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Abstract

Religious faith is central to life for Muslim patients in Kuwait, so it may influence adaptation and rehabilitation. This study explored quantitative associations among religious faith, self-efficacy, and life satisfaction in 40 female stroke patients and explored the influence of religion within stroke rehabilitation through qualitative interviews with 12 health professionals. The quantitative measure of religious faith did not relate to life satisfaction or self-efficacy in stroke patients. However, the health professionals described religious coping as influencing adaptation post-stroke. Fatalistic beliefs were thought to have mixed influences on rehabilitation. Measuring religious faith among Muslims through a standardized scale is debated. The qualitative accounts suggest that religious beliefs need to be acknowledged in stroke rehabilitation in Kuwait.

Keywords

Stroke rehabilitation, Religious faith, Fatalism, Religious coping, Self-efficacy

Introduction

Holistic care is increasingly recognized within therapy and rehabilitation, and attention has been paid to understanding patients' spiritual needs (Kaye and Raghavan 2002). However, research into patients' spiritual and religious resources when coping with chronic and critical illness largely focusses upon people with a Christian faith (e.g., Kaye and Raghavan 2002). Rashidi and Rajaram (2001) expand this focus by discussing culturally appropriate ways of working with Muslim women patients in the United States, providing an Islamic view on holistic care. They describe holistic care as taking into account Islamic beliefs and practices that integrate the spiritual, emotional, and physical aspects of the self. As faith is so central to Islamic cultures, it cannot be separated during the provision of medical care and rehabilitation. Luna (1989) emphasizes the importance of understanding the social structure and cultural context in promoting a sense of care when working

with the Arab Muslim patient both in Muslim countries and multicultural contexts. Similar views have been expressed by Rassool (*2000*), Miller and Petro-Nustas (*2002*), Halligan (*2006*).

Association between religious faith and health has been demonstrated, although the psychological basis for this association remains unclear (Holt et al. 2007). Research studies appear to show a positive relationship between religious practices, such as prayer, and coping with illness and medical treatment (Kaye and Raghavan 2002). In the stroke context, limited evidence suggests that religion may help to reduce emotional distress post-stroke, although in cases where patients believe their stroke has been a punishment from God, emotional distress is increased (Giaquinto et al. 2007). This finding highlights the need to assess what types of religious coping strategies patients are using and any negative coping such as denial, fatalism, or blaming. Prayer seems to be a significant coping resource post-stroke among believers, easing the burden of sudden disability (Robinson-Smith 2002). However, this finding was based on research with Christian participants in the US. Prayer may have different meanings in the Muslim religion, as it is a structured activity rather than an experience of private reflection.

Studies carried out with participants coping with conditions other than stroke have reported a variety of results regarding the association between religion and health. Fitchett et al. (*1999*) reported that among medical rehabilitation patients, religion did not facilitate adjustment or recovery, although negative religious coping (such as blaming God) was associated with depression. Franklin et al. (*2007*) reported that fatalistic beliefs were associated with unhealthy behaviors and increased frequency of chronic illnesses among an African–American sample, compared with White Americans. However, the direction of influence is open to debate. Individuals with poorer health outcomes may have more fatalistic beliefs in response to their failing health. This study highlighted the differences in fatalistic beliefs and health behavior among people of different cultural backgrounds. Making a further linkage with control and helplessness, Ai et al. (*2005*) reported that subjective religiosity was positively correlated both with reduced internal control and with increased "powerful others" health locus of control among cardiac patients. However, patients using prayer as a coping strategy reported increased internal control. These results indicated the need

to identify which aspects of religious beliefs facilitate or inhibit personal control and self-efficacy. The studies described above were all carried out with Western participants, primarily espousing the Christian religion, and it is unknown if similar patterns exist among people of other religions and cultures. It is important for the rehabilitation therapist to understand more about how self-efficacy can be enhanced, through religious and other means, because self-efficacy beliefs affect individuals' feelings, thoughts, motivation and behavior (Bandura *1994*), and influence stroke rehabilitation outcomes (Jones and Riazi *2011*).

