

BODY IMAGE AVOIDANCE QUESTIONNAIRE AND ASSOCIATED FACTORS: A STUDY OF A GROUP OF MOROCCAN ADOLESCENTS

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Abstract

Objectives. The aim of this study is to assess physical appearance behavior avoidance among a group of Moroccan adolescents and to identify the associated factors.

Material and methods. The data were gathered from a cross-sectional study conducted on 487 adolescents (223 boys and 264 girls), with the average age of 14.6 years. Gender, age, body mass index (BMI), and satisfaction of their body weight and height were considered in this study. Body satisfaction was evaluated by two questions: "Are you satisfied with your body weight?" and "are you satisfied with your body height?". The Body Image Avoidance Questionnaire (BIAQ) test was used to assess the adopted behaviors.

Results. The average score on the BIAQ test was 24.4. According to the different factors of the BIAQ test, the factors "clothing", "grooming and weighing", and "eating restraint", were more noticed among adolescents. The results showed that behavioral avoidance was associated with gender, age, BMI, and body dissatisfaction. It was females, the youngest group of adolescents, overweight, and those dissatisfied with their body weight or height who had the highest scores. This reflects the fact that adolescents resort to physical appearance behavior avoidance or control including practices such as dressing, grooming, and weighing.

Conclusions. It is recommended by health professionals to enhance awareness among adolescents about the risks of adopting such behaviors on their physical and mental health, to correct the narrow and unrealistic standards of physical appearance, and to encourage healthy behaviors.

Keywords: body image, behavior avoidance, adolescents, Marrakesh, Morocco.

Introduction

Body image is defined as one's attitude towards one's body, particularly its size, shape, and aesthetics (Cash, 1990). Adolescence is a critical period for body image development because of the various social, cultural, physical, and psychological changes occurring in this period (Campagna & Souza, 2006). These transformations also involve major upheavals in body image (Blyth, Simmons, & Zakin, 1985). Body image disturbance is conceptualized as a multidimensional construct with perceptual, attitudinal, and behavioral components (Banfield & McCabe, 2002). The perceptual component is defined as the relative inaccuracy of individuals' judgment regarding the shape of their whole body or various body parts (Slade, 1994). The attitudinal component involves dissatisfaction with body shape or size (Gardner, 2001). The behavioral component comprises body avoidance,

including tendencies to avoid situations that elicit worry about physical appearance (Rosen, Srebnik, Saltzberg, & Wendt, 1991), and body checking, the behavioral manifestation aimed at gaining information on body shape, size, or weight (Shafran, Fairburn, Robinson, & Lask, 2004). According to Stapleton, McIntyre and Bannatyne (2014), body image disturbance "serves as an important risk factor in the development of eating disturbances and other unhealthy behaviors". Among these, avoidance behaviors that typically refer to a range of behaviors intended to avoid information regarding one's shape, weight, or size. Examples of these behaviors include not weighing oneself, avoiding looking in mirrors wearing loose-fitted clothing, and avoidance situations in which revealing clothing may be required, such as the gym or the beach (Walker, Anderson, & Hildebrandt, 2009). These behaviors may play a significant role in the development of disturbed eating behaviors and in the maintenance of body image disturbance (Fairburn, Cooper, & Shafran, 2003).

Maïano, Morin, Monthuy-Blanc, and Garbarino (2009) remarked that, unlike the perceptual and attitudinal components of Body Image Disturbances, the behavior one benefited from very few assessment instruments to measure either body avoidance (e.g., Body Image Avoidance Questionnaire, Physical Appearance Behavior Avoidance Test) or body checking or both (e.g., Body Checking and Avoidance Questionnaire). Among these, the BIAQ is "the most widely used", as revealed by the literature review.

Overweight has gained increasing attention in developing countries as an issue that needs to be addressed (Musaiger et al., 2016). Adolescence is a sensitive period marked by important physical and social changes that can lead to a negative body image. Therefore, changes related to the body or body parts increases vulnerability to the use of unhealthy body change strategies, such as avoidance behaviors.

