In the context of the research, the agenda setting theory is significant in respect of the analysis of behavioural control of the individuals towards using social media forums. It indicates that the significant difference between the social media forums' usage by the participants is due to their behavioural intention and orientation to establish their social identity. The theory establishes that the difference in the use of social media is due to behavioural changes among people. The hypothesis result here can be stated as; People with different cultural backgrounds have varying health status as their routine habits are different according to their cultures and/or society.

5.3.6.5 ANOVA with regard to medical background (educational level)

The null hypothesis is rejected because the p-value in the table below is less than 0.05. Thus, it can be concluded that there is a significant difference in the means of the specified groups with regard to the category medical background. With the exception of the trust variable, all the other variables show significant differences for the different categories of people based on their profession within the healthcare sector. This indicates that social influence, industry support for credibility, performance expectancy, and effort expectancy are key factors, which transform the orientation of professionals to make use of social media forums.

Table 5.21: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
S.I	Between Groups	205.801	2	102.900	9.293	.000
	Within Groups	4839.072	437	11.073		
	Total	5044.873	439			
EE	Between Groups	380.250	2	190.125	21.601	.000
	Within Groups	3846.330	437	8.802		
	Total	4226.580	439			
PE	Between Groups	237.940	2	118.970	23.370	.000
	Within Groups	2224.639	437	5.091		
	Total	2462.580	439			
TU	Between Groups	25.078	2	12.539	2.806	.062
	Within Groups	1952.865	437	4.469		
	Total	1977.943	439			
SUP	Between Groups	148.891	2	74.446	15.492	.000
	Within Groups	2099.997	437	4.805		
	Total	2248.889	439			

The above table summarises the key results that show the impact of key variables on the behavioural intention of consumers, physicians, and pharmacists. It is clear from the significant values corresponding to the key variables, which are less than the significance level of 0.05, that social influence, performance expectancy, industry support for credibility, and effort expectancy have a direct impact on the relative intention of key stakeholders belonging to the healthcare industry. By applying a post-hoc test, it is apparent that there is a significant difference between consumers and physicians, as the p-value is less than 0.05. Furthermore, there is a significant difference between pharmacists and physicians in relation to the variables effort expectancy, industry support, social influence, and performance expectancy. The results conclude that consumers tended to use social media forums more than pharmacists. Moreover, pharmacists tended to use social media forums more than physicians. The result also shows that physicians generally do not support the social media forums for most variables and do not trust them.

With respect to the trust factor, physicians are relatively less involved in using social media, as they do not trust it, whilst pharmacists and consumers of the health care sector are more trusting in social media forums. With regard to the TAM model, people from different categories align their behaviour and beliefs towards using social media platforms, to establish their own identity and to comply with the needs of their respective professions (Lee and Suh, 2013). The key assumption of the TAM Model is that the use of social media is also dependent on people's trust level. The hypothesis results for this can be stated as, People of different categories and medical backgrounds have different perceptions about trust, other constructs and behavioural intention to use social media forums.

5.3.7 Multiple regression analysis

For the regression stage:

Regression analysis is a statistical method used for the purpose of analysing the average relationship between two types of variables: dependent and independent variables (Arguinis, 2004). The dependent variable is the variable, which is influenced by other variables, whereas independent variables are those variables that influence the dependent variable. In this context, in the present study, the dependent variable is the behavioural intention (BEI) and the independent variables are performance expectancy, effort expectancy, social influence, industry support for credibility, and trust. The purpose is to analyse the impact of independent variables on dependent variables (Seber and Lee, 2003). The statistical software, Statistical Package for Social Science (SPSS), was used for this purpose, and the results are outlined below.

The data for the regression model was transformed using the factor scores corresponding to each of the variables and for each of the individuals. The new data is termed as score data. It is used in the regression analysis to obtain accurate results by adjusting the variables corresponding to the defined factors.

The regression model is:

$$BEI = \alpha + \beta_1 (PE) + \beta_2 (EE) + \beta_3 (S.I) + \beta_4 (TU) + \beta_5 (SUP)$$

Null Hypothesis H₀: There is no impact of various independent variables on behavioural intention (BEI).

Alternative Hypothesis H₁: There is an impact of various independent variables on behavioural intention (BEI).

The model summary of the regression analysis is shown in the following table:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906 ^a	.821	.819	.90305	1.991

a. Predictors: (Constant), SUP_S, TU_S, S.I_S, EE_S, PE_S

b. Dependent Variable: BEI

The summarised model of the regression analysis identified that the R-square value is 0.821, which is good enough. It indicates that 82.1% of variation in behavioural intention can be explained through the independent variables, which are performance expectancy, social influence, trust, industry support for credibility, and effort expectancy.

Table 5.22: ANOVA^a for behaviour intention (BEI) and the independent variables

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1624.017	5	324.803	398.289	.000 ^b
	Residual	353.926	434	.815		
	Total	1977.943	439			

a. Dependent Variable: BEI

b. Predictors: (Constant), SUP_S, TU_S, S.I_S, EE_S, PE_S

The table above concludes that the regression model is a good fit model because the p-value is less than 0.05. It means that the independent variables are statistically significant for predicting the dependent variable.

Table 5.23: Coefficients^a

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.516	.168		9.042	.000
S.I_S	-.127	.017	-.211	-7.447	.000
EE_S	.057	.023	.092	2.464	.014
PE_S	.304	.031	.391	9.841	.000
TU_S	.580	.027	.680	21.154	.000
SUP_S	-.120	.016	-.177	-7.560	.000

a. Dependent Variable: BEI

The p-value in the significance table signifies that the null hypothesis may be accepted for the p-value greater than 0.05 at 5% level of significance because there is no strong evidence against the null hypothesis (Lawal, 2003). Further, for the p-value less than 0.05, the null hypothesis is rejected. Therefore, in this context, it can be concluded that there is an impact of independent variables, social influence (SI), effort expectancy (EE), performance expectancy (PE), trust (TU), and industry support for credibility (SUP) on behavioural intention (BEI). Therefore, the regression model obtained is:

$$BEI = 1.516 + 0.304(PE) + 0.057 (EE) - 0.127(S.I) + 0.580(TU) - 0.120(SUP)$$

The coefficients of the variables indicate that they have a significant impact on the behavioural intention of people to use social media forums. The variables performance

expectancy, effort expectancy, and trust stimulate a positive change in the behavioural intention with a unit change. In comparison, a unit change in the variables social influence and industry support for credibility stimulate a negative change in the behavioural intention to use social media.

5.3.8 T-test

The t-test is the statistical method of hypothesis testing used for the purpose of testing the significant difference between the means of the two groups. In this context, the t-test was applied to the performance expectancy (PE), effort expectancy (EE), social influence (S.I), industry support for credibility (SUP), and trust (TU) for the purpose of testing the significant difference between the means of two different groups that are males and females. Therefore, for this purpose, the null and alternative hypotheses for testing the significant difference between the two groups are as follows:

Null Hypothesis H0: There is no significant difference between the means of two groups.

Alternative Hypothesis H1: There is a significant difference between the means of two groups.

Table 5.24: Final results of T-test:

Constructs	Gender	Mean	Standard Deviation	t-value	d.f.	Sig value
Performance Expectancy	Male	17.3453	2.48523	1.508	438	0.220
	Female	17.7099	2.23379			
Effort Expectancy	Male	16.6331	2.93650	.266	438	0.606
	Female	16.5309	2.64968			
Social influence	Male	19.8309	3.97513	0.103	438	0.749
	Female	20.0185	4.14650			
Trust	Male	7.4892	3.08687	2.920	438	0.000
	Female	7.6358	3.31898			
Industry Support	Male	14.2194	2.12567	3.698	438	0.055
	Female	13.3704	2.40571			

Discussion

5.3.8.1 Testing of performance expectancy (PE) with regard to gender

Group Statistics					
Gender	N	Mean	Std. Deviation	Std. Error Mean	
PE	Male	278	17.3453	2.48523	.14905
	Female	162	17.7099	2.23379	.17550

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PE	Equal variances assumed	1.508	.220	-1.539	438	.124	-.36455	.23682	-.82999	.10088
	Equal variances not assumed			-1.583	366.265	.114	-.36455	.23026	-.81735	.08824

The p-value in the above table is greater than 0.05; therefore, the null hypothesis may be accepted. Thus, it can be concluded that there is no significant difference between males and females for performance expectancy, which means both males and female have the same views about social media forums. Similarly, Hamilton and Chou (2014) also found that gender was not a factor that affected people’s social media acceptance. This study demonstrates similar results by elaborating the variability of perceptions of men and women towards using social media forums.

5.3.8.2 Testing Social Influence (S.I) with regard to gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
CUL	Male	278	19.8309	3.97513	.23841
	Female	162	20.0185	4.14560	.32571

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
CUL	Equal variances assumed	.103	.749	-.470	438	.639
	Equal variances not assumed			-.465	325.443	.642

The significance value in the above table is greater than 0.05; therefore, the null hypothesis is not rejected. Thus, it can be concluded that there is no great degree of difference between males and females with the variable social influence (S.I). It concludes that both males and females share the same view. Hence, both males and females agreed that the social influence such as culture had an effect on their intention to use media forums. Most people considered that the use of media forums is affected by various cultures and societies, which is also supported by the literature. Leea (2011) presented the result that cultural differences depict variability in the perceptions of people to make use of social media forums. The literature also justified the rationale behind the open society/culture in the Western countries and the conservative culture in the Middle Eastern countries.

5.3.8.3 Testing of Trust (TU) with regard to gender

Group Statistics				
Gender	N	Mean	Std. Deviation	Std. Error Mean
TU Male	278	14.0683	2.30343	.13815
TU Female	162	14.6296	1.76188	.13843

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TU	Equal variances assumed	21.460	.000	-2.678	438	.008	-.56128	.20960	-.97323	-.14934
	Equal variances not assumed			-2.870	406.847	.004	-.56128	.19557	-.94574	-.17683

The p-value value in the above table is less than 0.05; therefore, the null hypothesis is rejected. Thus, it can be concluded that there is a significant difference between males and females, as trust is more important for females than it is for males. Hamilton and Chou (2014) commented on the prospects of trust and anonymity in using social media. In the healthcare sector, it is important to inform the public about their clinical care and health behaviour, so as to establish an interface between the health communication and the end users.

5.3.8.4 Testing of industry support for credibility (SUP) with regard to gender

Group Statistics				
Gender	N	Mean	Std. Deviation	Std. Error Mean
SUP Male	278	14.2194	2.12567	.12749
SUP Female	162	13.3704	2.40571	.18901

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
SUP	Equal variances assumed	3.698	.055	3.847	438	.000
	Equal variances not assumed			3.724	304.223	.000

The insignificant p-value in the above table concludes that there is no significant difference between males and females for social media as an industry support for credibility (SUP). Hence, the industry supports, such as providing a team to control the quality of information and the credibility of sources, is important for both females and males. Industry support is a vital aspect of using social media in the healthcare sector. Team-based training and control of the approach towards health communication is helpful for the practitioners and public in the enhancement of the feasibility of web 2.0 based interactions (Hamilton and Chou, 2014).

5.3.8.5 Testing of effort expectancy (EE) with regard to gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
EE	Male	278	16.6331	2.93650	.17612
	Female	162	16.5309	2.64968	.20818

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
EE	Equal variances assumed	.266	.606	.365	438	.715
	Equal variances not assumed			.375	365.201	.708

The significance value in the above table is greater than 0.05; therefore, the null hypothesis is not rejected. Thus, it can be concluded that there is an insignificant difference between the two groups, male and female. Therefore, the conclusion is drawn that there is no significant difference between the views of male and female regarding social media in relation to effort expectancy (Lehmann and Romano, 2008).

The table below summarises the mean value corresponding to the defined variables, which is divided on the basis of gender.

Table 5.25: Mean value corresponding to the defined variables

Factors	Male	Female
Performance Expectancy	17.3453	17.7099
Effort Expectancy	16.6331	16.5309
Social Influence	19.8309	20.0185
Trust	7.4892	7.6358
Industry Support	14.2194	13.3704

This table shows that the average is lowest for the variable trust (TU) and is highest for the variable social influence (S.I). This indicates that these factors are significant towards the stimulation of variations in the intention to make use of social media. In this respect, Heldman and his associates' research supported that the above-mentioned factors are vital components of public health practice, which are helpful in stimulating improvement in the communication across the healthcare industry. These factors also highlight the importance of

engaging audiences via multiple modes of interaction (Heldman, Schindelar and Weaver, 2013). Trust, as seen as a factor, is not simply restricted to being realised as an individual attribute, but it can also be extended to multidimensional characteristics in reference to examining social relationships apart from interpersonal relationships (Paliszkiewicz and Koohang, 2006).

In the context of the recent development of social media, trust is described as a quality backed by confidence, which is controlled by the existing vulnerabilities of not having direct contact with the other person on social media groups. Compared on the basis of gender, this attribute of trust is seen to be more rigidly held by males than females. This is also reflected in the outcome of the t-test examination of the significance of the difference between males and females regarding trust, related to participation on social media groups (Paliszkiewicz and Koohang, 2006). The hypothesis result for this finding is that, People of different genders have different perceptions and behavioural intentions regarding the usage of technology generally, and show different frequencies and affinity towards using social media for communication.

It is apparent in the societal perceptions that the gender-based variation seen in the usage of social media websites is primarily due to the females' awareness of the associated risk factors (Palmer, 2003). The demographic characteristics also play a key role in understanding the differences between social media usage among males and females. The potential of social media platforms to enhance women's empowerment and encourage them to be recognised as being equal to men in all respects is also determined. The reasons for participation on social media websites differ in regard to security and understanding the level of probable danger in the case of females. Therefore, risk theory plays an important role in governing the actions of users online, since an increased customisation of profiles by users on

such websites poses an identity threat thereby creating a risk for female participation on social media (Mazman and Usluel, 2011).

5.3.9 Correlation analysis

The correlation is the statistical method used for analysing the association between the variables (Weinberg and Abramowitz, 2002). The following table analyses the association between the variables for the given data by using SPSS software. If the significance value is greater than 0.05 then it signifies that there is no correlation between the two variables. The significance value of less than 0.05 signifies that there is a correlation between the variables. (See Appendix 4.1). This shows that the strength of the relationship between the variables can be identified. It reflects that the experience of participants is negatively correlated with performance expectancy and industry support, which indicates that there is a decline in the level of experience with respect to a change in the two component factors. Further, a negative relationship exists between the health condition and behavioural intention. Similar correlation exists for the component trust. This indicates that health condition affects the level of trust and intention of the participants to use the social media platforms in the healthcare sector. Another important aspect that arises from analysis of the correlation table is that the variable 'behavioural intention' is positively correlated with the component factors. Thus, trust is correlated with other factors such as, trust and performance expectancy (0.530), trust and industry support (0.205), trust and effort expectancy (0.632) and trust and social influence (0.234). The high p-values observed in the case (which are greater than 0.05 for each of the pair) show that there is correlation between trust and performance expectancy, industry support, effort expectancy and social influence.

This reflects that the behavioural intention of participants is positively influenced by these factors (constructs) in motivating them to follow and adopt the use of social media forums for communication and decisions. The positive correlation (0.638) between the behavioural intention and effort expectancy also shows their affinity towards using social media forums. Further, social influence is positively associated with effort expectancy (0.338), performance expectancy (0.237), and trust (0.234), and industry support (0.271), which indicates that this construct affects the others in a positive manner. The factor effort expectancy is positively associated with performance expectancy (0.708), trust (0.632), and industry support (0.582). This indicates that the efforts of individuals have a positive impact on the other factors that lead to active use of social media forums.

The value of correlation coefficients for each factor with every other factor is presented in the table 5.26 below:

Table 5.26: Correlations

		BEI	SI	EE	PE	TU	SUP
Pearson Correlation	BEI	1.000	.234	.632	.530	1.000	.205
	SI	.234	1.000	.338	.237	.234	.271
	EE	.632	.338	1.000	.708	.632	.582
	PE	.530	.237	.708	1.000	.530	.603
	TU	1.000	.234	.632	.530	1.000	.205
	SUP	.205	.271	.582	.603	.205	1.000
Sig. (1-tailed)	BEI	.	.000	.000	.000	.000	.000
	SI	.000	.	.000	.000	.000	.000
	EE	.000	.000	.	.000	.000	.000
	PE	.000	.000	.000	.	.000	.000
	TU	.000	.000	.000	.000	.	.000
	SUP	.000	.000	.000	.000	.000	.
N	BEI	440	440	440	440	440	440
	SI	440	440	440	440	440	440
	EE	440	440	440	440	440	440
	PE	440	440	440	440	440	440
	TU	440	440	440	440	440	440
	SUP	440	440	440	440	440	440

5.3.10 Discussion of key findings

The intention of people in the healthcare industry to make use of social media forum is greatly affected by different constructs. The results of the study signify the importance of the factors mentioned in stimulating individuals to become involved in using social media platforms in the healthcare sector. Gender differences are influential in the application of social media. It is observable that the social influence of people affects their intentions and perceptions towards using social media platforms actively in their day-to-day activities. The behavioural intention of the individuals is also affected by the industry support for credibility and trust. These aspects were helpful in the identification of the basic themes to be emphasised in the interview process and to obtain the results for the hypothesis of the availability of industry-related factors and moderators for each technology adopted and used, to highlight the main prospects of using social media forums in the healthcare sector. In this regard, the most important aspect is related to trust, and industrial support for credibility of information obtained by the individuals, which is also affected by social influence.

Social media platforms provide a new system of communication for professional people and those seeking the services of different business sectors, such as healthcare, consultancy, etc. Tufekci and Wilson (2012) identified that social media platforms have been instrumental in the transformation of the political structure of Egypt through the active communication of information about demonstrations. This finding is somewhat related to the current study because the importance of social media-based communication is clearly justified in the results, which is more prominent among youngsters and middle-aged people. The difference in their social media usage is also due to trust and their behavioural differences.

In the context of public health communication, social media has emerged as an integral component due to the involvement of many users and their level of trust regarding

sharing of information. The reason for social media use in health communication is its direct influence on public health. This is helpful in leveraging the capability to engage in conversations related to health issues and remedies among the digital communities (Antheunis, Tates and Nieboer, 2013). The current study supports these findings and emphasises social media engagement within the healthcare sector, which continues to expand significantly. This finding aligns with the findings of the study of Heldman, Schindelar and Weaver (2013), which showed the importance of social media in expanding the reach among diverse audiences.

Chou et al. (2009) also supported this fact and explained that the Web 2.0 platform based social media oriented communication plays a pivotal role in the transformation of public health interventions. The researchers presented their key findings in terms of placing more emphasis on the participatory characteristics of social media, so as to engage people across digital communities and promote active interactions among them about health. The researchers also found that social media was not uniformly used by people belonging to different age groups. This fact can also be supported by the findings of the post hoc ANOVA test of the moderator age, which supports that the usage of social media is different among different age groups.

Another important finding of Chou et al. (2009) was that social media-based communication is helpful in the promotion of healthcare programmes and efforts with respect to dietary interventions, smoking cessation, etc. It has increased the reach of these healthcare interventions and good health-oriented practices in cyberspace, which is increasingly being disseminated among the digital communities.

From the statistical analysis of the collected data, it was found that the behavioural intention of people to make use of the social media platforms in the healthcare sector is greatly affected with respect to the different moderators, such as gender, age, experience,

educational level (education stage and medical knowledge), and health condition. The results corresponding to ANOVA reveal that most youngsters are involved in using social media forums in comparison to middle-aged individuals. The level of trust, as well as effort expectancy, has greater influence on people from a younger age group than middle and old-aged people.

Another important aspect is related to education level, which reveals that individuals from higher educational courses are involved in the active use of social media platforms. These findings are also supported by the research of Chou et al. (2009) and Tufekci and Wilson (2012). Chou et al. (2009) explained the rapid changes in the communication landscape in the health sector of the United States demonstrate the differences in the perception and attitude of individuals from different age groups. Tufekci and Wilson (2012) also emphasise the role of education level in using social media in political protests to highlight the role of social forums in transforming the political landscape. These studies are significant in the current study to justify the relative changes in the communication technology used by the people.

Furthermore, the findings of the current study are also significant with regard to the agreement of Leininger's Culture Care Theory in the prediction of the use of social media by the people in the healthcare industry. Kuss and Griffiths (2011) support the importance of this theory in the establishment of social identity and extension of social belongingness by using the platform of social media. Leininger's Culture Care Theory signifies the association between the behaviour, perceptions, and beliefs of individuals, so as to explain control over their actions. The model focuses on the importance of independent thinking as it is of growing importance in a rapidly changing global scenario (McFarland and Wehbe-Alamah, 2014). It helps an individual to utilise his experiences and creative skills in different fields and areas, and focuses on the importance of social influence, especially culture, in changing

human perceptions. The theory supports the integration of people from diverse cultures and backgrounds across the globe. It helps to provide sufficient knowledge to individuals regarding a specific context (Leininger and McFarland, 2006).

5.3.11 Summary

The results of the factor analysis reveal that the components were reduced to five main factors including performance expectancy, effort expectancy, social influence, trust, and industry support for credibility, which are independent variables that help with the identification of their significant impact towards using social media platforms. Furthermore, the regression analysis has provided assistance in estimating the behavioural intention from the variables (social influence, trust, industry support for credibility, effort expectancy, and performance expectancy). The regression model obtained is significant with the prediction of 82.1% variability in the dependent variable through the independent variables. The overall analysis of the findings highlights the importance of trust, industry support for credibility, effort expectancy, social influence and performance expectancy in the transformation of the behavioural intention of individuals towards using social media forums. These findings can be further used to identify information from the participants in the interview process.

Furthermore, the results of the correlation analysis complement the results of the factor analysis as both findings clarify the relationship between the level of experience and health condition, and the study factors such as trust and social influence. This reflects that the levels of performance expectancy and industry support for credibility show a negative association with the experience level, and this affects people's intention to use social media forums in an adverse manner. In addition, the health condition of individuals is also negatively associated with the level of trust and behavioural intention. This shows the impact of health condition on the intention to make use of social media and the relative level of trust in using the platforms for sharing of information. Additionally, the main study variable shows

a positive association with the five constructs, which indicates that the behavioural intention of individuals to use social media forums in the healthcare setting can be encouraged through trust, efficiency, and industry support for credibility. The overall results of the study indicate that the behavioural intention of people in the healthcare sector is affected by the constructs considered for the study, which are social influence, effort expectancy, performance expectancy, industry support for credibility, and trust.

One new finding of the current study is related to the penetration of social media-based health communication within the population irrespective of the age, educational level, and health care accession of the people. This demonstrates that social media can prove to be helpful in coping with the challenges of the digital divide that exist at present among communities. It can also provide a platform for the transformation of the health disparities and can promote effective healthcare practices among the public.

In order to maximise the reach and effectiveness of health communication through social media platforms, it is important to emphasise the performance expectancy, industry support for credibility, effort expectancy, and trust constructs. These constructs are helpful in targeting the population for the implementation of eHealth interventions in a uniform manner among people from different age groups and educational levels. It also provides active opportunities for reducing the health disparities by covering a wide audience in the programmes. In this respect, Kuss and Griffiths (2011) explained the significance of the need for a satisfactory approach by individuals towards the use of different platforms of social media. This is in agreement with the gratification theory, which justifies the variation in the approach of users of social media for satisfying their needs and expectations in terms of differences in the intention to establish their social identity (Larson, 2009). This theory helps to minimise the complexities arising in understanding each individual's approach. With the support of this theory, people using social media can become connected with each other 24/7

and can share their problems with their friends and others. Individuals have different social networking and interaction needs. This was found from the differences in the level of involvement of people involved in the healthcare sector. The findings of the current study also justify the variations in the perceptions of individuals belonging to different age groups who consider the role of the defined moderators differently. The needs of individuals from different categories (medical knowledge) are different, which is apparent from an analysis of the post hoc results.

White and Dorman (2001) highlighted the increasing comfort level of the public in respect of social media forum-based interactions. The key rationale explained by the authors is that people are more interested in seeking information about health conditions and are becoming members of online communities. This is supportive of an improvement in people's quality of life and improving their survival time. In this context, the current study adds more information about the role of trust in facilitating the social support groups and people to feel a sense of empowerment through the information derived from healthcare interventions. It plays a pivotal role in the elimination of potential barriers that are confronted by people with disabilities and those who hold care-giving responsibilities. The research work adds to the understanding of trust-based interactions that promote an organised network of communication in the healthcare sector and delivers a better experience to the users.

Overall, the research work signifies the role of social media for stimulating better prospects for healthcare interventions. It emphasises the integration of wide audiences across the healthcare practices to improve their level of awareness of health consciousness. It facilitates the users in the healthcare sector to sustain trust-based relations to improve the performance output of effective communications to seek detailed information about their health issues and respective remedies.

The results obtained from the findings of the survey process were used to frame the interview questions of the third phase in order to obtain a deeper understanding of the reasons for the relationships between behavioural intention and the constructs and moderators. The results of the study are in agreement with the findings of Chou et al. (2009) and Tufekci and Wilson (2012), which found significant differences in the perceptions and beliefs of people towards using social media forums. With respect to the constructs, trust, social influence (culture), and industry support for the credibility of information, there are significant differences in the social belongingness and level of interaction of people using social media applications. Therefore, on the basis of the findings of the survey questionnaire analysis, the following research modified framework was developed (BIUSF).

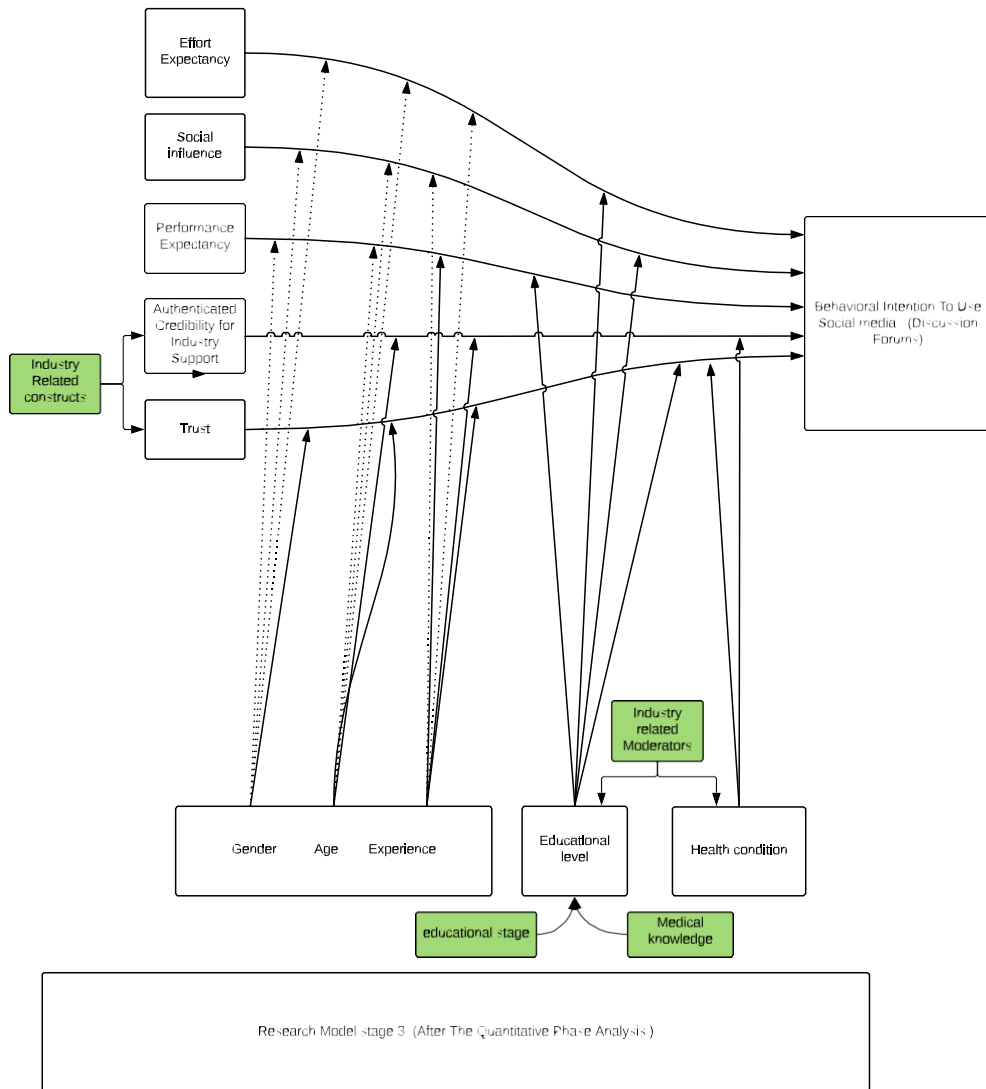


Figure 5.5 Research model BIUSF: after survey questionnaire

5.4 Data analysis of final qualitative interviews

5.4.1 Introduction

This chapter has discussed eleven relations between different variables associated with the research. The aim of this phase is to understand the reasons why the moderators affect each relationship of constructs with intention. In this regard, this third phase of data collection involving final in-depth semi-structured interviews was conducted to validate and explain the hypothesis: ‘Industry-related factors and moderators influence behavioural intention to adopt and use social media discussion forums in the pharmaceutical industry’. To undertake an in-depth discussion of each relationship, they are discussed and analysed in the light of the direct quotations gathered during the interview and the academic literature relevant to the subject of the variables.