The contribution of religious beliefs to self-efficacy and life satisfaction has not been investigated before in stroke patients living in a predominantly Muslim culture such as Kuwait. Such understandings will help to inform holistic care and rehabilitation, not only in Kuwait, but in other multicultural contexts.

This study had two phases: the aim of Phase 1 was to investigate quantitative relationships among religious faith, self-efficacy, and life satisfaction in female stroke patients living in Kuwait. The aim of Phase 2 was to explore health professionals' responses to the results of Phase 1 and their perspectives regarding the role of religion in recovery and rehabilitation post-stroke in Kuwait.

Methods

Phase 1

Relationships between measures of religious faith, self-efficacy, and life satisfaction were investigated with a cross-sectional study design. Stroke patients were recruited from a rehabilitation hospital in Kuwait, attending as in-patients or out-patients. A total of 40 female stroke survivors participated in this phase of the project. Females were selected as culturally it is deemed more appropriate for a female interviewer to interact with female patients. Inclusion criteria included a confirmed stoke diagnosis and ability to give consent to participate in the study and answer the questions posed. Participants with cognitive deficits, aphasia, and a history of other neurological disorders were excluded. Kuwaitis made up 55 % of the study sample

(22 participants), and Non-Kuwaitis made up the remaining 45 % (18 participants). The Non-Kuwaitis were of the following nationalities: Indian, Lebanese, Philipino, Iraqi, Egyptian, Bangladeshi, Bedouin, Ethiopian, Sudanese, Iranian, and Saudi Arabian. There are large numbers of expatriate workers in Kuwait, so this proportion of native and nonnative Kuwaiti patients was expected.

Ethical permission was initially obtained from the host University, followed by management permission. Interested stroke survivors receiving physiotherapy were provided with information sheets about the study. All data collected were anonymized. Upon obtaining consent to participate, an interview with a panel of the main researcher and a translator was conducted in a quiet room at the rehabilitation hospital. The questionnaires were in Arabic. However, the translator was present to aid in explanation of questions and to describe scenarios to aid in understanding of the questions and response options, for example, the rating scales of the variables being measured.

Four Scales Were Administered

Santa Clara Strength of Religious Faith Questionnaire (SCSROF): This is a 10-item questionnaire designed to measure strength of religious faith regardless of denomination or affiliation (Plante and Boccaccini *1997*). It contains 10 items, to which participants agree or disagree. Examples of items are as follows: "My religious faith is extremely important to me," and "I look to my faith as a source of comfort." The authors report high reliability and validity.

The Psychosocial Adaptation Self-efficacy Scale (adapted for this study from the Chronic Disease Self-efficacy Scales, devised by Lorig et al. *1996*): This adapted scale was based on earlier interviews with stroke survivors living in Kuwait, and the themes were used to identify culturally relevant items from the Chronic Disease Self-efficacy Scales (CDSES). Preliminary reliability and validity testing of this scale was carried out. This adapted scale is made up of 8 items regarding psychosocial self-efficacy, to which participants rate their level of confidence (from 1 "Not at all confident" to 10 "Totally confident"). For example, "How confident are you that you can deal with the frustration of your disability/disease?" The total score from the 8

items represents the participants' psychosocial adaptation self-efficacy (PSE). Cronbach's alpha was acceptably high (0.78), indicating internal coherence.

The Generalized Self-Efficacy Scale (Schwarzer and Jerusalem *1995*): This is a 10item questionnaire created to assess self-efficacy beliefs and the ability to cope with different stressful situations in life. Reliability and validity of this scale are reported as good.

A single item life satisfaction measure (10-point rating scale): Participants were asked to rate on a single scale of 1–10 how satisfied they felt with life at the moment, with "1" denoting "not satisfied at all" and "10" denoting "very satisfied." Other studies have used a single measure such as this in assessing life satisfaction post-stroke (e.g., Osberg et al. *1988*).

