



A Qualitative Exploration of Body Image from the Perspective of Adolescents with a Focus on Psychological Aspects: Findings from Iran

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Abstract

The current study employs a qualitative approach to uncover the perceptions of Iranian adolescents regarding their bodies, with a focus on the psychological components that contribute to their body image perceptions. Data collection conducted using 13 semi-structured focus group discussions with 42 girls and 42 boys (15–18 years). All focus group discussions were audio recorded and transcribed verbatim. Data analysis was done manually using constant comparative analysis according to the Strauss and Corbin analysis method. Based on the participants' statements, four main themes and related categories emerged from data: (1) Beliefs including uncontrollable body, biased opinion of those around, priority of health, spiritual/religious beliefs and affecting future success, (2) Body-evaluation including direct body evaluation and indirect body evaluation, (3) Feelings and emotions including disgust and hatred, frustration, sadness, shame, envy, fear, approval and satisfaction and (4) Behaviors including lifestyle modifications, beautifying and using make up, extreme dieting, physical inactivity, avoidance behaviors, passive behaviors, aggressive behaviors and social isolation. Findings of the current study provide further information regarding cognitive, emotional and behavioral aspects of body image from the perspectives of adolescents in a West-Asian region.

Keywords Body image · Adolescents · Behaviors · Emotions · Self-evaluation · Beliefs · Qualitative study

Introduction

Body image, a multidimensional construct, refers to self-perception and attitudes that an individual has regarding her/his body that encompasses their thoughts, beliefs, feelings and behaviors [1]. Adolescence is a period in one's life that is often accompanied by identity development and a wide range of psychological and physical changes that occur during and after puberty; making this a critical life stage

for shaping body image [2]. Several studies have indicated perceptions of adolescents regarding their body shape and size have been associated with different physical, mental and social aspects of their health [3–8]. Therefore, promotion of a healthy body image would be critical for enhancing all aspects of health.

To design effective interventions for improving body image, the main psycho-social determinants of body image need to be identified. Many individual and socio-environmental factors including sex, weight, ethnicity, relationships with family and friends, and social media were found to have a significant impact on shaping body image during adolescence [9–14]. Further, cultural context has been found to have a significant influence on the type and content of media that an individual is exposed to, common parenting styles and standards of attractiveness that are valued in a community [15–18]. In this regards, the tripartite influence model has endorsed the socio-cultural influences of parents, peers and media on body image and eating problems through mediational factors of appearance comparison and internalization of the thin ideal [19]. Hence, perceptions of

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individuals regarding their bodies is strongly associated with cultural context and may differ across countries. Although different aspects of body image have been extensively studied in Western cultures; little is known about this topic in developing countries specifically in the Eastern-Mediterranean region.

Regarding existing studies on body image topic in Iran, a number of studies have used quantitative methods to investigate prevalence rates of different components of body image (body dissatisfaction, misperception regarding weight status and eating disorders attitudes) or the association between body image and other variables [20–24]. In this regards, existing evidence indicates that only about one fourth of Iranian adolescents were satisfied with their body size [21]. Moreover, based on a recent report in Iran, probable eating disorder was common among more than 10% of adolescents [23]. Another research on a nationally representative sample of Iranian children and adolescents, indicates being older, female, and living in an urban associated with higher chance of having feeding and eating disorders [25]. In another study, body dissatisfaction has been associated with thin ideal internalization and appearance related social comparison and self-esteem has been negatively correlated with body dissatisfaction [22]. Additionally, desire to lose weight has been found to be the most central symptom across network of disordered eating, depression and low self-esteem; moreover, low self-esteem found to be a shared risk factor for disordered eating and depression [24].

Although body image components have been thoroughly studied using quantitative approach globally, limited studies explored the experiences of adolescents with regards to their body image using a qualitative approach and the existing ones, are mainly from Western Cultures [26–31]. Based on evidence, some gender differences exist regarding perception of appearance concerns in adolescents [26, 28]. For example, Hargreaves and Tiggemann found lower appearance concerns in boys compared to girls. Moreover, they found while a thin body is preferred by girls, a toned and muscular body is preferred by boys [28]. More qualitative data in pre-adolescents demonstrated a gender difference in perceived ideal body with a focus on function and sport by boys and emphasis on appearance by girls [26]. Another study on Australian students showed dissatisfaction of participants regarding greater representation of thin women bodies in media and their desire for using more diverse body sizes and average-size models in advertisements [27]. In summary, most of mentioned studies highlighted influences of socio-environmental factors on perception of body ideals of male and female adolescents [26, 27, 29–31]; however, findings of a study conducted among Australian high school boys indicated little influence of mass media on their body image [28]. Although body image have been qualitatively explored in Western communities as mentioned, psychological