A study was undertaken in the period March–May 2016 to determine the validity of the quantitative results discussed in the previous phase. Subsequently, messages and emails were sent to arrange face-to-face interviews with pharmacists and physicians. The meetings were held in different places such as hospital clinics and private pharmacies, and the consumer meetings were held at the hospitals while they were waiting for their physicians.

Permission was obtained from the Health Ministry hold the interviews with the physicians, pharmacists and patients inside the hospitals. Each interview lasted between 20 and 25 minutes. A total of 21 interviews were conducted with seven pharmacists, seven physicians and seven consumers (patients), 11 male and 10 female. In-depth semi-structured interviews were conducted to discover and understand the reason for the presence of the new factors (constructs) that have been highlighted in the model developed in the quantitative results phase of this study. The interviews also sought to explain the effect of different moderators on the relationship between the new constructs and behavioural intention to use social media forums. The results of interviews were translated into English and the transcripts

were reviewed. These interviews helped the researcher to formulate the final discussion by using the Nvivo analysis to explain the results and outcomes of these interviews.

5.4.2 Analysis and discussion of the relationships

5.4.2.1 Relationship 1: Effect of experience on performance expectancy and intention relationship

The findings of the interview revealed that experience has significant implications for the performance expectancy and intention to use social media forums to seek medical advice. In this regard, it was revealed that:

“The accuracy of information affects my intention a lot as more accurate information based on known credible sources lets me trust the forums more and use the media more than other sources to save my time. As I am from the new generation and newly graduated, this helped me a lot, as our pharmacy faculty has introduced all these new technology forums and media to be used for information collection, or to obtain new knowledge and information. So, I have a good background and experience with using the credible, accurate information from trustworthy sources and forums.” (P 9)

With the increase in the experience of using the social media forums, the people tend to increase their reliance on the information and guidance offered by such forums, thereby increasing their expectancy from such media forums. As a result, more experience can have a negative effect on the relation between performance expectancy and intention, as the expectancy is high for the more experienced person. If the forum does not meet his/her requirements then the intention to use these media forums decreases. This was confirmed by the correlation analysis test in the previous phase.

“In these forums each person will explain his personal experience with medications and treatments with all honesty in order to benefit others. We need to

distinguish between personal conclusions and scientific evidence, whether in examining the patient or treatment. The accuracy of the information from those forums can be confirmed by experience with time. Not from the first time of using them, as sometimes more experience means getting a better understanding of what is happening on these forums and better awareness of not using the forums for serious decisions” (p 11)

Further analysis of these findings demonstrates that experience is one of the biggest determinants regarding reliance on the credibility and accuracy of these forums. The findings assert that only with the benefit of experience of social media forums can people gain awareness about trust and first time users should not rely upon them. This highlights that an increase in experience leads to an increase in expectancy from health forums, and thus the intention will decrease if the user does not achieve the level of expectancy.

“I make sure that I will only accept media forums with as high level of accuracy and knowledge as possible. And all my experiences are positive with obtaining the relevant information. For this, based on my experiences, my intention to use forums increased.” (P 3)

“It depends if you experience a positive result and get accurate information from the forums, then you will use the media more as a result of getting a positive outcome – it’s human nature. And, as pharmacist, it is easier to get benefits from the forums and desired outcomes, my experience of practicing for a while enables me to use reliable and information-rich sources.” (P 8)

On the other hand, it can further be interpreted from these findings that if an individual has a positive experience and is able to derive accurate information from these forums, which helped him to obtain a positive outcome, he or she may intend to use such forums in the future, as a reliable and credible source of information. The findings’ analysis also shows that

people with greater experience and knowledge of medical science can be more confident in relying on the use of media and online forums to seek medical guidance. As a result of these findings, it is apparent that experience can affect the intention to use media forums based on whether the outcomes were negative or positive.

The research evaluation also shows that experience is one of the crucial moderators because it has a direct and indirect impact on the expected performance of the health forum and the intention to use it. On the basis of the overall analysis, it can thus be concluded that experience is directly related to performance expectancy and intention, and with greater experience. An individual increases his expectancy and intention to use online health forums may increase or decrease based on the experience of the outcomes.

5.4.2.2 Relationship 2: Effect of education level on performance expectancy and intention relationship

From the findings of the interview, it has been evaluated that educational level can also be one of the moderators of usage of social media health forums by people seeking medical guidance and consultation. Education can have direct implications for expectancy and intention among people regarding the use of social media health forums. In this regard, the findings of the interview reveal:

“Educational level, especially medical knowledge, has a great effect, as if I am qualified in the subject and know the basics then I would be more confident with the related topics and information, but if I am not qualified then I will not be sure about the quality of the information and this can limit my intention to use media.”(P 10)

“Each educational level has a different way of understanding the information and has different kinds of information needs. And each person has a different way of obtaining the information.” (P 5)

This indicates that education level serves as a crucial means to generate more confidence among people to rely on the medical guidance and health care information provided by such forums. With a higher level of education, people will have more knowledge and ability to verify the credibility of the social media health forums. Evaluating these findings in the light of the literature reveals that there are several factors such as activities, emotions, experience and self-efficacy can be proved determining factors for the motivation level (Jones and Ashurst, 2013).

“As an educated person the education and knowledge give me multiple ways to access the forums and allow to me find them easier to use and to find what I need. I find it helpful to have a medical background. As an experienced pharmacist, with the drugs, I can be more confident to use the media and save effort and time.” (P 9)

These findings can further be discussed in the light of the academic literature, wherein according to the mass theory, a higher degree of personal exposure leads to the higher probability of an individual to willingly continue the use of a specific technology (Kaptelinin and Nardi, 2009). This indicates that with increased experience and knowledge people become more confident regarding the use of a technology and intend to use it as a reliable means to gain information.

Further analysis of the findings of the interview show that there is a relation between medical knowledge level and information quality. It can be seen that high quality forums increase the intention to use those forums. On the basis of these findings, it can be concluded that an individual’s educational background affects the need to obtain high quality information and this affects the intention to use forums, which can hone existing medical knowledge and skills. It can further be inferred that educational background plays an important role in defining the need for quality information in order to update the existing

knowledge-base. Their educational level enables a person to judge the authentic sites and sources for accessing medical knowledge. It can, thus, be assessed that the quality of the information can only be judged by an expert or professional. Therefore, education level creates a significant impact on the performance expectancy and intention relationship.

From the findings of the research, it is apparent that behaviour is one of the most pertinent determinants of the action undertaken by people seeking guidance from medical forums. In this respect, there are many theories in health education and health promotion that seek to explore the reasons why people behave in the way they do. The theory helps to understand and predict the ways in which people change their unhealthy behaviours to healthier ones. In this respect, the findings of the research can be evaluated in the light of the theory of reasoned action and theory of planned behaviour (Fishbein and Ajzen, 2011). The theory predicts deliberate behaviour, assuming that human behaviour can be planned and deliberative. The theory suggests that the most appropriate determinant of behaviour is intention.

The literature explains that intention is the cognitive representation of an individual's representation of readiness to exhibit a specific behaviour. It is also considered to be the immediate antecedent of behaviour. This intention can be said to be largely predicted by the attitude of the individual towards a specific behaviour (Ajzen, Albarracin and Hornik, 2012). This behaviour might be related to intention to accept and follow the guidance for medical matters and healthcare, as provided by a medical forum to people seeking medical help. The theory of planned reasoned actions and planned behaviour thus help to measure the subjective norms of people regarding their readiness and willingness to follow the advice and medical help provided through an online forum. It can also be seen that perceived behavioural control influences intentions. Therefore, the higher the favourability of the attitude and subjective

norms of people, the greater the perceived control and the stronger would be the intention of an individual to perform the concerned behaviour (Ajzen, Albarracin and Hornik, 2012).

Therefore, on the basis of the analysis of the findings, it can be concluded that education level is one of the moderators that affects the performance expectancy and intention of the users to make use of and follow the online health forums. Education level has been identified as one of the key factors that enable an individual to use his knowledge and understanding to determine the relevance and effectiveness of the health information given on health forums. In addition, education level also enables an individual to have the technical ability to retrieve essential and useful information from a website and understand the relevance and reliability of the knowledge gained from health forums, rather than blindly following the information displayed.

5.4.2.3 Relationship 3: Effect of educational level on effort expectancy and intention relationship

The findings of the interview also revealed a relationship between educational level, effort expectancy and intention. In this respect, it has been shown that increased educational level leads to increase in the effort expectancy and intention relationship. Education helps in understanding and accessing the credibility of the information provided on the forum and tests its reliability. In this respect, the following responses can be observed:

“I find it important to be educated to know how to use the media and to find it easy to use. As a doctor, I have some issues with saving time and I do not intend to use any sources if it take a lot of time and effort. It is always interesting to compare the contents of social media forums to my personal medical knowledge. I tend to utilise information that I find credible while avoiding information obtained from weak sources. And based on my medical knowledge, I can judge

the effort needed for using the forums for information, if it's worth wasting time using it or not." (P 2)

"As I am educated and know more about how to use the media forums technically, it's given me more motivation to use the media to save my time in finding any information I need, and as I am a pharmacist I know from where I can obtain the information related to my needs or my patient's needs. As a pharmacist my professional background makes it easier for me to access the credible sources and find accurate information. As a professional I find it easier for to me to use the media any time based on my needs." (P 8)

In addition, the findings also revealed that in the absence of the appropriate level of education a person might not be able to access the forums and derive the essential and desired information. As a result, his intention to use and rely on the forums might be influenced to a considerable extent. In this respect, the following responses are relevant:

"My education makes it easier to know the basic skills to use the media forums and to get the information needed as quickly as possible. If the person is not educated then I think it's difficult to access the forums or get what he needs and then he will suffer from difficulties with the use of technology and this will greatly affect his intention to use social media" (P18)

Therefore, the overall findings demonstrate that possession of a significant level of education also enabled the user to know the correct means and location to obtain the desired information related to healthcare. Thus, it can be concluded that the level of education affects the effort expectancy and intention relationship to a significant extent.

5.4.2.4 Relationship 4: Effect of gender on social influence, trust and intention relationship

The findings of the interviews revealed that despite some physicians believing that there might be differences in the perceptions of the use of media forums, it was observed from the t-test conducted to ascertain the impact of gender on social influence, that for both males and females no significant difference exists with regard to social influence. The qualitative analysis of the responses of the interviewees was analysed by drawing important trends from them. As the following quote reveals:

“Between men and women there is a very big difference in intention especially in our society, our traditions and culture force us to do extra duties. Especially for housewives, bringing up children.” (P 13)

However, further examination of the responses reveals that gender, as a moderator of social influence, does not play a crucial role in affecting intention. Social websites and forums are highly popular among males as well as females, as a source of credible and reliable information regarding their health, which can be quickly accessed at any time. In this respect, the following responses from the male and female consumers can be examined, where the females and males state the following:

“I don’t think that the gender affects the attraction of social media or social communications. Perhaps the subjects that tend to attract both genders, we find that men tend to follow news and economics.” (P 14)

“If I get the information from a reliable source then I will use it more and then I will be motivated to use those forums and I will feel enjoyment while using the forums and communicate with others seeking information. For me, I don’t see any difference between men and women in their intentions. It depends on other factors such as the easiness of their lifestyle and social style of accessing the

forums or getting the related and accurate information regard a drug or product.”(P 20)

“The enjoyment level depends on the way we trust and use the social media as I find that public opinion matters. The current generation likes to connect with each other without any difference between gender, as both of men and women like to use forums to discuss many issues related to our health and get the best from the discussions, but it may relate more to importance, as women in our society are busier with life issues rather than being interested in searching for reliable and credible information.” (P 21)

However, a critical examination of the findings reveal that these media forums are more popular among men and that females are quite reluctant sometimes when relying on such online sites to refer for medical advice. In this regard, the following responses are relevant:

“It has become a habit for some people to take advantage of these social media sites especially men (males) for their personal benefit. Also, they exploit some issues themselves using their knowledge of technology, exploring and exposing some issues which have a negative effect on the society.” (P 16)

“I think I am motivated to use these forums for getting information quickly and saving my time, and to confirm information that I already had from my physician or to get additional information related to my condition or the prescribed medicines. In my opinion, you will be the one who decides whether the medicine is good for you or not, as much as you can, get more information related to that medicine. As a woman, I find it too risky based on our society and culture.” (P 18)

These findings indicate that although the females and males are enthusiastic about having access to information quickly through online media, males are more active in seeking

help and relying on such websites, while females are usually reluctant to rely on online forums. In this regard, the literature revealed that women show high tendency to show their concerns more than man (Hill et al., 2003). In this regard, information seeking attitude is quite high among man in comparison to female (Dale et al., 2004; Klemm et al., 1999; Sharf, 1997). In the help seeking behaviour also, a gender differences can be reported. (Smith, Pope, & Botha, 2005). Therefore, on the basis of this analysis, it can be concluded that with regard to social media forums, women are more sensitive to social pressure than men, which explains the greater activity of male users on the social networking sites in comparison to women. This thus highlights that gender is one of the crucial moderators that affects social influence and intention to use health forums.

5.4.2.5 Relationship 5: Effect of health condition on social influence and intention relationship

The findings of the interviews revealed that these media forums are highly popular among the users and most people are aware of them through their friends and family members. However, the analysis shows that people do not readily take risks with their health and blindly follow the guidance available on such forums; rather they prefer the advice of their doctor and might use forums that the doctor has recommended to them. In this context, the literature emphasised that the usefulness of any system is valued by consumers more in comparison to the enjoyment retrieved from the system. In this regard the perceived usefulness of the health recommendation system should be quite high. In this regard, the following responses can be observed:

“Friends and family play a major role in my involvement in social media forums because it is an interaction method of sharing interesting ideas and information. I tend to use social media forums primarily for health-related topics, which mainly involves dentistry as my medical background plays a big role in supporting me to use media forums.” (P 2)

“If any of my friends or family recommend a forum as a source for information then I will find myself automatically going to use that forum, as I am a person that can be affected by others’ opinions especially if that person is my friend or related to me. Mostly, I like to put myself in a safe place and use the forums for getting information about non-prescription drugs and for cosmetic purposes and diet products. I am a person who is not going to take risks with any health-related issues.” (P 10)

However, it can also be seen from the findings that users might rely on such sites for general health concerns like weight gain, but not consider them to be reliable for serious health issues. In this regard, the following response was observed.

“The spread of these sites or forums generate huge publicity and makes me anxious about the search for knowledge. I tend to believe that there is no serious effect but it is all about obsession. This differs from one person to another, that’s why I shortcut my answer with these words. I might have gained weight; I will resort to using the internet in order to find out the correct and ideal way, but not for serious conditions.” (P 12)

In this respect, the findings of the literature revealed that health blogs help people to share their experience with disease, which can be proved effective for others. In the same manner, message boards provide an effective and interactive way of getting responses and asking queries regarding disease at web domain.

These findings can be supported with the help of the health belief model, which serves as a highly effective conceptual framework for understanding health behaviour. The model proposes that a person will pursue a health-related action if he feels that a negative health condition can be avoided, expects that the recommended action can help in overcoming a negative health condition, and believes that the recommended health action can

be taken successfully, comfortably and with confidence (Edberg, 2010). Thus, from the analysis of the findings, it can be concluded that health condition has an impact on social influence and intention to a considerable extent because it influences health behaviour.

5.4.2.6 Relationship 6: Effect of educational level on social influence and intention relationship

From the findings of the interviews, it has been found that education level creates a significant impact on the social influence and intention of the users to follow and rely on the social media forums. In this regard, it was apparent that the pharmacists consider such forums useful to increase their knowledge and widen the scope of their medical knowledge. In this respect, the following responses are relevant:

“Of course, my medical knowledge has affected me, because I am a pharmacist and always take into account difficult probabilities and possibilities. I always take into consideration both positive and negative issues. As most of our society would like to take our recommendation regarding the use of forums.” (P1)

“There is an effect, as the more your medical education increases, it will lead to your need to continue using social media in order to know what is new and all about new medical developments. Each day there is a new discovery. Being a doctor with lots of valuable and good knowledge, educated with lots of background relating to important subjects leads me to be more precise with my choices, compared with someone with limited knowledge. This makes my choices of social media more accurate.” (P 3)

It is also apparent that the consumers also consider the social media forums as a useful source of information for medical health and guidance. In this respect, the following response was observed:

“I did not have any medical background as a professional person, but I think if I had it then it will help a lot as a qualified person can know better than others. I

think social identity plays a vital role in our intentions to use forums, as if you are surrounded by people using social media forums to get information and your organisation and work asks you to involve or try to use these new forums to get your work done or to get information quickly and save your time, then you will find yourself involved without even noticing. And you will feel safer as you are using forums which are recommended by others and not on your own.” (P 10)

In addition, there are some other factors related to lifestyle, societal influences and values that also influence people’s decisions while seeking guidance for medical and health care issues from the medical forums. In this respect, these factors can be evaluated in the light of the theoretical acceptance model that explains and predicts the behaviour of the user in respect of information technology (Park, 2009). This model is primarily an extension of the theory of reasoned action and explains the reasons for a user to accept or reject information technology by adapting the terms of the theory of reasoned action. The technology acceptance model provides the basic reason for the way an individual determines how external variables might create an impact on their attitude, belief and intention. The theory also explains that the use of a technological system or tool is directly or indirectly influenced by the behavioural intentions, perceived usefulness, attitude and perceived ease of the system. On the basis of this model, it can thus be proposed that the external factors influence the intention and the actual use with the help of mediated effects on the perceived ease of use, as well as the perceived usefulness (Park, 2009).

Therefore, on the basis of these findings, it is apparent that social media forums are popular among the pharmacists and consumers as a reliable source of knowledge on medicines and health care. It can be concluded that education level has a significant impact on the relationship between social influence and intention.

5.4.2.7 Relationship 7: Effect of age on trust and intention relationship

The findings of the interviews revealed that there is a considerable relationship between trust, age and intention. In this respect, the following response is relevant:

“Because I am an old pharmacist and always take into account difficult probabilities and possibilities, I always take into consideration both positive and negative issues.”

It can be inferred from this that the age moderator increases the probability of accepting the use of social media forums for accessing information related to medications and treatment. However, older people need more effort and persuasion to use social forums. The findings show that users feel safe when responsible bodies provide reliable and credible information. In this regard, the analysis shows that age creates an impact on the need for more persuasion to accept the knowledge and reliability of information, and there are major reasons for this. The following responses were observed in this respect:

“Ten years ago, of course, I didn’t have the same attitude, thoughts and concerns, as it [internet] was limited to some people and not accessed as it is nowadays. With the new technology everyone now can access the internet, even from their phones, and they can write whatever they want without thinking, as some people find it a place for advertising without any concerns. And, as an old person, I need more persuasion and knowledge through my experiences to distinguish and select the most credible forums for information.” (P 11)

“If there is no reliability and trust in these forums and media, there will be no turnout or attraction. Not all knowledge can be up to the standard and consideration of its main source (negative concept) unless there are many credible and secure sources to this information. As from the difficulty point of view, the source of information is very important, it has consequences that reflect and affect the life of our patients.”(P 1)

From these findings, it was found that the rules and credible sources will help people to use the social media forums/websites safely, and they will obtain the necessary information related to their health. The literature sources supported the fact that rules will help to minimise the misuse of social media and help in the easy sharing of information (Albarran, 2013). The findings of the research have revealed that people seeking medical advice from the online forums, along with other medical professionals, tend to fear the security issues associated with the information presented online. It was also apparent that trust in the safety of the treatment plan plays a significant role in identifying the alignment of people with the medical information discussed on social media forums.

From the research findings, it can also be inferred that the credibility and authenticity of the sources define the usefulness of the content that is available on the social media forums, and the credibility originally leads to trust. This is supported by the opinion of Rodgers and Thorson (2012), who opined that the inclination and preference of people seeking medical advice have shifted from the traditional media to the social media forums due to the usefulness and credibility of online research. The literature has also elaborated that the presence of significant factors, such as the internet, medical conditions, health status/condition and demographic characteristics, have a great impact on the activities of searching and processing the online health information by consumers (Rodgers and Thorson, 2012). The research also explored the use of online health-related information sources by physicians and found that it is related to the social context, education and the age of the physician.

“I was more trust worthy and confident with what I read or viewed, at the time I doubted most of it. Age increases probabilities in your brain which remains mature and does not allow anyone to make a mess of it.”

From the analysis of the findings, it has been observed that trust is also a critical factor that assesses the dependency of the customers, including physicians and medical professionals, to resort to the use of social media forums. It has been critiqued by Sahlin (2015) that risks of information being authentic and secure often make the online users hesitant in applying the suggestions provided on online forums for their health-related issues. In addition, due to the complexity involved in health-related issues, physicians are less likely to believe the medical assistance provided on social media forums.

It has been observed that the inclination towards implementing the advice also depends on the purpose for which the opinion is being sought. Medical professionals are less likely to adopt the remedies for grave medical issues suggested through online channels, as compared to implementing the solutions and discussions on cosmetics and other diseases. Physicians and other online users also have numerous concerns regarding their participation in discussions pertaining to health-related issues on social media forums (Sahlin, 2015). One negative incidence also makes online customers hesitant about being involved in the application of the health-related solutions discussed on social media forums. Therefore, it can be concluded that age has a crucial impact on the trust and intention relationship

The literature further critiqued that the credibility associated with the online sources precedes the other factors, such as ease of use, speed, unlimited access and relevance (performance expectancy) while seeking advice on health-related issues. However, Dwairy (2012) shed light on the obstacles to the familiarity and security concerns that people have while searching for medical information online. His research stated that the ability to identify the appropriate time for stopping the search and knowing the credible source, as well as the synthesis of the online information and its conversion into a clinically useful statement are significant factors for physicians while seeking online information (Dwairy, 2012). These factors also define the competency and the extent to which the information can be applied to

mitigate a health issue. Therefore, from the overall findings, it can be concluded that age has a considerable impact on authenticated credibility that leads to more trust and then increases the intention to use social media forums.

5.4.2.8 Relationship 8: Effect of experience on trust and intention relationship

From the findings of the interviews, it was apparent that physicians determine that social media forums cannot be considered as trustworthy sources for retrieving medical information and require verification from credible sources, such as doctors and friends. In this respect, the following response was observed:

“Social media cannot be trusted for health issues and should take into account other related recommendations such as doctors or our trustworthy friends who have knowledge regarding the credible forums.”

However, it has also been found that people associated the correctness of information with reliability. Once the consumers and pharmacists had ensured that the information on the forum is correct and accurate they develop trust in it. In this respect, the following responses were relevant:

“The more social media is trustworthy and honest the more people would use it.”

“The more satisfaction found in obtaining correct and trusted information the more it encourages the turnout and the number of people for positive discussions and communications.” (P 10)

“As the messages and information presented by members are not always accurate, there is little control over the reliability of information on the forum. By experiencing these forums you might find the information incomplete or inaccurate and this negative result can greatly affect my intention to use forums in future.” (P 5)

Thus, an increase of positive experience with the use of health forums helps people by increasing their understanding about the relevance and usefulness of the information obtained

from the forums, thereby increasing their trust in such forums and their intention to refer to them in future. Therefore, it can be concluded that experience has a significant impact on trust and intention while using online forums.

The findings of the interviews revealed that experience has a considerable impact on intention and trust by using authenticated credibility of industry support. In this respect, the following responses were found, which revealed that with an increase in experience, intention and credibility towards the use of the media forums increases among the users. In this context, these findings of the interviews were observed:

“Up to 10 years ago, I was not experienced with the use of social media, as I was young and did not have the same concerns at all (since then, there has been electronic technology development in all respects, even in television) and non-electronic from the same sources and even using debates and discussions between people.” (P10)

“The credibility of information greatly affects my intention as more accurate information based on known credible sources lets me trust in the forums and use social media more than other sources to save my time. As I am from the new generation and newly graduated, this has helped me a lot, as our pharmacy faculty introduced all these new technology forums and media to be used for information collection or to obtain new knowledge and information. So I have a good background and experience with using credible information from trustworthy sources and forums.” (P 9)

“In these forums, each person will explain his personal experience with medications and treatments with all honesty in order to benefit others. We need to distinguish between personal conclusions and scientific evidence, whether in examining the patient or treatment. And the accuracy of the information from

those forums can be confirmed by experience over time, not from the first time of using them.” (P 11)

“Of course, there are limitations to a certain level and it differs according to whether I found it useful or not, and my experiences are also based on my health condition for which I am searching for information.” (P 5)

“I make sure that I will only accept media forums with as high a level of accuracy and knowledge as possible. And, all my experiences are positive means of getting the relevant information. For this, based on my experiences, my intention to use forums increased.” (P 17)

In this regard, the findings of the literature revealed that on the basis of the empirical evidence it was found that customer-perceived value has a positive effect on e-shoppers' satisfaction with a supplier (Anderson and Mittal, 2000; Yang and Peterson, 2004). The literature has further stated that in the past, the high complexities and tasks associated with the production and dissemination of the information resulted in the existence of limited information providers (Metzger and Flanagin, 2013). However, networked communication technologies have led to lowering the cost of information dissemination, which has increased the accessibility of the online data. This has increased the security concerns and risks of being able to identify the relevant and appropriate knowledge on the media forums. In this regard, Murero and Rice (2013) highlighted that the complexity of the information related to health is high, which further instils fear and concern among people during the identification of the most suitable information. This, in turn, is greatly dependent on the trustworthiness and authenticity of the online source (Murero and Rice, 2013).

On the basis of these findings, it was found that the accuracy and adequacy of the information retrieved from web could be considered doubtful on the basis of which any health related decision couldn't be taken. It can thus be concluded that experience is one of

the highly crucial moderators that influences authenticated credibility that affects the trust construct and intention relationship to a significant extent.

5.4.2.9 Relationship 9: Effect of health conditions on trust and intention relationship

From the findings of the interviews, it was apparent that consumers only trust reliable sources when any situation involves their health. In this respect, the following response was found:

“Especially if it’s related to my health condition, as it’s a serious situation and [information] needs to be from trustworthy sources. Most of the time I use discussion forums to find information related to new drugs or from new brands.”

In this context, the literature emphasised that online informative portal can be proved quite effective and efficient in improving formal decision making and dealing with health-related complications with the help of desirable advices (Carrella et al., 2014). With the help of such information, the person can also get psychological advantage while fighting with health complications (van Varik & van Oostendorp, 2013).

“It is always interesting to compare the contents of social media forums to my personal medical knowledge. I tend to utilise information that I find credible while avoiding information obtained from weak sources.” (P 9)

It can, be analysed from these findings that health forums helps the patients and their attendants to share some crucial information among others regarding health care regimes. These findings can be further supported with the health belief model which emphasises that people consider some key moderating factors, such as age, personality, ethnicity, knowledge and socio-economic conditions. These also serve as the key determinants for the action taken by them in the form of perceived benefits. These factors help the patients by inculcating trust for such websites and increase their intention to use social media (Morris, 2012). Therefore, it

can be concluded that health condition is a crucial moderator influencing the trust and intention relationship.

5.4.2.10 Relationship 10: Effect of education level on trust and intention relationship

The findings evaluated that high quality forums increase the intention to use those forums. It can be inferred that educational background affects the needs for obtaining high quality information and this affects the intention to use forums, which can hone the existing medical knowledge and skills of the users.

“As a doctor I like to get information for all conditions and situations. I like to search for new information, updated information of products and medicines, and to be updated by new details. And I like to get them from high quality, trustworthy and credible forums and sites. As a doctor, I have got a high level of understanding of medical terminologies and the information that needs to be considered.” (P 3)

From these findings, it is apparent that education level, especially medical knowledge and background, has a direct impact on the level of trust and intention to use the social media health forums. A higher level of medical education enables an individual to understand the reliability and relevance of the medical information explained on the forum and test its validity by cross-checking it with other sources of information. Higher level of education also enables an individual to explore the more reliable and credible forums to obtain health-related information, as well as have the essential technical skills to use the social media forums in the most effective and secure manner. It thus helps by increasing the trust and intention to use the health forums. Therefore, it can be concluded that education level has a direct impact on trust and intention.

5.4.2.11 Relationship 11: Effect of age on authenticated credibility and intention relationship

The findings' analysis revealed that the users feel safe when responsible bodies provide reliable and credible information. In this regard, it was found that age creates an impact on the need for more knowledge and reliability of information. The following responses were observed in this respect:

“Ten years ago, of course, I didn't have the same attitude and concerns as it [the internet] was limited for some people and not accessed as it is nowadays. With the new technology, every one now can access the internet, even from their phones, and they can write whatever they want without thinking, as some of people find it a place for advertising without any concerns. And, as an old person, I need more knowledge from my experiences to distinguish and select the most credible forums for information.”

“If there is no reliability and trust in these forums and media, there will be no turnout or attraction. Not all knowledge can be up to the standard and consideration to its main source (negative concept) unless there are many credible and secure sources to this information. As, from the difficulty point of view, the source of information is very important, it has consequences that reflect and affect the life of our patients.” (P 1)

These findings demonstrate that rules and credible sources will help people to use the social media websites safely and obtain the necessary information related to their health. The literature sources supported the idea that rules will help to minimise the misuse of social media and help in easy sharing of information (Albarran, 2013). The findings of the research have revealed that people seeking medical advice from online forums, along with the other medical professionals, tend to fear the security issues associated with the information presented online. It was also found that trust in the safety of a treatment plan plays a

significant role in identifying the alignment of people with the medical information discussed on the social media forums. From the research findings, it was also inferred that the credibility and authenticity of the sources define the usefulness of the content that is available on the social media forums. This can be supported with the opinion of Rodgers and Thorson (2012), who opined that the inclination and preference of people seeking medical advice have shifted from the traditional media to the social media forums, due to the usefulness and credibility of online research. The literature has also elaborated that the presence of significant factors, such as the internet, medical conditions, health status and the demographic characteristics, have a great impact on the activities of searching and processing online health information by consumers (Rodgers and Thorson, 2012). Research has also found that the use of online health-related information sources by physicians is related to the social context, education and the age of the physician.