Phase 2

Semi-structured interviews were carried out with 12 health professionals with current/recent stroke rehabilitation experience in Kuwait. Interviews were conducted by the first author who is a physiotherapist who has worked in stroke rehabilitation in Kuwait. Local health professionals working at a rehabilitation center were informed about the study verbally and then given full written information (including main interview questions) if interested in participating. Further participants were recruited by word-of-mouth or snowballing. Snowball sampling is considered adequate when there is no clear sampling route or frame (Mason *1996*) as was the case in Kuwait.

The participating sample was made up of three males and nine females. Three were Kuwaitis, and nine were non-Kuwaitis. There were seven physiotherapists, three nurses, one occupational therapist, and one speech and language therapist. The interviews took place in a quiet room at the Institute or at a suitable public location (for anyone working outside of the Institute). Interviews were conducted in English and took 45 min to 1 h. All participants were informed of the aims of the study, their right to withdraw at any time, and that all interviews would be tape-recorded and confidential. Written consent was obtained prior to beginning the interviews.

The health professionals who participated were provided with the results of Phase 1 and asked to comment on these, as well as reflecting on their experience of the role of religious beliefs within stroke rehabilitation.

Interview transcripts were subject to thematic analysis (Braun and Clarke 2006), which includes steps such as familiarization with the data, generation of initial codes, and searching for larger themes through a reiterative process.

Results

Phase 1

Profile of the Patient Sample

There was a wide variation in age in the main study sample ranging from 30 to 73 (mean 55.3 years; SD 10.28). Time since stroke in months was between 1 and 131 months. The mean time was 27.2 months (SD 37.3). Of the 40 females participating, 33 (82.5 %) had a stroke due to an infarct, while the other 7 (17.5 %) had a hemorrhagic stroke. Twenty-three (57.5 %) of the 40 participants had a left-sided weakness, and 17 (42.5 %) had a right-sided weakness. Thirty-six (90 %) of the study sample were of the Muslim faith, and 4 (10 %) were Christians.

Descriptive Statistics of Study Variables

Religious faith (SCSROF) scores ranged from 25 to 40 (mean 36.72; SD 3.81). A higher score indicated stronger agreement with the statements relating to religious faith. The low standard deviation indicated minimal variability.

Total General Self-Efficacy (GSE) ranged 10–40 (mean 31.65; SD 7.49). The lowest score possible on this scale is 10, and 40 is the maximum score possible, so participants used the full range. The high mean score denoted good levels of general self-efficacy.

Total Psychosocial Adaptation Self-efficacy (PSE) ranged 27–80 (mean 64.07; SD 15.75). Minimum and maximum scores are 8 and 80. The mean suggested patients' confidence in psychosocial adaptation to stroke.

Life satisfaction scores occupied the full range, from 1 to 10, with a mean of 6.73 (SD 2.80).

Results of Correlational Analysis

Religious faith was not significantly correlated with any of the main study variables: GSE (Pearson r = 0.089), PSE (r = 0.114) and life satisfaction (r = 0.187). Older participants reported higher religious faith scores (r = 0.364, p = 0.021). Time since stroke was not correlated with any of the measures. Generalized Self-efficacy scores (GSE) were significantly positively correlated with Psychosocial Self-efficacy scores (PSE) (r = 0.657; p < 0.001) and life satisfaction (r = 0.452; p = 0.003).

Phase 2

In the quotations below, the usual convention is followed with ... indicating editing for brevity, and [] indicating that words have been added for clarity. All names are pseudonyms.

Exploring Responses to the Quantitative Findings from Stroke Patients

Many of the health professionals interviewed were surprised by the findings which showed an absence of measured relationship between religious faith and the variables general and psychosocial self-efficacy and life satisfaction.

I would have expected that the deeper the person is in their religious faith, and their life satisfaction would be better (Andrea, Canadian, Physical Therapist).

