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# Adolescent Males' Motivations to be Physically Active: A Qualitative Systematic Review Framed by Self Determination Theory

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## ABSTRACT

**Background:** Evidence suggests that adolescent males' physical activity levels are declining more rapidly than females. Adolescent males' motivation to be physically active needs to be better understood to ensure they stay active into adulthood.

**Purpose:** The aim of the systematic review was to synthesize qualitative research framed by Self Determination Theory to examine adolescent males' motivation to be active.

**Methods:** Databases were searched using key terms to identify studies that met the inclusion criteria.

**Results:** Adolescent males' experienced physical activity in line with intrinsic and extrinsic regulations and felt amotivated to be active if they found physical activity boring, felt vulnerable in physical activity spaces, or experienced peer teasing. Peer relatedness was key to their motivation to be active, associated with both amotivation via peer comparison, and positively with increased intrinsic motivation to be active with friends and those of a similar ability.

**Discussion:** Increased autonomy in adolescence means leisure-time physical activity with friends, away from school and parents, is critical if adolescent males are to remain active into adulthood.

**Translation to Health Education Practice:** Adolescent males' physical activity needs to be inclusive to a multifaceted definition of masculinity, ensuring all adolescent males' basic psychological needs are met.

## ARTICLE HISTORY

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## Background

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19, and is recognized as a critical period for the establishment of damaging health behaviors such as poor diet, smoking, alcohol abuse and inadequate physical activity (PA), which lead to obesity and chronic morbidity in adulthood.<sup>1</sup> The World Health Organization (WHO) defines PA as any bodily movement produced by skeletal muscles when energy is expended.<sup>2</sup> Regular PA is considered a key lifestyle factor in the prevention and management of obesity, type-2-diabetes, and cardiovascular disease, with WHO recommending adolescents complete one hour of MVPA (moderate to vigorous physical activity) per day.<sup>3–5</sup> In the US the Centers for Disease Control and Prevention reported higher childhood obesity for males, with 13.6% of 2–5-year-olds, 22.9% of 6–11-year-olds and 22.6% of 12–19-year-olds classed as obese.<sup>6</sup> In the UK the National Child Measurement Programme found 26.4% of males entering adolescence (Year 6) were obese, compared with 20.4% of females.<sup>7</sup> Understanding how to can motivate adolescent males to

remain active through into adulthood is key to preventing obesity and chronic morbidity in later life.<sup>8</sup>

The WHO worldwide survey found that 77.6% of adolescent males aged 11–17 years were insufficiently active in 2016.<sup>2</sup> The number of male adolescents reaching the PA guidelines of 60 minutes a day is 49.4% in the UK and 30.9% in the USA.<sup>9,10</sup> Exploring the recent Sport England data on the least active adolescents (less than an average of 30 minutes per day), males were less active than females in school years 7–8 at 29%, and in years 9 to 11 they were at the same level of 30.2%.<sup>10</sup> The focus on adolescent females' PA levels has caused researchers and practitioners to overlook the need to examine why such a high percentage of adolescent males are not remaining active through adolescence.<sup>11,12</sup> Research into PA of adolescent males has predominantly been quantitative, but with the severe health implications of future generations in the balance we need to ask adolescent males, through qualitative in-depth research, the reasons why they are not remaining as active and how we can motivate them to make healthy lifestyle choices and find PA they enjoy.<sup>13–15</sup>

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Examining adolescent males' motivations to be active needs to be set in the context of how contemporary society currently defines and views masculinities to ensure we fully understand how it affects them.<sup>16</sup> There are two distinct viewpoints on masculinities within PA environments, firstly the prevailing view of the dominant, hegemonic, heteronormative masculine concept,<sup>17</sup> and secondly the recent inclusive masculinities theories of multiple sexuality and gender identities.<sup>18</sup> Adolescent males' experiences of PA depend on their embodied masculinity within PA environments, and those that do not fit the hegemonic, White, heteronormative, masculine type may feel marginalized.<sup>19</sup> Puberty and growth occur at different ages during adolescence and males' body shape, weight and height can affect their physical embodiment in a PA setting.<sup>20</sup> Adolescent male bodies are seen as a prime indicator of masculinity, with muscular body shapes being coveted as a symbol of attractiveness and power and masculine traits of strength, authority, and aggressiveness wanted.<sup>17,21</sup>

### Theoretical background

Motivation is what drives people to behave in a certain way and is an important pre-determinant to PA.<sup>22</sup> It is acknowledged that males and females have different motivations for participating in PA.<sup>23</sup> Self Determination Theory (SDT) is an empirically based psychological model concerning the nature, structure and functioning of a person's motivation and pro-action.<sup>24</sup> SDT details the basic psychological needs (BPNs) of perceived autonomy, relatedness, and competency to be present to feel intrinsically motivated to engage in an activity.<sup>24</sup> Autonomy describes the feeling that the behavior is self-regulated and in accordance with a person's individual wishes and values.<sup>24</sup> Feelings of competence are also needed for autonomous motivation, to ensure a person senses they are capable to complete the task well. Relatedness refers to perceived social connections, which promote an individuals' feelings of belonging and affinity with a behavior or context.<sup>25</sup> SDT has been established as a suitable framework for understanding adolescent PA motivations and the contexts that prompt individuals to be active.<sup>22</sup>