The literature further critiqued that the credibility associated with the online sources precedes the other factors, such as ease of use, speed, unlimited access and relevance while seeking advice on health-related issues. However, Dwairy (2012) shed light on the obstacles to familiarity and security concerns that people have while searching medical information online. In essence, the literature stated that the ability to identify the appropriate time to stop the search and know the source is credible, as well as the synthesis of the online information and its conversion into a clinically useful statement, are significant factors for physicians while seeking online information (Dwairy, 2012). These factors also define the competency and the extent to which the information can be applied to mitigate a health issue. Therefore, from the overall findings, it can be said that age has a considerable impact on the authenticated credibility and intention relationship.

5.4.3 Summary

From the overall findings analysed and discussed in this last phase of the data collection, it was determined that the four key constructs that influence behavioural intention to use social media discussion forums are: effort expectancy, social influence, performance expectancy and trust. The fifth construct was related originally to the performance expectancy and trust construct, as both of the previous constructs needed the industry support to validate the credibility of information and sources. The five moderators in this regard are: gender, age, experience, and education level and health condition.

The findings of the interview revealed that experience has significant implications for the performance expectancy and intention to use social media forums to seek medical advice. Further, it is noted that that educational level is also one of the crucial moderators of usage of social media health forums by people seeking medical guidance and consultation. Furthermore, it is found out that increased educational level leads to increase in the effort expectancy and intention relationship. Education helps in understanding and accessing the credibility of the information provided on the forum and tests its reliability. However, the interview findings depict that no significant difference exists with regard to social influence and use of social media among different genders. In support of the interview findings, the t-test conducted to ascertain the impact of gender on social influence in which it is found out that for both males and females no significant difference exists with regard to social influence. The findings of the interviews revealed that these media forums are highly popular among the users and most people are aware of them through their friends and family members. Moreover, education level creates a significant impact on the social influence and intention of the users to follow and rely on the social media forums.

It can be inferred from findings that there is a considerable relationship between trust, age and intention. It is noted that pharmacists and consumers prefer, as well as advocate the use of social media for acquiring useful information concerning use of drugs. On the other

side, physicians assert that social media forums cannot be considered as trustworthy sources for retrieving medical information and require verification from credible sources. It is revealed in the findings that consumers consider only reliable sources when suffering from severe health conditions. However, it is evaluated that high quality forums increase the intention to use those forums. It can be inferred that educational background affects the needs for obtaining high quality information and this affects the intention to use forums, which can hone the existing medical knowledge and skills of the users.

Furthermore, this phase of the analysis has enabled the validation of the two pharmaceutical industry-related constructs that influence behavioural intention while using social media discussion forums: (1) trust and (2) authenticated credibility, which originally had been considered under the performance expectancy and trust construct roots. The pharmaceutical industry-related moderators are: (1) educational level, which includes educational stage and medical knowledge and (2) health conditions. In this respect, the research-modified model (BIUSF) after the third phase of data collection (final interview) is illustrated below (see figure 5.6):

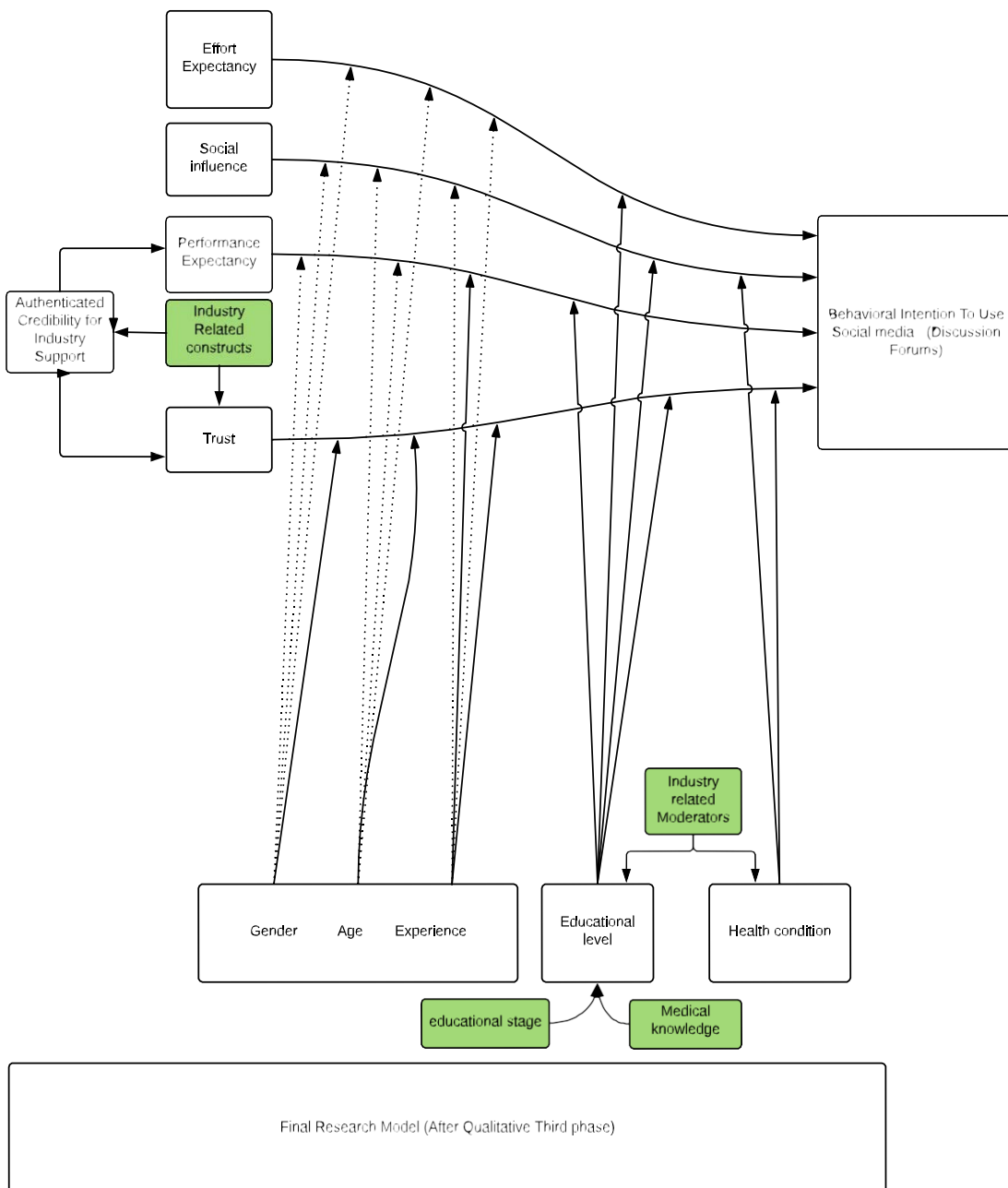


Figure 5.6: Research BIUSF model after the final interview

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Chapter Six: Discussion of Final Findings

6.1 Introduction

This research work is based on health-related behavioural intention to use social media forums in respect of decision-making in the pharmaceutical industry. In this context, the aim of this research is to investigate the industry-related factors and their effect on the behavioural intention to accept and use social media forums to support the decision-making process in the pharmaceutical industry. In respect of this research aim, the first research question sought to examine the industry-specific factors (constructs) that affect the intention to use social media in decision-making processes from the perspective of the pharmaceutical stakeholders (customers and consumers).

6.1.1 Role of social media in the pharmaceutical industry for decision-making by the stakeholders (pharmacists, physicians and patients)

The research findings have revealed that social media has proved to be an effective and useful tool to provide crucial information that facilitates rational decision-making by the stakeholders. It enables them to obtain critical and useful information related to drugs or their usage and impact. Thereby, it plays a significant role in shaping their decisions regarding the use of a product offered by a pharmaceutical company or investment in a specific product or company. The findings thus indicate that examination of social media can play a highly significant role in the decision-making undertaken by the internal, as well as, external stakeholders associated with the pharmaceutical industry. However, the investigation of this finding also indicated that there are some industry-specific factors (constructs) and moderators associated with the behavioural intention to use social media for the decision-making process of the different stakeholders including physicians, pharmacists and patients of the pharmaceutical industry.

6.1.2 Factors that affect the behavioural intention to use social media for the decision-making process among the different stakeholders (consumers and customers) of the pharmaceutical industry

The second research question focused on the industry-specific factors (constructs) and moderators that affect the intention to use social media for health-related decision-making processes among the stakeholders (pharmacists, physicians and patients) of the pharmaceutical industry. Research revealed that out of the ten relationships, four factors were identified that correlate with the health behavioural intention of the stakeholders to a considerable extent. These four factors have been identified as performance expectancy, social influence, effort expectancy and trust. Among these factors, trust has been determined as the new industry-specific factor that affects the intention to adopt social media forums among the stakeholders (consumers and customers). The research findings also revealed that, in addition to these four factors, five moderators were also found to be highly significant in creating an impact on the relationship between factors and behavioural intention. These moderators are age, health condition, education level, experience and gender, of which, the three moderators: age, gender and experience, were derived from the original UTAUT model while the remaining two moderators, education level and health condition, were identified in the modified model (BIUSF) as the industry-related moderators. Therefore, from the overall findings of the research, it can be seen that performance expectancy, social influence, effort expectancy and trust are the key constructs, while the moderators of age, health condition, education level, experience and gender are the major moderators that have a significant impact on the behavioural intention and constructs relationships.

6.1.3 How the industry moderators affect the relationship between the known independent variables and behavioural intention to use social media forums within the pharmaceutical industry

The second research question sought to examine how the industry moderators affect the relationship between the known independent variables and behavioural intention to use social media forums within the pharmaceutical industry.

6.1.3.1 Moderator: Experience

The research found that experience has a direct effect on the relationship between both performance expectancy and intention when seeking health-related information. However, if the experience was negative, the experience has an indirect impact on intention, because if there are more experiences with a negative outcome, the intention to use forums will be reduced. The findings also show that only with the help of experience regarding the use of media forums can people gain the confidence to use such forums to obtain health-related information, and consecutive positive experiences with the health forums serve as major determinants for increasing their trust in such forums' credibility.

On the other hand, first time users are reluctant to use such forums and cannot rely upon the credibility of the health information shared there. This further highlights that an increase in positive experiences helps people by increasing their trust and performance expectancy while using health forums. It was also found that pharmacists, physicians and consumers use other sources of credible medical information, such as research papers on medical issues, medical books, senior researchers in medical sciences and experienced pharmacists and physicians. Also, testing of the reliability and credibility of the medical information given on health forums enhances the intention and trust among people regarding the use of such forums. Positive past experiences reduce uncertainty and increases the trust and intention to use health forums.

Furthermore, the research found that experience also influences the relationship between authentic credibility and intention to a considerable extent. In this respect, it was

found that there is a correlation between positive experiences and the reliability and accuracy of the information obtained from the health forums. Therefore, from these findings, it can be concluded that experience is one of the key moderators that has a directly proportionate relationship if the experience is positive and an indirectly proportionate relationship if the experience is negative with regard to behavioural intention to use social media forums for decision-making among the stakeholders (customers and consumers) in the pharmaceutical industry.

6.1.3.2 Moderator: Education level

The second key moderator determined from the findings is education level, which was found to have a direct impact on performance expectancy, effort expectancy, social influence, trust and intention to use social media forums. In this respect, the research findings revealed that education level serves as a crucial means to generate greater confidence in people to rely on the medical guidance and health care information provided by such forums. With a higher level of education, people have more knowledge, which enables them to verify the credibility of the social media health forums. This motivates them to increase their intention to rely on health forums. In addition, social media is also an easy and convenient method for people to obtain information about improving their lifestyle and overall health. This further highlights how the use of social media forums helps to create a positive impact on people's healthcare by improving their education. It also leads to an increase in their trust and expectancy of positive performance from medical forums. Increased positive experience also increases the confidence and ability of people to use social media technology in the most effective and appropriate manner, in order to obtain the desired information and test the reliability and credibility of that information. Therefore, it can be concluded that the level of education has a direct impact on the relationship between performance expectancy, effort expectancy, social influence, and trust with behavioural intention to use social media forums for decision-making among the stakeholders in the pharmaceutical industry.

6.1.3.3 Moderator: Gender

Gender was found to be one of the crucial moderators influencing the use of social media forums among consumers, physicians and pharmacists. Evaluation of the findings revealed that the use of health forums was more popular among men, whereas women were quite reluctant to use social media forums to obtain medical advice. Although men and women were both enthusiastic about the ability to obtain information quickly through online media, a detailed evaluation of the findings indicated that women were more concerned about the credibility of the information obtained from health forums and were thus more sensitive than men whilst using them. It is suggested that women can be more sensitive to risk as they hold themselves responsible for the health and well-being of all their family. The findings of the research by Singh and Miero (2014) support this research result, as they highlighted that women appeared to be more concerned with themes related to their children's or parents' health.

The literature also highlighted that women in general are more concerned and interested in issues related to health in comparison to men (Singh and Miero, 2014). Consequently, they are more concerned about the health and well-being of their children and family members and, therefore, more cautious in using the information available on social media to address any health issue. In addition, the literature also found that women are more likely to use a group of friends and relatives to share their experiences and needed to be encouraged to use some information, in comparison to men who were found to be twice as likely to ask for information related to any health disorder and use it directly. On the other hand, men are quite confident and readily refer to the information obtained from social media (White and Dorman, 2001). Even when women indulge in communicating and taking advice from their friends and relatives, it is notable that these relatives and friends are trusted people in whom they have faith and feel can rely on their advice. From these findings, it can thus be concluded that gender has a directly proportionate relationship, in terms of constructs, with

behavioural intention to use social media for decision-making among the stakeholders in the pharmaceutical industry. Both males and females accept that there is a difference between them in using the social media forums and this is related to many issues, as discussed previously.

6.1.3.4 Moderator: Health conditions

The research found that people only trust highly credible sources of information when any situation involves their health. In this regard, the findings' analysis revealed that for serious health conditions people do not rely completely on online forum sources and prefer to follow a more authenticate and credible source of information to improve their health conditions. However, to explore information about a new drug, new brands of drugs, basic symptoms and the implications of a disease, people do tend to refer to the social media-based health forums. The information accessed from such forums helps people to increase their basic knowledge about health issues and can be helpful in enabling them to make informed decisions regarding their health. This indicates that the greater the severity of the health condition the lower is the level of trust in social media-based health forums. Therefore, from the findings it can be concluded that health conditions as a moderator influences trust and behavioural intention to use social media, thereby indicating that there is a direct relationship with behavioural intention to use social media for decision-making among the stakeholders in the pharmaceutical industry.

These findings imply that people use social media forums for minor health issues and improving their lifestyles, as a reliable means of obtaining information for decision-making. However, for more complex diseases, people are quite reluctant to refer to the information given on social media forums, because there is a risk of obtaining incorrect information, which might have a negative impact on the health of the information seeker. This can be explained with the help of an example. A person advises his friend to use a particular supplement of vitamins and protein to overcome his health issues related to muscles, but

when he tried the supplements, he acquired a fever. He was advised by a doctor that the prescribed supplement product had caused a side-effect. This indicates that not all information on social media can be used by people without cross-checking its effectiveness and relevance for the user. Therefore, it is essential for people to use the information regarding medicines available on social media with caution. These findings also imply that for complex diseases and critical health issues people will continue to refer to experienced healthcare practitioners and experienced doctors and physicians.

Nevertheless, this might not be the case in all situations, as for severe, rare and critical health conditions people might refer to advanced research papers and journals, advanced drugs, reputable doctors or health care practitioners discussed or recommended on forums to obtain knowledge and treatment for a life-threatening disease. Gaining such an understanding regarding the use and application of social media forums can be useful in increasing the trust in such forums and may modify the behavioural intention to use such forums in a positive direction.

6.1.3.5 Moderator: Age

The age of users was also found to be a key moderator of the use of social media forums by customers and consumers for mitigating health issues. It was found that age creates an impact on the need for more persuasion to obtain knowledge and overcome concern about the reliability of information. In the younger age group, people are more enthusiastic about the use of social media forums and, thus, tend to use them as a chief source for accessing information related to health. However, with age the dependency on social media might reduce and people tend to rely on more credible sources of health-related information. It was also found that people from younger age groups are more open to taking risks, while those of an older age are more reluctant to use health forums because of the fear of security issues, the safety of the treatment plan, and their limited ability to access the

technicalities of social media, all of which prevent them from relying on online health forums as credible and trustworthy sources of information.

These findings highlight that younger people have a higher intention to use social media forums for health issues and consider them to be a credible and trustworthy source of information, while older people have less intention to rely on social media for health issues. The findings show that age has a highly significant effect on trust and intention to use social media health forums. Therefore, from these findings it can be concluded that age has an effect on the relationship between trust and behavioural intention, due to factors such as personality development, greater understanding of the privacy issues, higher confidence at an older age and social influence. These factors influence understanding and the relevance of the information obtained from the sources of social media.

Therefore, in respect of the second research question, from the overall findings of the research, it can be concluded that experience, education level, gender, health conditions, and age have a direct impact on the relationship of constructs with behavioural intention to use social media forums within the pharmaceutical industry for health-related decisions. Health condition and educational level can be classified under pharmaceutical industry-related moderators, as for other industries. These are new moderators that should be investigated in future research.

The research will be beneficial for the stakeholders, such as the pharmaceutical industry, and should encourage them to become more cautious when publishing any information on social media. They should understand the need to provide more authentic and credible information to make such discussion forums reliable and popular means of obtaining information. In addition, the customers and consumers of the pharmaceutical industry, such as the pharmacists, physicians and patients, should become more aware of the need to check the credibility and reliability of the information available on social media forums. This will

increase people's intention to use social media correctly for taking decisions related to healthcare.

Thus, this research contributes to furthering the understanding of the UTAUT model and demonstrates that it can be used to research the intention of stakeholders to use social media forums for health-related decisions. It has provided an understanding of the validity of the theory to explain the intention of different stakeholders of the pharmaceutical industry to use social media in their health-related decisions.

6.2 Discussion of major findings to address the research objectives

6.2.1 Factors and moderators responsible for influencing behavioural intention of pharmaceutical stakeholders, such as pharmacists, physicians and patients, to adopt social media forums

The first research objective sought to determine the factors and moderators responsible for influencing the behavioural intention of pharmaceutical stakeholders, such as pharmacists, physicians and consumers, to adopt social media. The findings can also be supported by the literature, which states that pharmaceutical companies believe that the most suitable means of creating network value or social influence is the word of mouth strategy. Word of mouth can be most effectively established by incorporating the use of social media in marketing (Ding, Elishberg and Stremersch, 2013; Yang, and Wu, 2009). The information thus gained can also be a pertinent source for decision-making in the pharmaceutical industry (Ding, Elishberg and Stremersch, 2013). The findings of the literature also asserted that social media is an effective tool for providing useful information to aid rational decision-making by the stakeholders when planning investments and the use of products. Furthermore, social media also facilitates communication across the different departments of companies in the pharmaceutical industry, which enhances organisational decision-making. However, the research findings have also revealed that customers believe that the information supplied by social media is not trustworthy, and they asserted that decisions related to health must be based on authenticated medical books and physicians (Snyder et al., 2011).

In respect of these findings, the literature stated that the fact that physicians do not believe the information provided by social media to be trustworthy and credible indicates that the pharmaceutical industry is reluctant to incorporate social media into their marketing and advertising strategies (Shoemaker and Reese, 2013; Soliman, 2012). These findings highlight the contradictory opinions between pharmacists and physicians regarding the intention to use social media. In this respect, the research findings show that physicians do not believe social media to be a useful tool because they feel it lacks reliable and credible information, whereas pharmacists believe social media to be a good source of information if it provides reliable and authentic information (Kaba and Toure, 2014). It is essential to mitigate this conflict to ensure there is a comprehensive increase in the application and use of social media by the pharmaceutical industry stakeholders, as it is a useful platform to share and provide information related to healthcare. The prevalence of such a conflict might cause confusion among customers and patients, and prevent them from developing trust in the health forums as authentic sources for taking decisions related to healthcare. It might thus emerge as a pertinent barrier to promoting the use of social media for addressing health issues among the patients and customers of the pharmaceutical industry, and it may influence their behavioural intention to use social media for healthcare decisions.

There has been a considerable amount of research on the differences in opinions and the conflict between physicians and pharmacists regarding the use of social media for health care decision-making. However, none of the prevailing studies could highlight the reasons or factors that create such conflict between the intentions of the two stakeholders (Ventola, 2014; Klopotoska, 2013). In this regard, this conflict can be mitigated by increasing awareness about the effectiveness and benefits of social media among the physicians. It could be highly beneficial for physicians in communicating directly with their patients to improve

clinical care, gain knowledge about newly researched drugs, listen to healthcare experts, and consult colleagues to discuss the healthcare management practices.

These findings indicate that trust and the reliability of information provided by social media was one of the major determinants that influence the opinions of the stakeholders (consumers and customers) of the pharmaceutical industry for its usage and acceptance in decision-making. The research findings also revealed that pharmacists and customers in Kuwait use social media. The pharmacist's use it to obtain up-to-date information about health products, while consumers use it to explore the advantages or side effects associated with any drug (Touray, Salminen, and Mursu, 2013).

The research study analysis shows that the behavioural intention of pharmacists, as a pharmaceutical stakeholder, is influenced significantly by the effort expectancy of the use of social media. The effort expectancy is the most crucial factor that determined the behavioural intention of pharmacists to use social media for disseminating information on health care. No significant moderators, other than age, gender, experience and educational level, were observed to create an impact on the relationship between effort expectancy and the behavioural intention of pharmaceutical stakeholders to adopt social media.

In the literature review, Kaba and Toure (2014) explained that effort expectancy is the belief that the efforts applied by an individual or a company lead to the achievement of the desired results or expectations. The effort expectancy theory has a great role to play in the pharmaceutical industry in countries such as Kuwait (Kaba and Toure, 2014). Performance expectancy was the most significant factor responsible for influencing the community pharmacy regarding information dissemination, and the moderators of age, gender, education level and experience were identified in the community pharmacy. Furthermore, the findings revealed that in terms of information seeking, performance expectancy was considered to be the most significant factor, and experience and education level regarding medical background

were the significant moderators that have an impact on the relationship between performance expectancy and behavioural intention.

Performance expectancy was the most crucial variable that determined the behavioural intention of the patients to use social media for disseminating and collecting information on medical products and patient care. The literature supported the findings by stating the significance of factors that influence the patients in predicting behavioural intention to use social media in healthcare, such as exchange, social and emotional support, decision-making, health information seeking and behavioural change (Hanson et al., 2014; Wu, 2016). The behavioural intention of female patients was influenced by the performance expectancy in collecting the information, highlighting gender as the most significant moderator influencing the relationship between performance expectancy and behavioural intention. This moderator is more relevant to patients as stakeholders in the pharmaceutical industry, and is less relevant for physicians and pharmacists. However, gender was not found to be a key factor influencing the behavioural intention of the female physicians and pharmacists to use social media. The female physicians and pharmacists were not influenced by gender and use the information available on social media as a viable source of information for decision-making. As a result, gender was not considered to be a significant moderator in the relationship between performance expectancy and intention to use social media forums.

Educational level was considered to be a significant moderator that has an impact on the relationship between performance expectancy and the behavioural intention of pharmaceutical stakeholders to adopt social media forums for information seeking. Similarly, the findings revealed that the young, educated male patients also have high-performance expectancy in collecting information, but not for emotional support. Furthermore, the moderator education level was also considered to have a high impact on the social influence on behavioural intention to use social media forums for pharmaceutical product information.

These findings are surprising in a society where traditionally education, experience and age were stronger moderators to generate social influence, as the elderly person tended to have the greatest influence on the members of society. The literature also supported this finding by stating that medical knowledge has the potential to change the intention and behaviour of a person in comparison to the simply educated, due to different levels of experience and knowledge (Ding, Elishberg and Stremersch, 2013).

In addition to social influence, trust was also identified as a pertinent and significant factor. The findings show it to be more statistically significant for the collection of information related to a specific pharmaceutical product than for seeking emotional support. In respect of trust, education level was identified to be the most influential moderator among the consumer patients, as well as the consumer physician categories of information seekers. From these findings, it can also be observed that the seekers of information have a directly proportionate relationship with trust as a determinant of behavioural intention, which was found to be increasing with an increase in the education level of the information collector.

Therefore, the research findings and overall discussion demonstrate that in the pharmaceutical industry, perceived trust is the derived industry-specific construct and educational level and health conditions are the derived industry-specific moderators, regarding the usage of social media forums among the stakeholders (customers and consumers) of the pharmaceutical industry.

Table shown the findings related to moderators to the research model:

Moderator	Interrelationship with Behavioural Intention to Use Social Media
Experience	Significant relationship
Education Level	Significant relationship
Gender	No significant relationship
Health Conditions	Significant relationship
Age	Significant relationship

Table 6.1: Moderators and its Interrelationship with Behavioural Intention to Use Social Media

6.2.2 Influence of industry-specific factors and moderators on the relationship between known independent variables and behavioural intention to use social media forums as communication channels for the decision-making process

The research objective, which sought to determine the influence of industry-specific factors and moderators on the relationship between independent variables and behavioural intention to use social media as communication channels for the decision-making process, is aligned with the research findings through the discussion in the literature review.

The research analysis found that the UTAUT model highlighted the most relevant key factors that influence the acceptance of information technology and its usage. In this regard, four independent variables were determined: effort expectancy, performance expectancy, social influence and facilitating conditions. In the context of the research regarding social media forums as communication channels, facilitating conditions was not considered to be a significant variable that affects behavioural intention. In the light of the literature, the facilitating conditions factor can affect the behaviour of the user, but it does not affect behavioural intention (Gasco, 2012). Along with the independent variables, the three

moderators of age, gender and experience were examined in the research, together with two endogenous variables namely, intention to use behaviour and use technology. Since the research sought to examine behavioural intention regarding the usage of social media among the different stakeholders (customers and consumers) of the pharmaceutical industry, it did not explore the behaviour or usage of technology issues, which are more directly related to facilitating factors.

The research revealed that the components of the UTAUT model are essential to understand the overall behaviour and intentions to use social media as communication channels for the decision-making process. The moderators of gender and age have an impact on the relationship between the independent variable performance expectancy and behavioural intention. Similarly, the moderators of gender, age and experience have an impact on the relationship between the independent variable effort expectancy and behavioural intention. The moderators of age and experience have an impact on the relationship between the independent variable social influence and behavioural intention.

In addition, trust was identified as another factor in the modified model (BIUSF). Trust can be understood as the faith in the correctness and reliability of information provided on social media. It has been highlighted as a specific factor from the findings of the research because, for the stakeholders, the correctness and reliability of the information obtained from social media forums is highly significant.

6.2.3 Exploration of a model of current practice of behavioural intention for social media forum adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers in society

The research objective which sought to develop a model of the current practice of behavioural intention for social media forum adoption and use by pharmaceutical customers (pharmacists, physicians) and consumers in society, is aligned with the research findings through the discussion in the literature review.

With regard to the pharmaceutical customers and consumers in Kuwait, the modified model (BIUSF) was derived from the overall research findings and discussion (See Figure 6.1). According to the BIUSF model, the moderator gender has an impact on the relationship between trust and behavioural intention. In respect of gender, the literature highlighted that the difference in gender influences all of the stakeholders because of the differences between the genders in their stress levels, distrust, preferences, cultural hesitance and ethical issues (Im and Lim, 2008). This also indicates that the pharmaceutical industry cannot deploy the same social media strategy to communicate or interact with all stakeholders.

Furthermore, the literature has also highlighted that the differences in the psyche and behavioural patterns between males and females creates a direct influence on their decision-making regarding health issues. This indicates the need for the pharmaceutical industry to pursue different strategies and practices regarding the application of social media as effective platforms to communicate (Im and Lim, 2008). It has been observed from the research findings that the moderator age has an impact on the relationship between the industry-related construct trust and behavioural intention. In the context of age, the literature stated that age of the stakeholders influences the changes regarding planning and physical activities of all types of related stakeholders (Reuter et al., 2010). The literature supported the addition of trust as an industry-related construct by stating that there are numerous risks associated with the pharmaceutical industry (Hajli, 2014). Thus, it is essential for the industry to be cautious

while making use of social media for communication, which confirmed the need to add trust as a construct. Furthermore, the research findings revealed the impact of experience as a moderator on the relationship between performance expectancy and behavioural intention, and trust and behavioural intention.