aspects of perceptions and experiences of adolescents regarding their body image is less explored and a review of the literature shows a gap in studying of these aspects from the perspective of adolescents. A qualitative approach can help researchers uncover unknown aspects of the phenomena under study that have yet to be understood, and provide further complementary information regarding the understudied topic. Using qualitative approach would warranted a deeper understanding regarding mentioned aspects of body image from the perspectives of those who experience it which can help in designing more efficient interventions.

Considering the pivotal role of perceived body image in promoting variouse aspects of adolescents' health and existing limited evidence regarding this topic from the perspectives of adolescents worldwide, as mentioned earlier, as well as lack of related knowledge from non-Western culture including Iran; the current study employs a qualitative approach to uncover the perceptions of Iranian boys and girls regarding their bodies, with a focus on the main psychological components that contribute to their body image perceptions.

Methods

Participants

This study is a part of a qualitative study which has been conducted using grounded theory approach. Participants were 84 adolescents (42 boys and 42 girls) aged 15–18 years. The participants were selected from eight high schools located in two different geographic areas in Tehran including north and south areas as representative of high and low socio-economic status, respectively. In each area, one district was randomly selected. Then the lists of all high schools in the selected districts were prepared, and eight high schools (four schools for each gender) were selected using simple random sampling method. In each selected high school, using a purposive sampling method, students were selected and invited to participate in the study by school staff. For this purpose, school staff were asked to randomly select students with different physical features (e.g. height, weight, and facial features) from various study majors and grades. Inclusion criteria required that participants be between 15 and 18 years of age; not have any chronic physical or mental diseases; agree to participate in group discussions; and provide written informed consents by both themselves and their parents. Regarding religious affiliation of participants, since this was a sensitive topic and might influence participation, we did not ask about it; however, estimates of religious prevalence in our recruitment location are about 100% Muslim.

Of students who were invited, the current focus group discussions were scheduled for those who agreed to participate

in the study and complete the consent forms. Approval was obtained from the ethics committee of the Research Institute for Endocrine Sciences (RIES) of Shahid Beheshti University of Medical Sciences in Iran. Informed consent was obtained from all adolescents and their parents prior to involvement of participants in the study. The participants were told that their voice would be recorded and their permissions were granted for audiotaping. Furthermore, participants were ensured that their identity and conversations would be kept confidential and they could quit study at any time.

Data Collection

To collect data, a total of 13 semi-structured focus group discussions were conducted in single-gender groups and in school setting. Duration of sessions was about 60–90 min and in each session 6–8 adolescents participated. The first author moderated all sessions and in some sessions, second authors also accompanied the first author. To initiate each session, first, the interviewers introduced themselves and explain the aim of the study for participants. Each discussion was began by asking this question: “What do you think is the meaning of the term body image?”. After participants responded this question, a brief definition of the term “body image” was provided by the interviewer. Then, the discussion continued with open-ended questions as provided in the interview guide which has been developed for the current study. Some example of questions are provided in Table 1. The participants were asked to share their views and experiences regarding the topic with a focus on body image and its influences in their routine life. In general, the main asked questions were based on the developed interview guide, but in each session, based on the discussions raised by the participants, new questions were also asked.

Data Analysis

Data collection and data analysis were conducted simultaneously. Data collection continued until saturation was reached, a situation in which no new themes or information were observed. All sessions were audiotaped and transcribed

verbatim by the first author. Data analysis was conducted manually and constant comparative analysis of the data was conducted according to the Strauss and Corbin analysis method [32]. Open, axial and selective coding were applied to data. In the current study, findings achieved through open and axial coding have been presented. The first author coded all transcripts line by line, then the other members of the research team carefully reviewed the coded data and checked the compatibility of the codes with the related quotations. If there were any disagreements in coding, the difference was resolved through discussion with the other researchers. In this regard, the first author frequently met research team members to discuss regarding interpretation of data until they came to agreement regarding final themes.

