

**Hearing the Unheard Voice-Puberty Experiences of Young Pakistani Men : A
Qualitative Study**

ABSTRACT

Introduction: Puberty experiences of male adolescents can have significant impacts on physical and psychological health outcomes. This qualitative study explored the puberty experiences of young males in Pakistan, as there are limited accounts of what shapes these puberty experiences, especially for adolescent males living in a restrictive culture.

Methods: Twenty-two young Pakistani men (aged 18-21 years) from two urban sites in Karachi participated in individual face-to-face (n=19) and Skype (n=3) interviews. Qualitative thematic analysis was conducted using an inductive approach to identify and examine the patterns emerging from the data.

Results: Participants described puberty as a challenging phase for which they were unprepared with a combination of various socio-cultural factors exposing them to negative impacts. As a result, young men expressed feelings of anxiety, embarrassment and isolation. Societal and gender norms around masculinity, sexuality and the roles and responsibilities of young men had a significant impact on how participants experienced puberty. While negative reactions towards puberty were dominant, participants described adopting coping strategies (e.g. social support) to help them deal with negative experiences.

Conclusions: Findings highlight the significance of culturally appropriate puberty education and various facilitating factors that may improve the puberty experiences for future young men. While extending current literature, this study also identifies key factors that could inform the development of health promotion programmes, which may

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aid adolescent males' puberty transition and positively influence their long-term health, well-being and identity.

Keywords: Puberty, Adolescence, Young males/men, Pakistan, Social and Masculine norms, Qualitative Research

Introduction

In global public health literature, puberty is described as a complex biological/physiological phenomenon that occurs during the early phase of adolescence, influenced by socio-cultural contexts 'setting the stage' for adult life (Taga et al., 2006, p. 401). While puberty and adolescence are often used synonymously to refer to the developmental transition from childhood to adulthood, both terms have distinct meanings and characteristics (Berenbaum et al., 2015; Curtis, 2015). Puberty is generally documented as the beginning of adolescence, marking a period in which, a teen's sexuality is developing physically because of the hormonal changes that occur as part of the puberty process (Alwan et al., 2010; Berenbaum et al., 2015; National Health Service [NHS], 2018; Wood et al., 2019). In contrast, adolescence is described as the entire 10-12 years of a transformation phase that occurs when a dependent child becomes a more functionally independent young adult (Curtis, 2015; Pickhardt, 2010).

Literature support that the physical changes that occur during puberty can bring about profound psychological transformation of adolescents' adult identity, affecting their mental health and other health-related behaviours (Berenbaum et al., 2015; Lydon et al., 2014). Various authors suggest that the hormonal changes during puberty play an important role in triggering emotional, cognitive and behavioural changes in young people (Hayatbakhsh et al., 2009; Holder & Blaustein, 2014; Martin et al., 2007; Patton et al., 2007; Pickhardt, 2010). Specifically, testosterone (a male hormone) is linked with certain behaviours in male adolescents during puberty, which is responsible for both motivational tendencies to attain a higher status in life (e.g. decision making, emotional well being etc.) (Forbes & Dahl, 2010; Sawyer et al., 2012), as well as, influencing risk-

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taking behaviours (e.g. smoking, substance abuse, unsafe-sex etc.) (Cheng et al., 2012; Duke et al., 2014; Lydon et al., 2014). Thus, puberty transition from childhood to adulthood is portrayed as a time of physical, cognitive and social development, which brings not only challenges, but opportunities, and developmental growth (Berenbaum et al., 2015; Feldstein Ewing et al., 2018; Herting & Sowell, 2017; UNFPA, UNESCO, & WHO, 2015).

A common observation is that gender-related social norms (i.e. masculinity) and restrictive cultural factors often discourage boys from speaking about or seeking information on taboo subjects, or getting engaged in research related to sensitive topics such as, puberty (Ali et al., 2004; Iqbal et al., 2017; Saewyc, 2012; Scandurra et al., 2016; Sommer et al., 2013; World Health Organisation [WHO], 2000). Pakistani society is dominated by these socio-cultural factors and gender norms, where adolescents, particularly males are often more hesitant to share their puberty concerns. This may be because of the taboo nature of the subject (Ali et al., 2004; Hennink et al., 2006; Iqbal et al., 2017), less engagement of adolescents and young males in accessing sexual and reproductive health (SRH) services, and the cultural traditions of associating reproductive health care as a female entity (Aahung Annual Report, 2018; WHO, 2007).

Various studies (Kirillova et al., 2008; Shelton et al., 2008; Vermeersch et al., 2008) indicate that many of the physical health outcomes and long-term psychological problems could be prevented if, during puberty, male adolescents' social and learning environments were improved and modified. Providing education regarding bodily changes may be helpful in preventing puberty-related anxieties and worries for these young males (Ahmadi et al., 2009; Khalid, et al., 2019), who are categorised as a high risk group during puberty (Duke et al., 2014; Saewyc, 2012; WHO, 2007).

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Consequently an in-depth understanding of puberty experiences, gender-specific needs and insight into the psychological transition during puberty from the young males' perspective could promote good puberty experiences and be helpful in developing educational interventions and preventing longer-term psychological impacts.