A core component of SDT is the autonomy-control continuum (Figure 1), which shows the distinctions between autonomous and controlled motivation.<sup>24</sup> Amotivation occurs, when there is a lack of purpose, feelings you are ineffectual, or actively passive.<sup>26</sup> Controlled motivation can occur when there is either external regulation from outside sources, such as pressure from parents or coaches, or introjected motivations such as guilt and shame to look or behave a certain way.<sup>27</sup> Identified regulation, an autonomous motivation, may be experienced where PA becomes personally valued and goals are set.<sup>28,29</sup> Autonomous motivation also occurs when PA is seen as part of a personal identity and belief system as an integrated motivation, for example identifying as a runner or cyclist.<sup>28</sup> Intrinsic motivation is perceived when an adolescent male feels congruence and in control of their PA behaviors, with internal feelings of enjoyment.<sup>30</sup>

A review on SDT in physical education commented on the need for research into the gender effects on motivational outcomes, particularly on adolescent males, to assess how different forms of motivation to be active are experienced.<sup>13</sup> Systematic reviews and meta-analyses conducted on PA in adolescence, using SDT as a framework, have tended to focus on Physical Education (PE) in school, rather than PA in all settings.<sup>13,14,31</sup> Other reviews have combined data with either younger children or adults, and no review has focused only on adolescent males.<sup>15,24</sup> Moreover, systematic reviews in this area tend to focus on quantitative data.<sup>13-15,31</sup> Qualitative reviews using SDT in adolescents are limited to single study exploring motivation in PE for both boys and girls.<sup>13</sup> However, qualitative systematic reviews provide additional insight that is difficult to capture in quantitative work. For example, they allow for a deeper understanding of motivation from the perspective of the young person and an exploration of all BPNs, that can go overlooked in quantitative studies.<sup>13</sup>

### Purpose

Given the low levels of PA in adolescent males there is a need to synthesize qualitative evidence relating to motivations of this group.<sup>2,9,10</sup> The perspectives and

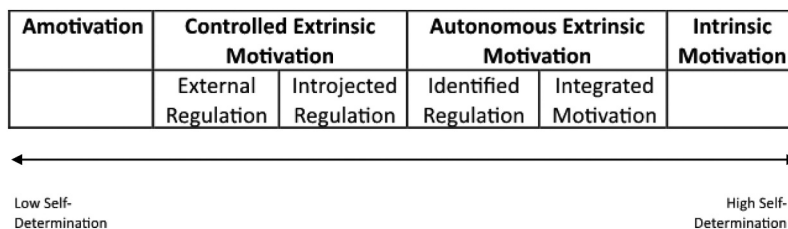


Figure 1. The self-determination continuum (adapted from Deci & Ryan, 2000).

opinions of adolescent females about PA have been collated in systematic reviews.<sup>32,33</sup> However, the voices of adolescent males have been largely underexplored. There are no qualitative systematic reviews exploring adolescent males' motivations to be active, therefore the aim of the review is to synthesize current studies using a SDT framework, to gain a more detailed insight into adolescent males' motivation to be physically active. The research questions were as follows: 1) How do adolescent males experience extrinsic motivation, intrinsic motivation and amotivation to be active? 2) How do adolescent males understand their BPNs (autonomy, competence, and relatedness) to be active? 3) How adolescent males' individual and societal identities affect their BPNs to be active?

### Methods

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses

(PRISMA) statement (Figure 2) and was registered to the international prospective register of systematic reviews (PROSPERO) on 2<sup>nd</sup> August 2021.<sup>34,35</sup>

### Search strategy

A comprehensive search of electronic databases using a combination of controlled vocabulary (MeSH) and free text term and scoping searches was conducted to assess search terms resulting in this systematic search strategy. Databases APA PsychInfo, APA PsychInfo Articles, SportDiscus, ERIC, Academic Search Complete, SocINDEX, CINAHLplus, and Medline via EbscoHost were searched, using the timeframe January 2001 to August 2021. Gray literature was sought by a request via the University twitter feed and Instagram pages, and no literature was found. All 2,209 identified papers were stored on Endnote and screened for duplicates.