To ensure trustworthiness in the current study, participants were selected from different gender, weight (underweight, normal weight, overweight/obese) and socio-economic status groups to enrich picture of the phenomena under study based on contribution of wide range of participants. Furthermore, all sessions were conducted in a private room in schools and in the absence of school staff to provide a safe space for openly discussing sensitive matters. Furthermore, to provide the chance of building trust and becoming familiar with the setting and context, a prolonged engagement of researchers with participants was applied. During the sessions, the interviewers restated and summarized the participants’ statements and asked them to confirm related accuracy. Codes were also checked with a random subset of the participants to confirm the fitness of findings. A total of 30% of the coded quotations underwent respondent validation. Additionally, three faculty members and a research assistant were asked to conduct a second review of the analysis.

Results

The mean age and BMI of participants were 16.2 ± 0.9 years and 24.3 ± 8.0 kg/m², respectively and 57.1% of participants were residing in north of Tehran. In analyzing the psychological aspects of body image in Iranian boys and girls, four themes emerged including beliefs, body-evaluation, feelings

Table 1 Example of questions utilized for the current report

	Questions
1	When was the first time you noticed and judged your body? Which body parts caught your attention?
2	In your opinion, what are the characteristics of an ideal body in your age?
3	If you could make a change in your appearance, what would that change be?
4	What things or who influenced your body perception and your feelings about it?
5	Do the feelings you have about your body affect your overall satisfaction with yourself?
6	How the feelings you have about your body affected your life?

and emotions, and behaviors. Themes and categories are summarized in Table 2.

Theme 1: Beliefs

This theme refers to the main beliefs associated with adolescents' perceptions of their bodies. Adolescents' beliefs regarding their bodies were further categorized into five main subthemes including uncontrollable body, biased opinion of those around them, priority of health, spiritual/religious beliefs and affecting future success. "Uncontrollable body" refers to the inability to choose or change your body's features. A number of participants believed that they had no authority to choose their bodies: "For example, when I was a child, I usually complain why my body is like this" (a 17-year old boy). Moreover, some of participants believed that their excessive weight is due to pubertal changes or genetics and they cannot do anything to modify it: "I was an athlete since I was a child, I used to go to the gym a lot, but because we have a very strong obesity gene, I could never be as thin as my peers." (a 16-year old girl) and "I researched about obesity and found that it is an inherited thing, I'm not obese, I'm big boned, really, my body is inherited from my grandfather. I mean, if you bring my grandfather's photos and ask my mother you will understand that my morals, body and weight are similar to my maternal grandfather." (a 17-year old boy).

In addition, some adolescents, mainly girls, believed in "biased opinion of those around them". So they did not

value people's comments about their bodies; because, they believed that some individuals are biased in their statements: "I care more about what my friends say about my body, because I think my family like my father or sister, no matter how flawed I am, will think I am a flawless person, but my friends are more honest and frank as they are not as close as my family, and their words are closer to the truth" (a 16-year old girl) and "I think if from a girl, maybe she's telling me something out of jealousy, maybe she wants to say something to make me depressed" (a 16-year old girl). Moreover, another subtheme of belief was "priority of health". Some participants believed that their body's health is more important than their appearance: "For example, appearance is not important to me, I think the health of the body is more important, because a person who is obese may want to lose weight and get many other diseases in this way, or someone who is thin and wants to gain weight may get sick, but in my opinion, each body size that we have is a good, we should just not get sick" (a 16-year old girl) and "Some people who are bodybuilders are not athletes, they have just built their bodies, if they smoke, smoke hookah, do whatever they want, their body is weak, but this weakness is not obvious in their appearance, so what is important is body condition, but society cares more about an ideal appearance." (a 16-year old boy). Finally, there were some spiritual and religious beliefs that influenced participants' perceptions towards their bodies. Some believed that conscience is more important than appearance and valued it more: "In general, in my opinion, inner beauty is better than outer beauty, for example, maybe someone is sitting next to you, may she doesn't have the beauty standards that you have in your mind, but when you start talking her you say to yourself she is the best person." (a 15-year old girl) and "I do not pay much attention to my face, but I am very careful about my behavior, for example, I am careful to not do anything wrong and annoy someone." (a 17-year old boy). Furthermore, a number of adolescents were opposed to cosmetic enhancement, because they believed that it interfered with God's will: "I am totally against cosmetic surgery. My face is a God—given thing. If I do cosmetic surgery, for example, if I lift my facial skin, my child would look like me before cosmetic surgery, because it is related to my genes. This is interfering in something that God has given you and I think it is wrong." (a 17-year old boy), "God wanted my face to be like this, because God wanted me to be like this, I do not interfere in God's work" (a 16-year old boy) and "Some people have undergone rhinoplasty surgery, they change what God gave them, what is natural and given by God himself, they should not change it." (a 16-year old girl).