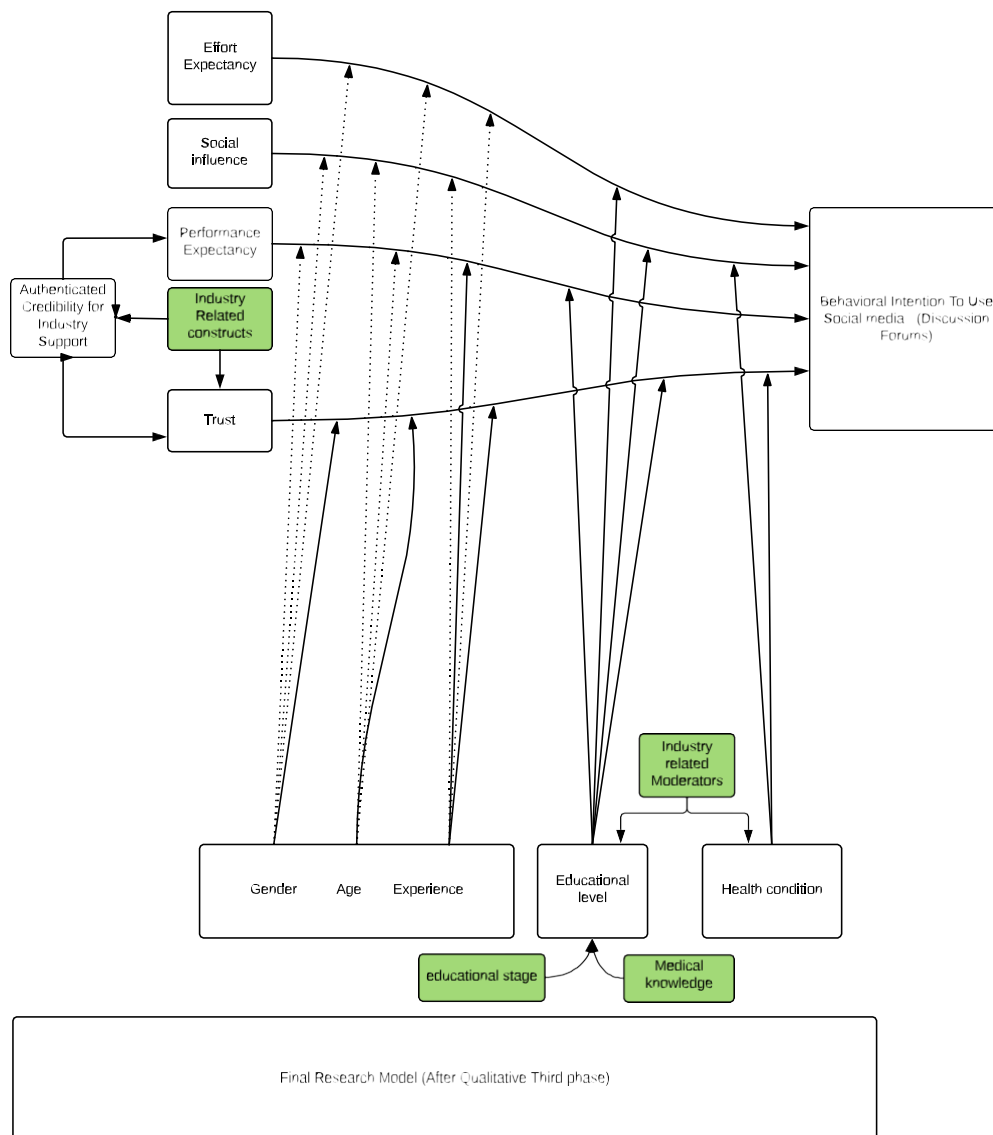


Figure 6.1: BIUSF model

The industry-specific moderators education level and health condition also affect the relationship between the constructs and the behavioural intention of the pharmaceutical industry stakeholders. In the light of the literature, the moderator of education level has been significant for this research as it focuses the attention of the pharmaceutical industry on selecting an appropriate mode of social media to address academic and non-academic people (Ding, Elishberg and Stremersch, 2013). Similarly, the literature also explained that health condition has been a significant moderator of the BIUSF model as it focuses on the different intentions and behaviour of patients in various phases of health conditions. In this regard, the education level has an impact on the relationship between trust and behavioural intention (Antheunis et al., 2013). Similarly, the moderator health condition has an impact on the relationship between trust and behavioural intention, and social influence and behavioural intention. It was observed that health conditions have a direct impact on the behavioural intention of the stakeholders of the pharmaceutical industry.

6.3 Contribution of research findings to theory

The results of the research have highlighted the significance of the information dissemination in respect of the information on social media related to the pharmaceutical industry and healthcare. Traditionally, pharma-covigilance has undertaken the task of monitoring medicinal interactions and the side-effects of drugs or any other medical practice. In particular, it is responsible for monitoring of the newly released medicinal and healthcare products and adverse side-effects, if associated with any drug. It relies on different reporting channels to present an effective and credible critical assessment of the medical information and ensures general patient well-being. However, until now, there has been no significant research on the use of social media as a reporting tool. This research thus highlights the

benefits of social media for the stakeholders of the pharmaceutical industry. For example, it would be possible to mine social media sites to provide a detailed and reliable account of the adverse reactions of medicinal products if any were encountered by pharmaceutical industry stakeholders and also to identify the risks associated with new and existing pharmaceutical products and services (Nikfarjam et al, 2015). This further highlights the significant contribution made by this research to the existing knowledge regarding the significance of social media as a reporting tool.

This research, which has undertaken an exploratory qualitative data analysis followed by the examination and evaluation of a quantitative survey of 440 customers (physicians and pharmacists) and consumers (patients) from Kuwait, has made a crucial contribution to enhancing the understanding of the adoption and acceptance of social media discussion forums by stakeholders of the pharmaceutical industry. This research has thus contributed to an increased understanding of social media usage, applications, benefits, risks and challenges for the pharmaceutical industry. The findings of the research have also provided more clarification of the main constructs, such as performance expectancy, effort expectancy, and social influence, and has explored trust as a new construct that influences the intention of the different stakeholders (customers and consumers) to use social media forums.

It has also provided an in-depth explanation of the moderators of gender, age, and experience, and has explored the new industry-related moderators of education level and health conditions that affect the intention of the different stakeholders (customers and consumers) to use social media forums. In addition, this research has added to the prevailing knowledge on acceptance of technology by undertaking an in-depth review of the existing models and theories for technology acceptance. In this context, the findings obtained from the specific reference to pharmaceutical industry of Kuwait have confirmed that the constructs of performance expectancy, effort expectancy and social influence are identified in the existing

models of technology acceptance and were relevant to the use and acceptance of social media forums in the pharmaceutical industry. It has also explored one additional construct, namely, trust as an industry-specific factor in the pharmaceutical industry.

The major contribution of this research has been in respect of the development of a conceptual model BIUSM for the acceptance and use of social media forums. This was developed with the help of the critical review of the existing literature on the acceptance of technology. These findings have been determined after testing the initial model through the opinions and perceptions of the consumers and customers. The modified model (BIUSF) thus contributed towards the identification of the five independent moderators: gender, age, experience, and health condition and education level.

The BIUSF model developed using the findings of this research can ensure the effective utilisation of information technology by the pharmaceutical industry. Information technology facilitates the dissemination of information regarding the processes, products and health awareness to stakeholders in an easy, quick and efficient manner. In this respect, this model has identified some critical differences between the previous literature covering the factors influencing the use and adoption of social media among the stakeholders of the pharmaceutical industry.

However, the research findings also demonstrated that the modified model couldn't be applied to all situations, even in the pharmaceutical industry. The findings were specifically targeted to examine the industry-specific factors influencing the use and application of social media forums and, thus, the BIUSF model highlights the key factors that influence the use of social media technology. This further indicates that the research findings are not applicable to the determination of the factors that can influence the use and application of any other technology related to the pharmaceutical industry. Nevertheless, these findings regarding the factors of performance expectancy, trust, effort expectancy and social influence as central

influences on the behavioural intention to use social media; can be generalised. This is because they are widely applicable in respect of the factors that influence the use of social media for decision-making related to healthcare. Thus, they are significant for the stakeholders of the pharmaceutical industry as they create awareness of the risks and benefits of relying on the information provided by social media. This indicates that this research is not a mere academic work, which does not hold relevance for the general public, rather this research emphasises social value and seeks to provide beneficial information regarding the use and awareness of the risks and their management while using social media for healthcare.

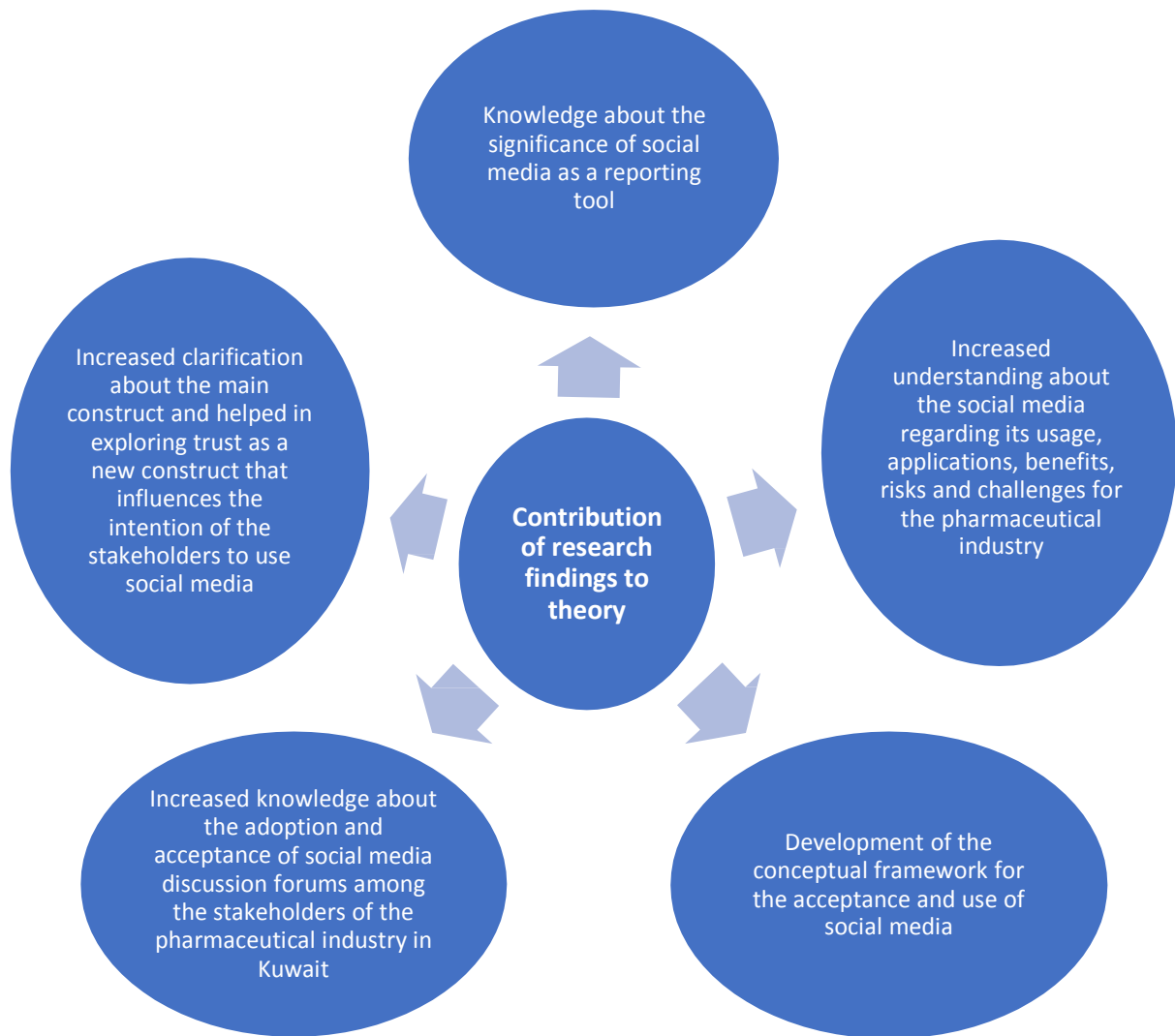


Figure 6.2: Contribution of research findings to theory

6.4 Contribution and implications of the research findings for society

The purpose of conducting this research has been to address the concerns about human safety and human rights in relation to health decisions. There is a considerable uncertainty and lack of reliability in the health information displayed on social media. In respect of generating awareness about the use of social media for human safety and human rights, this research has made a significant contribution to understanding the factors that motivate and demotivate the use of social media health forums by the stakeholders of the pharmaceutical industry. It has also suggested how the use of such forums can be promoted and serves to be useful for the stakeholders in society (Khechine et al., 2014). It has been revealed from the

examination of the prevailing literature that social media is usually distrusted because the sources of insight on sensitive subjects related to healthcare are unreliable (Ventola, 2014). By focusing on the role and significance of trust and the credibility of information as key determinants influencing intention to use social media forums, this research has highlighted the need for pharmaceutical companies to provide accurate information to their consumers about health-related issues. They must also understand their obligation to provide true and useful data that is helpful for the general public to take effective decisions related to safety and healthcare (Attuquayefio and Addo, 2014; Khechine et al., 2014).

This research raises people's awareness of their human rights regarding access to accurate and useful information about safety and healthcare on social media. It also raises awareness of the implications of inappropriate use of social media and the importance of maintaining the confidentiality and privacy of patients' personal information and providing true and correct information regarding the pharmaceutical industry's drugs, products and services.

This research will enable people to understand their human rights in relation to safe and quality healthcare and addresses their concerns about the human safety and human rights involved in their respective health decisions (Denecke et al., 2015). It thus seeks to highlight the need for social media to be a trustworthy source that provides effective opportunities to all members of society to connect with pharmacists and physicians in a new and authentic manner. The research has also addressed the issues and barriers that restrict the people from using social media as a reliable source of information and a safe platform to access health-related information, by making them aware of the benefits and risks associated with its application and usage (Attuquayefio and Addo, 2014; Kaba and Toure, 2014).

As this research was motivated by need for the pharmaceutical industry stakeholders to understand their human rights, safety and healthcare to enable effective decision-making, the

focus of this research was society and human rights and was not confined to technology. Therefore, this research can improve social situations by spreading awareness about the effectiveness of the information provided on social media, and can help people to obtain access to quality medical care. With the help of such awareness, this research ensures that the stakeholders of the pharmaceutical industry and the general public are cautious about the benefits and risks of using social media forums and are aware of the disciplinary action associated with the display of misleading information on such media (Abubakar and Ahmad, 2014; Huang, Choi and Chengalur-Smith, 2010). This will enable people to understand the correct use of social media forums for making decisions related to healthcare and improve their quality of life by learning effective ways to become healthier.

Furthermore, the research raises public awareness of their rights to access correct and authentic information and enables an understanding of social media abuses, legal regulations and moral obligations associated with the information published on social media (Khan, Saleh and Nivarthi, 2015; Rolls et al., 2016). It thus serves as a crucial means to keep the public up-to-date and informed about their general healthcare. Thereby, the study makes a key contribution to improving the health and lifestyle of the public and society at large. The prevailing literature established that social media is a highly beneficial platform on which to access the latest information about new drugs, existing drugs, effective practices for improved healthcare, and lifestyle. Therefore, by highlighting the benefits of social media this research is highly useful for people in improving the health of society (Spector and Kappel, 2012; Malagi, Angadi and Gull, 2013).

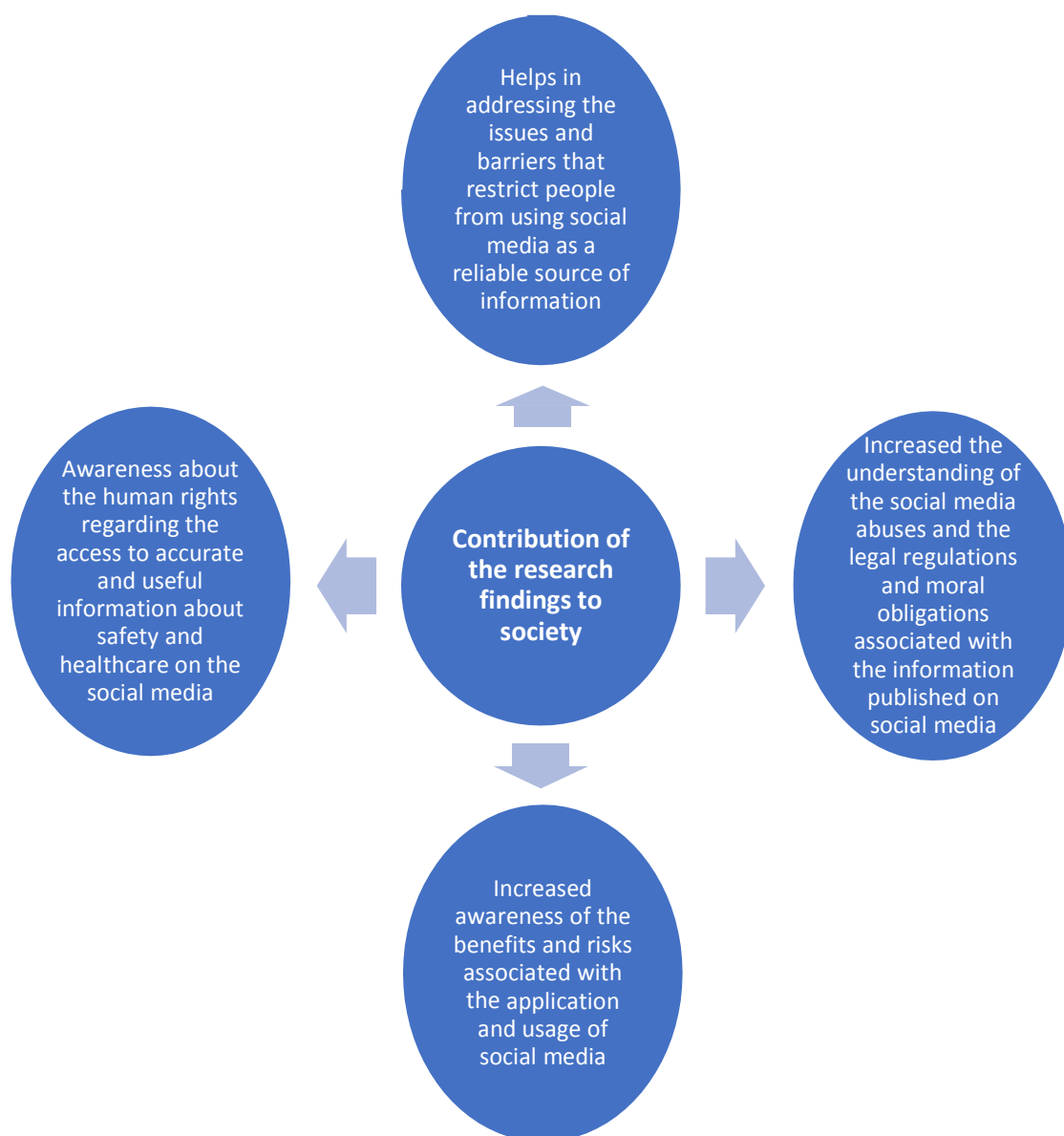


Figure 6.3: Contribution of research findings to society

6.5 Contribution and implications of research findings to practice

This research is beneficial for everyone in the real world including pharmacists, physicians, patients and society at large. It makes a significant contribution in three key areas. Firstly, it has identified the constructs and the barriers that influence the consumers and customers of the pharmaceutical industry in adopting social media forums for effective decision-making in healthcare. The determination of these factors could be helpful for the pharmaceutical industry in developing countries that are seeking to adopt social media. It will enable them to understand the factors that hinder its usage among the stakeholders and to

remove them in order to promote the use and adoption of social media for making decisions related to healthcare. Secondly, this research study has also made a significant contribution to the prevailing knowledge by providing a modified model for social media forum acceptance and promotion of its use among the stakeholders (customers and consumers) of the pharmaceutical industry in Kuwait. This model will prove as an effective and impressive means with the help of which, the pharmaceutical companies in developing countries can identify the main constructs of behavioural intention regarding social media and health decisions of consumers and customers. In this regard, this model will also assist the pharmaceutical industry to identify the factors that influence the behavioural intention to use and adopt social media. This can help to increase the use of social media by stakeholders. Increased use of social media-based health-care forums by stakeholders will provide increased access to relevant data for the pharmaceutical industry, which can provide crucial information for decision-making regarding business operations and marketing (Attuquayefio and Addo, 2014).

The third key contribution of this research is its significance in providing suitable and relevant recommendations for the four main stakeholder groups of the pharmaceutical industry: pharmacists and physicians as customers, patients as consumers, and the government. In this regard, if the social networking sites become more trustworthy, the pharmaceutical companies can promote the use and relevance of the information provided by such sites for effective decision-making by the stakeholders. This research has supported the fact that although social media is an ideal means of facilitating communication and interaction between patients and physicians, accessing information in a cost-effective manner, and disseminating and gathering information, it must be used under specific conditions and its credibility must be increased, in order to promote its use among pharmaceutical industry

stakeholders (Belbey, 2016). Therefore, the construct of trust serves as a significant determinant of the behavioural intention to use social media for health-related decisions.

The pharmaceutical and device firms can also make use of social media to educate, promote products and services, and facilitate interaction between customers, patients and physicians, while complying with the regulations of the pharmaceutical industry. In order to ensure that social media is reliable and trustworthy, it is essential for the pharmaceutical industry to follow compliance with the rules and regulations that govern communication via social media (Belbey, 2016).

The findings of this research have highlighted the significance of trust as a key construct influencing the behavioural intention to use social media and the prevailing literature has confirmed these findings. Research has revealed that to increase the level of trust in social media discussion forums, the FDA requires pharmaceutical companies to provide an equal amount of positive and negative information about the drugs, whenever they publish their first post about a drug. It asserts that the information about the risks associated with the drugs must be as prominent as the information about the benefits (Belbey, 2016). Additionally, by exploring the industry-specific factor of trust, the pharmaceutical industry should be aware of the need to develop a social media policy to ensure effective and authentic publication of credible and reliable information on social media (McWay, 2013). This will increase the public's trust in information published on social media and increase the use of such information for effective healthcare decisions, thereby improving public health and lifestyles.

Social media can be a highly effective platform for the discussion of diverse subjects, such as medical ethics, practice management, biostatistics and advanced research in drugs. It can also provide valuable information to the patients and pharmacists to facilitate effective decision-making (KPMG, 2011; Constantino, 2014). With an increased level of trustworthy

and credible information, social media can be highly beneficial for improving clinical education. In this respect, the examination of the literature revealed that the high usage rate of social media among medical students between the ages of 18 and 29 years has encouraged the clinical curricula of the social media tools to improve their understanding of professionalism, medical ethics and communication. In addition, the use of social media can also be implemented in the undergraduate pharmacy curricula, wherein Twitter and Facebook can be useful media for discussions on medical subjects and interactions with experts and scholars in the field (Ventola, 2014).

Existing research indicated that difficulty in enrolment is one of the greatest problems in the completion of clinical trials. Approximately 30% of the research time is spent on recruitment, while about 40% of the websites fail to meet the targets for enrolment. In this regard, social media can be a highly powerful tool that can effectively improve the enrolment process and assist the researchers in achieving the enrolment goals in less time and at lower cost (Belbey, 2016). The research can be beneficial for the pharmaceutical companies, which can focus on increasing the trust in the information provided on social networks and use the information gathered for effective decision-making. Social media is a highly reliable and cost-effective method for companies to communicate with their patients, market their products and services, acquire news about activities, offer customer support and service, and serve as a channel for patient resources and education (Ventola, 2014). It is also an effective communications channel for pharmaceutical companies to share press releases on new drugs, features, devices and clinical trials (Constantino, 2014).

The findings of the research have revealed significant and crucial information about the social networking sites, which are increasing the number of social ties of the average user and have a great potential to maintain such connections. These findings thus highlight how social media can help to enhance the image and visibility of the pharmaceutical industry (Ghosh,

2014). However, it is essential that while making use of social media, the factors such as trust, tolerance, community, social support and political engagement are considered. Therefore, the pharmaceutical industry must focus on factors such as trust and credibility of information. It should devise social media content reflecting factors such as gender, age, education level and experience, so that its usage and application increases among the stakeholders (Ghosh, 2014). This research confirmed that if social media use by the pharmaceutical industry involves all the constructs then it can serve as a safe and useful means for the industry stakeholders to obtain feedback about the products from customers in less time and at less cost (Belbey, 2016; Constantino, 2014).

The execution of these recommendations through a set of appropriate strategies can improve the usage and acceptance of social media and improve safety and reliability. This would increase its use for making effective decisions related to health (Constantino, 2014). These recommendations are also beneficial for other developing countries to adopt and accept the use of social media successfully.

The overall research findings revealed that no significant research has been conducted in the past regarding the application of social media as a pharmaceutical-based health education tool for the general public in the form of public policy or collaborative/community pharmacy programmes (Belbey, 2016). Moreover, the diffusion of social media platforms for health and education related to medical products among the pharmacists and physicians could be crucial means to determine the specific intentional product-related frauds or misrepresentation of marketing information (Belbey, 2016). In this context, the case of misrepresentation of medical information by Kim Kardashian on social media can be highlighted. In this case, immediately after the reports were received from the public about this breach prompt reaction from the FDA served as a clear warning of the emergent risks of the advertisement of pharmaceutical products by non-pharmaceutical companies (Karlin,

2015). This case also showed that such risks are unique to social media because of its ability to reach a wider audience, quickly and conveniently. This research thus makes a significant contribution by highlighting the benefits and risks regarding the use of social media for pharmaceutical care and education among the public and the patients (Karlin, 2015).

In the context of the organisational practices in the pharmaceutical industry, this research has made a significant contribution to marketing practices, by highlighting the risks associated with the use of social media in the marketing of medicinal products. It has also found that social media platforms can be highly effective and efficient channels for the pharmaceutical industry, enabling it to improve the corporate image and promote social corporate responsibility strategies. This is because social media platforms have a large coverage and relatively lower costs for information dissemination and collection (Swan, 2009).

The research has also highlighted the role and significance of the BIUSF model as a highly significant means to assist the pharmaceutical industry in communicating with stakeholders in an effective manner. In this respect, the research found that the industry can use the BIUSF model by focusing its attention on the use of different strategies and planning to influence intention and behaviours regarding the use and adoption of social media technology by stakeholders (Khechine et al., 2014). The BIUSF model is highly suitable for the pharmaceutical industry because it enables the determination of factors that directly influence the behavioural intention of the stakeholders regarding their use and adoption of social media for collecting, seeking and disseminating information. This modified model can be used by the pharmaceutical industry to promote the use of social media as a tool to address the issues of the stakeholders and improve the industry's performance. This model can also act as a crucial guide for the industry to provide more credible and trustworthy information on social media forums, which will generate confidence. The pharmaceutical industry can

also use it as a means to gather pertinent data regarding customers and physicians, which can provide a useful basis for improving the decisions related to operations and marketing (Attuquayefio and Addo, 2014).

This research has undertaken a detailed investigation in respect of evolving a pharmacy practice model of 2009 (Abramowitz, 2009). As the findings of this research are consistent with the research regarding the application of social media in other fields, this research has made a remarkable contribution by demonstrating the need for different approaches for different age groups. The research has also made a significant contribution to the practices prevailing in the pharmaceutical industry by identifying the risks related to the use of social media for the marketing of medicinal products. The literature review demonstrated that social media is pervading all domains of human life. It is widely used by employers, customers, pharmacists, physicians, and patients for gathering, disseminating, and obtaining information; shaping public opinion about quality healthcare and developing governmental policy. This research plays a key role in the social and human aspects by enabling the pharmaceutical industry to understand how the chatter in social media can be harnessed to raise people's awareness of healthcare practices, pharmaceutical products and services.

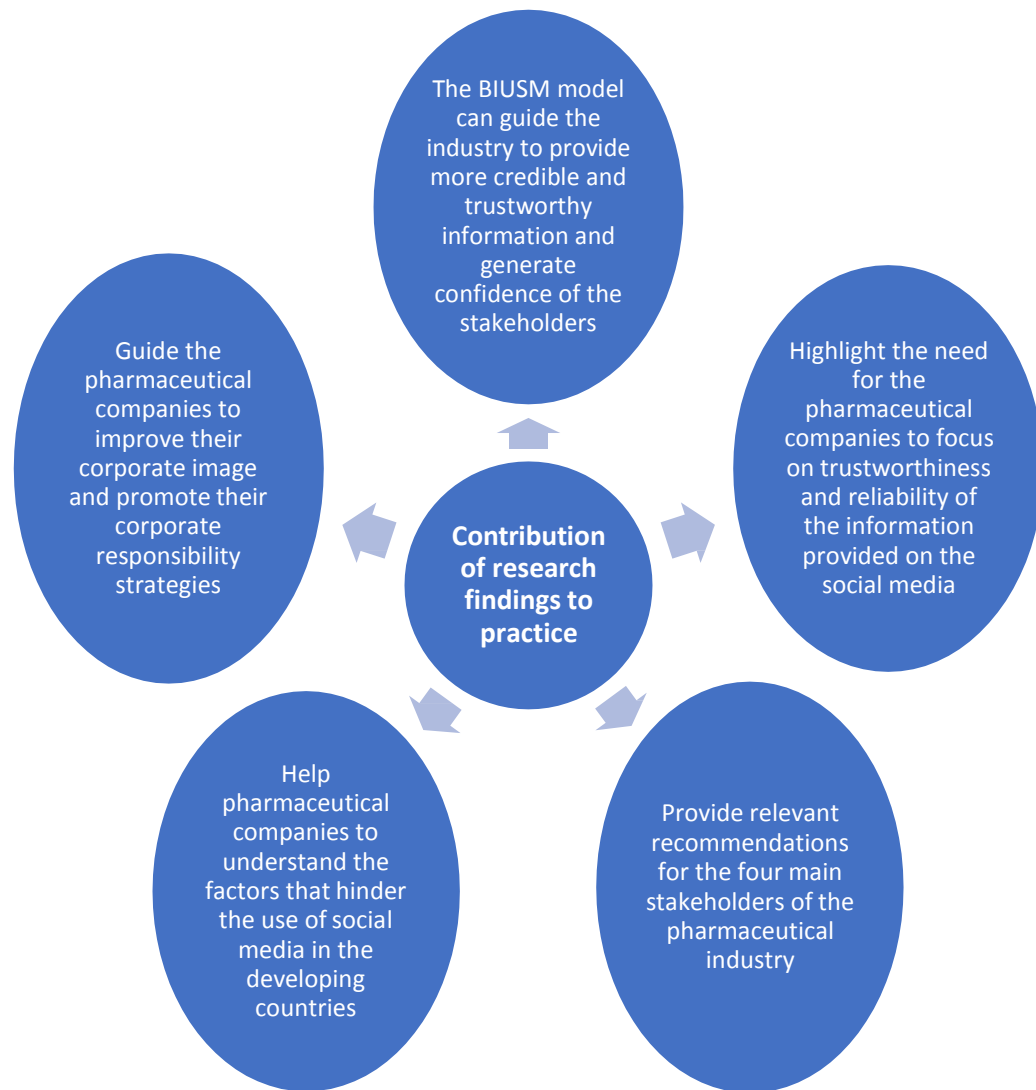


Figure 6.4: Contribution of research findings to practice

6.6 Research reflection

Conducting independent research has enabled me to hone my existing skills and inculcate the abilities required to undertake academic research. In this respect, undertaking this research provided a highly significant opportunity for me to gain detailed and comprehensive theoretical, as well as practical, exposure to academic research and to acquire the essential set of skills required to conduct a credible and logical academic research. In addition, it was also a significant opportunity to understand and apply the fundamentals of academic research in the field of pharmaceuticals and technology. While undertaking this research, a great deal of information about the factors that can influence the behavioural

intention of individuals while adopting and using technology was studied. This enabled me to explore some interesting and unknown facts about the factors that influence social media adoption in the pharmaceutical industry. Therefore, conducting this research was a very effective method to explore and study the factors influencing behavioural intention to adopt social media by the stakeholders of pharmaceutical industry in a critical manner using empirical data rather than a descriptive study of academic books.