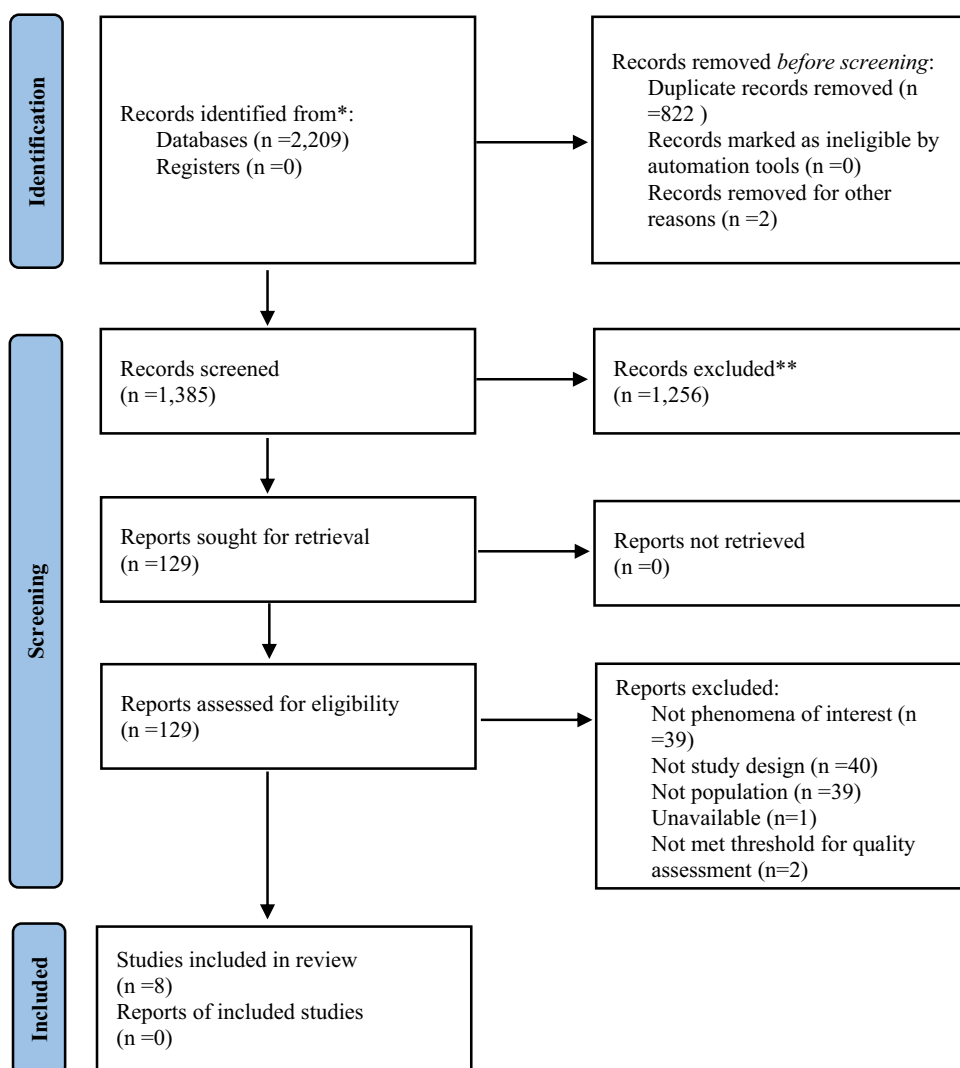


Figure 2. PRISMA flow diagram on the search screening process for adolescent males' physical activity motivation.

The search terms were devised using the following categories, a) methodology, b) population, c) theory, and d) phenomenon of interest (see supplementary material). Qualitative and mixed method studies (only qualitative data) were included. Adolescence is conventionally understood as the years between the start of puberty and the establishment of social independence, and although difficult to define, 11–18 years was used to ensure that adolescent males were in secondary education.<sup>36</sup> “Boy” and “male” were used as the search terms in line with the definition of gender as socially constructed and what an individual self-identifies. Self Determination Theory was explored, but search terms included constructs within this such as different forms of motivation and basic psychological needs. All forms of PA are included in line with the World Health Organization.<sup>5</sup>

### **Inclusion and exclusion criteria**

The SPIDER tool was used to define the research question and eligibility criteria to identify relevant literature for inclusion, examining the sample population, phenomenon of interest, theoretical design, evaluation data and the research type (see supplementary material).<sup>37</sup> Included studies examined adolescent males aged 11–18 years, in all forms of PA framed by SDT, and evaluated motivations to be active via qualitative or mixed-method research. The decision to include studies only framed by SDT and exclude studies framed within other motivational theories echoes the strategy adopted in other qualitative reviews.<sup>31</sup> Only studies in English were included. After conducting scoping reviews, the reviewers determined a time frame of twenty years allowed for all relevant peer-reviewed studies to be found from January 2001 to August 2021. Studies had to have an element of qualitative, empirical research, and include identifiable data on males.