A review of current literature identified substantial evidence exploring the puberty experiences of female adolescents across several cultures including research related to Pakistan (Ali et al., 2006; Mumtaz, 2017; Sommer et al., 2016). However, there are limited numbers of empirical studies, exploring male adolescents' puberty experiences, and most of these were not conducted recently (Ahmadi et al., 2009; Beausang, 2000; Flaming & Morse, 1991). Indeed, the research gaps in relation to young men's health and developmental needs, particularly in relation to puberty have been previously identified in the literature (Berenbaum et al., 2015; WHO, 2000).

While some of the puberty transition aspects of adolescent males have been researched in Pakistan, this has been investigated earlier under the broader area of the reproductive health needs of young males (Ali et al., 2004), of which puberty was only a small part. Research specific to Pakistan and similar cultures has examined awareness and attitudes towards the broader subject of sexual and reproductive health, assessing knowledge, attitudes, and behaviours of adolescents of both sexes (Hennink et al., 2005; Iqbal et al., 2017; Kacha & Lakdawala, 2019; Rajapaksa-Hewageegana et al., 2015; Shaikh & Rahim, 2006; Talpur and Khowaja, 2012.), but has not been specific to puberty. Those related to puberty explored communication patterns between parents and children (of both sexes) during puberty (Mamdani & Hussain, 2015), or assessed the attitudes and beliefs of parents and teachers on puberty and sex education needs (Al Zaabi et al., 2019; Nadeem et al., 2020). Thus, previous studies examined views and

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perceptions from other stakeholders such as, parents, teachers, doctors, trainees or community leaders (Makol-Abdul et al., 2009, Nair et al., 2012, Nair et al., 2013), rather than investigating the perceptions of young males themselves. Moreover most of these studies were quantitative in research design and did not explore the contextual aspects of puberty experiences.

To address this gap in literature, a qualitative study with the aim of exploring young males' puberty experiences in Pakistan was designed. A wider objective of this research was to inform policy and programmes related to enhancing puberty transition experiences for young males in Pakistan and other countries with similar cultural contexts.

Method

Design and Setting

To explore young males' puberty experiences, a generic qualitative study was undertaken using individual semi-structured interviews. Through using a 'generic qualitative methodology', authors intended to 'uncover the participants (young males) puberty experiences', 'explore the meaning participants ascribe to those experiences' and 'examine the various perceptions, participants may have regarding their puberty transition process' (Bellamy et al., 2016, p. 262). The generic approach is most suitable when an in-depth description of the phenomena needs to be analysed, and when there is little knowledge about the phenomenon (Kahlke, 2014).

The study was conducted in Karachi, with participants recruited from two study sites, a private university (comprising of medical and nursing students) and a male scout group in the Garden-East region of the city. These two sites were chosen in order to

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invite a diverse range of participants to the study, as the two populations were from differing backgrounds. Site selection was also based on pragmatic reasons, as the lead researcher (NS) was able to secure permission to recruit participants from these sites.

Sampling and Participants

The sample comprised 22 young males, all living in the city of Karachi at the time of the study, able to read, write and speak either Urdu (National language) or English and able to provide consent to participate in the study. Due to the sensitive nature of the subject matter (Aahung Annual Report, 2018; Ahmadi et al., 2009; Alwan et al., 2010) which can make recruitment challenging (Ellard-Gray et al., 2015; Elmir et al., 2011) a pragmatic purposive approach to sampling using a combination of convenience and snowball sampling was used. Given the challenges that can be encountered when recruiting participants for potentially sensitive research studies, convenience and snowball sampling processes were considered most appropriate (Browne, 2005; Semlyen & Hagger-Johnson, 2017). Some of the potential participants contacted the primary researcher (NS), once the study adverts were put out by the university representatives and the scout leaders, who got hold of them to seek consent. The primary researcher also reached out to potential participants with the help of lecturers and scout leaders, and checked with them if they would consent to take part in the study. Once initial recruitment was established, further enhancement in the recruitment of participants was achieved through snowball sampling (Ghaljaie et al., 2017), in which participants were asked to pass on study invitations to other young males of their age, who may be interested in participating and had insight into the research question.

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Young males who expressed an interest were provided with further information and invited to attend an individual interview in a format of their choice (face-to-face or skype). The authors initially aimed to recruit 30 participants. However, the final sample size comprised 22 young males, as by this point, researcher was confident that no further new information was identified from interviews, suggesting that data saturation had been achieved (Moser & Korstjens, 2018). In addition, no new meanings or themes could be identified from the interview transcripts, proposing that the data may have reached to 'thematic saturation' (Hagaman and Wutich, 2017).

In this study, the age criteria for inclusion were 18-21 years, so that young males could provide a retrospective account of their puberty experiences. The rationale for including young males of this age rather than adolescents was to gain a full account of the puberty impact on young males' life. As these young males would be able to reflect on their puberty experiences and how this might have influenced their adolescent and young adult lives.