[I am surprised] because I think always I really believe that the religion has a big effect on the life satisfaction of any person (Khadeja, Kuwaiti, Physical Therapist) The expectation from many of the health professionals interviewed was that those with higher religious faith scores would rate their life satisfaction more highly. Some drew upon personal experience:

When you believe that anything happens to you is from God and always it's for the good of you. Even if I have a stroke I would know, I believe strongly that God did this to me... sometimes for a good thing in the long run (Khadeja, Kuwait, Physical Therapist).

Other participants drew upon their experience with patients. A Christian therapist explained:

I personally find it easier dealing with somebody who has a religious affiliation, obviously even easier if it's same as mine, but if it's not then I still find it easier because ... they seem to be more at peace...if they still feel that there is a role for them to play within that scenario then I find them easier to deal with than somebody who has no hope ... There are more people in the no-religion side that would [find] it hard to define hope (Matt, Canadian Physical Therapist).

This therapist linked religious beliefs with retaining hope after stroke. However, when questioned further on this point, he acknowledged that patients without religious beliefs may have replacement goals that could reinforce the hope needed for recovery:

The person that's religious ... would likely feel that there is some sense of purpose ...so they would likely have more hope. That doesn't mean that the atheist couldn't find something to get them hopeful and they may have some relationship they want to restore and they are going to fight to get it back ... (Matt, Canadian, Physical Therapist)

Participants' surprise at the project's findings concerning religious faith was often linked with their own religious convictions. Some of those without strong religious beliefs did not want to comment when asked what they thought. An American therapist, however, had strong views regarding this issue, based on her earlier negative experience with the Christian religion:

Guess we have to speak here from my personal experience, I actually spent a large percentage of my life very religious and became a little more aware of why I believed, what I believed, [then] made some different choices and decisions in my life and even though I would say today that I am spiritual, I am not religious ...Putting myself in those [patients'] shoes, I think initially having a faith and believing something external to myself from a religious point of view, although it's helpful, I don't think its sustaining long-term when it comes down to the nuts and bolts of dealing with the effects of a condition like this (Katie, American, Occupational Therapist)

This therapist was not surprised by the absence of measured relationships from Phase 1, perceiving that there is a difference between spirituality and religion. She related the experience of spirituality (rather than religion) to life satisfaction:

I think ultimate satisfaction in one's life is a deeper, more internal process. Now some might argue God is that deeper, more internal process and that is quite possible, but ... religion tends to be more external, tends to be more based on conditions and rituals. This [spirituality] is just a true state of being and understanding and that sounds probably ... a little bit deep ... I guess because of the switch I have made in my life from being very faith-based and religious-based to now being more spiritual-based in my own belief (Katie, American, Occupational Therapist)

Some health professionals thought that the lack of quantitative association among Phase 1 variables reflected the mixed influence of religion, which not only promotes feelings of support but also of fatalism. Fatalism has been defined as: "the belief that an individual's health outcome is predetermined or purposed by a higher power and not within the individual's control" (Franklin et al. *2007*: p.564). A Kuwaiti therapist seemed to refer to fatalism when she said:

The other thing why didn't you see the relation between religion and the [life] satisfaction or the efficacy, I think, because in a way they [some patients] stop fighting for things and I don't think this is related to religion more or less, but they stop, they stop fighting for their rights, for example, or doing things. (Khadeja, Kuwaiti, Physical Therapist)

Khadeja thought that the stroke patients interviewed in phase 1 may already have lost hope and given up their efforts to cope with the effects of stroke, hence explaining the lack of association noted. She implied that religious patients may be more fatalistic. Other participants perceived a difference between public expression of religion through ritual, and private coping experiences, and thought this could confuse measured associations between faith and other measures:

Maybe they say that religion is the most important thing but they don't apply it to the recovery part (Ahmed, Kuwaiti, Speech and Language Therapist). For me, if I will believe that what's occurring to me is coming from God, then I will accept that, this is what I believe, this is the real belief. But if you would take the religion as just doing the activities, praying, fasting and all these things without this belief inside us ... This will give him [the patient] satisfaction, but if it was just movements he is doing, it's just actions (Mohammed, Kuwaiti, Physical Therapist).