On the other hand, a number of participants believed that their future in terms of having a successful marriage or job is closely tied to their physical appearance and features. Consequently, these adolescents placed more importance on their

Table 2 Summary of themes and codes

Themes	Categories
Beliefs	Uncontrollable body Biased opinion of those around them Priority of health Spiritual/Religious beliefs Affecting future success
Body evaluation	Direct body evaluation Indirect body evaluation
Feelings and emotions	Disgust and hatred Frustration Sadness Shame Envy Fear Approval Satisfaction
Behaviors	Lifestyle modifications Beautifying and using make up Extreme dieting Physical inactivity Avoidance behaviors Passive behaviors Aggressive behaviors Social isolation

appearance: “An individual’s appearance affects the job one would choose in future. For example, if you want to go to the army, the army accepts people who are both good in height and weight.” (a 18-year old boy) and “In my opinion, a good appearance has an effect on both marriage and after marriage. When you look better, the person who wants to choose his future partner may be a better person than the one who chooses a fat person.” (a 15-year old girl).

Theme 2: Body-Evaluation

This theme mainly refers to how adolescents perceive and judge their bodies. This judgment had two main components; first, direct body evaluation and indirect body evaluation. Based on statements made of participants in this study, their perception of their body was influenced by the perception of the ideal body that they had in their minds. Both girls and boys mentioned that they constantly compared their bodies to their friends and peers: “I used to see that my peers’ faces were smooth and they had very good skin. Then I said, well, why should my skin be like this? I even went to the doctor. All of them told me that from the age of 20 onwards, your face would start to get better, your acne is related to puberty hormonal change, I said myself, Why? Am I the only one who has hormones? Others also have hormones but they do not have this problem” (a 16-year old girl) and “Now when I stand next to my classmates, I get more annoyed, I realize how short I am, when I compare to the others. Now it’s about 3–4 weeks that the issue of height has occupied my mind a lot, I compare my height with the others more than ever.” (a 16-year old boy). In addition, a number of participants compared their bodies with the ideal body image that they had in their minds: “Sometimes I compare myself to models and say why I am not like them” (a 15-year old girl).

Furthermore, participants’ judgment regarding their own body was strongly influenced by others’ opinions about an ideal body. These influences were both direct and indirect. Sometimes people around made judgments about adolescents’ body features and gave direct comments about their body: “My mom is very sensitive about height, she always tells me you are a dwarf! For example, once I told her that I have become a little fat, then she said: no, you are not fat you are short” (a 15-year old girl) and “Many times people comment on my face in group settings; for example, I’ll be talking, and suddenly one of my relatives tells me how big my nose is, I am really shocked in that moment, I am upset!” (a 15-year old girl). In some cases, people around them indirectly mention bodily appearance defects and their statements influence adolescents’ judgment about their own bodies: “I hate these lines on my neck, every day that I see these lines, I get upset. My mother is very sensitive to these things for herself, not for me. For example, she says my neck should be so, then when I saw that it is so important to her,

it also became important to me subconsciously.” (a 16-year old girl) and “I have a very mischievous cousin, every time he sees me he asks me what grade are you? Every time! I think because of my height, because he is tall himself, every time he sees me he asks me this question, even if we see each other once a week, he still asks what grade are you in?” (a 16-year old boy).

Theme 3: Feelings and Emotions

This theme refers to how adolescents feel about different parts of their bodies. When participants talked about how their perceptions of their bodies influenced their life, girls talked more about their feelings than boys (71.4% of girls vs. 30.9% of boys). The participants of the study made statements about both positive and negative feelings about their bodies, with most being negative (80% of all quotations regarding feeling and emotions) including disgust and hatred, frustration, sadness, shame, envy and fear. Participants referred to feeling disgust and hatred about their bodies when in situations such as buying clothes and comparing their bodies with their peers and fashion models. For example, “When those who are fat want to go and buy clothes, they may hate it, because they want to try on the clothes in the fitting room but they hate themselves when they see their bodies!” (a 15-year old girl) and “I just hate my body and that I’m really fat, I’m upset because I wanted to be like everyone else, in our world, especially now that kids are drawn to fashion models a lot, and how good their bodies are, you feel bad about yourself” (a 15-year old girl). In some cases participants pointed out feeling frustration: “When someone tells you how fat you are, how chubby you are, or why you look like that, you get frustrated” (a 16-year old girl) and “Because the better your body, the more hopeful you will be in life” (a 16-year old girl). Some participants mentioned feeling intense sadness when they felt dissatisfied with their bodies following taunting and teasing by others: “I am very depressed now and some nights I cry because of my obesity” (a 15-year old girl) and “My classmates used to tell me that my eyes are like those of addicts, I was very upset by their words, I used to laugh a lot, now I laugh less, so my classmate asked why are you depressed?” (a 16-year old boy). Other participants felt shame and embarrassment about their bodies following other people’s comments: “For example, when they didn’t tell me anything, my self-confidence was very high, but after a series of words, I was even embarrassed to go out. For example, in school, maybe my height was the shortest.” (a 16-year old girl). Moreover, some adolescents, mainly girls, pointed out that they constantly compared their bodies to others’ and these comparisons made them envious: “For example, my mother is now 168 cm and 58 kg, her body is very beautiful! When I look at her, not to be jealous, but I envy how my mom can