Data Collection Procedures

The participants were recruited using several strategies (i.e. posters, face-to-face meetings, and webpage adverts). Data were collected by the lead author (NS) through individual semi-structured interviews, using either a face-to-face approach (n=19) or Skype technology (n=3). Participants could choose between these two approaches and whether to communicate with the researcher in English or Urdu languages. A semi-structured interview schedule as seen in table 1, was developed to explore the young males' puberty experience; any challenges they may have experienced during this transition phase; personal impacts of these puberty related experiences; strategies that might be useful for others and reflectively could have been used by themselves, for

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example social support. The interview schedule was used flexibly, in order to allow unanticipated topics to be explored.

The interview schedule was informed by the study aim and objectives, the authors' professional backgrounds and a literature review. The interview schedule was also reviewed by a patient and public involvement and engagement (PPIE) group comprising young males of similar age and socio-cultural backgrounds, after which necessary modifications were made. Interviews lasting on average 60-90 minutes, were conducted in a confidential space and recorded using a digital recorder. Recordings were transcribed verbatim into their original languages (i.e. either English, Urdu or bi-lingual). Transcripts in Urdu were translated into English by the primary researcher and back translated into Urdu by two bi-lingual professionals not directly associated with this study. This ensured that all data were accurately captured and there was no loss of meaning during the translation process.

(Insert Table 1)

Data Analysis

Interview transcripts were anonymised and uploaded into a Qualitative Research Software (NVivo Version 11) to aid data organisation. Data were analysed thematically using an inductive approach to data analysis, where coding and theme development were guided by the content of the data obtained (Braun & Clarke, 2013). Each transcript was read several times, allowing the researcher to become familiar with each participant's experiences. Initially, descriptive codes were developed within the entire data set through reading and re-reading the transcripts, highlighting, cutting and pasting sections that described similar meanings (Braun & Clarke, 2013). The large index of these codes was refined and a list of interpretive codes was developed from this constant

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revision and reorganising of the codes, which was further reviewed and the lead author (NS) identified patterns of similar concepts.

These patterns of concepts were then formulated into several themes and further revised into overarching key themes under which sub-themes were clustered. Finally, a thematic map was produced, presented in figure 1.

(Insert Figure 1)

Ethical Consideration

Ethical approval was obtained from the institution review board (IRB) of the University on Nottingham, Faculty of Medicine and Health Sciences research ethics committee in August 2014 (Ref no: OVSa14082014 SoHS PhD). Permissions to access the private university and scout group sites for recruitment of potential participants were granted between July and September 2014 from respective coordinators. Participation was entirely voluntary, and all the participants provided informed consent.

Results

Across the data, with a few exceptions, young males' reactions to pubertal changes were similar, indicating that puberty was a challenging phase in their lives, especially in terms of obtaining accurate information and accessing reliable resources. As a result, young males often reported negative psychological impacts of puberty, along with concerns related to their identity development. Thematic analysis of the data identified three substantive themes as seen in figure 1. Participant quotes, presented within the analysis are labelled with participants' codes, and detailed in table 2.

Demographic Summary

The demographic characteristics of the participants are illustrated in table 2. In total, 22 young males aged between 18-21 years participated in this study, with a mean age of 19.77 years . All participants lived in Karachi at the time of the study but were originally from different rural and urban sites across Pakistan and one participant was an immigrant from Afghanistan. All participants shared characteristics that can be compared with the rest of young male population of Pakistan. For example, all the participants were followers of the same religion - Islam. Participants in this study also represented diverse socio-economic status (SES) within the country (i.e. upper, middle and lower SES). As no single measure of socio-economic status is currently available in Pakistan, SES was determined from the locality in which participants lived, as has been previously described in the literature (Zainab et al., 2012).

(Insert Table 2)

Challenges Around Accessing Trustworthy Information

Cultural Barriers to Obtaining Puberty Education

Most of the young males experienced information gaps, particularly concerning physiological changes. Many participants were unable to obtain information on puberty, mainly because of the restrictive culture, which discouraged puberty-related conversations. Cultural barriers meant it was challenging to communicate about experiences of puberty with others (e.g., elders) and that information was difficult to access in school materials:

Our culture does not allow such communication with elders. That was the main barrier that I could not communicate regarding my puberty with elders (IN11)

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In class 9, in the book that chapter pages were fixed together with the glue. The chapter regarding the male and female reproductive system was literally stuck with glue; we used to slowly unfix it (IM2)

These barriers were created by cultural boundaries, restricting participants' ability to obtain puberty awareness and education.

Approachability and Accessibility of Information Sources

In the absence of formal puberty education, participants shared their experiences of actively seeking out information for themselves.

...I felt that this must be known to me but no one had taught me like that, no one guided me, no one talked with me [...] so I learn this myself..... (IN3)

Participants, therefore approached sources of information, which they were comfortable with, and which were often more accessible to them. For some young males, who had trusting relationships with their parents, they sought puberty information from these sources, particularly mothers.

I and my mother have always been best friends, with mother comfortable, so told her (IM2)

For others, it was more common to access information from the internet or their peers. Many participants reported that internet was mostly used because of that ease of access to gather puberty information:

The internet is the best thing that gives the most knowledge through internet and erm I think that the internet is the most helpful (INI).