As the field of medical science is ever evolving and advancing because of continuous research in the discipline, there is a critical need to keep up-to-date with the emerging knowledge, and also to endeavour to contribute to the prevailing knowledge by advanced research to facilitate highly effective healthcare. This research is a significant means to provide awareness about the industry-related factors and individual factors influencing the adoption and use of emerging technology, such as social media, in the pharmaceutical industry in Kuwait. It has also been very effective in gaining a detailed understanding about the behavioural patterns of stakeholders of the pharmaceutical industry in Kuwait. This understanding was useful in determining the new industry-related factors, in addition to the conventional factors, influencing the adoption of social media technology.

As all major industries and sectors have increased the use of social media tools and approaches to widen their reach to their end-customers and gain vital information to facilitate prompt and logical decision-making, it is also essential for the pharmaceutical industry to make comprehensive use of social media tools to promote products, and disseminate and collect information related to healthcare, thereby ensuring effective decision-making. As this research has focused on factors influencing the use of social media, it has made an effective exploration and examination of the role of age, gender, education level, and experience and health condition on behavioural intention to adopt and use social media. It has highlighted the issues related to social media adoption among the stakeholders of the pharmaceutical industry

in Kuwait that hinder or promote the intention to use healthcare information presented on social media. Thus, it has been able to provide recommendations for the stakeholders of the pharmaceutical industry.

The research findings are beneficial in three areas. Firstly, this research can improve and increase the academic understanding of the use of social media. The literature review found that with the advancement of science and technology, the opportunities for communication and networking have undergone considerable changes. During the last decade, there has been an explosion of social media websites on mobile telephones and other internet-based devices, through websites such as Facebook, Instagram and Twitter, each of which have become highly integrated into our daily lives (Ghosh, 2014).

In this context, this research has highlighted the significance of social media along with the risks associated with it. It promotes its use and application for effective decision-making among the pharmaceutical industry stakeholders in Kuwait. Secondly, this research has also highlighted the need for effective regulations and policies to govern the credibility and reliability of the social media websites. By identifying trust as a key construct influencing behavioural intention to use social media, this research has highlighted how such regulations can help to increase the trust of the stakeholders towards social media discussion forums.

Thirdly, the findings of the research will also play a crucial role in influencing the practices and behaviour of the pharmaceutical industry stakeholders towards their use and adoption of social media discussion forums to make decisions related to healthcare. In this respect, the pharmaceutical industry should use social media forums to provide information about new products and services and also use these forums as a reliable and cost-effective tool for promotion, marketing, and communication with the customers and to obtain information. The pharmacists and physicians can make use of social media discussion forums to participate in discussions about new research in drugs or answer health-related queries by

patients, while the patients can use it to gain information about new drugs, usage and side-effects of the existing drugs and other information about healthcare (Belbey, 2016; Constantino, 2014). Therefore, this research will be very useful for generating behavioural and attitudinal changes among the stakeholders of the pharmaceutical industry through the knowledge and awareness gained its help.

Chapter Seven: Conclusions and Recommendations

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Chapter Seven: Conclusions and Recommendations

7.1 Introduction

This chapter presents the overall conclusions of the research and aims to address the research objectives and answer the research questions. First, the conclusions of the overall research findings are presented, followed by an explanation of the limitations of the research, and concluding with recommendations for future research.

7.2 Conclusions of the overall research findings

7.2.1 Answer to the research aim

The examination of the literature regarding the industry-specific factors associated with the adoption and use of social media for effective decision-making revealed that behavioural intention is one of the key elements that determine the extent to which users accept and adopt technology in their everyday lives. Behavioural intention is the probability or the likelihood that individuals display the perceptions, which motivate certain types of behaviour. The literature also highlighted numerous factors, such as perceived risk, self-efficiency, perceived relative benefit, perceived usefulness, brand orientation, quality orientation, performance expectancy and service quality. The examination of these findings revealed that there were no specific factors identified in the existing literature that influenced the behavioural intention to adopt social media among the stakeholders of the pharmaceutical industry. In this respect, this research applied the BIUSF model to evaluate the most relevant industry-related factors that influenced the behavioural intention of the stakeholders in pharmaceutical industry in Kuwait while adopting social media for decision-making.

The original UTAUT model for technology adoption indicated some gaps based on the literature examined. In this respect, the overall research findings revealed that out of the standard factors influencing behavioural intention, as stated in the UTAUT model, namely: performance expectancy, effort expectancy, social influence and facilitating conditions; three

factors played a crucial role in influencing the intention to use and adopt social media among the stakeholders of the pharmaceutical industry. The exception was facilitating conditions. This cannot be considered as a key factor influencing behavioural intention to use social media, because these conditions do not affect behavioural intentions and are more closely associated with the usage of technology. Furthermore, the examination of the findings of the primary data, gathered with the help of a survey and interviews, revealed that the pharmacists and consumers believed that factors such as ease of use, time saving and access to clear, comprehensive and recent data motivates them to use and adopt social media to access information related to pharmaceutical products and healthcare. In addition, they also believed that factors such as security, absence of risk, trustworthy information, information addressing issues related to health conditions, quality of information indicating credibility, and access to trustworthy information, plays a key role in influencing stakeholders' intention to use and adopt social media forums for decision-making.

However, in contrast to the opinions of the pharmacists and pharmaceutical industry consumers, the findings revealed that physicians are not motivated to use and adopt social media, because of the lack of reliable information, the accuracy of information and issues related to privacy. These findings further highlighted trust as a highly significant factor influencing the intention to use and adopt social media forums among the stakeholders of the pharmaceutical industry. Therefore, based on these overall findings it can be concluded that trust, along with performance expectancy, effort expectancy and social influence, are the key industry-related factors that influence the intention to use and adopt social media forums by stakeholders of the pharmaceutical industry for effective decision-making.

Based on these findings, the study confirmed that trust is a key factor in the BIUSF model. Trust can be understood to be faith, correctness and reliability with regard to information provided on social media (Constantino, 2014). It has been highlighted as a key

factor from the findings of the research because, for the stakeholders, the correctness and reliability of the information obtained from social media is highly significant. The research further concluded that for the stakeholders considering social media, reliability, correctness and credibility of the information available, is a crucial determinant of whether to adopt and use it as a tool for decision-making. In this context, the research findings also highlighted that in addition to age, gender and experience as moderators of the UTAUT model, education level and health conditions are also pertinent moderators that influence the relationship between the constructs, namely, performance expectancy, effort expectancy, social influence and trust. Furthermore, the research found that for the stakeholders (customers and consumers) of the pharmaceutical industry medical knowledge and the stage of education plays a key role in determining the relevance and credibility of the healthcare information displayed on social media and its use for decision-making for healthcare. This highlights the fact that education level influences the relationship between the industry constructs and behavioural intention to adopt and use social media.

The research findings also revealed that the severity of the health conditions encountered by individuals also plays a crucial role in influencing their intention to use and rely on the information provided by social media for decision-making related to healthcare. Thus, this research has explored two new moderators in the BIUSF model: education level and health conditions. These are pertinent drivers that influence the relationship between the industry-related factors and the intention to use and adopt social media forums. Education level and health conditions were also shown to moderate the relationship between each construct and behavioural intention, as the pharmacists and physicians with medical knowledge would adopt a different attitude to social media, as compared to patients or persons not having medical knowledge, because the latter do not know whether the

information is correct and reliable. Higher levels of medical knowledge provide more confidence to use information from social media for decision-making.

On the basis of these research findings, it was concluded that BIUSF is an appropriate model to examine the factors that influence the behavioural intentions of individuals regarding the adoption or usage of technology. This model was very useful in determining the key factors influencing the behavioural intentions regarding the adoption of social media by the stakeholders (consumers and customers) of the pharmaceutical industry and was highly effective in identifying the ways in which the adoption and appropriate usage of social media could be increased in this group to improve decision-making.

The findings highlight the novelty of this research, which has been very effective in presenting the additional, new industry-specific factors and moderators that influence behavioural intention to use and adopt social media by pharmaceutical industry stakeholders in Kuwait for effective decision-making. The exploration of the new construct of trust, and the new moderators of education level and health conditions for the BIUSF model, widens the perspectives about the factors that influence behavioural intention to use social media for decision-making and provide specific elements that moderate behavioural intention among the stakeholders in the pharmaceutical industry.

This research provides knowledge for the public and stakeholders that can be helpful in influencing their attitude, perceptions and behaviour regarding the relevance and usage of social media as a safe and reliable method to obtain information for effective decision-making in healthcare. With the help of these research findings, the stakeholders can change their ideas about social media, by using this research as a means to gain awareness of the benefits of using social media for healthcare and the related risks which they must consider in order to use online information safely.

It has been reflected from findings obtained from examining social media and its contribution in influencing and improving decision-making in the healthcare field in Kuwait that an additional constructs of trust and authenticated credibility for industry support can be added to the existing UTAUT model. The research-modified model BIUSF also indicates that educational stage and medical knowledge relating to educational level affects the behavioural intention to use social media in pharmaceutical industry in Kuwait among patients, physicians and pharmacists. Moreover, educational level and health conditions are identified as two influential industry related moderators affecting behavioural intention to use social media.

On the other side, it has been inferred from investigation of real world examples that various pharmaceutical companies are using online platforms for selling unapproved products by misbranding them among customers. Hence, there is a need to take strict measures for restricting such practice and avoiding the misuse of social media and other platforms.

7.2.2 Answers to each research objective

7.2.2.1 Objective 1: To determine a set of industry-specific factors responsible for influencing behavioural intention of pharmaceutical stakeholders, such as pharmacists, physicians and consumers (patients), to adopt social media forums

The first objective sought to determine the factors responsible for influencing the behavioural intention of pharmaceutical industry stakeholders to adopt social media forums. The findings of the literature review revealed that from the perspectives of pharmacists, social media can be very useful in decision-making, because it enables customers to compare the merits and demerits of the products offered by the pharmaceutical companies. Additionally, as up-to-date information regarding drugs and their usage can be obtained from social media, the findings have revealed that social media is an effective tool for providing information for rational decision-making by the stakeholders. The application and use of social media by the public and pharmaceutical

industry stakeholders facilitates communication across the different departments of pharmaceutical companies, which enhance organisational decision-making. In respect of this objective, the findings have been compiled from chapter 2 and chapter 5, which have detailed the literature review, the qualitative data analysis and the quantitative data analysis, respectively.

The findings of these chapters have revealed that the behavioural intention of pharmacists is largely influenced by effort expectancy regarding the use of social media, while no significant moderator, other than gender, age, experience and education level was identified as influencing the relationship between effort expectancy and behavioural intention.

The behavioural intention of physicians was analysed. The findings revealed that this is influenced significantly by the performance expectancy of the use of social media. Performance expectancy is the most crucial variable that determines the behavioural intention of physicians to use social media for disseminating information on medical products and patient care. Performance expectancy involves benefits such as increased productivity and self-promotion of the physicians, which greatly influences their behavioural intentions. The influence of performance expectancy has been supported by the literature review, which found research confirming that various individuals and organisations undertake different activities and operations to satisfy the needs and expectations of their customers (Miner, 2015). In this regard, to fulfil the expectations of the customers in the pharmaceutical industry, performance expectancy is strongly responsible for influencing the behavioural intention of physicians. Furthermore, in terms of information seeking, performance expectancy is considered to be a highly influential factor that determines the behavioural intention of physicians.

Educational level, in terms of medical background and experience, is the most significant moderator that has an impact on the relationship between performance expectancy and the behavioural intention of pharmaceutical stakeholders regarding information seeking to adopt social media. The research study analysed the behavioural intention of patients as pharmaceutical stakeholders and found that it is significantly influenced by performance expectancy of the use of social media. Health condition is also considered to be a significant influential moderator that has an impact on the relationship between performance expectancy and behavioural intention. Other moderators, namely, education level, age, gender, experience and health condition, were also examined and found to be crucial in influencing the relationship between constructs and behavioural intention to use social media among the stakeholders of the pharmaceutical industry.

7.2.2.2 Objective 2: To determine the influence of the industry-related moderators on the relationship between independent variables and behavioural intention to use social media forums as communication channels for the decision-making process

The research objective that sought to evaluate the relationship between independent variables and behavioural intention to use social media as communication channels for the decision-making process was addressed with the help of chapter 5, which presented the findings of the qualitative and quantitative data gathered for this research. The findings of this chapter revealed that the four independent variables determined were: effort expectancy, performance expectancy, social influence and trust. These influence the behavioural intention to use social media among the stakeholders of the pharmaceutical industry to the greatest extent. The research analysed the components of the BIUSF model and found these to be essential in order to understand the overall behaviour and intentions to use social media as communication channels for the decision-making process. The moderators, namely gender, age, experience and educational level, have a direct impact over independent variables such as performance expectancy and the behaviour intention. In the same manner, moderators used

in the study namely: gender, age, experience and educational level have an impact on the relationship between the independent variable effort expectancy and behavioural intention. The moderators, age, experience, educational level and health condition have an impact on the relationship between the independent variable of social influence and behavioural intention. The moderator's age, gender, experience, educational level and health condition have an impact on the relationship between the new industry-related construct of trust and behavioural intention.

7.2.2.3 Objective 3: To develop a model of current practice of behavioural intention for social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers in Kuwait

The final objective sought to develop a model for the current behavioural intention to use social media, BIUSF model. This was considered in chapters 5 and 6, which presented the findings of the qualitative and quantitative data gathered for this research. The findings of these chapters revealed that there are some industry-specific factors that directly influenced the behavioural intention of the stakeholders (customers and consumers) of the pharmaceutical industry. The research analysed the current practice of behavioural intention for social media adoption and usage by pharmaceutical customers (pharmacists, physicians) and consumers. The findings highlighted the addition of perceived trust as an industry-specific construct, and education level and health conditions as the industry-specific moderators.

7.3 Limitations of the research

The research findings show that although there are regulations for monitoring and prevention of misuse of social media in marketing medical products, none of the currently established regulations in Kuwait focus on monitoring, reporting, and publicising the use of social media platforms by socially influential individuals. Moreover, even in countries such as the US, the Food and Drug Administration (FDA) has been inefficient in preventing or

controlling the misuse of social media for marketing medical products, and continues to struggle with the effective imposition of regulations and instructions in this respect. This indicates a limitation in the research and highlights the need for further research into the gaps in the prevailing regulations regarding the use and misuse of social media in the pharmaceutical industry. Therefore, future research could examine the development of more suitable regulations that would enable stakeholders to increase their trust in social media for decision-making. This study found that social media can make a key contribution in serving as a reporting tool for pharma-covigilance purposes. However, there has been limited research in this respect, which also highlights a limitation of this research.

7.4 Recommendations for future research

Future research could examine the optimal types of social media platforms for pharma-covigilance purposes (Nikfarjam et al., 2015). Although this research has highlighted the factors influencing the usage of social media to obtain reviews regarding medicinal products, there has been very limited research regarding the incorporation of the pharma-covigilance efforts into a community pharmacy approach in respect of the patient community and collaborative care, in contrast to patient self-care (Nikfarjam et al., 2015). Furthermore, considering the significance of patient stakeholder groups, it is recommended that future research examines the most appropriate social media platforms and strategies for the diverse age groups of patients, the different types of diseases and the varying levels of health education. In respect of future research, it is also recommended that research is undertaken into the benefits of socially-specialised media platforms for healthcare or pharmaceutical products. In addition, the reputation of the international pharmaceutical companies has tarnished during recent years, because they have been accused of focusing on profit taking over patient health.

References

- Abraham, C., Norman, P. and Conner, M. 2013. *Understanding and Changing Health Behaviour: From Health Beliefs to Self-Regulation*. Psychology Press.
- Abubakar, F.M. and Ahmad, H. 2014. Determinants of Behavioural Intention to Use E-Payment System in Nigerian Retail Industry: A Conceptual Extension of UTAUT with Concern for Customers. *International Journal of Contemporary Business Management* 1(1), pp. 87-93.
- Abubakar, F.M. and Ahmad, H.B. 2013. The Moderating Effect of Technology Awareness on the Relationship between UTAUT Constructs and Behavioural Intention to Use Technology: A Conceptual Paper. *Australian Journal of Business and Management Research* 3(2), pp. 14-23.
- Agrawal, S. and Kaur, N. 2015. Influence of Social Media Marketing in Indian Pharmaceutical Industry. *International Journal of Advanced Research and Innovation* 3(4), pp. 735-738.
- Aitken, M. 2014. Engaging patients through social media. [Online]. Available at: http://www.imshealth.com/files/web/IMSH%20Institute/Reports/Engaging%20Patients%20Through%20Social%20Media/IIHI_Social_Media_Report_2014.pdf. [Accessed on: 25 August 2016].
- Akhtar, N., Kanpurwala, M. A., Arshad, R. and Sharafatullah, T. 2015. Perception and Impact of Social Media in Pharmaceutical Marketing and Promotion in Pakistan. *Scholars Academic Journal of Pharmacy* 4(1), pp 54-57.
- Al-Essa, R.K. et al. 2015. *Pharmaceutical Regulatory Environment: Challenges and Opportunities in the Gulf Region*. Berlin: Springer.
- Al-Suqri and Nasser, M. 2015. *Information Seeking Behaviour and Technology Adoption: Theories and Trends: Theories and Trends*. IGI Global.

- Alkhateeb, F.M. et al. 2010. Pharmacist use of social media. *International Journal of Pharmacy Practice* 19, pp. 140-142.
- Alshenqeeti, H. 2014. Interviewing as a data collection method: A critical review. *English Linguistic Research* 3(1), pp. 39-45.
- Amerland, D. 2015. *The Social Media Mind: How social media is changing business, politics and science and helps create a new world order*. New York: New Line Publishing.
- Ansell, J. 2016. *Transforming Big Pharma: Assessing the Strategic Alternatives*. New York: CRC Press.
- Antheunis, M.L. et al. 2013. Patients' and health professionals' use of social media in health care: Motives, barriers and expectations. *Patient Education and Counselling* 92, pp. 426-431.
- Antheunis, M.L., Tates, K. and Neiboer, T.E. 2013. Patients' and health professionals' use of social media in health care: Motives, barriers and expectations. *Patient Education and Counselling* 92, pp. 426-431.
- Appel, K.C. and Milch, K.F. 2011. The decision making individual differences inventory and guidelines for the study of individual differences in judgment and decision making. *Judgment and Decision Making* 6(10), pp. 252-262.
- Arazy Group. 2016. The GCC healthcare market series: Kuwait. [Online]. Available at: <http://arazygroup.com/articles/arazygroup/2016/09/01/the-gcc-healthcare-market-series-kuwait>. [Accessed on: 16 January 2017].
- Armstrong, B.K., Gillespie, J.A., Leeder, S.R., Rubin, G.L. and Russell, L.M. 2007. Challenges in health and healthcare for Australia. *The Medical Journal of Australia* 187(9), pp. 485-489.
- Attuquayefio, S. and Addo, H. 2014¹. Review of studies with UTAUT as conceptual framework. *European Scientific Journal* 10(8), pp. 249-258.

- Attuquayefio, S.N. and Addo, H. 2014². Using the UTAUT model to analyse student's ICT adoption. *International Journal of Education and Development using Information and Communication Technology* 10(3), pp. 75-86.
- Bacon, M. 2014. *Pragmatism: An Introduction*. New Jersey: John Wiley & Sons.
- Barnes, S. 2015. *Like, Follow, Share: Awesome, Actionable Social Media Marketing to Maximize Your Online Potential*. Berkeley: Callisto Media Inc.
- Barry, A.R. and Pearson, G.J. 2015. Professional use of social media by pharmacists. *The Canadian Journal of Hospital Pharmacy* 68(1), pp. 22-27.
- Basset, H., Stuart, D. and Silber, D. 2012. *From Science 2.0 to Pharma 3.0: Semantic Search and Social Media in the Pharmaceutical industry and STM Publishing*. Elsevier.
- Baumgarten, M. 2013. *Paradigm Wars - Validity and Reliability in Qualitative Research*. Germany: GRIN Verlag.
- Bazeley, P. and Jackson, K. 2013. *Qualitative Data Analysis with NVivo*. London: SAGE.
- Beasley, B.A. and Haney, M.R. 2015. *Social Media and Living Well*. Lexington Books.
- Belbey, J. 2016. 6 ways pharma may use social media. [Online]. Available at: <http://www.forbes.com/sites/joannabelbey/2016/03/09/6-ways-pharma-may-use-social-media/#122b44e326de>. [Accessed on: 12 October 2016].
- Bell, M., Douglas, J. and Cutts, C. 2014. How pharmacy's adoption of social media can enhance patient outcomes. *Integrated Pharmacy Research and Practice* 3, pp. 39-47.
- Benetoli, A., Chen, T.F. and Aslani, P. 2015. The use of social media in pharmacy practice and education. *Research in Social and Administrative Pharmacy* 11, pp. 1-46.
- Benetoli, A. et al. 2015. The use of social media in pharmacy practice and education. *Research in social an administrative pharmacy* 11, pp. 1-46.
- Bernard, H.R. 2012. *Social Research Methods: Qualitative and Quantitative Approaches*. London: SAGE Publications.

- Bertino, E. and Matei, S.A. 2014. *Roles, Trust, and Reputation in Social Media Knowledge Markets: Theory and Methods*. Berlin: Springer.
- Blaikie, N. 2007. *Approaches to Social Enquiry: Advancing Knowledge*. Polity.
- BMI Research. 2017¹. Industry trend analysis- Import reliance to favour multinational drugmakers. [Online]. Available at:
<http://www.pharmaceuticalsinsight.com/industry-trend-analysis-import-reliance-favour-multinational-drugmakers-feb-2017>. [Accessed on: 16 January 2017].
- BMI Research. 2017². Kuwait pharmaceuticals and Healthcare report. [Online]. Available at:
<http://store.bmiresearch.com/kuwait-pharmaceuticals-healthcare-report.html>
 [Accessed on: 16 January 2017].
- Bolt, D. 2014. *Changing Social Attitudes Toward Disability: Perspectives from Historical, Cultural, and Educational Studies*. London: Routledge.
- Booth, A., Papaioannou, D. and Sutton, A. 2012. *Systematic approaches to a successful literature review*. London: SAGE.
- Brace, I. 2008. *Questionnaire Design: How to Plan, Structure and Write Survey Material for Effective Market Research*. New York: Kogan Page Publishers.
- Bridges, D.R., Davidson, R.A., Odegard, P.S., Maki, I.V. and Tomkowiak, J. 2011. Interprofessional collaboration: Three best practice models of interprofessional education. *Medical Education Online* 16, pp. 1-15.
- Buthion, V. 2013. Healthcare management and the decision-making process perspective: could a normative framework from stakeholder theory help? [Online]. Available at:
 [Accessed on: 25 August 2016].
- Calcaterra, R.M. 2011. *New Perspectives on Pragmatism and Analytic Philosophy*. New York: Rodopi.
- Calisir, F., Atahan, L. and Saracoglu, M. 2013. Factors affecting social network sites usage

on smartphones of students in Turkey. [Online]. Available at:
http://www.iaeng.org/publication/WCECS2013/WCECS2013_pp1081-1085.pdf.
[Accessed on: 07 November 2016].

Cargan, L. 2007. *Doing Social Research*. Plymouth: Rowman & Littlefield.

Chang, A. 2012. UTAUT AND UTAUT 2: A Review and Agenda for Future Research.
Journal The Winners 13 (2), pp. 106-114.

Chesnay, M.D. 2014. *Nursing Research Using Ethnography: Qualitative Designs and Methods in Nursing*. Berlin: Springer Publishing Company.

Chunxiang, L. 2014. Study on Mobile Commerce Customer Based on Value Adoption.
Journal of Applied Sciences 9, pp. 901-909

Constantino, T. 2014. IMS Health: Pharma Should Make Better Use of Social Media to Engage Patients and Improve the Use of Medicines. [Online]. Available at:
<http://www.imshealth.com/en/about-us/news/ims-health:-pharma-should-make-better-use-of-social-media-to-engage-patients-and-improve-the-use-of-medicines>.
[Accessed on: 12 October 2016].

Contractor, N.S. and DeChurch, L.A. 2014. Integrating social networks and human social motives to achieve social influence at scale. *Proceedings of the National Academy of Sciences of the United States of America* 111(4), pp. 13650-13657.

Coskuncay, D.F. 2013. Identifying the Factors Affecting Users' Adoption of Social Networking. *International Journal of Human Computer Interaction* 4(1), pp. 1-18.

Coughlan, M., Cronin, P. and Ryan, F. 2013. *Doing a literature review in nursing, health and social care*. London: SAGE.

Creswell, J.W. 2009. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: SAGE Publications.

Creswell, J.W. 2013. *Qualitative Inquiry and Research Design: Choosing Among Five*

- Approaches*. London: SAGE Publications.
- Creswell, J.W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: SAGE.
- Creswell, J.W. and Clark, V.L.P. 2011. *Designing and Conducting Mixed Methods Research*. London: SAGE Publications.
- Cronan, T.P. and Al-Rafee, S. 2008. The factors that influence the intention to pirate software and media. *Journal of Business Ethics* 78, pp. 527-545.
- Dainton, M. and Zelle, E.D. 2010. *Applying Communication Theory for Professional Life: A Practical Introduction*. California: SAGE.
- Daniel, J. 2011. *Sampling Essentials: Practical Guidelines for Making Sampling Choices*. London: Sage
- Davison, M. 2011. *Pharmaceutical Anti-Counterfeiting: Combating the Real Danger from Fake Drugs*. New Jersey: John Wiley & Sons.
- Denecke, K. et al., 2015. Ethical issues of social media usage in healthcare. *Yearbook of Medical Information* 10(1), pp. 137-147.
- Deverka, P.A., Lavalley, D.C., Desai, P.J., Esmail, L.C., Ramsey, S.D., Veenstra, D.L. and Tunis, S.R. 2012. Stakeholder participation in comparative effectiveness research defining a framework for effective engagement. *Journal of Comparative Effectiveness Research* 1(2), pp. 181-194.
- Ding, M., Eliashberg, J. and Stremersch, S. 2013. *Innovation and Marketing in the Pharmaceutical Industry: Emerging Practices, Research, and Policies*. Berlin: Springer Science & Business Media.
- Downey, E. 2012. *Public Service, Governance and Web 2.0 Technologies: Future Trends in Social Media: Future Trends in Social Media*. Hershey: IGI Global.
- Edwards, L.D, Fox, A.W. and Stonier, P.D. 2011. *Principles and Practice of Pharmaceutical*

Medicine. New Jersey: John Wiley & Sons.

Edwin, T.S., Chandramohan, A., Shenbagavalli, R. and Senthilkumar, S. 2015. Social Media: The New Hybrid Factor of the Promotion Policy for the Pharmaceutical Industries.

Int. J. Pharm. Sci. Rev. Res. 32(1), pp. 112-116.

EIA. 2013. Kuwait. [Online]. Available at:

http://www.europarl.europa.eu/meetdocs/2009_2014/documents/darp/dv/darp20140213_11_/darp20140213_11_en.pdf. [Accessed on: 16 January 2017].

Enkel, E. and Bader, K. 2007. Why do experts contribute in cross cultural innovation? A structural model of motivational factors, intentions and behavior. *RADAMA*, pp. 207-215.

Etikan, I., Musa, S.A. and Alkassim, R.S. 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics* 5(1), pp.1-4.

Farquhar, J.D. 2012. *Case Study Research for Business*. Los Angeles: SAGE.

Fischhoff, B. 2012. *Communicating Risks and Benefits: An Evidence Based User's Guide*. Government Printing Office.

Flick, U. 2011. *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. London: SAGE.

Flick, U. 2015. *Introducing research methodology: A beginner's guide to doing a research project*. California: Sage.