Thus, this study seeks to evaluate the avoidance behaviors and their association with gender, age, BMI, and satisfaction of their body weight and height among a group of Moroccan adolescents.

Material and methods

Participants

This cross-sectional survey was carried out in several secondary schools in Marrakesh, Morocco. The survey took place between 2014 and 2016. Marrakesh is situated in the center of Morocco, and its population rises to 928 850 inhabitants. During the studied period (2014-2016) there were 56 secondary schools located with a total secondary school student population of 78306. A random cluster sampling technique was used in this study. The sampling frame comprised a list of all 56 secondary schools in educational districts in Marrakesh. Six out of the 56 schools were selected via random sampling. The sample population included students from the six selected schools. Three classes were randomly picked up from each of the selected schools. The students were randomly chosen from those classes. Those who refused to participate were excluded from the study. The total obtained sample was 487 male and female adolescents aged 10 to 18 years, with 223 boys (45.8%) and 264 girls (54.2%).

According to the World Health Organization (WHO, 2017) classification, the sample was divided into two groups: early adolescents (between 10-14 years old) and middle to late adolescents (between 15-19 years old).

Measures

Weight status. Height and weight measurements were undertaken twice in private areas. Weight was measured in light clothes and no shoes to the nearest 0.1 kg by a portable digital Seca. Height was measured while subjects were in the standing position, not wearing shoes, hat, hair bows, combs, and with the normal position of shoulder to the nearest 0.1 cm by a portable/wall-mounted

stadiometer with movable headpiece. An average of two values for each measurement was documented. Body mass index (BMI) was calculated by the following formula: weight (kg)/height (m²) and standard deviation scores (BMI z-scores) were gathered using the age and sex according to the WHO standards reference (De Onis et al., 2007). Adolescents were also categorized according to their BMI z-score in three groups: Overweight (BMI obesity included; z-score is $\geq +1$), normal weight (BMI z-Score between -2 and $+1$), and underweight adolescents (BMI z-score is ≤ -2).

Avoidance and physical control behaviors. The behavioral trends, which frequently accompany body image disturbances of adolescents, were assessed by BIAQ test (Body Image Avoidance Questionnaire) (Rosen et al., 1991); the scale consisted of 19 items. The test could be subdivided into 4 factors allowing to evaluate the adopted behaviours. The questionnaire has 19 items across four behavioral themes: clothing (disguising or covering up the body through clothing choices; items 1-4, 13, 15-18), social activities (avoidance of social situations that involve eating or focusing on appearance; items 8-11), eating restraint (dietary restriction; items 5-7), and grooming/weighting (checking behaviors such as scrutinizing oneself in the mirror and weighing...; items 12, 14, 19). Each item on this factor is scored on a 6-point scale ranging from 0 (never) to 5 (always) (Table 1). The findings suggest that the higher is the individual score, the more likely the individual resort to physical appearance behavior avoidance.

The BIAQ test has demonstrated good psychometric properties among patients with eating disorders as well as healthy adults or adolescents (Lydecker, Cotter, & Mazzeo, 2014; Mañano et al., 2009; Rosen et al., 1991; Senín-Calderón, Santos-Morocho, & Rodríguez-Testal, 2020; Stapleton et al., 2014).

In the present study, the translation-back translation procedure was used. Two translations of the questionnaire from English to Arabic were conducted by two independent, bilingual, and qualified translators. One bilingual expert translated the questionnaire into Arabic. The second expert, who was kept unfamiliar with the original questionnaire, translated this Arabic version back into English. Then a final version was prepared with the help of the research team's native Arabic speakers, who examined the translation quality, ensured its validity and measured reliability in the Moroccan context. The final Arabic version was piloted, with very few comments returned that were corrected.

Body satisfaction. Body satisfaction was evaluated by two questions: "are you satisfied with your body weight?" and "are you satisfied with your body height?".