In both quotations above, Kuwaiti therapists suggested that some stroke participants did not apply their religious beliefs and practices (i.e. fasting and praying) to their own personal recovery process. Others suggested that the choice of questionnaire may have been inappropriate for Muslims:

Then maybe that [scale] is not the proper measurement tool potentially, that we are not asking the right questions to determine if they are truly finding any of their satisfaction from their religious background or their religion... If it's just a practice and not a deep- down belief that actually influences their life in hard times (Matt, Canadian, Physical Therapist).

The possibility that the measurement tool was not sensitive enough to detect changes in religious faith was a suggestion given by Matt in the quotation above. However, he shared with other therapists the possibility that there is a potential difference between the public practice of religion and using religious coping in a "deep-down" private way to promote recovery post-stroke.

Perceived Contributions of Religion to Rehabilitation and Recovery Post-Stroke

Three main themes were discussed by the health professionals regarding the role of religious faith and practice in recovery and rehabilitation after stroke:

1. Religious coping and acceptance

2. Fatalistic beliefs

3. Therapists' engagement with religious issues during rehabilitation

Religious Coping and Acceptance

Most health professionals interviewed, believed that religious coping could help with a person's acceptance of their new situation post-stroke.

Now, what I have noticed ...in regard to a faith-based acceptance of their condition is they may work through things a little bit more quickly or a little bit differently than someone who does not have a specific religious belief (Katie, American, Occupational Therapist)

Matt elaborated further on the process he thought was involved in religious coping, namely trust in God's new direction for life:

If I felt that there is some sort of supreme being directing... the flow of things... if they accept it as something given from God... there is going to be grace or some kind of a supreme new direction, that seems more hopeful than if there wasn't [that belief] (Matt, Canadian, Physical Therapist).

A Kuwaiti therapist thought that acceptance was "*pure religion*," believing that acceptance was necessary in disabling conditions such as stroke, or critical conditions such as cancer, and supported by religious belief

But if ...that cancer patient ... has a strong religion and you ... tell him you will die, will he collapse? ... Would he go to drugs? Would he go and fall and drink? No, he will accept and live the rest of his [life] ... this is pure religion (Khadeja, Kuwait, Physical Therapist).

Religious instruction was also thought to help not only in coping with disability but also in increasing motivation to work harder during rehabilitation. A Muslim therapist reflected on his own experience:

Well, the religion tells us to not to give up, to try harder and harder, to pray and to work until we get ...the work done ... If you have a problem, you don't have to give up very easily, try hard, harder and harder until you will get the results you want (Ahmed, Kuwaiti, Speech and Language Therapist).

Ahmed was asked to elaborate on how acceptance assists the rehabilitation process:

It depends on the type of the disability ... having faith and having acceptance will help you learning new skills ... and becoming more functional (Ahmed, Kuwaiti, Speech and Language Therapist).

Understandings of acceptance appeared to be culturally influenced as health professionals from non-Kuwaiti cultures viewed acceptance in more negative terms as fatalism, which they thought prevented active participation in rehabilitation. This is discussed in the next section. Although the issue of acceptance can be viewed negatively, Mohammed explained that acceptance is a positive strategy that could lead to increased motivation, perhaps by reducing denial and anger, which interfere with engagement in rehabilitation:

If they are accepting, they are willing to do something... acceptance is a positive way. ... Accepting means that I am accepting what I have, that I can do something to improve it. If he will accept his disease, now he will try to see what types of treatments that are possible and [what] he can achieve ... he is trying to do something and this is good (Mohammed, Kuwait, Physical Therapist).

Helen, who was also of the Muslim faith, although non-Kuwaiti, explained both the positive and negative effects that acceptance can have on a patient.

Acceptance in the stroke patient... [has a] negative and positive effect. Because if, at the early stage you say that this is my fate, I am going to accept it. Some of these people they wouldn't do anything, they just accept it, 'this is what God wants me to do'. 'This is going to happen' and this is what sometimes de-motivates them. But the other side is the positive side. 'This is what God gave me' so ... you try hard...So that's why I say sometimes it's positive, sometimes it can be negative (Helen, Malaysian, Nurse) While the Kuwaitis viewed acceptance as necessary and a true reflection of their religion, Western therapists generally viewed religious coping and acceptance as different responses, with acceptance more related to fatalistic beliefs, which will be discussed next.