Trustworthiness of Information Sources

Despite being comfortable and accessing information from the sources mentioned in above section, young males acknowledged that information gained from these sources was not always accurate or reliable:

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The Internet is giving you anything in any direction and any form, it may mislead you, it may be giving you a positive direction, but you don't know what is good for you, what is bad for you (IN3)

Our parents are not aware regarding that (puberty education). If I talk about myself personally so my my father is not much educated so he knows not much how this (puberty and sexual) type of talk may be done correctly (IS2)

While some young males, during the time of the study, recognised that not all the information was accurate, many still believed and lived with those misperceptions and myths. One example of this came from a participant (from a non-health related profession) who demonstrated a blind trust in his mother and accepted the face value of the information she provided him with during puberty, which he still believed in, without checking the authenticity of this information:

I did not go to see a doctor for this (acne), I asked my mother as I trust her most, she (mother) told me that when I was born I had jaundice and that is why you have spots and pimples on your face ... (IS3)

R: do you still believe that's true? Or did you try to check?

P: Yes, I do believe, there is a trust in mum so like whatever she says, whatever she told me was enough, and I had no problems (IS3)

Many participants highlighted the need for appropriate education and awareness programmes (e.g. school-based programmes, parent-child awareness, community outreach programmes, online training sessions) concerning pubertal changes to counteract the difficulties they experienced due to lack of awareness:

I think from my viewpoint, awareness programmes should be there to make one aware of the physical and mental, psychological changes and the problems they (young boys) are expected to go through during puberty. It should be discussed, and people should know what our society dictates, what religion dictates. It would help a lot (IM2)

In relation to awareness, some participants underlined the importance of bridging the communication gap between parents, and adolescent males. Fathers were

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thought to be important trustworthy sources of information as they themselves had experienced puberty:

I think the first thing that should be done is to break the communication gap between parents and children (IM1)

I would really erm recommend a child that he does talk to his father because his father had experienced this thing, in his childhood. So like it is recommended... (IS5)

Overall, information gathering and accessing trustworthy sources of information was a key puberty challenge for adolescent males, which was exacerbated by cultural taboos around this topic. It is clear from the data that the information was hard to access routinely from schools or parents, even when the information was accessible it was not always reliable. Thus, young males felt that enhanced communication with parents and educational programmes would help in facing these challenges.

Psychological Impacts and Adaptation Techniques

Negative Psychological Impacts

Almost all the young males shared experiencing negative psychological effects due to not being aware and prepared for pubertal changes. These negative emotions were expressed not only due to lack of information, but also because the physical changes themselves were unpleasant. Some of the emotions expressed by participants to these impacts were: anxiety, fear, confusion, sadness, uncertainty, guilt, isolation and despair.

I was really confused at that point, so I got worried and didn't know what was going wrong. I found about it (nocturnal emissions) like 3-4 years ago ya I mean even despite knowing that for three years I didn't know what was happening, strange, because there was no one to tell me at that time, so mentally I got really disturbed (IM1)

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For several young males, these emotions influenced daily activities and relationships. For example, young males mentioned that they felt isolated and depressed as a result of feeling uncomfortable and embarrassed about some of the pubertal changes as illustrated in the quote below:

I can't even believe my face, and can't look in the mirror, I locked myself in the room because this (acne) was the horrible experience in my puberty. I was totally upset every time, it was all worst experience, my self-esteem affected, I felt alone for a couple of months so I was like I could not go anywhere I was like unable to socialise with my friends (IN10)

Participants also discussed how during puberty they experienced negative emotions such as guilt due to engaging in masturbation and watching pornography, which was perceived to be immoral in the society of Pakistan.

The image of sex and sexual behaviours was so bad in our society, it was like a bad thing and because people who are involved in these things were considered here (in society) no more with morality (IM1)

Erection is a negative phenomenon in our culture as if someone will have this (erection) or involved in any such behaviours, so like even in the family these things will be considered wrong, and outside society as well this will be considered wrong (IN5)

Coping Strategies

Contrary to these negative emotions, some of the young males shared how they started to move forward with a positive approach to life by accepting pubertal changes as part of normal growth and development.

I, erm step by step observing and you know experiencing ...start accepting the things, initially definitely I was having discomfort (IN2)

Others described that they had strong social support, especially good friends that promoted their overall well-being, relieving the emotional burden and minimising emotional distress.

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My friends were good, and they were helpful; they gave me the correct advice to overcome habits which were making me stress (IN9)

Young males were not only supported by friends but also by family members.

For a third of the participants (n=7), families were instrumental in providing both tangible and emotional support to the young males. In the following quote it can be seen how parents facilitated a participant to come out from his 'shelter' and overcome isolation.

My parents told me that just do not get yourself locked in a room, go out and socialize and don't think about it (acne) too much, my mom and dad told me it's (isolation) not good, take out Tasbih (i.e. rosary beads) and do some spiritual rituals (paternoster), that's all (IN10)

Several other participants identified that a coping strategy young males used was 'improving a sense of self-control', highlighting the significance and need of self-control in dealing with puberty related challenges that may have affected them psychologically. The attitude of controlling oneself to cope with the psychological and emotional effects was developed among these young males through involvement in diversionary activities and adapting restraining, refraining and avoidance attitudes and behaviours to overcome the challenges associated with puberty. One participant discussed using diversion strategies to avoid stressful puberty related experiences.