### **Data selection**

The primary reviewer screened the titles and abstracts of 2,209 studies and 2,080 were excluded. Full texts of 129 studies were read for eligibility and independently checked by the second reviewer. This secondary screening excluded 121 studies and 8 were included in the review. Figure 2 shows the PRISMA flowchart of studies.<sup>34</sup>

### **Data extraction**

Data was extracted by a reviewer using the Cochrane standardized data extraction form including details of participants, methodology, analysis, qualitative themes,

conclusions, and limitations of each study and independently screened by a second reviewer.<sup>38</sup>

### **Data synthesis**

An interpretative methodological approach was taken, appropriate for qualitative synthesis, resulting in thematic synthesis being used to explore the primary studies, allowing for heterogeneous data to be analyzed and the reviewers to develop themes.<sup>39</sup> Thematic synthesis was selected based on its appropriateness within the RETREAT framework for selecting research synthesis for qualitative systematic reviews.<sup>40</sup> The RETREAT criteria include the Research question, Epistemology, Timeframe, Resources, Expertise, Audience (purpose), and Type of data.<sup>40</sup> A detailed synthesis was conducted initially using thematic analysis; a systematic process of familiarization of data, coding, and generating common themes across the papers which was recorded on MS Word.<sup>41</sup> Critical discussions were held by the research team to develop these themes further to produce an analysis revealing the differences, similarities, inconsistencies, and gaps in the studies grounded in specific, identifiable data summarized in results.<sup>42</sup> The three spheres of data, theory and methodology in each study were examined providing a critical analysis of the original studies and producing new reflexive perspectives to be identified.<sup>43</sup>

### **Quality appraisal**

Two independent reviewers completed a quality assessment form for each eligible study to check the methodological quality of the studies using the Critical Appraisal Skills Programme Systematic Review Checklist.<sup>44</sup>

### **Results**

The data synthesis produced 7 key themes (Table 1.) toward adolescent males’ experiences of motivations to be active, their understanding of their BPNs and how these are influenced by their identities.

### **Characteristics of included studies**

Table 2 details the eight studies included in the systematic review. Seven of the studies examined all adolescents’ motivations to be active, with only one paper concentrating on adolescent males only.<sup>47</sup> Four studies were based in the UK,<sup>46,48,51–52</sup> three in Norway<sup>45,49,50</sup> and one in Australia.<sup>47</sup> The males ages ranged from 11–18

**Table 1.** Themes produced toward adolescent males' experiences of motivations to be active, their understanding of their BPNs and how these are influenced by their identities.

| Number | Theme  |
|--------|--|
| 1      | Extrinsic motivations are experienced as feeling of pressure and through identifying the value of PA for health      |
| 2      | Intrinsic motivations are experienced as fun when the BPN are met  |
| 3      | Amotivation is experienced when PA is perceived as boring, or environments make adolescents feel uncomfortable       |
| 4      | The degree of autonomy satisfaction is influenced by choices offered by parents and in PA and pedagogical spaces     |
| 5      | The degree of competence satisfaction is impacted by comments from peers and perceptions of sporting identity        |
| 6      | Relatedness satisfaction is a key factor for PA participation that was primarily impacted through peer relationships |
| 7      | Adolescent males' individual and societal identities are overlooked in qualitative studies                           |

**Table 2.** Included studies and their characteristics.

| Authors       | Aim  | Location of Study | Population  | Methodology  | Data Analysis      | Key Findings  |
|---------------|--|-------------------|---|--|--------------------|---|
| <sup>45</sup> | Explore motivation for PA in adolescents with asthma in a 10-week play based intervention.   | Norway.           | Adolescents with asthma. 13–19 years. All PA.                             | Qualitative. Semi-structured interviews. Field observations. | Thematic analysis. | Facilitating involvement for adolescents with asthma might help remove previously reported barriers for PA. Demonstrated the importance of understanding asthma by participants and instructors.  |
| <sup>46</sup> | The aim of this study was to explore motives, barriers, and enablers to physical activity among those with cystic fibrosis (CF).   | UK.               | Adolescents with CF. 12–18 years. All PA.                                 | Qualitative. Interviews. Photo elicitation.                  | Thematic analysis. | Key factors perceived by the participants to encourage/adoption and maintenance of PA: social support; positive history of PA; role models; physical mastery/competence; and positive affect.   |
| <sup>47</sup> | ATLAS (Active Teen Leaders Avoiding Screen-time) programme, to engage adolescent boys from low socio-economic backgrounds in PA, reduce consumption of sugary beverages and limit screen-time. | Australia.        | Male adolescents 12–13 years. PE lessons                                  | Qualitative. Focus groups.                                   | Thematic analysis. | Suggest embedding health promotion programmes in a need-supportive context can help to foster the motivation and self-regulation required to maintain newly adopted healthier behaviors.  |
| <sup>48</sup> | To investigate pupils' perceptions of and experiences of PE, i.e. their perception of competence, enjoyment/value they attach to games such as soccer and basketball                           | UK.               | All adolescents. 11–15 years. PE lessons                                  | Mixed methods. Questionnaire and focus groups.               | Thematic analysis. | Male pupils seem to enjoy games such as soccer and basketball more than female pupils, have higher levels of perceived competence than female pupils and place greater value/importance on contact PE.  |
| <sup>49</sup> | Explore how adolescents', who receive weight management in primary health care, experience barriers to and facilitators for engaging in PA within their social networks.                       | Norway.           | Adolescents classed as obese or overweight. 13–17 year PE lessons         | Qualitative. Interviews.                                     | Thematic analysis. | Experiences of PA in their social networks, organizing PA groups that consist of similarly young people classed as overweight can contribute to an increased level of PA and help modify their negative perceptions of such activity.                               |
| <sup>50</sup> | Explore how adolescents understand their parents' involvement in sport and how they define ideal and undesirable forms   | Norway.           | All adolescents 13–14 years. All PA.                                      | Qualitative. Focus groups and interviews.                    | Thematic analysis. | Young people should be seen not only as subjected to parental involvement but also as active co-constructors of valid parental roles in and beyond the sporting arena.  |
| <sup>51</sup> | To understand the determinants of PA and dietary patterns in the population with mild intellectual capabilities.   | UK.               | Adolescents with mild cognitive disability. 16–18 years. All PA and diet. | Qualitative. Interviews.                                     | Thematic analysis. | School structure, high self-efficacy and social connectedness facilitate increased PA and healthier diet in adolescents with intellectual disabilities. Home life, low self-efficacy and a lack of social connectedness serve as barriers to PA and a healthy diet. |
| <sup>52</sup> | Explore adolescents' values in relation to diet and PA and how these values can inform health intervention design.   | UK.               | All adolescents. 13–14 years. All PA and diet.                            | Qualitative. Semi structured interviews.                     | Thematic analysis. | Interventions designed to support adolescent health need to focus on aligning health agendas with adolescents' own values and priorities, creating autonomous forms of motivation for eating well and being active.   |