be so thin!” (a 16-year old girl) and “When you go out, you see everyone has a good body shape, for example, one is tall, one is athletic, and that’s it. Well, I wish I was like them” (a 16-year old girl). Finally, when participants were dissatisfied with their bodies and believed their bodies were not ideal, they became worried and experienced fear. Some of them were afraid that their body features would impact their future job opportunities: “Because I want to work in the field of physical education, my body must be very good. For example, because I am short, I may not be able to become a volleyball coach, and because I want to be a coach, my body may have a great impact on my life satisfaction. If I do not get that job, my life satisfaction will be zero percent. I’m afraid I will never get my favorite job because of my short height” (a 16-year old girl) and marriage: “I’m afraid I’ll be rejected because of my body when I get married” (a 15-year old girl) and “My parents were worried and said me you if you remain short, when you want to get married one day, you will have a problem.” (a 16-year old boy). Most of the times, participants experienced more than one of these undesired feelings: “I hate my own body right now, because I’m really fat, I’m upset because I wanted to be like everyone else.” (a 15-year old girl).

To a lesser extent, some participants spoke of desirable feelings such as approval and satisfaction in relation to their body: “I used to be thin and had no muscles, then I exercised for 2 years and my body became more muscular and now I am satisfied with it” (a 16-year old girl) and “I am satisfied with everything in my body, if my nose has a defect, the important thing is that I like it myself and do not see the need for doing rhinoplasty” (a 16-year old girl) and “When I lost weight, I had a very good feeling, I really enjoyed my photos and clothes I wore” (a 15-year old girl).

Theme 4: Behaviors

Participants’ perceptions of their bodies resulted in different behavioral approaches. In the first approach, when participants believed something was wrong with their bodies and they felt dissatisfaction about it, they tried to correct it. In this regard, two groups of behaviors were identified: lifestyle modifications to adjust body size and shape, and beautifying practices to make changes to facial appearance. Participants’ lifestyle modifications focused on weight management such as changing their eating habits or doing activities to modify their weight and height: “After I became obese, I started exercising a lot. I loved basketball and football very much. I was able to lose a lot of weight from these two sports. I also went to the doctor and he gave me a diet, and I was able to lose weight. Walking was also very effective, every day except Fridays, I walk a very long distance (for about an hour and a half)” (a 15-year old girl) and “At that time, everyone who saw me said, “Wow, how overweight you

are!” That’s why I went to volleyball for a year, I didn’t lose weight, but my height went up a bit. After a while everyone who saw me, said how fit you are! My weight and height are proportionate now” (a 16-year old boy). Other participants, mainly girls, used beautifying techniques and make-up to improve their facial appearance: “From that day on, I frequently go and buy a face mask. I’ve been taking care of my skin for a while, I apply cream before and after the bath, I use different creams in the bathroom” (a 15-year old girl) and “You don’t have make-up at home, but you go out and put on make-up, because you like to always look beautiful in the eyes of others. Everyone does this. I put on make-up not for boys, but for myself ...and for the others, everyone always likes to look more beautiful!” (a 16-year old girl).

