

## Iranian Adolescent Girls' Self-Concepts of Eating Behaviors: A Qualitative Study

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### Abstract

**Background:** Self-concept plays an important role in understanding behavioral patterns. The purpose of the present study was to explain Iranian adolescent girls' self-concepts of eating behaviors.

**Materials and Methods:** In this qualitative study, conventional content analysis was used and participants were selected through purposeful sampling. This study was conducted in the government girls' schools of Shiraz City, Iran from October 2018 to March 2019. Data were collected through in-depth, semi-structured individual interviews with 42 girl students. Interviews were recorded with the audio recorder and continued until data saturation was achieved so that no new conceptual information was obtained after 35 interviews, while individual interviews were conducted with seven other individuals to ensure data saturation, and no additional conceptual information emerged from the seven interviews. The data were analyzed according to the conventional content analysis approach.

**Results:** From the analysis of the data, six categories for adolescent girls' self-concepts were drawn including: (1) physical self-concept, (2) social self-concept, (3) academic self-concept, (4) self-satisfaction, (5) self-confidence, and (6) self-esteem. These self-concepts included subcategories of effective eating behaviors on appearance, physical energy status, morals, academic performance, satisfaction and happiness, self-confidence and popularity and respect.

**Conclusion:** Adolescent girls' self-concepts of eating behaviors encompass a wide range of dimensions such as physical, social, academic, self-satisfaction, self-confidence and self-esteem, and their identification is one of the determinants of the development of intention to adopt healthy eating behaviors.

**Key Words:** Adolescent, Eating behaviors, Self-concept, Qualitative study.

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## 1- INTRODUCTION

Healthy eating behaviors in adolescence promote health, growth and cognitive development, and prevent chronic diseases in adulthood (1). Eating behaviors that occur in early adolescence also continue into adulthood (2), and the unhealthy eating behaviors are often prevalent in adolescence due to rapid lifestyle changes (3). Therefore, improvement of eating behaviors in adolescents is a global priority and developing effective strategies requires understanding and recognition of the multiple and interactive factors that influence adolescent eating behaviors (4). Self-concept is one of the determinants of the likelihood of developing individual intention to adopt health-related behaviors. Self-concept as a multidimensional structure refers to one's beliefs and feelings about oneself and includes various aspects such as academic, physical, emotional and social self-concepts (5). Self-concept plays an important role in understanding one's personality and behavioral patterns (6), and positive self-concept is a way to achieve expected behaviors and activities (7). Based on the evidence, positive self-concept is an important predictor of adolescents' intention to engage in behaviors such as physical activity, fruit and vegetable consumption, healthy lifestyle and high self-esteem in adolescents (8-10). Many studies have been conducted to identify determinants and environmental, social, cultural and psychological factors that are effective on eating behaviors (11-13).

However, very few studies have been conducted to identify the determinant role of self-concept in eating behaviors (9, 14). Furthermore, sociocultural and environmental factors in community can cause a significant difference between adolescents' experiences, which can be examined using a qualitative approach. Therefore, this study was conducted using a qualitative approach to explain Iranian adolescent girls' self-concepts of eating behaviors using a qualitative approach.

## 2- MATERIALS AND METHODS

### 2-1. Study design

This study was conducted from October 2018 to March 2019 in Shiraz city, Iran. In this qualitative study, conventional content analysis was used to explain Iranian adolescent girls' self-concepts of eating behaviors.

### 2-2. Participants

Participants were 42 girls aged 13-15 years who were enrolled from the government schools affiliated to the four educational districts of Shiraz City, Iran. Inclusion criteria were being eighth grade girl students studying in government schools in Shiraz, volunteering to participate in the study and being aware of the issue. Purposeful sampling was performed with the maximum variation in terms of girl students' demographic characteristics such as age, education level, employment status, and number of children in the family (**Table.1**).