Procedure

The study was approved by the Moroccan Ministry of Education and the State Department of Education of the city of Marrakesh. None of the participants were forced to participate in this study, they were reassured that any dissent on their part would not affect them in any way, and the purpose of the study was explained to them as well. A written consent form was obtained from the participating adolescents and their parents. The data was collected by the researcher who interviewed adolescents individually at their school in one session. The interview lasted 30 minutes on average. Then anthropometric measurements were taken. The information was collected anonymously and confidentially.

Analysis

The statistical treatment of data was carried out by WHO AnthroPlus 2007 program (WHO, 2009) which determines BMI z-scores and Statistical Package for the Social Sciences Program (SPSS for Windows, version 18) was also used for all statistical analysis. Qualitative variables were described by their size and percentage. Quantitative variables were described by their mean and standard deviation. Intergroup comparisons were made by Mann-Whitney and Kruskal-Wallis test

for quantitative variables and by Chi-square tests for qualitative variables.

Results

Age, weight status, and body satisfaction

The age of adolescents ranged from 10 to 18 years while the average age was 14.6 years (SD=2.8). Adolescents aged 10 to 14 years were relatively more represented than their counterparts in the 15-18 years age group, 53.6 % and 46.4%, respectively. On average, males were older than females (14.9 ± 2.8 vs 14.4 ± 2.8); there were no significant differences among different age groups (U Mann-Whitney=1.9; p=0.07). Of adolescents, 78.9% had normal weight, 8.6% underweight, and 12.5% overweight (8.4% pre -obese and 4.1% obese). While considering adolescents' perception of their body weight and height, the majority of them were satisfied, 78.4% and 84.6% respectively.

Avoidance and physical control behaviors

Overall, the total BIAQ score for the adolescents in this sample varied from 4 to 54 with an average of 24.4 (SD = 9.7; median = 23). The alpha value of Cronbach is equal to 0.723. Table 1 presents the results of the evaluation of the different items of the BIAQ scale. The highest scores were those scoring 3 (often), 4 (usually), and 5 (always). This reflects the adolescents' resort to body avoidance behaviors. The dimensions "clothing", "grooming and weighing" and "eating restraint", especially the restriction of the amount of food consumed, were more noticed among adolescents.

Table 1

Assessing adolescents using the BIAQ test: Percentage of adolescents adopting the following behaviours

Factors and Items	0	1	2	3	4	5
Factor 1: Clothing						
- I wear baggy clothes	43.1	18.3	24.6	5.1	4.7	4.1
- I wear clothes that I do not like	66.1	12.3	15.4	2.1	2.5	1.6
- I wear darker colour clothing	10.7	13.3	36.6	15.0	12.3	12.1
- I wear a special set of clothing, e.g, my "fat clothes"	83.2	8.4	5.7	1.4	0.6	0.6
- I am inactive	48.9	14.6	29.0	5.3	1.2	1.0
- I avoid physical intimacy	50.3	5.1	10.9	5.1	6.2	22.4
- I wear clothes that will divert attention from my weight	56.7	6.0	14.2	4.9	6.0	12.3
- I avoid going clothes shopping	92.0	2.9	3.3	0.6	0.8	0.4
- I don't wear "revealing" clothes (eg, bathing suits, tank tops, or shorts...)	61.0	3.3	8.2	3.3	4.3	19.9
Factor 2: Eating restraint						
- I restrict the amount of food I eat	56.1	6.4	15.4	5.5	7.2	9.4
- I only eat fruits, vegetables, and other low calorie foods	70.6	7.4	7.2	4.5	4.7	5.5
- I fast for a day or longer	88.5	2.7	4.1	1.6	0.8	2.3
Factor 3: Social activity						
- I do not go out socially if I will be "checked out"	60.2	5.7	9.9	3.7	2.5	18.1