Fatalistic Beliefs

Some health professionals considered that patients' fatalistic beliefs had a mixed role to play in rehabilitation. A Muslim therapist explained:

So some people, even though they try hard, but they believe that after you pray, after you do everything, if the condition is still there, then in our belief this is your fate ... if the fate is already like that, it's like that you can't change the fate. You can try to improve, but if the God is willing then, then thank God, but if the God is not willing, then it's fate (Helen, Malaysian, Nurse).

Matt, a non-Muslim Canadian, considered that although fatalistic beliefs can lead to reduced personal responsibility, religious faith may encourage patients to fight through challenges post-stroke, experiencing God as a supportive presence and putting themselves in His hands:

I think they are able to deflect some of the responsibility... or allow some of the weight of the experience to be placed on their God... you can also say that God will take you through it, as opposed to I have to fight through it on my own (Matt, Canadian, Physical Therapist)

Fatalistic beliefs were mostly thought to limit patients' engagement in rehabilitation, although a small number of therapists thought that fatalistic beliefs reduced emotional turmoil, which can also interfere with engagement in rehabilitation. A few linked fatalistic beliefs to surrender and trust in God, which could increase the patient's sense of support.

Therapists' Engagement with Religious Issues during Rehabilitation

Some therapists regarded health professionals as having a role to play in drawing upon patients' religious faith if it helped to motivate them during therapy. Although Matt was of a Christian background, he was interested in his patients' Muslim beliefs: In Kuwait there are no guidelines so it's a personal choice as to how far you get involved in it [Muslim religion]. Where it (religious faith) is helpful, I think you get involved but where it's potentially going to cause problems then it's up to the patient to decide how much we can get involved in that (Matt, Canadian, Physical Therapist).

A Kuwaiti therapist, on the other hand, experienced less choice over faith matters. He pointed out that religion is an integral part of life in Kuwait and could not be separated from rehabilitation. If religion could be used to motivate patients to improve and increase their function and satisfaction, then, he integrated such beliefs within rehabilitation.

We have to [acknowledge religion]... Most people here in Kuwait they are Muslims... those group of unbelievers, they are still a minority... Religion is not outside the hospital or inside the mosque alone, no, it is living with us in every place and at every time so it is something, I mean, part of our life. We can utilise it to the maximum to help these patients to achieve something, at least not in terms of function but at least of satisfaction, at least trying to do something (Mohammed, Kuwaiti, Physical Therapist).

Health professionals mentioned the need to use religious beliefs to enhance motivation during rehabilitation because religion is an important part of life among Kuwaiti patients. However, the qualitative accounts revealed that perspectives on religious coping, acceptance, and fatalistic beliefs differed somewhat among therapists, reflecting their personal and cultural backgrounds.

Discussion

No significant quantitative relationships were found between religious faith, selfefficacy, or life satisfaction in stroke survivors undergoing physical rehabilitation in Kuwait. Age was the only variable significantly positively associated with religious faith (mostly Muslim faith). The relationship with age was derived from a post hoc analysis so needs a cautious interpretation, but it is possible that older people were clinging to a more traditional religious faith or had a more conservative religious upbringing than the next generation. These findings are inconsistent with those from the reviewed literature investigating religious faith and health outcomes in both Western/Christian and Muslim cultures. Weaver et al. (2004) identified eight articles in which religious faith had positive associations with coping with illness. A further review of spirituality in coping with illness and disability was offered by Kaye and Raghavan (2002). Religious faith was reported to be positively related to mental health and happiness, in healthy Kuwaiti students (Abdel-Khalek 2006). Carried out with Muslim university students in Kuwait, the study found that religiosity, mental health, physical health, and happiness are all significantly intercorrelated. While religiosity accounted for only 15 % of happiness, mental health accounted for 60 % of happiness. This shows that there are other factors apart from religion that could influence well-being. Nevertheless, the use by Abdel-Khalek (2006) of a single item to measure each of the four variables makes it difficult to determine which aspects of religiosity the participants were referring to (such as interpersonal religion, religious attendance, or external religiousness). Findings from healthy young adults cannot be generalized to stroke patients. Education could influence outcomes, as Kuwaiti students may feel more able to express private views or able to challenge the assumptions of elders, and may feel less constrained by the norms that may govern older people. Faith may become a more salient issue when people are directly faced with disability/mortality (Idler and Kasl 1992; Idler et al. 2001), which may account for the limited variation in the stroke sample's responses.