Farquhar, J.D. 2012. *Case Study Research for Business*. Los Angeles: SAGE.

Fischhoff, B. 2012. *Communicating Risks and Benefits: An Evidence Based User's Guide*. Government Printing Office.

Flick, U. 2011. *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. London: SAGE.

- Gascó, M. 2012. *ECEG2012-Proceedings of the 12th European Conference on e-Government: ECEG*. Academic Conferences Limited.
- Gava, G. and Stern, R. 2015. *Pragmatism, Kant, and Transcendental Philosophy*. New York: Routledge.
- George, D.R., Rovniak, L.S. and Kraschnewski, J.L. 2013. Dangers and opportunities for social media in medicine. *Clinical Obstetrics and Gynaecology* 56(3), pp. 1-12.
- Ghosh, S. 2014. Overuse of Social Media and the Wellbeing of Users. [Online]. Available at: <http://medlink-uk.net/wp-content/uploads/2014/11/GhoshS.pdf>. [Accessed on: 12 October 2016].
- Grajales, F.J., Sheps, S., Ho, K., Novak-Lauscher, H. and Eysenbach, G. 2014. Social Media: A Review and Tutorial of Applications in Medicine and Health Care. *Journal of Medical Internet Research* 16, pp. 1-23.
- Greener, S. and Rospigliosi, A. 2014. *ePub - European Conference on Social Media: ECSM*. Academic Conferences Limited.
- Griffiths, F. 2012. Social networks- The future for health care delivery. *Social Science & Medicine* 75, pp. 2233-2241.
- Grindrod, K., Forgione, A., Tsuyuki, R.T., Gavura, S. and Giustini, D. 2014. Pharmacy 2.0: A scoping review of social media use in pharmacy. *Research in Social and Administrative Pharmacy* 10, pp. 256-270.
- Guffey, M.E. and Loewy, D. 2014. *Business Communication: Process and Product*. Boston: Cengage Learning.
- Hair, J.F., Celsi, M.W., Money, A.H., Samouel, P. and Page, M.J. 2012. *Essentials of Business Research Methods*. New York: M.E. Sharpe.
- Hajli, M.N. 2014. A study of the impact of social media on consumers. *International Journal of Market Research* 56(3), pp. 387-404.

- Hammersley, M. and Traianou, A. 2012. *Ethics in Qualitative Research: Controversies and Contexts*. London: SAGE.
- Hanson, C.L., West, J., Thackeray, R., Barnes, M.D. and Downey, J. 2014. Understanding and Predicting Social Media Use Among Community Health Centre Patients: A Cross-Sectional Survey. *Journal of Medical Internet Research* 16(11), pp. 1-15.
- Harrington, N.G. 2014. *Health Communication: Theory, Method, and Application*. NY: Routledge.
- Hoffmann, C.P. and Lutz, C. 2014. The impact of online media on stakeholder engagement and the governance of corporations. *Journal of Public Affairs*, pp. 12-25.
- Holtz, C. 2016. *Global Healthcare: Issues and Policies*. Jones & Bartlett Publishers.
- Holzinger, A. and Simonik, K.M. 2011. *Information Quality in e-Health: 7th Conference of the Workgroup Human-Computer Interaction and Usability Engineering of the Austrian Computer Society, USAB 2011, Graz, Austria, November 25-26, 2011, Proceedings*. Berlin: Springer.
- Howell, K.E. 2012. *An Introduction to the Philosophy of Methodology*. Los Angeles: SAGE.
- Huang, C. and Kao, Y. 2015. UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP. *Mathematical Problems in Engineering*, pp. 1-23.
- Huang, K. Y., Choi, N. and Chengalur-Smith, I. 2010. Cultural Dimensions as Moderators of the UTAUT Model: A Research Proposal in a Healthcare Context. *AMCIS 2010 Proceedings* 8(1), pp. 1-10.
- IBP, Inc. 2015. *Kuwait Energy Policy, Laws and Regulations Handbook Volume 1 Strategic Information and Basic Laws*. Washington, DC: Lulu.com.
- Ihuah, P.W. and Eaton, P.W. 2013. The pragmatic research approach: A framework for sustainable management of public housing estates in Nigeria. *Journal of US-China*

Public Administration 10(10), pp. 933-944.

Im, I., Hong, S. and Kang, M.S. 2011. An international comparison of technology adoption: Testing the UTAUT model. *Information & Management* 48(1), pp. 1-8.

Im, O. E. and Lim, H.J. 2008. An online forum exploring needs for help of patients with cancer: Gender and ethnic differences. *Oncology Nursing Forum* 35 (4), pp. 653-660.

IMS Institute for Healthcare Informatics. 2014. Engaging patients through social media.

[Online]. Available at:

http://www.imshealth.com/files/web/IMSH%20Institute/Reports/Engaging%20Patients%20Through%20Social%20Media/IIHI_Social_Media_Report_2014.pdf.

[Accessed on: 26 November 2016].

Jabbour, S. and Yamout, R. 2012. *Public Health in the Arab World*. Cambridge University Press.

Jackson, K.F. 2010. Ethical Considerations in Social Work Research with Multiracial Individuals. *Journal of Social Work Values and Ethics* 7(1), pp. 5-10.

Jackson, S.L. 2012. *Research Methods and Statistics: A Critical Thinking Approach*. Boston: Cengage Learning.

Jiang, S. and Chen, H. 2015. *The impact of individual attributes on knowledge*. Springer Science.

Johnson, B. and Christensen, L. 2010. *Educational Research: Quantitative, Qualitative, and Mixed Approaches*. London: SAGE Publications.

Johnson, P. and Clark, M. 2006. *Mapping the terrain: an overview of business and management research methodologies*. London: Sage

Jonker, J. and Pennink, B. 2010. *The Essence of Research Methodology: A Concise Guide for Master and PhD Students in Management Science*. Berlin: Springer.

Jordan, A.B. and Romer, D. 2014. *Media and the Well-Being of Children and Adolescents*.

London: Oxford University Press.

- Kaba, B. and Toure, B. 2014. Understanding Information and Communication Technology Behavioral Intention to Use: Applying the UTAUT Model to Social Networking Site Adoption by Young People in a Least Developed Country. *Journal of the Association for Information Science and technology* 65(8), pp. 1662-1672.
- Kamara, R.K. 2013. *Internet Usage in Sierra Leone*. USA: Xlibris LLC.
- Katsanis, L.P. 2015. *Global Issues in Pharmaceutical Marketing*. London: Routledge.
- Katsirikou, A. and Skiadas, C.H. 2010. *Qualitative and Quantitative Methods in Libraries: Theory and Applications*. World Scientific.
- Keller, E. and Fay, B. 2012. *The Face-to-Face Book: Why Real Relationships Rule in a Digital Marketplace*. Simon and Schuster.
- Khan, A. and Woosley, J.M. 2011. Comparison of Contemporary Technology Acceptance Models and Evaluation of the Best Fit for Health Industry Organizations. *IJCSET* 1(11), pp. 709-717.
- Khan, I., Saleh, M.A. and Nivarthi, S. 2015. Understanding the adoption of Social media in the Australian Healthcare Sector: A Meta Analytical Approach. *World Journal of Management* 6(2), pp. 92-107.
- Khechine, H., Lakhal, S., Pascot, D. and Bytha, A. 2014. UTAUT model for blended learning: The role of Gender and age in the intention to use webinars. *Interdisciplinary Journal of E-learning and Learning Objectives* 10, pp. 33-52.
- Kim, J.Y., Shim, J.P. and Ahn, K.M. 2011. Social networking service: Motivation, pleasure and behavioural intention to use. *The Journal of Computer Information Systems* 51(4), pp. 92-101.
- Kim, S., Lee, K-H., Hwang, H. and Yoo, S. 2016. Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using

- the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. *BMC Medical Informatics and Decision Making* 16(12), pp. 125-135.
- Kimmel, A.J. 2009. *Ethical Issues in Behavioral Research: Basic and Applied Perspectives*. New Jersey: John Wiley & Sons.
- Klenke, K., Martin, A. and Wallace, J.R. 2015. *Qualitative Research in the Study of Leadership*. Bingley: Emerald Group Publishing.
- Kommers, P. et al. 2014. *Perspectives on Social Media: A Yearbook*. London: Routledge.
- KPMG. 2011. Issues monitor. [Online]. Available at:
<https://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Issues-monitor-healthcare/Documents/im-healthcare-october-2011.pdf>. [Accessed on: 11 October 2016].
- Krauss, S.E. 2005. Research Paradigms and Meaning Making: A Premier. *The Quantitative Report*. 10(4), pp. 758-770.
- Kukreja, P., Sheehan, A.H. and Riggins, J. 2011. Use of social medial by pharmacy preceptors. *American Journal of Pharmaceutical Education* 75(9), pp. 176-185.
- Lancaster, G. 2005. *Research Methods in Management: A Concise Introduction to Research in Management and Business Consultancy*. London: Routledge.
- Lau, A.Y.S., Gabarron, E., Fernandez-Lucue, L. and Armayones, M. 2012. Social media in health-what are the safety concerns for health consumers. *Heath Information Management Journal* 41(2), pp. 30-35.
- Lee, I. 2014. *Integrating Social Media into Business Practice, Applications, Management, and Models*. Pennsylvania: IGI Global.
- Levers, M.D. 2013. Philosophical Paradigms, Grounded Theory and Perspectives on Emergence. [Online]. Available at:
<http://journals.sagepub.com/doi/pdf/10.1177/2158244013517243> [Accessed on: 13

December 2016].

- Li, Lo. 2010. A critical review of technology acceptance literature. [Online]. Available at: http://www.swdsi.org/swdsi2010/sw2010_preceedings/papers/pa104.pdf. [Accessed on: 28 November 2016].
- Lim, W. M. and Ting, D.H. 2013. *Research Methodology: A Toolkit of Sampling and Data Analysis Techniques for Quantitative Research*. Germany: GRIN Verlag.
- Lin, K. and Lu, H. 2011. Why people use social networking sites: An empirical study integrating networks externalities and motivation theory. *Computers in Human Behavior* 27(3), pp. 1152-1161.
- Lipschultz, J. H. 2014. *Social Media Communication: Concepts, Practices, Data, Law and Ethics*. Oxfordshire: Routledge.
- Lisle, J.D. 2011. The benefits and challenges of mixing methods and methodologies. *Caribbean Curriculum* 18, pp. 87-120.
- Livermore, R. and Celia. 2012. *E-Politics and Organizational Implications of the Internet: Power, Influence, and Social Change: Power, Influence, and Social Change*. Pennsylvania: IGI Global.
- Lohr, S.L. 2009. *Sampling: Design and Analysis*. Boston: Cengage Learning.
- Lorenzo-Romero, C., Alarcon-del-Amo, M. and Constantinides, E. 2014. Determinants of Use of Social Media Tools in Retailing Sector. *Journal of Theoretical and Applied Electronic Research* 9(1).
- Lyon, F., Msltering, G. and Saunders, M.N.K. 2015. *Handbook of Research Methods on Trust: Second Edition*. Cheltenham: Edward Elgar Publishing.
- Magalhaes, S.T., Jahankhani, H. and Hessami, A.G. 2010. *Global Security, Safety, and Sustainability: 6th International Conference*. Berlin: Springer Science & Business Media.

- Mahoney, L.M. and Tang, T. 2016. *Strategic Social Media: From Marketing to Social Change*. New Jersey: John Wiley & Sons.
- Malagi, K., Angadi, A. and Gull, K. 2013. A survey on security issues and concerns to social networks. *International Journal of Science and Research* 2(5), pp. 256-265.
- Mann, T. 2015. *The Oxford Guide to Library Research*. Oxford University Press.
- Mao, E. and Zhang, J. 2015. What derives consumers to click on social media ads? The role of content media and individual factors. *Hawaii International Conference on System Sciences*, pp. 1-9.
- Mardikyan, S., Besiroglu, B. and Uzmaya, G. 2012. Behavioral Intention towards the Use of 3G Technology. *Communications of the IBIMA*, pp. 1-10.
- Matook, S.A., Brown, S. and Rolf, J.A. 2015. Forming an integration to act on the recommendations given via online social network. *European Journal of Information Systems* 24, pp. 76-92.
- Maxwell, J.A. 2005. *Qualitative Research Design: An Interactive Approach*. London: SAGE Publications.
- Maxwell, J.A. 2012. *Qualitative Research Design: An Interactive Approach*. London: SAGE Publications.
- Mazman, S.G. and Usluel, Y.K. 2011. Gender differences in using social networks. *TOJET: The Turkish Online Journal of Educational Technology* 10(2).
- Mazman, S.G. and Usluel, Y.K. 2011. Gender differences using social networks. *The Turkish Online Journal of Educational Technology* 10(2), pp. 133-139.
- McBurney, D.H. and White, T.L. 2009. *Research Methods*. Boston: Cengage Learning.
- McFarland, M.R. and Wehbe-Alamah, H.B. 2014. *Leininger's Culture Care Diversity and Universality*. Jones & Bartlett Publishers.
- McGowan, B.S., Wasko, M., Vartabedian, B.S., Miller, R.S. Friherr and Abdolrasulnia, M.

2012. Understanding the factors that influence the adoption the meaningful use of social media by physicians to share medical information. *Journal of Medical Internal Research* 14(5), pp. 1-12.
- McMurray, A. and Clendon, J. 2015. *Community Health and Wellness: Primary Health Care in Practice*. Elsevier Health Sciences.
- McWay, D.C. 2013. *Today's Health Information Management: An Integrated Approach*. Boston: Cengage Learning.
- Metzger, M.J. and Flanagin, A.J. 2013. Credibility and trust of information in online environments: The use of cognitive heuristics. *Journal of Pragmatics* 59, pp.210-220.
- Miller, T., Mauthner, M., Birch, M. and Jessop, J. 2012. *Ethics in Qualitative Research*. London: SAGE.
- Miner, J.B. 2015. *Organizational Behavior 4: From Theory to Practice*. NY: Routledge.
- Moorhead, S.A., Hazlett, D.E., Harrison, L., Carroll, J.K., Irwin, A. and Hoving, C. 2013. A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. *Journal of Medical Internet Research* 15(4), pp. 1-10.
- Mousavi. S. and Demirkan, H. 2013. Customer Relationship Management to Social Media. *Hawaii International Conference on System Sciences* 46, pp. 718-727.
- Mowafa, H. 2014. *Social Media and Mobile Technologies for Healthcare*. New York: IGI Global.
- Muhlen, M.V. and Machado, L.O. 2012. Reviewing social media use by clinicians. *J Am Med Inform Assoc* 19, pp. 777-781.
- Nadaraja, R. and Yazdanifard, R. 2013. Social media marketing social media marketing: Advantages and disadvantages. [Online]. Available at:

https://www.researchgate.net/publication/256296291_Social_Media_Marketing_SOCIAL_MEDIA_MARKETING_ADVANTAGES_AND_DISADVANTAGES.

[Accessed on: 26 November 2016].

- Nair, S.C., Ibrahim, H. and Celentano, D.D. 2013. Clinical trials in the Middle East and North Africa (MENA) Region: grandstanding or grandeur? *Contemporary Clinical Trials* 36(2), pp. 704-710.
- Nasr, A., Lauterio, T.J. and Davis, M.W. 2011. Unapproved drugs in the United States and the Food and Drug Administration. *Advances in therapy* 28(10), p.842.
- Nee, I. 2016. *Managing Negative Word-of-Mouth on Social Media Platforms: The Effect of Hotel Management Responses on Observers' Purchase Intention*. Berlin: Springer.
- Nick, H. 2015. *Handbook of Research on Integrating Social Media into Strategic Marketing*. New York: IGI Global.
- Nind, M. 2008. Conducting qualitative research with people with learning, communication and other disabilities: Methodological challenges. [Online]. Available at: <http://eprints.ncrm.ac.uk/491/1/MethodsReviewPaperNCRM-012.pdf> [Accessed on: 14 December 2016].
- Ofcom. 2014. Children and Parents: Media Use and Attitudes Report. [Online]. Available at: http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-use-attitudes-14/Childrens_2014_Report.pdf [Accessed on: 21 May 2016].
- Oye, N.D., Iahad, N. and Ab. Rahim, N.Z. 2012. The impact of UTAUT model and ICT theoretical framework on University academic staff: Focus on Adamawa State University, Nigeria. *International Journal of Computers & Technology* 2(2), pp. 102-111.
- Paliszkievicz, J. and Koohang, A. 2006. California: Informing Science.
- Palmer, A. 2012. *Introduction to Marketing: Theory and Practice*. London: OUP Oxford.

- Palmer, J. The Role of Gender on Social Network Websites.
- Panagopoulos, N. 2010. *Sales Technology: Making the Most of Your Investment*. Business Expert Press.
- Pasick, R.J. and Barker, J.C. 2009. Intention subjective norms and cancer screening in the context of relational culture. *Health Education and Behavior* 36(1), pp. 91-112.
- Pathirage, C.P., Amaratunga, R.D.G. and Haigh, R.P. 2008. The role of philosophical context in the development of theory: Towards methodological pluralism. *The Built & Human Environment Review* 1, pp. 1-10.
- Pauly, M.V., McGuire, T.G. and Barros, P.P. 2012. *Handbook of Health Economics*. Elsevier.
- Payne, H., et al. 2015. Use and Acceptance of Social Media among Community Health Workers. *Journal of Community Medicine & Health Education* 5(3), pp. 1-6.
- Peres, P. and Mesquita, A. 2015. *ECSM2015-Proceedings of the 2nd European Conference on Social Media 2015: ECSM 2015*. Academic Conferences Limited.
- Peters, A. 2010. *Social Media Marketing for Small Business*. Lulu.com.
- Phichitchaisopa, N. and Naenna, T. 2013. Factors Affecting the Adoption of Healthcare Information Technology. *EXCLI Journal* 12, pp. 413-436.
- PWC. 2016. Kuwait. [Online]. Available at:
<http://taxsummaries.pwc.com/uk/taxsummaries/wwts.nsf/ID/Kuwait-Overview>.
 [Accessed on: 16 January 2017].
- Pontiggia, A. and Virili, F. 2008. Network effects in technology acceptance: Laboratory evidence. [Online]. Available at:
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.231.9186&rep=rep1&type=pdf> [Accessed on: 22 March 2017].
- Quaddus, M. and Woodside, A.G. 2015. *Sustaining Competitive Advantage via Business*

- Intelligence, Knowledge Management, and System Dynamics*. Bingley: Emerald Group Publishing.
- Rader, S. C., Subhan, Z.D., Lanier, C., Brooksbank, R., Yankah, S. and Spears, K. 2014. CyberRx: emerging social media marketing strategy for pharmaceuticals. *International Journal of Pharmaceutical and Healthcare Marketing* 8(2), pp. 193-225.
- Rahman, M.S., Osmangani, A.M., Daud, N. M., Fattah, F.A.M.A. 2015. Knowledge sharing behaviours among non-academic staff of higher learning institutions. Attitude subjective norms and behavioural intention embedded model. *Knowledge Sharing Behaviour* 65 (1/2), pp. 65-83.
- Reddick, C.G. 2010. *Comparative E-Government*. Berlin: Springer Science & Business Media.
- Resatsch, F. 2010. *Ubiquitous Computing: Developing and Evaluating Near Field Communication Applications*. Berlin: Springer Science & Business Media.
- Reuter, T., Ziegelmann, J.P., Wiedemann, A.U., Lippke, S., Schuz, B. and Aiken, L.S. 2010. Planning bridges the intention behaviour gap: Age makes a difference and strategy use explains why? *Psychology and Health* 25 (7), pp. 873-887.
- Reyes, M.A. 2004. *Social Research: A Deductive Approach*. Rex Bookstore, Inc.
- Riyad, E. 2013. *Managing Customer Trust, Satisfaction, and Loyalty through Information Communication Technologies*. America: IGI Global.
- Rolls, K., Hansen, M., Jackson, D. and Elliott, D. 2016. How Health Care Professionals Use Social Media to Create Virtual Communities: An Integrative Review. *Journal of Medical Internet Research* 18(6), pp. 618-655.
- Rose, S., Spinks, N. and Canhoto, A.I. 2014. *Management Research: Applying the Principles*. London: Routledge.

- Rubin, H.J. and Rubin, I.S. 2011. *Qualitative Interviewing: The Art of Hearing Data 3rd ed.* London: SAGE.
- Salim, B. 2012. An Application of UTAUT Model for Acceptance of Social Media in Egypt: A Statistical Study. *International Journal of Information Science* 2(6), PP. 92-105.
- Samovar, L.A., Porter, R.E. and McDaniel, E.R. 2011. *Intercultural Communication: A Reader.* Australia: Cengage Learning.
- Sapleton, N. 2013. *Advancing Research Methods with New Technologies.* Idea Group Inc (IGI).
- Sapsford, R. and Jupp, V. 2006. *Data Collection and Analysis.* SAGE.
- Sattikar, A.A. and Kulkarni, R.V. 2011. A review of security and privacy issues in social networking. *International Journal of Computer Science and Information Technologies* 2(5), pp. 2784-2787.
- Saunders, M., Lewis, P. and Thornhill, A. 2007. *Research methods for business students.* London: Financial Times Prentice Hall.
- Schnall, R. and Bakken, S. 2011. Testing the Technology Acceptance Model: HIV case managers' intention to use a continuity of case record with context specific links. *Inform Health Soc Care* 36(3), pp. 161-172.
- Shoemaker, P.J. and Reese, S.D. 2013. *Mediating the Message in the 21st Century: A Media Sociology Perspective.* Oxfordshire: Routledge.
- Shreves, R. 2015. *Social Media Optimization for Dummies.* New Jersey: John Wiley & Sons.
- Simonton, D.K. 2003. Qualitative and Quantitative Analyses of Historical Data. *Annual Review Psychological* 56, pp. 617-640.
- Smith, M. 2011. *The New Relationship Marketing: How to Build a Large, Loyal, Profitable Network Using the Social Web.* New Jersey: John Wiley & Sons.
- Snyder, C.F., Wu, A.W., Miller, R.S., Jensen, R.E., Bantug, E.T. and Wolff, A.C. 2011. The

role of informatics in promoting patient-entered care. *The Cancer Journal* 17(4), pp. 211-218.

Soliman, M.A. 2012. Understanding Individual Adoption and Use of Social Media: A User-System Fit Model and Empirical Study. [Online]. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.633.7961&rep=rep1&type=pdf>. [Accessed on: 25 August 2016].

Spector, N. and Kappel, D.M. 2012. Guidelines for using electronic and social medial: The regulatory perspective. *The Online Journal of Issues in Nursing* 17, pp. 1-15.

Sponder, M. 2011. *Social Media Analytics: Effective Tools for Building, Interpreting, and Using Metrics*. New York: McGraw Hill Professional.

Stacks, D.W. 2010. *Primer of Public Relations Research*. New York: Guilford Press.

Stewart, D.R. 2013. *Social Media and the Law: A Guidebook for Communication Students and Professionals*. London: Routledge.

Stuhr, J.J. 2010. *100 Years of Pragmatism: William James's Revolutionary Philosophy*. Bloomington: Indiana University Press.

Suki, N.M. and Ramayah, T. 2010. User Acceptance of the E-Government Services in Malaysia: Structural Equation Modeling Approach. *Interdisciplinary Journal of Information, Knowledge and Management* 5, pp. 395-413.

Suls, J. and Wheeler, L. 2013. *Handbook of Social Comparison: Theory and Research*. Berlin: Springer Science & Business Media.

Tabsh, B.K.H. 2012. *An Investigation of the Adoption by Banks and Acceptance by Bank Customers of Internet Banking in the Sultanate of Oman*. Cardiff Metropolitan University

Tashakkori, A. and Teddlie, C. 2010. *SAGE Handbook of Mixed Methods in Social & Behavioural Research*. London: SAGE Publications.

- Touray, A., Salminen, A. and Mursu, A. 2013. The impact of moderating factors on behavioural intension towards internet: A Transactional perspective. *International Journal of Computer and Information Technology* 2(3), pp. 1035-1042.
- Tyranwski, J. and DeAndrea, D.C. 2015. Pharmaceutical companies and their drugs on social media: A content analysis of drug information on popular social media sites. *Journal of Medical Internet Research* 17(6), pp. 1-12.
- Vartanian, T.P. 2010. *Secondary Data Analysis*. Oxford University Press.
- Venkatesh, V., Morris, M., Davis, G. and Davis, F. User acceptance of information technology: toward a unified view. *MIS Quarterly* 27(3), pp. 425-478.
- Ventola, C.L. 2014. Social Media and Health Care Professionals: Benefits, Risks, and Best Practices. *Pharmacy and Therapeutics* 39(7), pp. 491-499.
- Wang, H.W. and Wang, S.H. 2010. User acceptance of mobile Internet based on the Unified Theory of Acceptance and Use of Technology: Investigating the determinants and gender differences. *Social Behavior & Personality: An International Journal* 38(3), pp. 415–426.
- Waters, R.D., Burnett, E., Lamm, A. and Lucas, J. 2009. Engaging stakeholders through social networking: How non-profit organisations are using Facebook. *Public Relations Review*, pp. 1-5.
- Watzlawik, M. and Born, A. 2007. *Capturing Identity: Quantitative and Qualitative Methods*. University Press of America.
- Weinstein, N.D. and Sandman, P.M. 1992. A Model of the Precaution Adoption Process: Evidence from Home Radon Testing. *Health Psychology* 11(3), pp. 170-180.
- Wendel, S., Dellaert, B.G., Ronteltap, A. and Trijp, H.C. 2013. Consumers' intention to use health recommendation systems to receive personalized nutrition advice. *BMC Health Services Research* 13, pp. 126-132.

- Wetcher-Hendricks, D. 2011. *Analyzing Quantitative Data: An Introduction for Social Researchers*. New Jersey: John Wiley & Sons.
- Wienstein, N.D., Sadman, P.M. and Blalock, S.J. 2008. The precaution model adoption model. *Jossey-Bass*, pp. 123-147.
- Williams, C. 2007. Research methods. *Journal of Business & Economic Research* 5(3), pp. 65-72.
- Williams, C. 2009. Research methods. *Journal of Business & Economics Research* 5(3), pp. 65-72.
- Wimmer, M.A. et al. 2013. *Electronic Participation: 5th IFIP WG 8.5 International Conference, ePart 2013, Koblenz, Germany, September 17-19, 2013, Proceedings*. Berlin: Springer.
- Wimmer, R.D. and Dominick, J.R. 2010. *Mass Media Research: An Introduction*. UK: Cengage Learning.
- Wisdom, J. and Creswell, J.W. 2013. Mixed methods: Integrating Quantitative and Qualitative Data Collection and Analysis While Studying Patient-Centered Medical Home Models. [Online]. Available at: https://pcmh.ahrq.gov/sites/default/files/attachments/MixedMethods_032513comp.pdf [Accessed on: 13 December 2016].
- Wu, B. 2016. Effects of Individuals' Motivations On Communications in Online Health Forums. *Social Behaviour and Personality* 44(2), pp. 299-312.
- Wu, M., Yu, P. and Weng, Y. 2012. A Study on User Behavior for I Pass by UTAUT. *Asia Pacific Management Review* 17(1), pp. 91-111.
- Wyrwoll, C. 2014. *Social Media: Fundamentals, Models, and Ranking of User-Generated Content*. Berlin: Springer.
- Xiaoge, X. 2014. *Interdisciplinary Mobile Media and Communications: Social, Political, and*

Economic. Hershey: IGI Global.

- Yang, H.E. and Wu, C.C. 2009. Effects of image interactivity technology adoption on e-shoppers' behavioural intentions with risk as moderator. *Production, Planning and Control: The Management of Operations* 20(4), pp. 370-382.
- Yang, J., Shen, G.Q., Ho, M., Drew, D.S. and Chan, A.P., 2009. Exploring critical success factors for stakeholder management in construction projects. *Journal of Civil Engineering and Management* 15(4), pp. 337-348.
- Yang, K. and Forney, J.C. 2013. The moderating role of consumer technology anxiety in mobile shopping adoption: differential effects of facilitating conditions and social influences. *Journal of Electronic Commerce Research* 14(4), pp. 334-347.
- Yin, R.K. 2013. *Case Study Research: Design and Methods*. London: SAGE Publications.
- Zarella, D. 2009. *The Social Media Marketing Book*. Sebastopol: O'Reilly Media, Inc.
- Zeng, F., Hu, Z., Chen, R. and Yang, Z. 2009. Determinants of online service satisfaction and their impacts on behavioural intentions. *Total Quality Management* 20(9), pp. 953-969.
- Ziska, F. 2016. *Collective Creativity for Responsible and Sustainable Business Practice*. New York: IGI Global.

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Appendix 1: Questionnaires

Appendix 1a: Questionnaire for Exploratory Study Survey



Questionnaire Form

Dear Respondent,

I am a pharmacist in Kuwait and I am currently a full- time PhD student at the Business school, Brunel University in the United Kingdom. This questionnaire is part of a PhD study, which aims to investigate the behaviour intention to adopt social media discussion forums in health related decisions in the state of Kuwait.

Your responses

will enable me to identify the main factors that influence customers' intentions towards the adoption and use of social media discussion forums.

Your corporation is very important to the success of this research. All the information you provide will be treated in the strictest confidence and will only be accessible by academic researchers who are involved in this study. In case you would like to add any additional information please feel free to contact me at any time.

Thank you for your help

Alshayma Alshati

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Mobile number: +447776622455

Primary Survey Questionnaire for the Exploratory Study

Section 1: General Information

What is your gender?