I used strategies like I said that mind diverting therapy or related thing like erm in that you like erm I think that we should keep ourselves busy, people keep themselves busy as much as they can in various things such as, read any book, do some stuff like so your mind doesn't go in things make you worried or ignore some thoughts if they come in mind and disturb you (IN11).

Overall, there were a number of negative psychological impacts of puberty on the young males. However participants mentioned several coping strategies they used to manage these negative impacts. These were the young males, who not only accepted

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these changes with time but also were able to cope with some of the negative psychological effects, using social support and self-control.

Identity Exploration and Formation

Young males in the study, specifically discussed how puberty affected their emerging masculinity, sexual identity, adult outlook and how these identities were formed under the influence of gendered social norms. Young males discussed how certain behaviours and attributes were expected from them during puberty and how they needed to adopt these norms in order to be accepted in society.

Developing Masculinity

Many participants reflected on how their masculine identity was formed during puberty. Their perceptions of masculinity were shaped by their experiences of physiological and behavioural changes such as, voice change, facial hair, anger, aggression and getting involved in risk-taking behaviours such as drinking and smoking. Social and cultural norms and standards played a significant role in shaping participants' masculinity. On many occasions, young males felt under pressure to experience those specific physiological features such as, facial hair or to engage in certain activities as they were markers of masculinity in the Pakistani culture, for example, smoking, drinking, being in an opposite sex relationships etc.

I am 20; no one believe that...I am a class fellow of [name of a colleague]. Everyone calls him [name] sir. He is [name] is a bit fat but his complexion is full with full beard, and I am just having this (pointed to very little facial hair) on my face [...] my skin does not look like grown up man ...ya ...so when I tell people that I am 20 years old then nobody in my community believes that I am that old, which makes me feel bad (upset tone) (IS1)

They (peers) use to tell that you should have to do this (getting involved in different habits), 'you are not a man if you don't do these things' (such as, porn watching, masturbation, partnered-sex, etc) [...] so like just go for sex

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or like exactly like alcoholism, the first stage was that to force me to have a cigarettes and alcohol and involved in certain habits that were perceived by society to be done when you have grown up as a man from young boy (IN11)

Participants described how they negotiated the tensions between the societal norms and pressures, and their personal experiences of developing masculinity. This theme also highlights the gender stereotypes that exist in Pakistani society regarding assigning gender-based roles and responsibilities to young people. These stereotypes fed into the young men's developing masculine identities, as they felt they had to adhere to certain roles and responsibilities.

When I go through the puberty I know about that man have to do work and girl has to stay at home and we (men) have to do all the work and just woman has to be house wife and like make food and serve us and just that man is the only person to work out, it was my thinking developed from what I saw in our society (pakistani society) so mmm I thought that man should work all day all night and make money for their family and support (IN6)

Sexual Identity Development

In relation to sexual identity development, most of the young males mentioned that the societal norms encouraged them to exhibit opposite-sex attraction, following the masculine culture. Thus, most of the young males shared that they felt obliged to be attracted to girls to fulfil what society dictates. These sexual norms and expectations often created difficulties for young males, who felt they did not conform to these norms.

People think a crush on a female is normal for boys in this (puberty) age (smiling and laughing), but still, it did not happen to me, so am I not normal then? or... (Smiling and question mark expression) (IN2)

Furthermore, participants felt that engaging in certain sexual behaviours helped them in developing their sexual identity. In relation to this, peer influence shaped many young males' identities in differing ways and helped them to develop sexual maturity

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during puberty. Peers were said to encourage adolescents to engage in sexual behaviours (i.e., masturbation, viewing pornographic videos).

When I came here in Karachi, so I got a peer group who told me about such videos like porn videos name, and they said, 'you go for it, watching such videos will not harm you but give you pleasure' (quoted friend's words). So they (friends) said it is better than doing a practice thing (sex), so then I watched that (videos) and masturbated ... (IN11)

Developing an Adult Outlook

In addition to developing sexual identity during puberty, young males also described how they explored and developed their identity as an adult male. During puberty, for example, young males described becoming rebellious and more independent.

I did not like questions at that (puberty) time; I was independent and rebellious and used to do whatever I was pleased. I used to tell my mother that let me do whatever I want (IN4)

However, with time, and as young males grew out of the primary pubertal phase, they described starting to become more mature and showed respect to their parents and elders and considered some of the puberty experiences helpful in later life.

With maturity, I also develop erm positive thinking erm like caring for others, respecting them, etc. so, during puberty, while growing old, I become more obedient with erm my parents, with my sisters, with my brothers, with my cousins, of relatives and mostly with the elders in the society (IN1)

Young males also reflected on how they developed maturity in their thinking during puberty and a more rational approach to life decisions.

I used to get happy because at that time, growing older meant, I became an intellectually, a very wise man, when I was younger my mind was small but since I have grown older my mind became more mature, can make good decisions and can do a lot of good actions (IN11)

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Thus participants reflected on the importance of puberty in terms of their identity development (i.e., masculine and sexual identity) and on their cognitive maturity.