On the other hand, a considerable number of participants used a different approach in dealing with their body dissatisfaction that could have negative consequences on their physical and mental health due to self-destructive coping behaviors such as extreme dieting, physical inactivity, avoiding confrontation with their bodies and passive behaviors. Some adolescents, mainly girls, referred to their experience of disordered eating and extreme dieting to lose weight: “I really eat nothing and I hurt my body, I get a series of terrible diseases because of that, I try again and I don’t eat anything so that I feel very nauseous and have been hospitalized several times” (a 15-year old girl) and “I started exercising, dieting and eating less, and because of these diets, I feel weaknesses in my body, which sometimes makes my head dizzy in class. Two weeks ago, I really felt bad, I fainted several times in class last year, and this year I still feel dizzy sometimes because of those diets” (a 15-year old girl). In addition, both boys and girls mentioned limiting their physical activity after being mocked or feeling envious of others: “I don’t like to exercise at all, because I don’t have any self-confidence at all. For example, when I see my colleagues who are very good at volleyball, they are dominant with the ball, they are very tall, their bodies are good and stretched, I don’t like to exercise” (a 15-year old girl) and “That time, I didn’t focus on anything at all, because of those words my colleagues said to me. I like football very much, but I couldn’t play football at all. Because they sat on the bench and teased me! For example, when the ball was under my feet, they told “look at that Panda!” so I started messing up, and it happened again and again, I totally messed up and didn’t continue.” (a 17-year old boy). Moreover, in some cases of body dissatisfaction, some girls and boys used avoidance strategy to escape confrontation with their bodies or tried to cover up their undesired body features: “I was very fat. We have a very large tall mirror in our house, I covered the whole mirror with newspaper, I also removed mirrors from my room” she also added “I try to wear relatively loose clothes, because my body really shows in tight clothes or tight pants.” (a 15-year old girl) and “I have been

ridiculed since I was in eighth grade, since then I no longer have a photo of myself, for example, I didn't post any photo on my Instagram and my profile doesn't have a photo of me, maybe it is a picture of my body, but not my face, my face is black." (a 16-year old boy). Finally, when adolescents were criticized regarding their bodies, some of them sacrificed their personal needs and preferences and used passive behaviors: "For example, I go to buy clothes, the sellers look at my body and quickly say "no, we don't have your size", they talk in a kind of humiliating way, I really get upset and uncomfortable. Maybe I go to two shops, then I pretend that I'm tired and stop shopping, when really I want to continue shopping" (a 16-year old girl) and "When I was in the eighth grade, I exercised and I had a muscular abdomen, but all of a sudden, I said what good is it when I have hump like this or I have dark under eye circle, what is the benefit? So I gave up everything!" (a 16-year old boy).

Participants' perceptions regarding their bodies also influenced their social interactions with family members, relatives and peers. Some mentioned when they were ridiculed and received negative or offensive comments about their bodies, they acted out and used aggressive behaviors: "Once, when I went to buy a dress for a wedding ceremony of one of our relatives, there were fewer clothes that fit my body that I could wear. At that moment, my mother told me that if you were thin, you would not cause us so much trouble! I couldn't control my anger and quickly said her: "Why are you saying this? Do you think you are very fit?!!" and I told her everything that came out of my mouth." (a 15-year old girl) and "Once someone made fun of my body, so I hit him" (a 16-year old boy). Another group of participants limited their social interactions and isolated themselves from family, peers and relatives when they received unfavorable reactions regarding their bodies from those people: "From the eighth grade onwards, I became a completely different person who no longer liked society. Even now, I do not go out with my friends at all, I go to a place where there is not a single person, how can I say, for example, my classmates told me let's go to the food court and have something to eat together, but I didn't go with them, I went to a place where there wasn't anyone, I walked along the highway and thought about myself" (a 16-year old boy) and "When others judge my appearance, I try not to go there anymore and participate less in their gatherings." (a 17-year old girl).

Discussion

The findings of the current study provide an overview of the main cognitive, emotional and behavioral aspects of body image of Iranian adolescents. Adolescents' beliefs and evaluation of their bodies contributes to the cognitive component of body image in this study. Moreover, participants

experienced negative feelings such as disgust and hatred, frustration, sadness, shame, envy, fear and to a lesser extent positive feelings of approval and satisfaction. Finally, participants referred to two main groups of behaviors including appearance fixing and maladaptive behaviors (i.e. bringing about adverse effects on physical, mental and social aspects of health).

The current findings regarding role of adolescents' belief in their perceptions of body are in accordance with cognitive theory of eating disorders in which dysfunctional attitudes about appearance were considered to be a determinant of eating disorders risk factors [33]. Some participants of the current study stated that although they experienced body dissatisfaction previously, certain beliefs including priority of health and spiritual/religious beliefs may help them to have more positive judgments about their bodies despite existing misalignment between their real and ideal body characteristics. Current findings regarding the influence of religious beliefs on adolescents' evaluation of their bodies are in agreement with Spangler's theoretical model in which religion was hypothesized to influence body image and eating disorders through different pathways [34]. To that end, findings of a systematic review also demonstrated the role of religiosity and spirituality in lowering the risk of body image concerns and disordered eating [35].