- Male
- Female

1.1 In which age band are you?

- Less than 20 years
- 20-30 years
- 30-50 years
- More than 50 years

1.3 What is the highest education level you have achieved?

- School Certificate
- Diploma/Higher Diploma
- Master Degree
- PhD Degree
- Bachelor Degree
- ◆ Other (please specify

1.4 Which category you can classify yourself in?

- Customer as (patient, costumer)
- Pharmacist
- Physician
- ◆ Other (Please specify.....)

Health condition Related Questions:

1.5 What is your health condition if customer? If you are a pharmacist or physician for which condition you advice your patient or customer to use social media forums?

- 4 Simple condition
- 5 Without prescription (Please specify.....)
- 6 With prescription (Please specify.....)
- 7 Serious condition

1.6 Which health topics have you looked for information about on the media discussion forums?

- Simple conditions such as (fitness and exercise, hygiene, diet and nutrition, smoking.)
- ◆ Without prescription drug related (dental health, headache, eating disorders, cold and flu, sleep disorders.)
- with prescription drugs related (Depression or other mental health issues, pregnancy, birth control, stress or anxiety, attention deficit disorder.)
- serious conditions (sexually transmitted disease, cancer, diabetes, heart disease...)

Section 2: Information regarding your Social Forums experience

2.1 In which one of the following discussion forums do you use to search for information?

- health websites
- Drugs forum
- .net
- Drugs.com
- .edu
- .gov
- ◆ . Org
- ◆ Other (Please specify.....)

2.2 Which of these functions do you use social media discussion forums for? (Please tick all that apply)

- Information regarding your health and drug usage
- communication with medical team and other patients
- Decisions on how to use the medicine or regards medicine
- Other (Please specify...)
- I don't know

2.3 Do you use the social media discussion forums for health issue?

- Yes
- No if No (Please go to question number 2.8)

Why?.....

2.4 If **yes**, what are the main reasons that motivated you to use social media discussion forums? (Please tick all that apply)

- Availability of the media
- A reliability of the information
- Time saving
- Lower or free charge
- Other (Please specify.....)

2.5 How often you use social media discussion forums for your health issue?

- Daily
- Once a week
- Few times a week
- Once a month
- Few times a month
- Yearly

Why?.....

2.6 Does use of social media discussion forums mean that you visit your doctor less often?

- Yes
- No
- No difference

Why?.....

2.7 Did you change any of the following because of health information you found online?

- your weight
- Your fitness routine
- Your medicine
- your diet or nutrition
- None of these
- Didnot change

2.8 If **No**, what are the main reasons that prevented you to not use the social media discussion forums? (Please tick all that apply)

- Never heard about it before
- Too complicated (explain what is complicated.)
- I concerned about security and privacy
- Too new, I would like to see how it works with others and then I may use it
- Other (Please specify.....)
- I am not familiar with computers and the Internet forums
- The human touch is very important for me
- My health condition needs to refer to physicians.

Trust issue I can't trust using it.

Section 3: Your beliefs about the adoption and use of social media discussion forums

	Agree	Strongly Agree	Disagree	Strongly Disagree
3.1 social media discussion forums and Performance Expectancy:				
1.Social media discussion forums help to conduct information accurately.				
2.Social media discussion forum provides all the information needed regard health issues and drugs.				
3.Social media discussion forums useful in our life and our health. If disagree why? .				
4.Using social media discussion forum would enable user to take his/her decisions more quickly				
5.Social media discussion forum enables user to manage his/her Health issues more effectively.				
6.social media discussion forums motivate us to search and communicate.				
7.Using social media discussion forums is for our health decision.				
3.2 social media discussion forums and ease of use (Effort Expectancy)				
1. Learning to operate and use social media discussion forum would be easy for any one.				
2. It would be easy for anyone to become skillful at using social media discussion forums.				
3.I believe that using social media discussion forums not complicated				
4.I believe that it would take too long to Learn how to use social media discussion forums				
5. I often find social media discussion forum is flexible to Interact with.				
6.I believe that social media discussion forum is understandable.				
7. My computer experience helps me to deal with social media discussion forums.				

3.3 Social influences on use of social media discussion forums				
1. Kuwaiti culture encourages us to use the social media discussion forums in order to their health information.				
2. Supervisors/ doctors motivated us to start using social media discussion forums, so we can consider our health responsibilities and understand more about our health problems.				
3. People who influence my behaviour (family members, friends and co-workers) think that I should use the social media discussion forums. IF Disagree Why?.....				
4. When user chooses one of the new channels or forums, He/ She prefer to choose one that his/her friends use as well, even if it isn't the best one.				
5. When I hear about new drugs or products I am willing to search on social media discussion forums regard it.				
6. In choosing a new drug, it is Important to user that there are clear guidelines and rules about how to use it.				
3.4 users intention towards using social media discussion forum if the industries support it.				
1. I like the idea of using social media discussion forums for health issues if a responsible professional areas have a control over it.				
2. It would be comfortable if users using professional websites or forums for credibility issue.				
3. Users feel more confident using social media discussion forum if it is under control from responsible areas.				
4. It is better to have regulations and moderation from responsible areas over the health information at the social media discussion forum				
3.5 Trust in social media discussion forums				
1. I trust social media discussion forums as a reliable source and information provider.				
2. I believe that getting information regards products and drugs from the social media discussion forum is risky and not safe.				
3. Social media discussion forum guarantees				

that all health information is complete and relevant.				
4. The trust in media forums influences the users intention towards using the system				
<i>3.6 Using the social media discussion forums in the future</i>				
1. The availability of some guidance and advice affects our intention towards using social media discussion forums.				
2. The intention to use social media discussion forum is more to get knowledge about health topics.				
3. The intention to use social media discussion forums depends on the individual sincerity.				
4. Users intend to use social media discussion forums to be prepared for his/her health condition.				

4. Would you like to add any other things that may help me to understand your acceptance, perceptions and opinions regarding the adoption and use of social media discussion forums such as (Drugs forum, Health websites, Bluelight, Drugs.com? If so, please feel free to add any comments in the space below.

Appendices Appendix 1: Research Interview Questions

Appendix 1b: Interview Questionnaire



PhD Researcher

Dear Respondent,

I am a Kuwaiti Pharmacist—and I am currently a full- time PhD student at the Brunel Business School in the United Kingdom. This Interview is part of a PhD study, which aims to investigate your intention to the acceptance and use of social media in supporting medicine related decisions. Your responses will enable me to identify the main factors that influence your intentions towards the acceptance and use of Social media channels.

Your corporation is very important to the success of this research. All the information you provide will be treated in the strictest confidence and will only be accessible by academic researchers who are involved in this study. Please make sure that you answer all questions by explaining your opinion, viewpoint with the most appropriate responses and words as much as you can explain. In case you have any comment on the questions please feel free to add your comment and if you would like to add any additional information please feel free to contact me at any time.

Thank you for your help

ALshayma Alshati

Brunel Business School, Brunel University

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Pharmacists Interview Questions Version

. First introduce myself and give the participant a brief explanation for the purpose of the interview

. Address the confidentiality issue and hand in interview information sheet

. Invite the participant to introduce her/him self

Name-----

Age-----

Education level (experience by years)-----

Interview Parts: Performance Expectancy, Effort Expectancy, And Social Influence.

Facilitating Conditions, Culture and Trust and Industry Related Questions

1-Do you as pharmacist use the social media forums in medicine related decisions? What kind of decisions?

-In buying a medicine? Yes/No

-Recommending a medicine? Yes/No

-In increasing your knowledge or information? Yes/No

If yes:

A. Performance Expectancy

. What are the measures that have been taken by the pharmaceutical industries to make the social media more useful for users in regards to the following points:

Website:

- - Content (Is pharmaceutical website provide the users with sufficient information?).

1. - Accuracy (Are the on-line drugs information accurate?).

. - Timeliness (Can the users' access the required information in a short time?).

1 - Format (Is the pharmaceutical website information been presented in a useful format?).

1 - Reliability (Are the medicines information reliable?)

1. -What do you think about the quality of information on social media in general?

Consumers' behavior:

5 Do you think as a pharmacist that social media is useful and consistent with your lifestyle and work-style?

• Do you think that the usefulness of social media influences your intention towards using it?

• What advantages has the social media brought to the health (Do you think social media brought better choices /know more information regarding medicines)...?

B. Effort Expectancy

1.As a pharmacist, to what extent do you believe that the ease of use affects your intentions towards using the social media forums?

2.Do you find the social media easy to use? And why?

3.Is your communication with the social media clear and understandable?

4.Is the social media generally considered to be easy to learn?

C. Social influence

▪ Do you think the pharmaceutical industries support the use of the social media?

7. Do pharmacists in general support the use of the social media?

1. Are there resistances among pharmacists towards the use of the social media?

- -----

- Is it more prestigious for staff to use the social media, than not to use it?
- -----

5. Does the social influence (Privacy, trust, thoughts, attitudes) affect your intentions to accept and use social media? Explain?

6. To what extent do you think that the Kuwaiti society influences the adoption of social media service?

1 Families, Colleagues, Head managements (Power Distance).

2 -----

- Personal decision making (Individualism).

- Society confidence regards development technology (Uncertainty Avoidance).

D. Facilitating Conditions

1. What types of facilitating conditions (functions) does the social media provide to you as users?

2. To what extent do you believe that the facilitating conditions affect your intentions towards accept to use the social media in your medicines related decisions?

E. Industry related questions

- Are there any procedures that have been taken by the pharmaceutical industries to convince customers that the social media is secure and risk-free?

2. Are there any measures taken by the industries' managers

to activate and increase the social media security and privacy?

3. Within your work so far, how thorough has the use of social media been on your decision making process regarding a particular medicine? What would your recommendation?

4. Do you intend to use social media channels in medicines related decision? Why or why not? How?

5. What is your biggest concern with using social media channels for decision making of a particular medicine?

6. Do you think consumer health seriousness can be a main factor influencing their intention to use the social media?

7. Do you think that the health condition and stage can affect your intention to use social media for medicine related decisions?

8. How do you use social media within your health decisions? Any specific application? Any concerns? Does it help with issues related to your health condition?

9. How the use of social media is helpful with your needs and experiences?

E. Moderators and General Questions

1. From your point of view, who are more willing to social media according to the following categories?

Age (Younger / Older users).

Gender (Male / Female users).

Education level (Low / High education level).

Health seriousness.

Disease level or stage.

2. Do you think that using the social media should voluntary or mandatory by pharmacists?

3. Are there any short-term or long-term plans in order to develop the social media and motivate customers to use the media?

4. Generally how do you evaluate the social media usage during the previous period (three years)?

5. Do you think there should be more control from pharmaceutical industries over information available on social media? More regulations?

6. Finally, would you like to add anything else to this interview?

Thank you for your time and co-operation

If No,

1 From your point of view what are the main barriers to use the social media in decisions related to Medicines? Examples?

2 Are there any plans to adopt the social media in the future?

Closing

Thank the participant for his/her time and willingness to participate in the research

Then take notes about:

. How and where the interview was and how the interview went

Physician Interview Questions Version

- . First introduce myself and give the participant a brief explanation for the purpose of the interview
- . Address the confidentiality issue and hand in interview information sheet
- . Invite the participant to introduce her/him self

Name-----

Age-----

Education level (Experience by years)-----

Interview Part: Performance Expectancy, Effort Expectancy, And Social Influence. Facilitating Conditions, Culture and Trust and Industry Related Questions

1-Do you as physician use the social media channels in drug related decisions? What kind of decisions?

- In buying a medicine? Yes/No
- Recommending a medicine? Yes/No
- Increasing your background and knowledge
- Updating your medicine information's
- Others-----

If yes:

A. Performance Expectancy

1 What are the measures that have been taken by the pharmaceutical industries to make the social media more useful for users in regards to the following points:

Website:

- 1 - Content (Is pharmaceutical website provide the users with sufficient information?).
- 2 - Accuracy (Are the on-line medicine information accurate?).
- 3 - Timeliness (Can you as a users' access the required information in a short time?).
- 4 - Format (Is the pharmaceutical website information been presented in a useful format?).
- 5 - Reliability (Are the medicines information reliable?)
- 6 -What do you think about the quality of information on social media in general?

Consumers' behavior:

Do you think as an on-line users that social media is useful and consistent with your lifestyle and work-style?

Do you think that the usefulness of social media influences your intention towards using it?

2.What advantages has the social media brought to the health (Do you think social media brought better choices /know more information regarding medicines)...?

B. Effort Expectancy

1. As a physician, to what extent do you believe that the ease of use affects your intentions towards using the social media forums?
2. Do you find the social media easy to use? And why?
3. Is your communication with the social media clear and understandable?
4. Is the social media generally considered to be easy to learn?

C. Social influence

1. Do you think the pharmaceutical industries support the use of the social media?
 2. Do physicians in general support the use of the social media?
 3. Are there resistances among physicians towards the use of the social media?
 4. Is it more prestigious for staff to use the social media, than not to use it?
5. Does the social influences (Privacy, trust, thoughts, attitudes) affect your intentions to accept and use social media? Explain?
 - 2 To what extent do you think that the Kuwaiti society influences the adoption of social media service?

Families, Colleagues, Head managements (Power Distance).

- Personal decision making (Individualism).
- Society confidence regards development technology (Uncertainty Avoidance).

D. Facilitating Conditions

1. What types of facilitating conditions (functions) does the social media provide to you as a user?
2. To what extent do you believe that the facilitating conditions affect your intentions towards accept to use the social media in medicines related decisions?

E. Industry related questions

1. Are there any procedures that have been taken by the pharmaceutical industries to convince physicians that the social media is secure and risk-free?
2. Are there any measures taken by the industries' managers to activate and increase the social media security and privacy?
Within your position and work so far, how thorough has the use of social media been on your decision making process regarding a particular medicine? What would your recommendation?
3. Do you intend to use social media forums in your medicines related decision? Why or why not? How?
4. What is your biggest concern with using social media forums for decision making of a particular medicine?
5. Do you think patients' health seriousness can be a main factor influencing your intention to use the social media for medicines related decisions?
6. Do you think that the health condition can affect your intention to use social media for decision-making?
1. How do you use social media within medicine related decisions? Any particular application? Any concerns?
1. How social media can help you to make decision related to your patients' health?
9. How the use of social media is helpful with your needs and experiences?

E. Moderators and General Questions

- 1 From your point of view, who are more willing to social media according to the following categories
 - Age (Younger / Older users).
 - Gender (Male / Female users).
 - Education level (Low / High education level).
- 1 Do you think that using the social media should voluntary or mandatory by physicians?

- 2 Are there any short-term or long-term plans in order to develop the social media and motivate physicians to use it?
 - 3 Generally how do you evaluate the social media usage during the previous period (three years)?
 - 4 Do you think there should be more control from pharmaceutical industries over information available on social media? More regulations?
 - 5 Finally, would you like to add anything else to this interview?
- Thank you for your time and co-operation

If No,

1. From your point of view what are the main barriers to use the social media in decisions related to drugs? Examples?
- 2 .Are there any plans to adopt the social media in the future?

Closing

Thank the participant for his/her time and willingness to participate in the research

Then take notes about:

- . How and where the interview was and how the interview went

Customers Interview Questionnaires Version

. First introduce myself and give the participant a brief explanation for the purpose of the interview

. Address the confidentiality issue and hand in interview information sheet

. Invite the participant to introduce her/him self

Name-----

Age-----

Education level-----

Health condition-----

Interview Parts: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Culture and Trust and Industry Related Questions

1-Do you consumers use the social media channels in medicine related decisions? What kind of decisions?

-In buying a medicine? Yes/No

-Recommending a medicine for friend? Yes/No

-Increasing your knowledge? Yes/No

-Searching for information regarding a particular medicine? Yes/No

-Others-----

If yes:

A. Performance Expectancy

1 What are the measures that have been taken by the pharmaceutical industries to make the social media more useful for you as a user's in regards to the following points:

Website:

1 - Content (Is pharmaceutical website provide you with sufficient information?).

1 - Accuracy (Are the on-line medicines information accurate?).

1 - Timeliness (Can you as a users' access the required information in a short time?).

1 - Format (Is the pharmaceutical website information been presented in a useful format?).

1 - Reliability (Are the medicines information reliable?)

1 -What do you think about the quality of information on social media in general?

Consumers' behavior:

7 - Do you think as an on-line user that social media is useful and consistent with their lifestyle?

8 - Do you think that the usefulness of social media influences your intention towards using it?

9.What advantages has the social media brought to your health (Do you think social media brought better choices /know more information regarding medicines/Increase your awareness)?

B. Effort Expectancy

1. As a consumer, to what extent do you believe that the ease of use affects your intentions towards using the social media forums?

2.Do you find the social media easy to use? And why?

3.Is your communication with the social media clear and understandable?

4.Is the social media generally considered to be easy to learn?

C. Social influence

1. Do Pharmacists/ physicians/consumers in general support the use of the social media?

1. Are there resistances among consumers towards the use of the social media?

1. Is it more prestigious for consumers to use the social media, than not to use it?

4. Does the social (Privacy, trust, thoughts, attitudes) affect your intentions to accept and use social media? Explain?

5. To what extent do you think that the Kuwaiti society influences the adoption of social media service?

Families, Colleagues, Head managements (Power Distance).

- Personal decision making (Individualism).

- Society confidence regards development technology (Uncertainty Avoidance).

D. Facilitating Conditions

1. What types of facilitating conditions (functions) does the social media provide to you as a user?

2. To what extent do you believe that the facilitating conditions affect your intentions towards accept to use the social media in your medicines related decisions?

E. Industry related questions

1. Are there any procedures that have been taken by the pharmaceutical industries to convince

you as a customer that the social media is secure and risk-free?

1. Within your health so far, how thorough has the use of social media been on your decision making process regarding a particular drug? What would your recommendation?

1. Do you intend to use social media forums in your medicine related decisions? Why or why not? How?

1. What is your biggest concern with using social media forums for decision making of a particular medicine?

1. Do you think your health seriousness can be a main factor influencing your intention to use the social media?

1. Do you think that the health condition can affect your intention to use social media for decision-making?

1. How do use social media within your health decisions? any particular application? Any concerns? Does it help with issues related to your health condition?

1. How the use of social media is helpful with your needs and experiences?

E. Moderators and General Questions

1. From your point of view, who are more willing to social media according to the following categories?

- Age (Younger / Older users).

- Gender (Male / Female users).

- Education level (Low / High education level).

- Health condition (out of prescription medicines/ prescription medicines).

-Health seriousness (stage/ level).

2. Generally how do you evaluate the social media usage during the previous period (three years)?

3. Do you think there should be more control from pharmaceutical industries over information available on social media? More regulations?

4. Finally, would you like to add anything else to this interview?

Thank you for your time and co-operation

If No,

1 From your point of view what are the main barriers to use the social media in decisions related to drugs? Examples?

2 Are there any plans to adopt the social media in the future?

Closing

Thank the participant for his/her time and willingness to participate in the research

Then take notes about:

. How and where the interview was and how the interview went

Appendix2: Survey Questionnaire



Questionnaire Form

Dear Respondent,

I am a pharmacist in Kuwait and I am currently a full- time PhD student at the Business school, Brunel University in the United Kingdom. This questionnaire is part of a PhD study, which aims to investigate the behaviour intention to adopt social media discussion forums in health related decisions in the state of Kuwait. Your responses will enable me to identify the main factors that influence customers' intentions towards the adoption and use of social media discussion forums.

Your corporation is very important to the success of this research. All the information you provide will be treated in the strictest confidence and will only be accessible by academic researchers who are involved in this study. In case you would like to add any additional information please feel free to contact me at anytime.

Thank you for your help

Alshayma Alshati

Brunel Business School

CBPGAYA@brunel.ac.uk

Mobile number: +447776622455

Section 1: General Information

.1 What is your gender?

- Male
- Female

.1 In which age band are you?

- Less than 20 years
- 20-30 years
- 30-50years
- More than 50 years

1.3 What is the highest education level you have achieved?

- School Certificate
- Diploma/Higher Diploma
- Master Degree
- PhD Degree
- Bachelor Degree
- ◆ Other (please specify

1.4 Which category you can classify yourself in?

- Customer as (patient, costumer)
- Pharmacist
- Physician
- ◆ Other (Please specify.....)

Health condition Related Questions:

1.5 What is your health condition if customer? If you are a pharmacist or physician for which condition you advice your patient or customer to use social media forums?

- Simple condition
- Without prescription (Please specify.....)
- With prescription (Please specify.....)
- Serious condition

1.6 Which health topics have you looked for information about on the media discussion forums?

- ◆ Simple conditions such as (fitness and exercise, hygiene, diet and nutrition, smoking..)
- ◆ Without prescription drug related (dental health, headache, eating disorders, cold and flu, sleep disorders..)
- ◆ with prescription drugs related (Depression or other mental health issues, pregnancy, birth control, stress or anxiety, attention deficit disorder..)
- ◆ serious conditions (sexually transmitted disease, cancer, diabetes, heart disease...)

Section 2: Information regarding your Social forum experience

2.1 In which one of the following discussion forums do you use to search for information?

- health websites
- Drugs forum
- .net
- Drugs.com
- .edu

- .gov
- .org
- Other (Please specify.....)

2.2 Which of these functions do you use social media discussion forums for? (Please tick all that apply)

- Information regarding your health and drug usage
- communication with medical team and other patients
- Decisions on how to use the medicine or regards medicine
- Other (Please specify...)
- I don't know

2.3 Do you use the social media discussion forums for health issue?

- Yes
- No if No (Please go to question number 2.8)

Why?.....

2.4 If **yes**, what are the main reasons that motivated you to use social media discussion forums? (Please tick all that apply)

- Availability of the media
- A reliability of the information
- Time saving
- Lower or free charge
- Other (Please specify.....)

2.5 How often you use social media discussion forums for your health issue?

- Daily
- Once a week
- Few times a week
- Once a month
- Few times a month
- Yearly

Why?.....

2.6 Does use of social media discussion forums mean that you visit your doctor less often?

- Yes
- No
- No difference

Why?.....

2.7 Did you change any of the following because of health information you found online:

- your weight
- Your fitness routine
- Your medicine
- your diet or nutrition
- None of these
- Did not cha

2.8 If **No**, what are the main reasons that prevented you to not use the social media discussion forums? (Please tick all that apply)

- Never heard about it before
- Too complicated (explain what is complicated?)
- I concerned about security and privacy
- Too new, I would like to see how it works with others and then I may use it
- Other (Please specify.....)
- I am not familiar with computers and the Internet

forums

- The human touch is very important for me
- My health condition needs to refer to physicians.
- Trust issue I can't trust using it.

Section 3: Your beliefs about the adoption and use of social media discussion forums

	Agree	Strongly agree	Disagree	Strongly Disagree
3.2 social media discussion forums and Performance Expectancy:				
1. Social media discussion forums help to conduct information accurately.				
2. Social media discussion forum provides all the information needed regard health issues and drugs.				
3. Social media discussion forums useful in our life and our health. If disagree why?				
4. Using social media discussion forum would enable user to take his/her decisions more quickly				
5. Social media discussion forum enables user to manage his/her Health issues more effectively.				
3.2 social media discussion forums and ease of use (Effort Expectancy)				
1. Learning to operate and use social media discussion forum would be easy for any one.				
2. It would be easy for anyone to become skillful at using social media discussion forums.				
3. I believe that using social media discussion forums not complicated				
4. I often find social media discussion forum is flexible to Interact with.				
5. I believe that social media discussion forum is understandable.				
3.3 Social influences on use of social media				

<i>discussion forums</i>				
Power Distance 1. Kuwaiti culture encourages us to use the social media discussion forums in order to their health information.				
2. Supervisors/ doctors motivated us to start using social media discussion forums, so we can consider our health responsibilities and understand more about our health problems.				
Collectivism vs Individualism 3. People who influence my behaviour (family members, friends and co-workers) think that I should use the social media discussion forums. IF Disagree Why?.....				
4. When user chooses one of the new forums or forums, He/ She prefer to choose one that his/her friends use as well, even if it isn't the best one.				
Uncertainty Avoidance 5. When I hear about a new drugs or products I am willing to search on social media discussion forums regard it.				
6. In choosing a new drug, it is Important to user that there are clear guidelines and rules about how to use it.				
<i>3.4 users intention towards using social media discussion forum if the industries support it.</i>				
1. I like the idea of using social media discussion forums for health issues if a responsible professional areas have a control over it.				
2. It would be comfortable if users using professional websites or forums and more credible.				
3. Users feel more confident using social media discussion forum if it is under control from responsible areas.				
4. It is better to have regulations and moderation from responsible areas over the health information at the social media discussion forum				
<i>3.5 Trust in social media discussion forums</i>				
1. I trust social media discussion forums as a reliable source and information provider.				
2. I believe that getting information regards				

products and drugs from the social media discussion forum is risky and not safe.				
3. Social media discussion forum guarantees that all health information is complete and relevant.				
4. The trust in media forums influences the users intention towards using the system				
3.6 Using the social media discussion forums in the future				
1. The availability of some guidance and advice affects our intention towards using social media discussion forums.				
2. The intention to use social media discussion forum is more to get knowledge about health topics.				
3. The intention to use social media discussion forums depends on the individual sincerity.				
4. Users intend to use social media discussion forums to be prepared for his/her health condition.				

4. Would you like to add any other things that may help me to understand your acceptance, perceptions and opinions regarding the adoption and use of social media discussion forums such as (Drugs forum, Health websites, Bluelight, Drugs.com? If so, please feel free to add any comments in the space below.

Appendix 1d: Final Interview Questionnaire

. In what way does your educational level encourage you to use social media tools? And how much does your education level helps you to overcome over the difficulties of using social media tools?
. In what way does your own medical knowledge (professional/nonprofessional category) affect your intention to use social media tools? . How much your professional network/ friends /families influence your intention to use social media tools?
. In what way does your health condition affect your intention to use social media tools? . How much your social and professional identity and medical knowledge influences your intention to use social media tools?
. In what way does your experience with social media affect your intention to use social media tools? . How much your health level improvement influence your intention to use of social media tools? Any positive or negative influences history?
. In what way does your beliefs and social influences affect your intention to use social media tools?
. To which limit does your trust on social media discussion forums affect your intention to use these forums based on your knowledge and educational level?

. In what way does your enjoyment factor affect your trust level in social media tools and influence your intention to use these tools?

How your gender as men/ women affects your intention to use of social media tools?

14. Do you face any issue related to trust based on your experience to use different social media discussion forums? Explain

15. In what way does your satisfaction affect your intention to use social media tools?

16. To which level your educational influence your satisfaction with the information in the social media forums?

10-years ago, did you have the same perception about reliability of information in the social media tools? Yes/No why?

. Do you have any assumptions for using different discussion forums to your health condition or health related decisions?

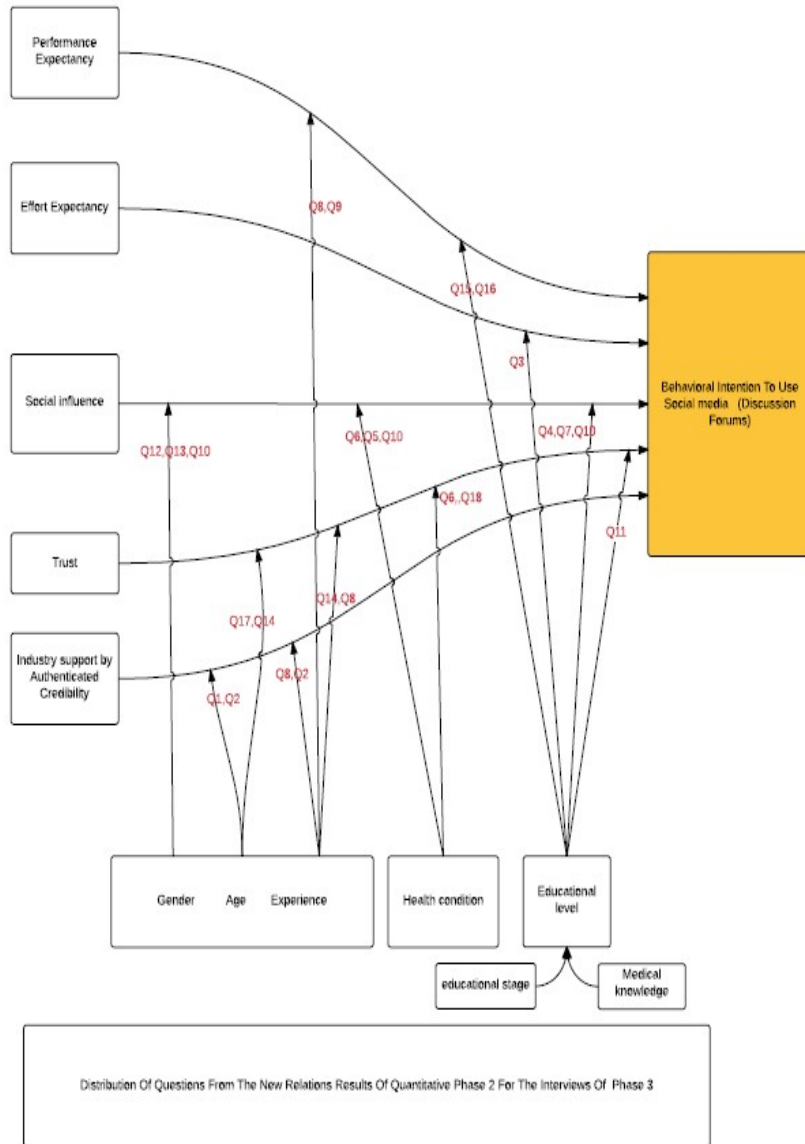


Figure 1: Distribution of the Questions from the New Relations Results of Quantitative

Appendix 3: Participant Information Sheet



Brunel Business School
Research Ethics
Participant Information Sheet

1. Title of Research:

Factors that Influence Pharmaceutical Industry Stakeholders Behavioral Intentions to use Social Media Forums that Influence Decision Making for Healthcare

1. Researcher: ALSHAYMA Y ALSHATI

PHD, Brunel Business School, Brunel University

3. Contact Email: cbpgaya@brunel.ac.uk

4. Purpose of the research: To investigate the industry related factors and their influences on the behaviour intention to use social media in the pharmaceutical industry by using UTAUT model.