**Table- 1:** Demographic characteristics of participants.

Variables	Students	Parents	
		Mothers	Fathers
Age			
Range	13-15	34-43	35-52
Mean ± SD	13.81±0.71	38.02±2.60	42.57±4.84
Education, Number (%)			
Illiterate and primary school	-	3 (7.1)	2 (4.8)

Secondary school	42 (100)	6 (14.3)	5 (11.9)
High school and diploma	-	21 (50)	17 (40.5)
Academic	-	12 (28.6)	18 (42.9)
Occupation, Number (%)			
Housewife	-	33 (78.6)	-
Self-employed	-	4 (9.5)	24 (57.1)
Employee	-	5 (11.9)	15 (35.7)
Worker	-	-	3 (7.1)
Number of children		Girl	Boy
Range	-	1-3	0-4
Mean $\pm$ SD	-	1.57 $\pm$ 0.59	0.52 $\pm$ 0.80

SD: Standard Deviation.

### 2-3. Data Collection

Data were collected using in-depth semi-structured individual interviews based on predetermined guiding questions. Each interview lasted 40-75 minutes and was conducted in the participants' schools in a quiet location to ensure privacy. All interviews were recorded with the audio recorder by the second author and sampling continued until data saturation was achieved, so that no new conceptual information was obtained after 35 interviews, while individual interviews were conducted with seven other individuals to ensure data saturation, and no additional conceptual information emerged from the seven interviews. Interview questions included demographic information and main research questions based on self-concept such as *"What effects does eating behavior have on you personally?"*, Follow-up questions that were asked to gain a more in-depth insight into the participants' experiences, included *"Could you explain your experiences with an example?"*, and *"Please explain a little more"*.

### 2-4. Ethical considerations

The ethical approval for the study protocol was obtained from the Ethics Committee of Shahid Sadoughi University of Medical Sciences, Yazd, Iran (ID-code: IR.SSU.SPH.REC.1397.071).

Before starting the interview, the interviewer introduced herself to the

participants and fully explained the purpose and procedure of the study including use of the audio recorder to record the interview and confidentiality of information and the participants' right to withdraw from the study whenever they wished without being required to provide any reason(s). The participants were asked to provide signed informed consent if they would volunteer to participate in the study.

### 2-5. Data Analysis

Graneheim and Lundman method was applied to analyze the data (15). In this method, first all interviews were transcribed verbatim immediately after each interview, and an unstructured classification matrix was created for the self-concept construct. The transcripts were carefully and repeatedly reviewed by researchers to identify semantic units. In the next step, the semantic units were summarized and transformed into codes and the initial coding of the text was accomplished. Then the subcategories and categories were drawn according to similarities and differences. The MAXQDA software (version 10.0) was used for the data analysis. All data analysis was performed under the supervision of supervisors and advisors.

### 2-6. Data trustworthiness and rigor

In this study, the four criteria of Lincoln and Guba, namely, credibility, transferability, confirmability and dependability were used to provide the

trustworthiness and rigor of the data (16). The research team provided sufficient time to the participants to express their experiences and maintained a long-term engagement with the subject under study during the study through repeated review and immersion in the data. In order to confirm the credibility of the data drawn from content analysis, a number of coded transcripts were returned to a number of participants to allow member check. Data dependability was ensured through peer (individuals outside the research team that did not participate in the data collection phase), and member (supervisor and advisor) check by providing coded transcripts to them and reaching final consensus on the data codification. The researchers also gave participants precise explanations about the sampling method

and the time and location of data collection, and increased data credibility and confirmability by precisely describing the study procedure and recording all stages of data collection (transcription, coding and analysis).

### 3- RESULTS

From the qualitative data analysis, six categories were extracted from self-concept construct including physical self-concept, social self-concept, academic self-concept, self-satisfaction, and self-confidence and self-esteem dimensions. Adolescents' differing beliefs and perceptions of healthy or unhealthy eating behaviors in each of these dimensions are presented in **Table.2**.

**Table-2:** Adolescent girls' self-concept categories and subcategories of eating behaviors.

Construct	Categories	Subcategories
Self-Concept of the eating behaviors	1. Physical Self- Concept	1.1. Handsome 1.1. Strong and energetic 1.2. Ugly appearance 1.3. Weak and low energy
	2. Social Self- Concept	2.1. Kind and good-tempered 2.2. Angry and bad-tempered
	3. Academic Self -Concept	3.1. Clever and smart 3.2. Lazy and slow-witted
	4. Self-Satisfaction	4.1. Happy and satisfied 4.2. Unhappy and unsatisfied
	5. Self -Confidence	5.1. Confidence 5.2. No confidence
	6. Self- Esteem	6.1. Popular and respected 6.2. Not being popular and respected

#### 3-1. Physical Self- concept

Adolescents reported that eating behaviors were an important factor for formation of their perceptions and emotions regarding their physical appearance and ability. Some adolescents described themselves as *handsome, strong, and energetic* and

believed that they had a good body and skin because of healthy eating behaviors and could perform their daily activities and tasks with great vigor.