Discussion

The purpose of the study was to explore the puberty experiences of young males' living in the patriarchal culture of Pakistan and therefore represents a previously unheard voice. To fulfil this purpose, a total of 22 young males were interviewed and asked about their overall puberty experiences. Participants raised significant concerns regarding their puberty transition phase, which were related to information gathering, negative psychological impacts, coping strategies and identity formation. The findings further demonstrate that currently puberty transition does not necessarily provide positive experiences for the male adolescents, since the conjunction of personal and social worlds exposed participants to both negative and positive psychological impacts during their puberty. The study results highlight several implications for young males not being prepared for this transition stage and explain how gender-related social norms, along with pubertal changes had a strong influence on their identity development as an adult male. Three themes were interpreted from the experiences shared by these young males and these are discussed in the light of the current literature.

A lack of awareness regarding normal pubertal changes, featured in all participants' puberty experiences, which is consistent with previous studies on the sexual and reproductive health knowledge (Adeokun et al., 2009; Rajapaksa-Hewageegana et al., 2015; Shaikh & Rahim, 2006) and reproductive health needs of young people (Ali et al., 2004). The characteristics that made information sources accessible, varied and were dependent on the socio-cultural factors operating in

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participants' homes, schools and at community levels at the time of puberty. While the reliability and trustworthiness of the sources were important to participants, this did not always guarantee the accuracy of the information provided. Cultural realities of these inaccuracies were recognised, identifying a further need to explore, propose and develop cultural-specific interventions for adolescent boys.

Another prominent finding in relation to puberty knowledge and awareness was that there was a lack of formal puberty or sex education. A number of authors have previously advocated for the provision of puberty and sex education in schools (Ahmadi et al., 2009; Al Zaabi et al., 2019; Farahani et al., 2012; Nadeem et al., 2020) and other academic institutions (Shaikh et al., 2017). This has been proposed through the introduction of a formal curriculum (Shaikh et al., 2017; Talpur & Khowaja, 2012) and providing training to teachers to effectively educate on this topic (Al Zaabi et al., 2019; Goldman, 2011; Nair et al., 2012, Nadeem et al., 2020;).

Inconsistent with the cultural norms and expectations, the participants in this study placed a high value on their parents, particularly fathers, considering them as the most trustworthy source of puberty education for male adolescents. This finding supports existing literature (Mamdani & Hussain, 2015; Marcell et al., 2007; Wang, 2016), calling for parents, particularly fathers, to play a role in puberty education. These findings support the claim of previous authors that a good father-son relationship is an important factor in preventing anxiety during puberty (Ahmadi et al., 2009). A positive father-son relationship could lead to reduced high-risk behaviours (Caldwell et al., 2010) thus, promoting positive puberty experiences. This, however, has not yet been implemented on a large scale in Pakistan. Indeed, a deficit in the communication between fathers and sons during puberty may have resulted in poor puberty experiences.

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The findings of this study, therefore, suggest a need for culturally appropriate sex education, including puberty education and awareness programmes at various levels such as, school-based programmes, parent-child awareness, community outreach programmes, and online training sessions. Other researchers have also recommended to integrate community programmes (Chandra-Mouli et al., 2018), and online trainings (Crockette et al., 2019) in other settings, similar to the findings of this study.

In contrast to the accounts of the immediate psychological impacts occurring due to pubertal changes, which dominate the existing literature (Ahmadi et al., 2009; Ali et al., 2004), participants' accounts in this study identified some of the strategies that helped them to cope with these immediate negative psychological impacts. Previous studies exploring puberty transition of males included younger populations of adolescent males (Ahmadi et al., 2009; Al wan et al., 2010; Bello et al., 2017; Huda et al., 2017) explored only those issues that occurred at a certain point in time. The retrospective nature of this study, facilitated participants to be able to reflect on experiences over time. Thus, providing a new insight into various factors that may have influenced their experiences, and may need to be considered for enabling future positive puberty experiences.

There were also social and cultural norms that created gender stereotypes and influenced participants' adult identity development. These findings mirror a Cambodian study conducted on young males (Scandurra et al., 2016) and a study on Irish young males (O'Beaglaioich et al., 2015), where societal norms of masculine identity often created gender role conflicts among these individuals. In the context of Pakistan, this is the first study where participants' shared that their male adult identities were formed during puberty, as part of similar societal norms with them experiencing pressure to

develop certain stereotypical identities. The area of identity exploration and formation could be further explored in future longitudinal research, exploring how these gender informed identities influence roles and responsibilities in wider society and whether they impact not only on their own health but also on that of their partner, including sexual and reproductive health and overall wellbeing.

Strengths, Limitations and Future Directions

To the best of our knowledge, this is the first exploratory study in Pakistan, discovering puberty experiences of young men and extends the current literature in this field. A key strength of the qualitative approach used was that it enabled researchers to elicit contextualised puberty experience, understanding and meaning from primary stakeholders. This is in contrast to the existing literature, which has largely been dominated by assessing the general aspects of sexual and reproductive health, and which mostly examines these phenomenon from other stakeholders' perspectives.