Factors and Items	0	1	2	3	4	5
- I do not go out socially if the people I am with will discuss weight	56.7	4.5	8.6	3.7	3.7	22.8
- I do not go out socially if the people I am with are thinner than me	84.8	2.7	5.7	1.2	1.0	4.5
- I do not go out socially if this involves eating	90.8	2.5	4.1	0.8	0.6	1.2
Factor 4: Grooming and weighing						
- I weight myself	18.7	27.9	35.5	5.1	6.6	6.2
- I look at myself in the mirror	1.6	3.3	11.5	8.8	13.8	61.0
- I get dressed up or made up	29.6	10.9	23.0	8.6	10.1	17.9

0: Never; 1: Rarely; 2: Sometimes; 3: Often; 4: Usually; 5: Always

An examination of the relationship between the BIAQ score and the used variables is presented in Table 2. The results of the comparison of the avoidance behaviors among adolescents by gender, age, BMI categories, and body satisfaction with weight or height, showed that behavioral avoidance was associated with all the used variables: the average of BIAQ score was higher for the females than males ($p < 0.05$). Young adolescents had a significantly higher BIAQ scores as compared to their younger counterparts ($p < 0.001$). According to the weight categories, overweight adolescents reached the highest BIAQ scores (32.0) as compared to adolescents with normal weight (23.4) or underweight (22.4) ($p < 0.001$). The dissatisfied adolescents with their body weight or height had a high average BIAQ score (28.9) and (27.6), respectively. BIAQ was found to be strongly associated with body weight satisfaction ($p < 0.001$). In fact, the youngest, female adolescents, overweight and those dissatisfied with their body weight or height showed these behaviors or strategies (way of dressing, of eating, of behaving in public).

Table 2

Mean scores of the BIAQ test according to gender, age, BMI categories, and body satisfaction

Variables	Modalities	n	Mean ± SD	Tests ^{a, b}
Gender	Boys	223	23.3 ± 9.7	2.5 ^a ; $p < 0.05$
	Girls	264	25.3 ± 9.6	
Age	10-14 years	261	26.1 ± 9.5	4.8 ^a ; $p < 0.001$
	15-18 years	226	22.5 ± 9.5	
BMI categories	Underweight	42	22.4 ± 8.8	36.1 ^b ; $p < 0.001$
	Normal weight	384	23.4 ± 9.1	
	Overweight	61	32.0 ± 10.4	
Body weight satisfaction	Satisfied	382	23.2 ± 9.1	5.0 ^a ; $p < 0.001$
	Dissatisfied	105	28.9 ± 10.2	
Body height satisfaction	Satisfied	412	23.8 ± 9.4	2.8 ^a ; $p < 0.01$
	Dissatisfied	75	27.6 ± 10.6	

^aMann-Whitney test; ^bKruskal Wallis test

Discussions

Body image dissatisfaction was a particular phenomenon of Western societies, recent studies have shown an increasing level of body image dissatisfaction in non-Western Arabic countries, including Morocco. Body image dissatisfaction is prevalent among adolescents in Arabic countries with socio-cultural conditions relatively similar to that of their Moroccan counterparts. In United

Arab Emirates, Schulte and Thomas (2013) found that 73% of adolescents indicated body dissatisfaction (78% of females, 58% of males). In Lebanon, 39% of adolescents underestimated or overestimated their body weight (Assaad et al., 2018). In Egypt, about 25.6% of males and 40% of females had some level of body image concern among undergraduate students (El Ansari, Dibba, Labeeb, & Stock, 2014). In Morocco, body dissatisfaction was prevalent in 61.0% of the adolescents, of whom 38.2% wanted to gain weight while 22.8% wanted to lose it (Zakaria, Amor, & Baali, 2021).

Furthermore, as the world becomes increasingly globalized, Western beauty practices have spread rapidly in many countries. Morocco is no exception. It is a country which has undergone deep transformations, an unprecedented process of modernization and a series of socio-economic and socio-cultural changes (High Commission for Planning (HCP), 2018). These changes included a transformation in dressing styles from long loose dresses to Western modern styles. The combination of these factors of acculturation would change body image ideals of Moroccan adolescents and contribute to adopt some negative attitudes.