*"I have beautiful skin and limbs because I always eat my mom's food, home-made foods are not oily like outside [of home]"*

*foods that make one fat and ugly or ruin your facial skin"* (Participant 5).

*"I am always energetic and strong. I do my daily work easily because I eat fast food less. Most of my foods energize me"* (Participant 12).

Other adolescents described themselves as *ugly appearance* as well as *poor and low energy* because of their unhealthy eating behaviors.

*"I am aware that I eat a lot of pizzas and sauces. My face has been ruined. It is so ugly. I hate myself so much. I always blame myself for my looks"* (Participant 19).

*"I run out of energy soon when I help my mom in [doing] household chores. My mom says, 'Look, you don't have any stamina at all; don't eat so much of these unnutritious cakes and juices"* (Participant 25).

### 3-2. Social Self- concept

Eating behaviors were another factor for shaping adolescents' beliefs about how they interacted with others. Some adolescents considered themselves as *kind* and *good-tempered* with good relationships with others

*"Some of my friends are bad tempered, they always shout because they don't care about what they eat, but I don't eat these things, so my manners are good, I help my classmates in their lessons"* (Participant 31).

Other participants considered themselves *angry* and *bad-tempered* with inappropriate interpersonal relationships.

*"I am very bad-tempered with my friends. They upset me quickly. If I eat fruit and vegetables, vitamins will reach my body [and then] I won't get upset at my friends so quickly"* (Participant 16).

### 3-3. Academic Self- concept

Adolescents' beliefs about their academic performance was another dimension of eating behaviors. The adolescents who perceived themselves as *clever* and *smart* found healthy eating behaviors to increase their intelligence and learning ability and thus to improve their academic performance.

*"I'm strong at math lessons, and I solve math problems very well, because in our home my mom makes things that are good for our intelligence, like fish and shrimp"* (Participant 8).

Conversely, adolescents who considered themselves *lazy* and *slow-witted* reported unhealthy eating behaviors as the reason for low learning and poor academic performance.

*"Most mornings I eat creamy biscuits as breakfast, I don't get to have a good breakfast. [In] Some classes, especially math class, my brain stops working, I don't understand maths well"* (Participant 26).

### 3-4. Self-satisfaction

Adolescents' self-satisfaction or dissatisfaction was related to the self-belief that was in turn related to eating behaviors. *Self-satisfied* adolescents described their health, which was an outcome of their eating behaviors, as a reason for their happiness and self-satisfaction.

*"I thank God that I'm healthy [and] work on myself, the foods I eat are helpful for my body, they make me healthy, , I'm really satisfied with myself that I pay attention to my food and health"* (Participant 2).

Meanwhile, adolescents who had *self-dissatisfaction* perceived unhealthy eating behaviors and the likelihood of disease as the reason for it.

*"I feel very upset about myself, I eat too much, especially when we have guests, I*

*don't stop myself, I eat everything [and] I'll get sick this way"* (Participant 30).

### **3-5. Self- confidence**

Adolescents' belief in their ability to engage in group activities or adapt to different conditions was another dimension of self-concept that was developed by managing eating behaviors. Adolescents who believed they had confidence in group activities had appropriate eating and fitness behaviors.

*"I have good limbs because of my food. This gives me confidence to participate in the group programs our school holds"* (Participant 28).

Adolescents who believed that they lacked confidence to do group activities and join groups of people attributed it to unhealthy eating behaviors and resulting physical dissatisfaction.

*"Unfortunately my diet has made me a fat person [and] my self-confidence has come down, I'm embarrassed to join a group of my friends [and] to do group work"* (Participant 35).

### **3-6. Self- esteem**

Self-esteem was another belief about eating behaviors among our participants. Adolescents with healthy eating behaviors believed that they were *popular* and were *respected* among their friends.

*"My friends at school respect me, they love me, they see me always bringing meals from home to school, I don't eat sandwiches and drinks"* (Participant 21).