A further strength of exploring retrospective puberty experiences with young males was that it allowed them to reflect on their experience and how it shaped their lives over time. Having already experienced puberty transition, young men were in a better position to reflect on the specific puberty-related health promotion needs for adolescent boys. Study participants openly communicated about their puberty experiences, which is in contrast to the previous studies with younger adolescents which suggests that younger adolescents found it uncomfortable sharing such experiences (Ahmadi et al., 2009; Ali et al., 2004).

One of the disadvantages of using the sample of young adult males was that the accounts of participants' experience were reliant on recall of past events. An additional factor to consider in interpreting the results is that the lead researcher was female, which

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may have impacted the level of disclosure of the male participants. However, the findings of the study showed detailed accounts of young males' puberty experiences, suggesting that the level of disclosure was not negatively impacted by this. Thus, this study provides a significant contribution to the small body of existing qualitative research within this area of male puberty transition and adolescence development.

In this study, researchers were interested in overarching experiences of puberty and therefore did not differentiate between the experiences of those who may have had early or late onset of puberty. For future research in this area, collection of the timing of male puberty would therefore be very valuable and may provide the opportunity to distinguish experiences in relation to puberty onset.

Given the qualitative nature of the study, the data generated symbolised the views of the people included in the study, and may not be generalisable, limiting the application of the study findings to the larger, more general population. For example, the participants were drawn from a convenience sample taken from two private institutions. Furthermore, the young males who took part in the study were completing their degrees, suggesting they were well-educated, and some may have had a particular interest in health due to their educational background (i.e. medicine and nursing students); their experiences may differ from the broader population. This may limit the extrapolation of findings to the other settings of Pakistan. The findings of this study, however, could be extrapolated to other similar socio-cultural contexts.

Building on this initial qualitative study, future areas of research may include the development of health promotion programmes for adolescent boys, preparing them for the physical, mental and emotional changes that occur during puberty. There is also likely a role for home education programmes and encouraging parents to teach boys

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about puberty, especially as boys seemed to see their father and sometimes mothers as important and reliable sources of information. Further qualitative and quantitative development work would be required to determine the focus of particular interventions and the intervention components.

Conclusion

This study provides a novel contribution to knowledge about male adolescents and their developmental challenges during puberty through investigating an under-researched and potentially sensitive subject in Pakistan. In the presence of restrictive social and cultural norms, puberty transition in male adolescents is accompanied by a variety of challenges and emotional reactions. Therefore, it is important that the development of puberty related health promotion programmes are sensitive to social and cultural issues. Appropriate puberty and sex education could provide male adolescents with the skills needed to cope with the pubertal changes, which may positively influence their their long-term health, well-being and adult male identity.

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List of Tables

Table 1

Interview schedule with the line of inquiries and probes

Line of Inquiries	Probes
Overall experiences of young males towards puberty	<ul style="list-style-type: none"> • Puberty/ adolescence/ teenage experience from young males' perspectives. • Physiological, psychological and emotional experiences from young males during the time of pubertal changes/ adolescence time/ teenage when physical growth and development occurred. • Young males' ways of sharing these physiological, psychological and emotional experiences with regard to the puberty phenomenon.
Potential barriers and challenges	<ul style="list-style-type: none"> • Socio-cultural, parental and environmental factors affecting puberty experiences of young males • Role of communication and information sharing about pubertal changes
Effects on young males due to potential barriers	<ul style="list-style-type: none"> • Impacts/ effects/ outcomes of puberty experiences/ teenage period as a result of certain barriers • Impacts/ effects/ outcomes of pubertal changes/ physical maturation on participants' relationships with their parents, peers, friends and community people. • Impacts/ effects/ outcomes of pubertal changes in their young adult life.
Strategies used to overcome barriers	<ul style="list-style-type: none"> • Strategies adopted/used to cope up while having pubertal changes/ during teenage period. • Understanding their perceptions, opinions, and views about the strategies used during puberty time. • Potential helpful strategies for adolescent males
Possible suggestions for facilitation in future	<ul style="list-style-type: none"> • Suggestions of young males regarding possible strategies that can be developed in the future for adolescent boys undergoing puberty transition/ teenage maturational changes for their positive experiences. • Suggestions in terms of developing health promotion programmes for adolescent boys during pubertal changes and helpful in positive developmental experiences.

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1 **Table 2**
 2 *Demographic characteristics*
 3