On the other hand, in the current study, other beliefs such as uncontrollable body and affecting future success were found to accompany by more body image concerns, negative feelings and consequently passive behaviors. Those participants who believed in "uncontrollable body" assumed that they are incapable of choosing or changing their body characteristics. These participants had low self-efficacy towards changing their bodies' imperfections such as getting rid of excessive weight through lifestyle modification. Both social cognitive theory and the theory of planned behavior endorse the important role of such beliefs in one's intention and performing a certain behavior. Self-efficacy was found to be an important determinants of an individual's thoughts, feelings, motivation and behaviors [36]. Based on the theory of planned behavior, perceived behavioral control can predict the performance of a certain behavior [37]. For example, Dzielska et al. demonstrated the importance of self-efficacy in modifying obesity-related behaviors in adolescents [38]. Another belief that could influence body-evaluation and feelings such as fear, frustration, and satisfaction, was "affecting future success" which refers to adolescents' job and marriage prospects. Alignment with the current findings, Spangler demonstrated that dysfunctional beliefs about the perceived consequences of one's appearance on their relationships, achievements, self-view, and feelings are associated with risk factors of eating disorders including dietary restraint, body dissatisfaction, (lowered) self-esteem and thin-ideal internalization [39].

Based on statements of participants, body-evaluation was another factor that influenced adolescents' perceptions of their bodies which indicates how an individual is satisfied with her/his body, and it is one of the most commonly measured elements of body image in adolescents. As mentioned in previous research, appearance comparison and internalization of appearance ideals can influence how adolescents judge their bodies. The tripartite influence model proposed by Thompson et al. suggests that social factors including media, peers and parents can affect body image and eating problems through two main mechanisms of appearance comparison and internalization of the thin-ideal [40]. In this regards, previous studies endorsed the mediating effects of appearance comparison and internalization of appearance ideals in the association between social-influences and body dissatisfaction as well as emotional eating [19, 41].

Furthermore, our findings indicated that the people around participants influenced their body evaluation. These findings are compatible with the objectification theory. This theory suggests that females acculturated to internalize an observer's view as a central view of their physical selves or body. Such perspective can result in experiencing higher levels of shame and anxiety and consequently mental health problems such as depression and disordered eating [42]. Besides, past studies have found that comments received from people around adolescents could influence their body dissatisfaction and consequently their emotional health and disordered eating behaviors [13, 43, 44]. Oliveira et al. indicated that when an individual recognizes that others have negative judgment about them, they may use maladaptive emotion regulation strategies which can result in disordered eating attitude and behaviors [45]. According to the current findings, other people may both directly and indirectly influence adolescents' body perceptions. Previous studies have also shown both direct and indirect influences of parents and peers, on adolescents' concerns and dissatisfaction regarding their bodies [9, 46]. For example, maternal weight talk, including both mothers' comments about their own weight (indirect influence) and encouragement of their daughters to diet (direct influence) affected disordered eating behaviors in girls [46]. How an adolescent evaluate their bodies affect their feelings and behaviors. Such influences have been reported in previous studies. For example, existing evidence indicates that self-worth and evaluations can predict depression [47] and body dissatisfaction was found to be associated with feelings of loneliness and depressive symptoms in adolescents [48, 49]. Additionally, body dissatisfaction has been recognized as an important determinant of disordered eating in adolescents [50]. Findings of a cross-sectional study conducted in China indicated that body dissatisfaction is a significant risk factor for emotional and behavioral problems of Chinese adolescents [7].

Based on the current findings, adolescents' body evaluation could accompany by both negative and positive feelings, with greater experiences of negative ones which can influence adolescents' behaviors and social interactions. Similarly, a past study found that depressive symptoms had a negative impact on the social interaction of students [51]. Furthermore, negative feelings can directly and indirectly influence disruptive behaviors such as disordered eating. For example, existing evidence demonstrates that emotions such as self-disgust and shame contribute to eating psychopathology [45, 52, 53]. On the other hand, self-compassion was found to have a protective role in the development of negative body image and eating pathology [54]. In addition, negative feelings may indirectly influence adolescents' behaviors; for instance, negative affects have been found to have mediating role in the association between body dissatisfaction and disordered eating [50] and shame and disgust have been identified as indirect predictors of non-suicidal self-injury in adolescents [55].