The results of this study were also inconsistent with evidence that prayer has a positive role in coping post-stroke, albeit among Christians (Robinson-Smith 2002). However, the current study did not distinguish different aspects of religion such as prayer or attendance at religious events. A different method used to obtain data, better tailored to Muslim religious beliefs and practises, might have yielded different results. Robinson-Smith (2002) conducted interviews with eight stroke survivors who had already identified that they used prayer as a coping strategy. In contrast, this current study used a validated generic scale measuring religious faith of which prayer was a part. Options in the scale limited responses to strongly disagree, disagree, agree, and strongly agree. Perhaps having a greater choice of responses could have yielded different, more nuanced, results. Further critical evaluation is provided at the end of this section.

Giaquinto et al. (2007) also presented results in support of those of Robinson-Smith (2002) and in contrast to those of this study. They reported that religious beliefs were associated with lower anxiety and depression scores among Italian stroke patients (predominantly Christian). Among cardiac patients in the US (predominantly of the Christian faith), Ai et al. (2005) found that subjective religiosity was associated with less internal control and increased "powerful others" health locus of control. However, the use of prayer as a coping strategy was positively associated with internal health locus of control. These various findings suggest that religious belief and/or practice has no uniform influence on levels of internal control. Many facets of religious observance need to be differentiated in future research studies.

Spirituality was identified as a significant predictor of life satisfaction in patients undergoing rehabilitation in the US (Tate and Forchheimer 2002). These authors investigated life satisfaction, quality of life and spirituality in cancer and rehabilitation patients. Although Western literature suggests a distinction between religion and spirituality (Giaquinto et al. 2007; Williams and Sternthal 2007), Rassool (2000) points out that in the Islamic context, the terms "spirituality" and "religion" have the same meaning. Evidence described above suggests that spirituality and religious faith could be associated with better health outcomes and life satisfaction in the rehabilitation of neurological patients. However, the current study failed to identify such a relationship.

A lack of measured association between religious faith and psychological variables such as self-efficacy and life satisfaction in this study could reflect possible fatalistic beliefs among stroke survivors living in Kuwait. This suggestion was supported to some extent by interviews with health professionals. Fatalism was expressed as a positive stroke survivor coping strategy, linked with acceptance, particularly by Kuwaiti health professionals. In contrast, Western therapists in the current study voiced their concerns that fatalistic beliefs encouraged a passive approach by the patient toward therapy and an avoidance of responsibility to play an active role in rehabilitation. This contrast in perspectives may reflect the Western health professionals' own culture and experiences with patients in their own countries who appear (to them) to be more engaged and participative in therapy. Kuwaiti-born therapists, on the other hand, explained the need for patients to be educated about

recovery and their need to participate actively in therapy. A Malaysian Muslim nurse explained that fatalism could have both a positive and a negative role in rehabilitation. Its positive role was expressed as being related to acceptance and contentment with disability after trying as best as possible to recover and to achieve agreed goals. Its negative influence related to abandonment (spiritual surrender) and lack of active participation in therapy as mentioned by Western therapists. It is possible that Western health professionals have been educated in client-centered models, which emphasize personal worlds, values, motives, and active engagement by the patient (Sumsion *1999*). Where Kuwaiti patients are indeed reluctant to participate actively in rehabilitation, it is unknown whether this reflects fatalistic religious beliefs or broader cultural values (shaped by the dominant biomedical model, and the societal position of therapists more as servants rather than partners in rehabilitation). Further research is needed.