5. What is involved?

- This Interview is a semi- structured interview, which contains six to seven Parts related to the factors affecting your behavior intention toward using and adopting social media in medicine related decisions
- Each part contains three to six open-ended questions where you as participant can have your freedom to answer and clarify your opinion and thoughts.

6. Voluntary nature of participation and confidentiality.

. You will be provided with accurate information about the research aim, objectives and possible outcomes.

. Any information you provided, such as personal names, roles and responsibility, health conditions would be treated confidentially and would not be made available to the public.

. All collected data will be saved and kept in a secure place.

. To maintain anonymity, no real names or positions will be identified in this study. If it is necessary, then coding will be developed for each interviewee and used consistently in presenting the results.

. You could withdraw from the study at any time either during the interview or when you completed the questionnaire.

. You will be given the right to refuse to answer any question that you believed contained confidential information

Appendix 4.2

Communalities

	Initial	Extracted
S.I.1		
S.I.2		
S.I.3		
S.I.4		
S.I.5		
S.I.6		
EE1		
EE2		
EE3		
EE5		
EE4		
PE1		
PE2		
PE3		
PE4		
PE5		
TU1		
TU2		
TU3		
TU4		
SUP1		
SUP2		
SUP3		
SUP4		

Extraction Method: Principal Component Analysis.

Appendix 4.3

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Of Variance	Cumulative	Total	% Of Variance	Cumulative	Total	% Of Variance	Cumulative
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24	1.00	1.00	1.00						

Extraction Method: Principal Component Analysis.

Appendix 4.4

Component Matrix^a

	Component				
	1	2	3	4	5
S.11					
S.12					
S.13					
S.14					
S.15					
S.16					
EE1					
EE2					
EE3					
EE5					
EE4					
PE1					
PE2					
PE3					
PE4					
PE5					
TU1					
TU2					
TU3					
TU4					
SUP1					
SUP2					
SUP3					
SUP4					

Extraction Method: Principal Component Analysis.

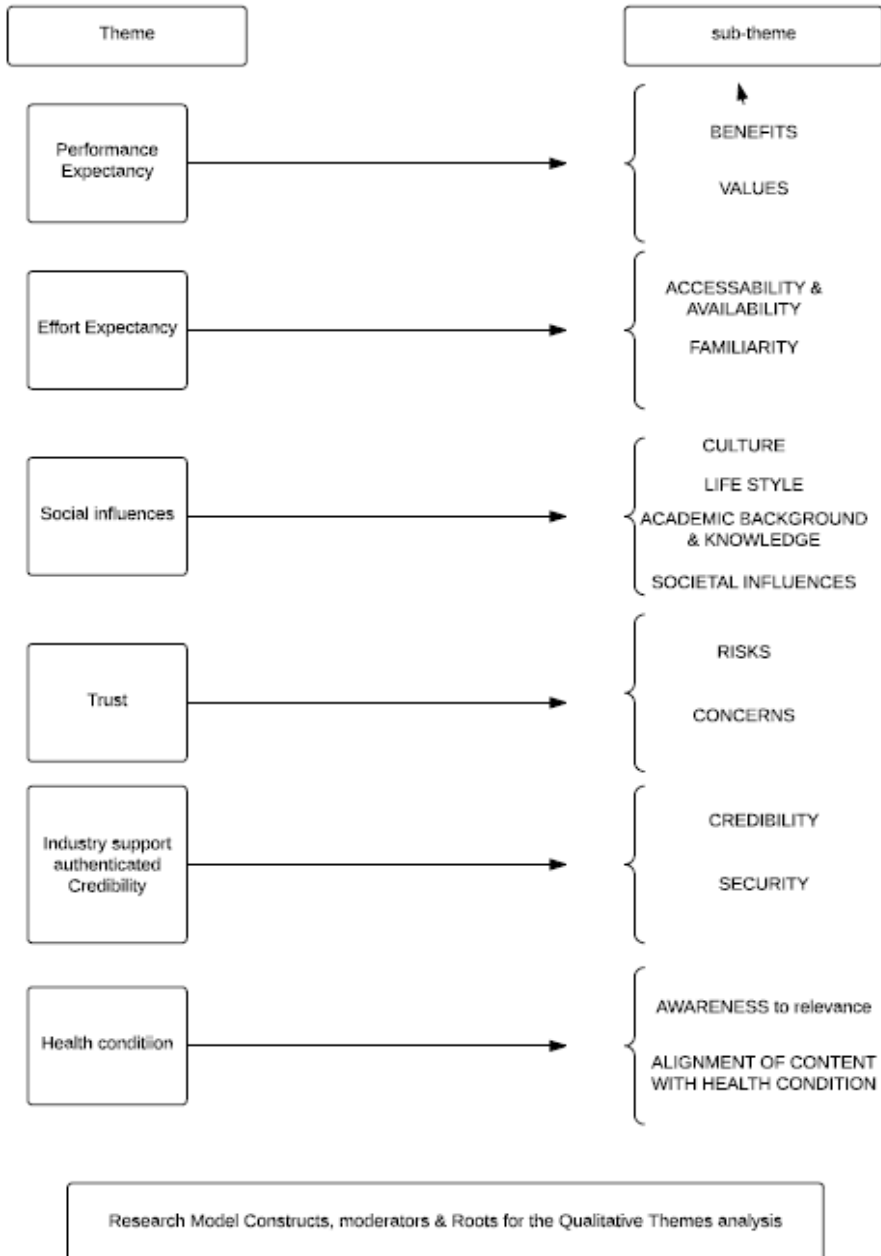
a. 5 components extracted.

Appendix 4.5

ANOVA

		Sum of Squ	df	Mean Squ	F	Sig.
S.I	Between Groups	2				
	Within Groups	47				
	Total	50				
EE	Between Groups	1				
	Within Groups	40				
	Total	42				
PE	Between Groups	1				
	Within Groups	23				
	Total	24				
TU	Between Groups					
	Within Groups	19				
	Total	19				
SUP	Between Groups					
	Within Groups	22				
	Total	22				

Appendix 5: Qualitative Analysis



Transcript for the Qualitative

	name	gender	age	Educational level	Professionalis e	Health condition
1	sara	Female	24	Bachelor degree	Pharmacist	Simple conditions
2	ahmad	male	28	Bachelor degree	Physician dentist	Simple
3	Sara Y	female	36	Master degree	physician	Simple
4	Hadeya	female	52	Master degree	physician	Simple
5	Abdulmohsen	male	50	Bachelor degree	physician	Simple
6	Thuria	female	41	Bachelor degree	pharmacist	Simple
7	Noura	female	30	Bachelor degree	pharmacist	Simple
8	Meshal	male	51	Bachelor degree	pharmacist	Simple
9	Jarah	male	28	Bachelor degree	pharmacist	Simple
10	Nabeel	male	30	Bachelor degree	Consumer	Prescription medicines
11	Salah	male	52	Diploma degree	consumer	Prescription related
12	Adnan	male	34	High school	consumer	Prescription related
13	Bashar	male	43	Bachelor degree	physician	Simple
14	Ruba	female	32	master degree	physician	Simple
15	Muhamad	male	25	Bachelor degree	physician	Simple
16	Reham	female	37	Bachelor degree	Pharmacist	Simple
17	Eman	female	45	Bachelor degree	pharmacist	Simple
18	sarah	female	53	Diploma degree	consumer	Simple
19	Naveen	male	29	Diploma degree	consumer	Prescription condition
20	Emad	male	54	High school	consumer	Serious condition
21	Ditty	female	29	High school	consumer	Prescription condition

Appendix 6: Ethics Form



Brunel Business School
Research Ethics Form
PhD Students and Staff

Any research that involves human participation, the collection or study of their data, organs and/or tissues, and that is carried out on Brunel University premises and/or by Brunel University staff or Brunel University students under the supervision of Brunel University staff requires ethical approval.

This document is designed to help you ensure that your research is conducted in an ethical manner. It is the "Ethical Clearance" part of your research (whether it requires funding or not). You need to submit this form with your research documents. In addition to this and other requirements for your project, you might need to submit three documents – see Ethics Submission Guidelines for PhD-Staff for consideration by BBS Research Ethics Committee:

1. A Participant Information Sheet (created by you)
2. A Participant Consent Form (created by you)
3. A Company Confidentiality Agreement Form (created by you, not always required)

Section A – Information About You and Your Research Project

This is used to identify you and to give us a brief overview of your project.

Name: Alshayma Y Y M M Alshati	Contact email address: cbpgaya@brunel.ac.uk
Date: 09/02/2015	
Name of Supervisor (if PhD student): Dr. Tariq Khan	
Title of Research Project: Exploring the industry related factors on the behaviour intention to use social media in the pharmaceutical industries.	
Describe the Data Collection Process (200 words): In this study two different primary sources will be used to collect the necessary primary data as follows: 1. Semi-structured interview. 2. Questionnaire Survey. In-depth semi-structured interviews will be implemented with three types of participants(with pharmacists in kuwait hospitals and independent as their role is to have a stock of medicines and make it available, then with physicians in hospitals and private clinics as customers who usually recommend a particular medicine and finally with consumers who will use the medicine (prescription medicine and non prescription medicine). Then the questionnaire survey will be implemented online with mainly the consumers who will use the medicine and physically with pharmacists as customers. This study combines qualitative and quantitative approaches in a sequential and equal way. The study starts with a qualitative approach through In-depth semi-structured interviews will then conducted with Three to Five of each stakeholders : pharmacists, physicians as customers and consumers to determine the industry related factors responsible for influencing behavior intention of stakeholders to adopt social media in health related decisions. This will then followed by a quantitative approach using around 400-600 questionnaire surveys which will be distributed physically to pharmacists as customers and online on Twitters and other Websites to consumers hospitals pharmacists and consumers to determine the relationship between the explored factors and moderators that influencing behavior intention to use social	

Section B – Identification of Ethical and Risk Issues

Most research projects involve a number of potential risks (either to participants or yourself). The more risk factors that can be identified at the start, the easier it will be to guard against them. Answer the questions below to identify potential risks in your project. Please refer to the guidelines if you are unsure about your answer to any of these questions. Please indicate your answer by selecting either “Yes” or “No” options.

<p>1. Is it possible participants might have been told to co-operate rather than freely volunteering? Sometimes it is difficult to ensure interviewees do not feel “obligated” in some way. You will need gatekeeper consent for this.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>2. Is it possible that participants might be under eighteen years of age? Normally minors are not legally able to give their consent to participation.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>3. Is it possible that participants might be required to discuss sensitive issues (e.g. private or of criminal nature)? Such discussion could put yourself or the participants in danger.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>4. Is it possible that your research might cause clinical or psychological harm to participants or yourself? This may include discussion of topics of sensitive nature or prolonged strenuous psychological or physical pressure for participants and/or yourself.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>5. Are all or some of the participants unable to give their own consents Including organisations with gatekeepers (e.g. schools and prisons); or vulnerable participants (e.g., children, people with learning disabilities, your own students).</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>6. Will you be recording the identity of any participants (e.g. their name or employee number)? Sometimes it is difficult to guarantee anonymity. If so, you will need explicit consent.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>7. Is it possible that identity of participants could be traced (e.g. their name or employee number)? Sometimes anonymity can be broken by combining information from more than one source. If so, you will need explicit consent.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>8. Will you be storing traceable participant data on a laptop or in a file at any point during and/or after the duration of your project? There is a risk if a laptop or file is lost or stolen.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>9. Is it possible that your company will want the research kept confidential? Some companies allow research only on condition that the results are not made public. If so, you will need to fill in Company Confidentiality Form.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>10. Is it possible that copyright material might be copied? It may be necessary to get permission to use it.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>11. Will the study involve recruitment of patients through the NHS? If you answered ‘Yes’, you will have to submit an application to the appropriate external health authority ethics committee, after you have received approval from the School Research Ethics Committee.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>

- If you have answered ‘No’ to all questions, you may upload **the completed form to your supervisor via uLink** (see submission guidelines).
- If you have answered ‘Yes’ to **any** of the questions **1 – 5**, you will need to describe more fully how you plan to deal with the ethical issues raised by your research. You should use the University Ethics Application form by clicking on this link: [Application Form for Research Ethics Approval](#). You will need to submit the form via uLink.
- If you have answered ‘Yes’ to **any** of the questions **6 – 10**, please tell us in the box below how you are planning to mitigate against these risks. On completions you may upload **the completed form to your supervisor via uLink** (see uLink submission guidelines).
- If you answered ‘Yes’ to **question 11**, you will have to submit an application to the appropriate external health authority ethics committee, **after** you have received approval from the School Research Ethics Committee.

Describe which risks (6-10) you have said "Yes" to and your mitigation plans:

Section C (Declaration)

Please note that it is your responsibility to follow the University's Code of Research Ethics and any relevant academic or professional guidelines in the conduct of your study. **This includes providing appropriate information sheets and consent forms, and ensuring confidentiality in the storage and use of data.** We should be notified of any significant changes in the protocol over the course of the research and may require a new application for ethics approval.

You need to indicate that you have carried out various activities prior to submitting this form along with your proposal.

I have read through and understood the Brunel University Code of Ethics (available at: https://intranet.brunel.ac.uk/registry/minutes/researchethics/CoEv7.pdf).	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
I have written and attached a Participant Information Sheet ONLY needed if your research involves direct data collection from people.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
I have written and attached a Participant Consent Form ONLY needed if your research requires <i>explicit</i> consent.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
I have written and attached a Company Confidentiality Agreement Form Only needed if your research involves a company that is concerned about information being made public.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

For PhD students ONLY

I confirm that the application submitted has been discussed with the supervisor mentioned in Section A, and that he/she fully supports the application submitted and confirm that the information entered is correct.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

APPENDIX 7: Concept for participating in an academic



Dear , The head of General Administration

Subject:

Consent for participating in an academic research

This is Alshayma Alshati caring out a PhD research project, which aims to investigate (physicians, pharmacists and consumers) intention to the acceptance and use of social media discussion forums in supporting medicine related decisions. In this stage I am aiming to do my data collection about the subject above and I am wondering to get your permission for caring out interviews with the hospital physicians, pharmacists and consumers. I confirmed that all the collected data will be used for academic proposes and will be only accessible by academic researchers who are involved in this project.

Your participation will be highly appreciated.

Kind regards,

ALshayma Yaqoub Alshati

PhD student at Brunel Business School, Brunel University

Email cbpgaya@brunel.ac.uk

Mobile number at UK: +447776622455

Mobile number at Kuwait: +99933009

فيصل محمد الدوسري
مدير إدارة العلاقات العامة والإعلام
وزارة الصحة
س.ب. ٤١٥

Concept for participating in an academic (Arabic Version):



الى السيد المحترم:

مدير ادارة العلاقات العامة والاعلام

تحية طيبه وبعد

الموضوع:

اذن باجراء مقابلات لبحث أكاديمي

اود افادتكم بانني الباحث الشيماء الشطي طالبة دكتوراه في جامعة برونييل بالمملكة المتحدة, اقوم حاليا باجراء دراسته حول وجهة نظر كل من الكادر الطبي والمراجعين في الاقبال لى استخدام وسائل التواصل الاجتماعي في مواضيع تتعلق بلمواضيع الطبيه. في هذي المرحله اقوم بجمع البيانات المتعلقة بالدراسه المذكوره اعلاه, وفي هذا الخصوص أرغب في الحصول على موافقتكم الكريمه باجراء مقابلات مع كل من الكادر الطبي والمراجعين. اود التاكيد ان جميع البيانات التي سيتم جمعها سوف تستخدم لاغراض البحث العلمي فقط ومتاحه للباحث والكادر الاكاديمي بالجامعه.

شاكره لكم حسن تعاونكم في هذا الخصوص ..

تقبلوا تحياتي

الشيماء يعقوب الشطي
طالبة دكتوراه بجامعة برونييل في المملكة المتحدة

للتسقيق: ايميل cbpgaya@brunel.ac.uk

تلفون: +99933009

لا مانع من ذلك
حسب نظام
فيصل محمد الدوسري
مدير ادارة العلاقات العامة والإعلام
وزارة الصحة

Appendix 8: Original Questionnaire & Interview Questions of Tabsh 2012 Thesis:

Appendices

Note:

Please tick (✓) the most appropriate responses, if none are appropriate please select the response "other" and, if possible provide a brief explanation.

- The following information is important to better understand and utilize the information gathered in this questionnaire.

Section 1: General Information		
1.1 What is your gender?		
<input type="checkbox"/> Male		<input type="checkbox"/> Female
1.2 In which age band are you?		
<input type="checkbox"/> Less than 20 years	<input type="checkbox"/> 20 – 30 years	<input type="checkbox"/> 31 – 40 years
<input type="checkbox"/> 41 – 50 years	<input type="checkbox"/> 51 – 60 years	<input type="checkbox"/> More than 60 years
1.3 What is the highest education level you have achieved?		
<input type="checkbox"/> School Certificate	<input type="checkbox"/> Diploma/Higher Diploma	<input type="checkbox"/> Bachelor Degree
<input type="checkbox"/> Master Degree	<input type="checkbox"/> PhD Degree	<input type="checkbox"/> Other (please specify)
1.4 What is your occupation?		
<input type="checkbox"/> Student		<input type="checkbox"/> Self-employed
<input type="checkbox"/> Employee in the Private Sector		<input type="checkbox"/> Employee in the Government
<input type="checkbox"/> Retired		<input type="checkbox"/> Other (Please specify.....)
1.5 What is your nationality?		
<input type="checkbox"/> Omani		<input type="checkbox"/> Other (Please specify.....)
Section 2: Information regarding your banking experience		
2.1 In which one of the following banks do you have your main bank account?		
<input type="checkbox"/> Ahli Bank	<input type="checkbox"/> Bank Muscat	<input type="checkbox"/> Dhofar Bank
<input type="checkbox"/> Oman Arab Bank	<input type="checkbox"/> Oman International Bank	<input type="checkbox"/> National Bank of Oman
<input type="checkbox"/> Sohar Bank		<input type="checkbox"/> Other (Please specify.....)
2.2 How frequently do you visit your bank branch?		
<input type="checkbox"/> Daily	<input type="checkbox"/> Once a week	<input type="checkbox"/> Few times a week
<input type="checkbox"/> Once a month	<input type="checkbox"/> Yearly	<input type="checkbox"/> Never
2.3 In which area do you usually visit your bank branch?		
<input type="checkbox"/> Al-Batinah	<input type="checkbox"/> Al-Buraimi	<input type="checkbox"/> Al-Dakhliyah
<input type="checkbox"/> Al-Dhahirah	<input type="checkbox"/> Al-Sharqiyah	<input type="checkbox"/> Al-Wusta
<input type="checkbox"/> Dhofar	<input type="checkbox"/> Musandam	<input type="checkbox"/> Muscat
2.4 Which of these electronic banking functions do you use? (Please tick all that apply)		
<input type="checkbox"/> Automatic Teller Machine (ATM)	<input type="checkbox"/> Cash Deposit Machine (CDM)	<input type="checkbox"/> Internet Bank
<input type="checkbox"/> Mobile Bank (SMS Bank)	<input type="checkbox"/> P.C Bank	<input type="checkbox"/> Phone Bank
<input type="checkbox"/> Web Bank	<input type="checkbox"/> T.V Bank	<input type="checkbox"/> Other (Please specify.....)
2.5 Does your bank have a website?		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> I don't know
2.6 Does your bank provide its customers with Internet banking service?		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> I don't know

Note:

Please tick (✓) the most appropriate responses, if none are appropriate please select the response "other" and, if possible provide a brief explanation.

2.7 Do you use the Internet banking system offered by your bank? <input type="checkbox"/> Yes <input type="checkbox"/> No (Please go to question number 2.12)			
2.8 If yes , what are the main reasons that motivated you to use Internet banking system? (Please tick all that apply) <input type="checkbox"/> Availability of the Internet banking round-the-clock <input type="checkbox"/> A reliable medium for banking transaction <input type="checkbox"/> Time saving <input type="checkbox"/> Lower or free charge <input type="checkbox"/> Other (Please specify.....)			
2.9 How often you use Internet banking system? <input type="checkbox"/> Daily <input type="checkbox"/> Once a week <input type="checkbox"/> Few times a week <input type="checkbox"/> Once a month <input type="checkbox"/> Few times a month <input type="checkbox"/> Yearly			
2.10 Does use of Internet banking mean that you visit your bank branch less often? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No difference			
2.11 How do you achieve the following bank operations (Please after answering this question go to section 3)	Via the Internet banking	Visiting the bank branch	Both Internet banking and bank branch
Checking your account balance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Viewing and printing your account transaction history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paying utility bills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paying credit cards expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ordering cheque books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ordering credit / debit cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ordering a bank loans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transfers funds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting financial and investment information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting investment advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12 If No , what are the main reasons that prevented you to not use the Internet banking system? (Please tick all that apply) <input type="checkbox"/> Never heard about Internet banking before <input type="checkbox"/> I am not familiar with computers and the Internet <input type="checkbox"/> Too complicated <input type="checkbox"/> The human touch is very important for me <input type="checkbox"/> I concerned about security and privacy <input type="checkbox"/> Difficulties of Internet connection <input type="checkbox"/> Too new, I would like to see how it works with others and then I may use it <input type="checkbox"/> No guidance available about how to start use the Internet banking system <input type="checkbox"/> Other (Please specify.....)			

Note: Please tick (√) to the most appropriate responses

Section 3: Customers beliefs about the adoption and use of Internet banking				
3.1 Customers beliefs regarding the Internet banking performance expectancy	Strongly Disagree	Disagree	Agree	Strongly Agree
Internet banking helps me to conduct my account transactions accurately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking provides me with all the information I need on banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking makes it easier to focus on my other working responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would not find the Internet banking useful in my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Internet banking would enable me to accomplish my bank transactions more quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking enables me to manage my financial resources more effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Internet banking and ease of use				
Learning to operate Internet banking would be easy for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It would be easy for me to become skilful at using Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe that it would take too long to learn how to use Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking is complicated as it is difficult to understand what is going on.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often find Internet banking is flexible to interact with.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, I believe that Internet banking is easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Internet banking facilitating conditions				
All the resources needed to use Internet banking are available to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking is not compatible with the other on-line systems I use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Full guidance is available for customers who wish to use Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A specific department (customer service) is available round-the-clock for assistance with any difficulties I encounter with Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking fits well with my lifestyle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Internet banking is compatible with all aspects of my banking requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>3.4 Culture influences on use of Internet banking</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
People who influence my behaviour (family members, friends and co-workers) think that I should use/not use the Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My supervisor / manager motivated me to start using Internet banking, so I can consider my work responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I choose one of the new banking functions, I prefer to choose one that my friends use as well, even if it isn't the best one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I hear about a new banking service I am willing to giving it a try.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In choosing a new banking service, it is important to me that there are clear guidelines and rules about how to use it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would use Internet banking even if the bank is not able to answer all my queries about the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Omani culture allows females to use the Internet in order to bank on-line.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think males are more inclined to use Internet banking than females.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, the use of Internet banking is voluntary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3.5 Customer attitudes towards computers</i>				
I like the idea of using new computer systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using new technology is pleasant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy using new technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel comfortable using new technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New technologies make life more complicated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once I start using a new system I find it hard to stop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get bored quickly when using new systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel more confident using computer tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I prefer to computerize all my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am frightened of using computer systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It worries me to think that I could lose a lot of information by hitting the wrong key.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>3.6 Trust in Internet banking</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
I trust my bank as a reliable service provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe that my bank is safe and keeps all my data securely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel loyal towards my bank.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel secure by using the Internet to send personal information.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe that all information sent over the Internet will be seen by other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, I trust the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe that Internet banking provides accurate records.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet banking guarantees that all financial information are complete and relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't believe that Internet banking systems processes transactions accurately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am sure that the bank will not repay money withdrawn from my account by unauthorized transactions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, I feel that using Internet banking system is secure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3.7 Using the Internet banking system in the future</i>				
I believe that the Internet banking is useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Internet banking is not complicated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Internet banking is my personal decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of some guidance and advice affects my intention towards using Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My computer experience helps me to deal with Internet banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The trust in Internet banking influences my intention towards using the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would you like to add any other things that may help me to understand your acceptance, perceptions and opinions regarding the adoption and use of Internet banking. If so, please feel free to add any comments in the space below.

THANK YOU VERY MUCH FOR YOUR PARTICIPATION IN THIS STUDY.

APPENDIX TWO
Interview Form with Bank Managers

Section 1: The bank situation regarding the Internet banking services.

1. What is the first thing that comes into your mind when you hear the term Internet banking?
S.H

2. Does your bank offer an Internet banking service?
use S.M for ...

If yes,

- What was the driver for the development of Internet banking service in your bank?
- What are the main difficulties that the bank encountered in the early stages of system adoption?
- In your opinion what are the main barriers that stimulate the bank's customers to use the Internet banking service?
- Does the bank follow any specific methods to motivate customers to use the Internet banking service?
- Does the bank has any statistical information regards Internet banking services users:
 - How many customers asked for user name and password for the Internet banking? How many of them became an active user?
 - Is the number of active Internet banking users increasing or decreasing? What are the reasons for that?
 - Users of Internet banking service may face some problems when they use the service, what are the methods that can used to communicate with the bank about these problems?
 - What are the natures of these problems?
 - How does the bank deal with these complaints?
- Internet banking services is one of several electronic banking functions, what other electronic functions does the bank offer to their customers?

Section 2: Performance Expectancy, Effort Expectancy, Facilitating Conditions, Culture, Customers' Attitudes Towards Computers and Trust

A. Performance Expectancy

- What are the measures that have been taken by the bank to make the system more useful for users in regards to the following points:
 - Content (Is bank website provide the users with sufficient information?).
 - Accuracy (Are the on-line bank information accurate?).
 - Timeliness (Can users' access the required information in a short time?).
 - Format (Is the bank website information been presented in a useful format).
- Do you think that on-line users perceive that Internet banking service is useful and consistent with their lifestyle?
- Do you think that the usefulness of Internet banking service influence the customers' intention towards using it?

B. Effort Expectancy

- As a bank manager, to what extent do you believe that the ease of use affects customers' intentions towards using the Internet banking service?
- What are the measures than have been taken by the bank to make the Internet banking service system ease of use? (Website design, language, number of web pages).

C. Facilitating Conditions

- Can you list the different functions which are available to users through the Internet banking service website?
- Are there any future plans to add new functions to your Internet banking service system?
- What types of facilitating conditions does the bank provide Internet banking service users with?
- To what extent do you believe that the facilitating conditions affect customers' intentions towards accept the Internet banking service?

D. Customers' Attitude Towards Computer

- Do you think that customers who have good knowledge regarding the technology in general and computers in particular are more willing to bank on line comparing with other customers who do not have computer knowledge? In another word does computer knowledge affect the acceptance of Internet banking?
- Based on your experience, do any of the following points affect the customers Intentions towards using the Internet banking service?
 - Users' attitude towards technology.
 - Confidence of using computers (Self-efficacy).
 - Computers anxiety.

E. Culture

- Does Omani culture affect customers' intentions to accept and use Internet banking service? Explain?
- To what extent do you think that the culture of Omani society influences the adoption of Internet banking service?
 - Families, Colleagues, Head managements (Power Distance).
 - Personal decision making (Individualism).
 - Society confidence regards development technology (Uncertainty Avoidance).
 - Depending on the Omani culture, are females allowed freely to use the internet in order to bank on-line (Masculinity).
- Have you noticed any difference between Omanis and foreigners customers regards the using of the Internet banking system? Explain?

F. Trust

- Generally, what do you think about trust as one of the influential elements that affect the acceptance of the on-line service?
- Are there any procedures that have been taken by the bank to convince customers that the Internet banking service is secure and risk-free?
- Are there any measures taken by the banks' managers to activate and increase the Internet banking service security and privacy?

- What is the approved period to update and review the website information in order to provide users with accuracy, completeness and relevance information?

G. Moderators and General Questions

- From your point of view, who are more willing to bank on-line according to the following categories
 - Age (Younger / Older users).
 - Gender (Male / Female users).
 - Education level (Low / High education level).
- Do you think that using the Internet banking service should voluntary or mandatory?
- Are there any short-term or long-term plans in order to develop the Internet banking services and motivate customers to use the Internet banking?
- Generally how do you evaluate the service during the previous period (three years)?

H. Research Model

At this particular time I am really interested to know what you think regarding the research model.

- Strengths and Weaknesses.
- Additions and Deletions.
- Suggestions.

Finally, would you like to add any thing else to this interview?

Thank you for your time and co-operation

If No,

- From your point of view what are the major barriers that prevent the bank from developing an Internet banking service?
 - Are there any pressures from the government or the Central Bank of Oman to adopt and provide your clients with the Internet banking service?
 - Are there any plans to adopt the Internet banking service in the future?
 - What electronic banking functions does the bank offer to their customers?
-