years and four of the studies examined males with underlying health conditions of asthma,<sup>45</sup> cystic fibrosis,<sup>46</sup> mild intellectual disability,<sup>51</sup> and classed as overweight or obese.<sup>49</sup> Three of the studies examined PE classes rather than all PA and two explored adolescent males' diet as well as PA.<sup>47–49</sup>

### ***Extrinsic motivations are experienced as feeling of pressure and through identifying the value of PA for health***

Adolescent males' extrinsic motivation was influenced by parents<sup>50</sup> and coaches,<sup>49</sup> with feelings of external regulation to be active. Some males felt external pressure from parents to be active as a protection against them getting into trouble and deviant behavior.<sup>50</sup> A participant said, "I believe they want us to do activities instead of hanging out at the mall or something like that."<sup>50</sup> Extrinsic motivation can also take the form of identified regulation, where PA behaviors have been personally valued.<sup>28</sup> Where males had managed to maintain PA after an intervention, they sometimes described feelings of self-regulation and identified values in PA, for example, "would be good for me to use later in life so I'm healthier and live longer."<sup>47</sup> Adolescent males with health conditions recognized the value in PA and experienced identified regulation to be active in the long term.<sup>45,46</sup> A 14-year-old participant with cystic fibrosis said ". . . I just think like I need to do it to stay healthy. And like, if I want to live a long life, healthy life, I just need to do it and do it properly so I can live."<sup>46</sup> Although some of these benefits were directly related to fear of ill health, there was also a greater knowledge of how PA could improve their general fitness and well-being. A 17-year-old with cystic fibrosis said, "I think everyone should do more, regardless of whether they have cystic fibrosis or not. . . because it makes you feel so much better."<sup>46</sup>

### ***Intrinsic motivations are experienced as fun when the BPN are met***

Adolescent males were intrinsically motivated if their BPNs of autonomy, competency, and relatedness were satisfied.<sup>48,49</sup> Feeling a sense of social connectedness was key to adolescent males being intrinsically motivated to continue to be active, sensing they "fitted in" if they felt comfortable to exercise together in a supportive environment.<sup>45</sup> Intrinsic motivation and wanting to continue PA can also be achieved by feelings of competence and mastery of an activity, leading to increased self-confidence.<sup>45</sup> If adolescent males found an activity hard, but had then improved their

personal performance, they gained a sense of achievement, with a 16-year-old participant saying, "Now I manage to do ten push-ups. I couldn't do one before."<sup>45</sup> A key word used by adolescent males to describe PA was "fun," as they found it enjoyable and stimulating. One participant said, "Yes (I will continue with PA), 'cause I find it amusing, like fun as a workout, workouts are usually boring and stuff and it's not though, not this one."<sup>47</sup> A male aged 17, classed as overweight, talked about how PA had become fun in his new activity group of adolescents with weight issues saying, "When I started, I thought it would be really boring and so on. I thought it would be no fun here. I've been proven wrong . . . I'm very happy that I have friends here and all that. People I come along with are a lot of fun to exercise with."<sup>49</sup> This form of intrinsic motivation to be active encouraged males to make an effort during PA and choose to continue coming to exercise.<sup>47</sup>