S No.	Participant Code	Age (Years)	Ethnicity	Siblings	Primary City (city of birth)	Number of Years living in Karachi	Relationship Status	Education Background
					Urban(U)/Rural (R)			
1	IM1	19	Pakistani	3 sisters	Rawalpindi (U)	1	Single	Medicine year 1
2	IM2	19	Karachite-Pakistani	1 sister	Karachi (U)	18	In a relationship	Medicine year 1
3	IM3	20	Punjabi-Pakistani	1 brother	Faisalabad(U)	3	Single	Medicine year 3
4	IM4	20	Punjabi-Pakistani	1 brother	Lahore(U)	3	Single	Medicine year 3
5	IM5	21	Pakistani	1 brother and 1 sister	Lahore(U)	3	In a relationship	Medicine year 3
6	IN1	20	Pushto-Pakistani	1 brother and 4 sisters	Mardan (Peshawar)(R)	1	Single	BS, Biotechnology
7	IN2	21	Afghani	2 brothers and 2 sisters	Afghanistan (U)	14	Single	Nursing year 3
8	IN3	19	Hunzai-Pakistani	2 brothers and 3 sisters	Gilgit Baltistan (R)	3	Single	Nursing year 2
9	IN4	19	Sindhi-Pakistani	1 brother	Hyderabad (U)	2	Single	Nursing year 2
10	IN5	21	Hunzai-Pakistani	4 brothers and 1 sister	Hunza (R)	8	Single	Nursing year 1
11	IN6	18	Karachite-Pakistani	1 brother	Karachi (U)	18	Single	Nursing year 1
12	IN7	21	Punjabi-Pakistani	1 brother and sister	Karachi (U)	21	Single	Nursing year 3
13	IN8	21	Karachite-Pakistani	1 brother	Karachi (U)	21	Single	Nursing year 2
14	IN9	21	Gilgiti-Pakistani	4 brothers and 4 sisters	Gilgit Baltistan (R)	2	Single	Nursing year 2
15	IN10	20	Gilgiti-Pakistani	5 brothers and 1 sister	Gilgit Baltistan (R)	2	Single	Nursing year 2
16	IN11	21	Gilgiti-Pakistani	1 brother and 5 sisters	Gilgit Baltistan (R)	2	Single	Nursing year 2
17	IN12	20	Karachite-Pakistani	1 brother	Karachi (U)	20	Single	Nursing year 2
18	IS1	20	Karachite-Pakistani	1 brother and 1 sister	Karachi (U)	20	Single	BDS (Bachelors in Dental Sciences) year 2
19	IS2	18	Karachite-Pakistani	None	Karachi (U)	18	Single	BDS (Bachelors in Dental Sciences) year 1
20	IS3	19	Karachite-Pakistani	1 brother	Karachi (U)	19	Single	BBA, Accountancy year 1
21	IS4	19	Karachite-Pakistani	1 sister	Karachi (U)	19	Single	BS, Accounting and Finance
22	IS5	18	Karachite-Pakistani	3 brothers	Karachi (U)	18	Single	Grade 11, College

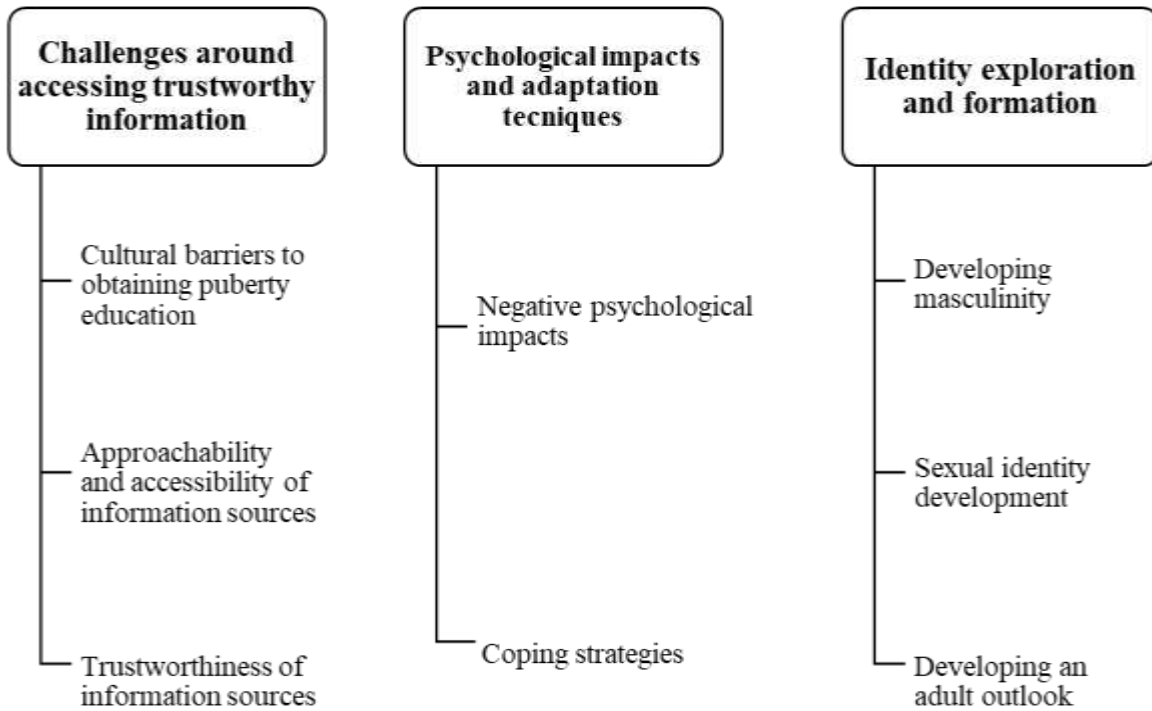
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List of Figures

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7 *Thematic map*



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