While adolescents with unhealthy eating behaviors reported that, they were *not popular* with their friends and were *not respected*.

*"My friends make fun of me because of my pimples/acne. They disrespect me. They don't like me, they always ridicule me. They say go and eat chocolate cake to make your skin look good"* (Participant 1).

## **4- DISCUSSION**

This study was conducted to explain Iranian adolescent girls' self-concepts of eating behaviors using a qualitative approach. Self-concept is one of the most useful constructs that plays a decisive role in adolescent girls' decision-making about healthy eating behaviors. In the present study, adolescents' self-assessments in different physical, social, and academic aspects, satisfaction, self-confidence and self-esteem demonstrated the role of eating behaviors in self-concept. In physical self-concept, body image and physical ability were among the items that were important to adolescents and brought about different beliefs and perceptions. Regarding body image, adolescents talked of their satisfaction or dissatisfaction with their body image and considered eating behaviors to be the reason for fitness or overweight and obesity. Consistent with these findings, in the study of Voelker et al. (2015), a relationship was observed between adolescent weight and body image (17). In the study by Ribeiro-Silva et al. (2018), adolescents who used quasi-western dietary patterns were dissatisfied with their body image (18).

Kwak et al. (2011) study also reported that appropriate eating behaviors could be a factor for positive perceptions of weight, body image, and health (19). In terms of physical strength and physical ability, adolescents talked of their weaknesses or abilities in physical performance that were related to their dietary behaviors. In this regard, Bisogn et al. (2012) conducted a review of qualitative studies on the role of healthy nutrition in enhancing energy and improving physical function (20). Regarding social self-concept, adolescents discussed interpersonal relationships and how to establish relationships with friends or others, and believed that eating behaviors contributed to their appropriate relationships or inappropriate dealings with others. Concerning these findings, in

the study of Salandy et al. (2013), students with moderate nutritional status had poorer interpersonal relationships compared to students with high nutritional status (21). Das et al. (2014) in a qualitative study pointed to the role of healthy nutrition in improving relationships (22). In academic self-concept, adolescents assessed their academic performance. They attributed their poor or desirable academic performance to healthy or unhealthy eating behaviors. Consistent with these findings, Krølner et al.'s review of qualitative studies (2011) showed that adolescents perceive healthy eating as a factor for improving their performance and efficiency in school activities (23). In the study of Bautista et al. (2018), children and adolescents who consumed nutritious foods showed better cognitive performance and academic achievement (24). Antonopoulou et al. (2019) reported that adherence to a healthy diet such as Mediterranean diet could enhance the academic performance of students (25).

For self-satisfaction, adolescents viewed health or illness such as obesity or overweight as a factor for their self-satisfaction or self-dissatisfaction that was related to their eating habits. Regarding this, Forste et al. (2012), and Wadsworth et al. (2014) reported a negative correlation between body weight and self-satisfaction among adolescents (26, 27). Regarding self-confidence, adolescents talked of their ability or inability to engage in-group activities and attributed it to having appropriate or inappropriate weight and limbs. Consistent with these findings, the studies of Banna et al. (2015), and Peyman et al. (2012) reported obese adolescents' feelings of dissatisfaction with and embarrassment about appearing among friends and others (11, 28). With respect to the self-esteem dimension, adolescents addressed self-valuing, acceptance, and popularity among others, and reported eating behaviors as an influencing factor

on their popularity or lack of popularity. Regarding this, the qualitative study of Tiedje et al. (2014), immigrant adolescents in the United States believed that healthy eating would improve their self-esteem (29). In the qualitative study of Jensen et al. (2014), adolescents found attraction and acceptance among friends as the reason for their weight loss and healthy nutrition (30).

#### **4-1. Study Limitations**

The limitations of the study include exclusively enrolling female adolescents aged 13-15 years from Shiraz, Iran, that should be taken into account in applying its results and conducting future studies.

#### **5- CONCLUSION**

Adolescent girls' self-concept of eating behaviors encompasses a wide range of dimensions such as physical, social, academic, self-satisfaction, self-confidence and self-esteem, and their identification is one of the determinants of the development of intention to adopt healthy eating behaviors. The findings of this study could serve as a guide for future studies looking at the well-known self-concept impact of designing programs that help improve healthy eating behaviors in adolescents.

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**7- CONFLICT OF INTEREST:** None.

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