### ***Amotivation is experienced when PA is perceived as boring or environments make adolescents feel uncomfortable***

The three principal reasons mentioned by adolescent males to why they felt amotivated to be active were, finding PA boring,<sup>47,50</sup> feeling uncomfortable and vulnerable in PA spaces,<sup>49</sup> and peer teasing and peer comparison in terms of body and ability.<sup>45,51</sup> Finding PA boring was a reason for quitting PA, with a participant quoted as saying, "I've played football almost as long as I can remember. But then it got really boring and stuff . . . And then there were many who quit. Then I wanted to quit as well, but they said, 'Just try.' So I tried. But I still didn't have fun, so I quit."<sup>50</sup> Lack of motivation to be active due to not feeling involved was particularly evident in adolescent males with chronic health conditions, with a study of adolescents with asthma finding they felt a lack of competence as their health condition was not considered in PA settings or by coaches.<sup>45</sup> A 14-year-old participant said, "We were supposed to run around the [name of a small lake], and I could not participate because first I had to warm up, and second, I could not run as long as the others."<sup>45</sup>

Amotivation to be active was discussed in relation to feeling vulnerable in PA spaces and a dislike of being "visible" to others.<sup>49</sup> Feeling awkward about their physical embodiment in the space led to not wanting to be there and amotivation.<sup>49</sup> Adolescent males classed as overweight or obese were particularly exposed to these feelings of not wanting to be visible, as they expected to be teased, or felt embarrassed to come last or got exhausted in front of the

others.<sup>49</sup> Most adolescent males in the study had had negative experiences of PE and felt the classes were designed to cater for more athletic males, resulting in them being in “actual pain,” leading to not wanting to be there.<sup>49</sup>

***The degree of autonomy satisfaction is influenced by choices offered by parents and in PA and pedagogical spaces***

Perceived autonomy by adolescent males to be active came from parental influence,<sup>50</sup> PA spaces,<sup>49</sup> coaching styles,<sup>48</sup> and choice of activity.<sup>48</sup> Parents often had a high level of influence over what types of PA and where it takes place through positive encouragement and facilitating PA through transport to activities, paying for coaching sessions, and prioritizing PA in family diaries.<sup>50</sup> Autonomy could feel thwarted by parental influence when either there was a lack of interest in PA in the family, or where finances and time were prioritized elsewhere, making it harder for adolescent males to do the activities they wished.<sup>51</sup> Adolescent males also felt a lack of autonomy when parents placed too much pressure on them to perform.<sup>50</sup> During compulsory school PE the type of environment created by coaches and PE staff determined how much perceived autonomy adolescent males felt and choice of activity was the most common way they felt a sense of control over their PA.<sup>48,49</sup> Participants described a bias toward certain activities by teachers, without considering what pupils would like to do, with one male stating, “and usually the teachers themselves, they like football, and they think that almost that because they like it that other people should do it instead of asking people what they want to do.”<sup>48</sup> PE can be the only time adolescent males are active and negative experiences were found to influence whether they wanted to participate in other PA outside of school.<sup>49</sup> If they had a sense of autonomy over what activities were being taught in PE, this helped them feel they had control over their participation, with 13-year-old participant saying, “It’s soccer here, but I don’t want to start with soccer. But I don’t think there is much more to do here . . . ”<sup>49</sup> Adolescent males with health conditions, had often started to make informed choices about what activities they could do, considering their bodies’ abilities, with a 16-year-old participant with asthma saying, “That was the main reason I had to quit [football], because we had sessions in like one and a half hours, in the middle of winter. It was freezing, and when I got home, I could barely breathe.”<sup>45</sup>

***The degree of competence satisfaction is impacted by comments from peers and perceptions of sporting identity***

Adolescents need to perceive they are competent enough at an activity to take part and not embarrass themselves.<sup>48</sup> Heightened sense of self and public self-consciousness amongst their peers led adolescent males to feel their perceived low ability may produce negative responses from others, with a participant saying, “. . . You just say to yourself there’s not much point playing if they’re just going to give you abuse every time you miss it. They just take the absolute mick out of you, do you know what I mean.”<sup>48</sup> For adolescents with health complications the sense of feeling competent in PA spaces could manifest itself in comparing themselves by body shape<sup>49</sup> or athleticism.<sup>45</sup> The study of adolescents with cystic fibrosis found feelings of low competency during PA was amotivating, with an 18-year-old participant stating, “The swimming pool used to be split into lanes, and so you had to swim up and down the lanes. And I couldn’t keep up. I would have people overtaking me and kicking me, and have their feet and water in my face. It really put me off. . . and I stopped going.”<sup>46</sup> Being “sporty” was perceived as something to emulate, with a sense of pride if they managed to perform well in the activity in front of their peers, with one participant saying, “If you score a lot then you feel better,” and another adolescent male making a statement that suggested that it makes him apply more effort, “. . . you want to score more so it sort of drives you on.”<sup>48</sup> Where adolescent males felt they were not seen as “sporty” they felt peer pressure to perform, with one participant saying, “They [the exercises] were all right, just got a lot of pressure from everyone else to try to do them -like -go really fast and everything.”<sup>46</sup> The research found that where vulnerable adolescents had found supportive environments to be active, their sense of competency could be a key driver to them enjoying the activity, with a 13-year-old participant saying, “Because then you feel safer. . . for example, most of us are a bit stocky. . . except one . . . and if there had been several . . . and if you exercise, they start laughing if you do something wrong or something. And if there had been strangers present, then they would have started talking. . . They’d say bad things about you and things like that.”<sup>49</sup>