Critical Evaluation

One issue that may account for the lack of measured relationships among the selected variables is that the religious faith scores (derived from the Santa Clara Strength of Religious Faith Questionnaire) showed much less variability than in previous studies. Most participants reported high scores. Although presented as suitable for any religion, it is possible that the tool developed to measure religious faith in mainly Christian or secular cultures was not sensitive enough to pick up subtle differences in levels of agreement within a predominantly Muslim sample. In addition, during face-to-face data collection, participants may have felt that they were being personally "judged" by their answers to the questions. Social desirability effects are well understood in social psychology to be a source of potential bias especially in face-to-face data collection (Presser and Stinson *1998*). In this project, the issues may go deeper than social desirability, as participants may have held strong convictions that there is no alternative other than being deeply religious and unquestioning of faith. It may be difficult to determine the influence of religiosity in cultures which require a strong public commitment to religion.

Phase 1 adopted a cross-sectional design. This meant that causal associations could not be made. Compared to other similar published studies, the Phase 1 study

used a relatively small sample size of 40 participants for pragmatic reasons, that is, time available and difficulty recruiting sufficient numbers of willing participants meeting exclusion and inclusion criteria. Only female participants were used in Phase 1; therefore, its results cannot be generalized to include male stroke survivors. The use of self-report measures meant that there is a possibility that participants were unwilling to report their true beliefs regarding self-efficacy and religious faith.

The role of the first author as a Christian and non-Kuwaiti working and interviewing in a different cultural context cannot be overlooked. This may have affected participants' willingness to disclose certain issues. The background of the interviewer could have led to subtle biases during interviewing and subsequent analysis of the data in all phases of this study. It is also possible that all the researchers' taken-forgranted beliefs influenced data analysis, although this was managed through keeping a reflective diary, and discussion, to increase awareness of such implicit beliefs and assumptions. An ideal situation might involve the use of stroke survivors and health professionals in the joint analysis of the data. With the health professionals, interviews appeared to be free and frank, with fewer social barriers than encountered with patients. However, several therapists were using English as a second language, and this may have inhibited communication about deeply held, potentially subtle, and difficult to express religious and spiritual beliefs. Also, advantageous was the composition of the health professional sample, with both Kuwaiti and non-Kuwaiti participants, which enriched perspectives on the Kuwaiti culture. However, further comparison of the beliefs and perspectives of Muslim and non-Muslim participants would require larger samples.

Conclusion

The results of Phase 1 of this project showed that professed religious faith did not relate to self-efficacy or life satisfaction in a largely Muslim sample of stroke patients in Kuwait. This result came as a surprise to most of the health professionals interviewed in Phase 2, who were working in stroke rehabilitation. The majority of professionals expressed the view that they had expected to see a positive relationship between religious faith and life satisfaction (and self-efficacy).

Three themes were identified in the health professionals' interviews discussing their perceptions of the role of religious faith in stroke recovery/rehabilitation. These were as follows: religious coping and acceptance, fatalistic beliefs and the therapists' engagement with religious issues in rehabilitation. While Kuwaiti therapists viewed religious coping in a positive light and as assisting in acceptance of disability, some Western health professionals felt that religious beliefs increased fatalism and encouraged patients to place responsibility for their progress in God's hands and to lack motivation to participate actively in rehabilitation. These different views may have been shaped by the home culture of the health professionals. Stanhope (2002) describes different allocation of responsibility over symptoms based on cultural backgrounds, with Western cultures more attuned to taking more personal responsibility. Health professionals need to be aware of the possible influence of religion on patients' acceptance and motivation during recovery and rehabilitation post-stroke, and how their own religious beliefs may influence their preparedness to work in culturally sensitive ways with patients. There is a need for more mixedmethods studies with Muslim patients living in the Middle East and in Western multicultural contexts to achieve a deeper understanding of religious coping within rehabilitation.

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