In the current study, disruptive behaviors such as extreme dieting, physical inactivity, avoidance, passive and aggressive behaviors, and social isolation were more common among participants implying negative body image was more dominate. Conversely, some adolescents used adaptive behaviors such as lifestyle modifications, beautifying practices and applying make-up. In the development and validation of the Body Image Coping Questionnaire, Cash et al. identified three main coping strategies including avoidance, appearance fixing, and positive rational acceptance for coping with body image challenges [56]. Previous studies looked at the role of coping strategies on different aspects of adolescents' health; for example, using avoidance coping strategies increased the risk of developing eating disorders [57, 58]. In another study, positive rational acceptance as an adaptive coping strategy, had a mediating role in the association between physical appearance-related teasing and body esteem and could enhance levels of self-esteem in adolescents [59]. Furthermore, avoidance and positive rational acceptance coping strategies were significantly associated with subjective well-being in Canadian undergraduate females [60]. In the current study, using different behavioral approaches may be rooted in participants' beliefs, body-evaluation and feelings. Negative body image and body dissatisfaction can stir feelings of sadness and depression [61] and consequently result in disruptive behaviors. Previous research showed the mediating role of depression in the association between negative body image and eating disorders [62]. Moreover, the relationship between some negative feelings and behaviors is mutual. For instance, depressive symptoms lead individuals to become more isolated [51] and social isolation increases the risk of depressive symptoms and low self-esteem [63]; hence, negative influences may

be amplified through a vicious cycle. Therefore, to design more effective interventions aimed at promoting adolescents' health, it is recommended to expand our understanding about different coping strategies related to adolescents' body dissatisfaction.

Based on the adolescents' perceptions and experiences, body image is a multi-dimensional concept that includes physical, psychological, and social dimensions. Obtaining comprehensive knowledge about each component of this concept, particularly from the perspectives of those who live in a specific society, would provide beneficial information for future research and interventions focusing on promoting a healthy body image and overall health in the early years of life. For example, the findings of the current study provide useful information about the "beliefs" associated with body image in adolescents. Some of these beliefs, including "religious beliefs" and "priority of health", help adolescents make more positive judgments about their bodies, despite the discordance between their body characteristics and their ideal body. Therefore, it is recommended to include reinforcement of such beliefs in relevant interventions. Moreover, modifying dysfunctional beliefs such as "uncontrollable body" and "affecting future success" should be another component of related health promotion programs. Furthermore, based on the findings of the present study, most adolescents experienced negative feelings and emotions; therefore, empowering adolescents to control their negative feelings and deal with these emotions should be another component of related interventions. In addition, using maladaptive coping strategies was common among participants of the current study; hence, incorporation of educational content regarding adaptive coping strategies is recommended for this age group in complementary health promotion programs.

This qualitative study is among the first attempts to explore psychological aspects of body image as perceived by Iranian adolescent boys and girls. Findings of the current study provides directions for future research and interventions focused on the promotion of body image in adolescents. Including the perspectives of both female and male participants and selecting participants from different socio-economic backgrounds and weight status groups are strengths of the current study. There are limitations to the current study as well. First, considering the nature of the focus group discussion, adolescents may have been influenced by their peers in the group, especially since participants were from the same school, some of them from the same grade and could have known each other. Additionally, focus group discussions were led by a female researcher which may have influenced adolescents' openness. Finally, participants of the current study were mainly recruited from an urban community; therefore, current findings do not reflect perspectives of suburban and rural adolescents. To broaden our understanding of psychological aspects of

body image, further research in suburban and rural areas is recommended.

Summary

This study provides further insights into the main cognitive, emotional and behavioral aspects of perceived body image by Iranian adolescents. Based on the current findings, although a number of participants spoke of their positive feelings and adaptive behaviors, it seems that most of the time adolescents' perceptions regarding their bodies were accompanied by negative feelings and destructive behaviors, which can have a significant impact on their health. Considering how critical body image is to adolescents' health, the promotion of a healthy body image should be integrated in all health promotion interventions to protect the health and wellbeing of adolescents.

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Declarations

Conflict of interest The authors declare they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Research Involving Human Participants and/or Animals Approval was obtained from the ethics committee of the Research Institute for Endocrine Sciences (RIES) of Shahid Beheshti University of Medical Sciences in Iran.

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