***Relatedness satisfaction is a key factor for PA participation that was primarily impacted through peer relationships***

Data supports the view that adolescent males enjoy being physically active with their friends, with one



participant saying, “It was really cool how we all got to do it together and -like -we got to do it with our friends.”<sup>47</sup> When asked what the adolescent males liked about being together with their friends in PA sessions, they described how they could support each other and create a friendly environment, with one participant saying, “(I like) . . . Having a training partner, having someone beside you to slap you across the back of the head and tell you to get up and stop being lazy.”<sup>47</sup> For adolescents with health issues exercising with peers with the same medical conditions allowed them to relate to each other, which encouraged effort.<sup>45</sup> A field observation described, “He did one push up and lay flat on his stomach. His teammate looked at him and said: ‘Come on, you can do it. Let’s do it together’. They both took nine more push-ups counting out loud.”<sup>45</sup> If a feeling of relatedness and support was not present adolescent males felt amotivated to be active.<sup>47</sup> These feelings were often related to compulsory school PE, where PA is conducted in classes and will include a wider peer group, which may not feel as safe an environment for all.<sup>49</sup> A participant aged 17 explained no alternative exercises were given to students who were overweight or obese – “Teachers in lower secondary school saw the whole class as one pupil. For everyone to be good, they had to do (exercises and activities) exactly the same as everyone else.”<sup>49</sup> Studies where adolescents were able to participate in PA with peers they could relate to, in terms of friendship and ability, also found the teachers made it a positive, enjoyable experience.<sup>47</sup> By creating a more caring, safe environment encouraged by teacher engagement and autonomy adolescent males wanted to participate and enjoyed the challenge of the activities.<sup>46</sup> Adolescent males with health issues particularly appreciated when pedagogues were able to target PA on a more individualized level, as opposed to “one size fits all”.<sup>47</sup> Having proactive parents was found to facilitate adolescent males’ ability to be physically active outside of PE lessons, but the participants did want there to be limits on parental involvement, to enable them to express themselves without their parents present and to “feel free” and “get away” from their parents.<sup>50</sup>

### ***Adolescent males’ individual and societal identities are overlooked in qualitative studies***

Data on adolescent males’ social identity such as ethnicity, culture, sexuality, and social group were not collected in the studies. This limits findings on how their individual and societal identities and contexts affect their motivations to be active. However, in the study of adolescent males with health conditions were aware

of how their health context and identity affected their motivations to be active, with adolescents with CF participating in PA to “escape” from CF and experience a sense of normality.<sup>46</sup> A participant commented

For me. . . football was the one thing I did that had absolutely nothing to do with having CF. I mean obviously it did in terms of the implication of cardio on my lungs, but that wasn’t what I thought about. When I was playing football, I was just like everyone else and could forget that I was the kid with that illness. . . It’s about being normal, and healthy and having fun, and not just being the kid with CF for a while. It’s just about being me. (Denford et al., 2019, p.4).

## **Discussion**

Understanding adolescent males’ motivations and BPNs of autonomy, competency, and relatedness to be active is key to preventing sedentary lifestyle choices in adulthood.<sup>5,53</sup> This review is the first synthesis of qualitative studies focusing on adolescent males’ PA motivations using SDT to understand their BPNs, and how these are affected by their individual and societal identities. Adolescent males’ increased autonomy over their leisure-time activities, and reduced influence of parents and teachers, allows them to make more of their own choices around PA.<sup>54</sup> The review found adolescent males who have not discovered a PA which fulfills their BPNs by the age of 11–13 years may choose to be inactive and avoid PA spaces when they can.<sup>55</sup>

Within the contemporary socially constructed view of masculinity adolescent males’ embodied experiences in PA spaces are varied and complicated to evaluate.<sup>56</sup> The results show adolescent males who fit the hegemonic male social expectations with masculine traits like courage, strength, leadership, and assertiveness, find traditional PA such as football, rugby, and athletics as places they can excel and show off these qualities, whereas adolescent males who cannot fulfill this gender performativity can feel excluded and unwelcome in these spaces.<sup>17,57</sup> Adolescent males’ PA needs to align with the inclusive definition of multi-dimensional masculinities to include those of different sexuality, ability or with socially constructed feminine traits such as sensitivity, gentleness, and kindness.<sup>18,58–60</sup>