For knowledge, this is the first nationwide study of its kind to be carried out in Morocco and the Arab region that investigates body image avoidance and associated factors in adolescent males and females.

The average score of the BIAQ test in this study was 24.4 (SD = 9.7). This was higher than the score found among Spanish adolescents (23.6 ± 11.0) (Senín-Calderón et al., 2020). It is worth noting that "clothing", "grooming and weighing", and "eating restraint" factors reached the highest score, particularly food restriction.

Adolescents were more concerned about the most visible part of the body and the face (often looking at the mirror, putting on makeup). They also weigh themselves frequently as a means of controlling their body weight. In the context of weight control, self-monitoring of weight in adolescents was a strategy that can be used to monitor body weight variation. This concern about body weight could have negative consequences on body image (Dionne & Yeudall, 2005; Friend, Bauer, Madden, & Neumark-Sztainer, 2012), which will push the individual to adopt means of loss or gain weight if one's current weight exceeds or falls behind the one desired (Neumark-Sztainer, van den Berg, Hannan, & Story, 2006). In addition, the frequency of weighing may worsen body image according to Ogden and Whyman (1997), the self-frequent weighing was associated with worse body image among women with normal weight. The adolescents in this study used grooming behaviors more than weighing to control and change their physical appearances and physical aesthetics by frequently looking in the mirror and using cosmetics to increase physical attractiveness. Subsequently, as international studies have shown, these subjects become more concerned about their body image (Cash, Dawson, Davis, & Bowen, 1989). As for the clothing factor, women who declared themselves dissatisfied / perceived themselves as failing to meet the ideal standards usually wear clothes that allow them to control their appearance and hide their size and shape (Rudd & Lennon, 2000), also the men interested and concerned about their body used clothing to manipulate their appearance (Frith & Gleeson, 2004). In the present study, adolescents avoid the use of tight clothing; because they probably choose to dress in the Islamic style (do not reveal body contours/silhouette). This fact was also revealed in various studies in Arab countries, Muslim oriented, having the same socio-cultural conditions (e.g. El Ansari et al., 2014). In addition, body satisfaction with their body weight and height could also have a direct impact on eating behaviors to achieve the perceived ideal body and to have a sense of control and even lead the individual to practice chronic diets (Calderon, Yu, & Jambbazian, 2004; Stice, Presnell, & Spangler, 2002).

Young adolescents in pubertal development are more likely to adopt these behaviors because rapid changes in physical appearance happening during this period (Patton & Viner, 2007) could lead to enhanced preoccupation with physical appearance, especially among girls (Grogan & Richards, 2002). This dissatisfaction of girls may be due to the fact that puberty leads to a departure from the thin-ideal of Western feminine beauty by an excessive accumulation of fat in certain parts of their body (Steinberg & Morris, 2001; Waylen & Wolke, 2004).

Another formative factor that contributes to body dissatisfaction is the social comparison (Leahey, Crowther, & Mickelson, 2007). Social comparison theory claims that people have an innate drive to evaluate themselves, often in comparison to others; it emphasizes the importance of social comparisons in self-evaluation and social behavior (Festinger, 1954; Wood, 1989). This process is also true about body image. Meta-analyses have revealed that when women compare themselves with thinner females, their body dissatisfaction increases (Bailey & Ricciardelli, 2010). Being overweight is also one of the factors that may cause adolescent dissatisfaction (Latiff, Muhamad, & Rahman, 2018); overweight adolescents in this study used more these behavioral avoidance strategies.

Conclusions

In the present study, adolescents reported body avoidance behaviors, especially those related to grooming, weighing, and clothing. The results support the association of these manifestations with the adolescents' gender, age, weight status, and perception of their weight and height. It is worth noting that the phenomenon affects mostly females, the youngest and overweight adolescents. Adolescents tend to adopt avoidance behavior to cope with body dissatisfaction. It is recommended by health experts to enhance awareness among adolescents about the risks of doing so on their physical and mental health, to correct the narrow and unrealistic standards of physical appearance, and to encourage healthy behaviors.

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