Key to keeping adolescent males active is ensuring they feel comfortable in PA environments and have a sense of belonging and fitting in amongst their peer group, both in terms of having friendships and feeling competent enough not to make a fool of themselves in front of the wider peer group.<sup>25,61</sup> The results show adolescent males connect the BPNs of relatedness and competency together, as they can perceive the

adolescent peer group as an imaginary audience who are critical of their behavior and ability.<sup>62,63</sup> The concept of an imaginary audience is part of adolescent egocentrism where they cannot distinguish between their peers' opinions and their own preoccupations about how they look.<sup>62,63</sup> Adolescent males' socially constructed view of masculinity causes any lack of athleticism, strength, or stoicism to negatively affect their feelings of relatedness and belonging, triggering an amotivation to be in a PA space.<sup>64</sup>

The review indicates a need for participatory-led qualitative research to explore how adolescent males' masculine identities affect their motivations to be active.<sup>65</sup> Future research needs to be positioned within the inclusive beliefs around masculinities, ensuring all adolescent males are given a voice to produce an accurate picture of their experiences of current PA spaces.<sup>18</sup> The review found research focused on school PE, but there is a need to examine PA in all spaces including leisure-PA, as this is often what tracks into adulthood physical literacy.<sup>66,67</sup> The trend toward adolescent males' motivations to be active to increase muscularity and change aesthetic body-image is also an area which need to be explored further.<sup>68,69</sup>

## Limitations

The review was systematically produced, with a transparent audit trail of data, ensuring all relevant empirical qualitative studies were included and a trustworthy report produced. This strict eligibility criteria ensured validity of data and an ability to replicate the study, but limited inclusion of primary studies where males' data could not be identified, and adolescents were treated as a homogenous group. Future qualitative research data on adolescents needs to provide gender to be easily identifiable, and to include social identity data such as ethnicity, sexuality, and social group. A traditional gender binary vocabulary of masculine and feminine was used, adhering to the primary studies language, whereas a more nuanced and inclusive gender classification could have been used to include transgender and other gender identities. Primary studies were also excluded if they were not framed within Self Determination Theory, and perhaps a wider inclusion of studies using other motivational concepts could have added to the report.

## Translation to Health Education Practice

The National Commission of Health Education Credentialing Inc ([www.nche.org](http://www.nche.org), accessed 19/05/23) accredits Certified Health Education Specialists (CHES) and the areas of responsibility align with

findings from this study.<sup>70</sup> This paper will be of interest to CHES concerned with adolescent health and preventing damaging health behaviors being established which may continue into adulthood, leading to obesity and chronic morbidity.<sup>1</sup> This systematic review provides a unique qualitative overview of adolescent males' physical activity motivation that can support the development of PA programs (1.1.2 Identify priority population(s); 1.2.1 Identify primary data, secondary data, and evidence-informed resources; 1.2.3 Conduct a literature review). Based on the findings of this review, physical activity programs should be planned and implemented for adolescent males, specifically tailored for this population (Area II; Area III).

A practical intervention CHES can implement for adolescent males who do not enjoy competitive sport at school or PE lessons is to introduce new ways of being active and ensure PA is not just perceived as PE or traditional sports such as football, rugby and athletics (2.3.4, Adopt, adapt, and/or develop tailored intervention(s) for priority population(s) to achieve desired outcomes; 2.4.2, Development material needed for implementation). Another way sports health educators can tailor PA interventions is to ensure adolescent males can be active with peers of a similar ability<sup>28</sup> (2.3.4, Adopt, adapt, and/or develop tailored intervention(s) for priority population(s) to achieve desired outcomes; 2.4.2, Development material needed for implementation). Furthermore, CHES need to listen to adolescent males' experiences of PA spaces, including ancillary areas like changing rooms, and ensure they feel comfortable and safe to be active without sensing they are being judged (1.3.3 Identify the social, cultural, environmental factors that impact health). Data on adolescent males' social identity such as ethnicity, culture, sexuality, and social group were missing from the studies and future research needs to collect this data to assess whether these factors affect motivation to be active (Identify gaps in data 1.2.6).<sup>71-73</sup>

This study identified gaps in the literature relating to participatory approaches to physical activity promotion and research in this population (1.2.6: Identify data gaps; 1.2.7: Determine primary data collection needs, instruments, methods, and procedures). Adolescent males are classed as a hard-to reach population and can be difficult to engage with about health-related topics.<sup>74</sup> CHES need to know how adolescent males' attitudes, beliefs and behaviors impact their physical health (1.3.2) and identify what social, cultural, and environmental factors are preventing them from being active (1.3.3). It is recommended that CHES engage with adolescent males in participatory-led qualitative

research to develop PA interventions which meet their BPNs and motivate them to remain active (2.1.1 Convene priority populations, partners, and stakeholders).

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