

Body Image Perception in Association with Healthy Lifestyle Behaviour's in Lebanese Men and Women

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Abstract

Background: Body image is an individual's self-perceptions and attitudes about his or her physical appearance, leading to either satisfaction or dissatisfaction. These self-perceptions can affect lifestyle of both men and women of all ages.

Objectives: The purpose of the study is to determine the relationship between body image satisfaction and healthy lifestyles among adults (men and women).

Methods: A sample of 400 participants (221 women and 179 men) aged between 18-64 years were randomly recruited for analysis. Anthropometric measurements were collected and the body mass index (BMI) was calculated. Participants completed a questionnaire about body image, health-promoting lifestyle, and physical activity.

Results: 60% of participants were of normal BMI, 56% underweight, with 34% were overweight and obese. Men tended to be more overweight and obese than women who were mostly of normal BMI (72%), and 9% only were underweight ($p < 0.001$). 59% of participants were satisfied with their body image compared to 41% who were not satisfied. 19% of participants were physically active and 81% were not. Men reported more days of physical activity than women ($p = 0.005$). Body image was inversely related to healthy lifestyle. Correlation was not moderately strong but significant ($p = 0.037$).

Conclusion: This study showed that the relation between body satisfaction and healthy lifestyle behaviors was not strong due to the fact that body image is multifactorial construct that depends on many factors other than healthy lifestyle behaviors. More studies among body image perception and effect on life domains are still under focus. Health care providers are encouraged to assess and discuss weight, shape, and aging-related concerns with all mature women and men, and to maintain sensitivity when talking about weight management. Exercise may be a primary mechanism for enhancing body image, and future studies should explore best practices for how to incorporate exercise and physical activity into body image interventions. Detailed longitudinal studies are needed to understand body satisfaction in diverse populations and by weight status.

Keywords: Body image; Satisfaction; Lifestyle; Adults; Physical activity

Introduction

Body image is a multidimensional construct broadly describing internal, subjective representations of physical appearance and bodily experience, our attitude towards body, in particular, size, shape and aesthetics [1-2]. Physiological functions such as appetite, food consumption and body weight are intricately linked to psychological constructs such as body image, self-esteem and psychosocial adjustment [1-2].

Children develop beliefs about ideal body image and carry these perceptions into adulthood. Consequences of poor body image may include decreased self-esteem, depression, unhealthy lifestyle, and eating disorders.

Most people develop the behaviors that they will carry into adulthood while they are children. Children are exposed to many sources of information and opinions that influence what they see as a healthy body image [3].

Children are very impressionable, which opens doors for them to adopt lifestyle behaviors and a perceived body image that they will carry into adolescence and possibly further into adulthood. Depending on what they are exposed to as children, they may adopt a lifestyle of healthy or unhealthy behaviors based on their exposures. They also may develop a negative perceived body image, which can have an effect on their self-esteem, eating habits, and lifestyle choices [4].

Both adolescent boys and girls are under pressure to be thin from their peers, which has a negative effect on their body image [5]. Over the past decade, evidence has accumulated indicating that the

prevalence of body dissatisfaction among adolescent and young girls has increased in the world, particularly in Western countries [6].

It is important to understand the relationship between body image and lifestyle habits of late adolescents so that the appropriate interventions can be developed to guide this population toward a more positive body image [7]. Whilst ageing inevitably takes a person's body away from western societies' cultural ideals of thinness [8], studying body image during adulthood is important and has implications and conclusion related to adolescence and previous periods of building body image and adopting lifestyles. Although it is mentioned in the literature, body image and lifestyle among adults has been described in only a few published studies and considering women only. It is crucial to highlight body image and its relation to behaviors in late adolescence and adulthood in addition. The purpose of the study is to determine the relationship between body image and healthy lifestyles among adults (men and women).

Methods

Subjects aged between 18 and 64 years self-filled a validated modified questionnaire used by the University of North Florida and it took approximately 20 minutes to be completed. 10 questions regarding body image were added to the questionnaire. The survey contained a total of 62 questions. Demographic data included the subject's age, gender, grade level, part-time or full-time designation, college major, work status, self-reported height and weight, and self-reported health status. The whole questionnaire was translated to Arabic language and validated by a separate sample of 30 participants that self-administered the questionnaire (Cronbach's $\alpha=0.767$).

The study sample included 400 participants randomly selected from the Lebanese University campus including students, doctors, employees and workers. Inclusion criteria were: adult subjects working in the Lebanese University campus that age should be more than 18 years old only. Study participants should be literate to fill the questionnaire. Exclusion criteria are any subjects aged less than 18 years and are not willing to participate in our study. It included three parts concerning information on respondents' background

characteristics, self-Actualization, Health Responsibility, Exercise, Nutrition, Interpersonal Support, and Stress Management. Body weight and height were self-reported by the respondents in the questionnaire.

BMI was calculated by dividing weight (kg) by the square of height (m), and based on the BMI, study participants were classified into five categories; Underweight (BMI<18.5 kg/m²), normal body weight (BMI between 18.5 and 24.9 kg/m²), overweight (BMI between 24.9 and 29.9 kg/m²), Obese (BMI \geq 30 kg/m²).

The association between body image and healthy life style (Health Responsibility, Exercise, Nutrition, Interpersonal Support, and Stress Management) was examined, using Pearson correlation, Chi-square and t-test. Data management and analysis were conducted using SPSS (Version 21.0).

Results

Demographic characteristics of the participants

Subjects were randomly selected from the Lebanese University, Hadath Campus, including students and employees, of whom 55% were women and 45% were men. Mean age of the sample was 26.7 ± 10.8 years, mainly of 20-30 years category (43%). The majority of participants were single (68%), living with family (56%) and unemployed (53%). 66% of participants were of university educational level, where the majority are employed in non-health domains (36%), but 31% belonged to middle socioeconomic class.

A great majority of participants reported no health problems (90%), where the same percentage reported satisfaction with body image (90%).

The mean height was 168.75 ± 9.18 cm, with men being taller than women ($p<0.001$) and of greater weight ($p<0.001$) where the mean weight was 68.21 ± 14.78 kg. Most of the participants were of normal BMI with mean BMI= 23.77 ± 3.81 , however, men tend to be more overweight with higher BMI ($p<0.001$). All the demographic characteristics of the participants are represented in Table 1.

Characteristics	Total N=400 (%)	Men N=179 (45%)	Women N=221 (55%)	p-value*
Age				0.000
<20	136 (34)	27 (15)	109 (49)	
20-30	174 (43)	75 (42)	99 (45)	
30-40	43 (11)	36 (20)	7 (3)	
>40	47 (12)	41 (23)	6 (3)	
Marital status				0.000
Single	274 (68)	97 (54)	177 (80)	
Married	124 (31)	81 (45)	43 (19)	
Divorced	2 (1)	1(1)	1 (1)	
Educational level				0.000
Elementary	10 (2)	8 (5)	2 (2)	
Secondary	59 (15)	43 (24)	16 (7)	

University	264 (66)	95 (53)	169 (76)	
Master	52 (13)	22 (12)	30 (13)	
PhD	15 (4)	11(6)	4 (2)	
Residence				0.000
With family	225 (56)	78 (44)	147 (67)	
Apartment	125 (31)	89 (49)	36 (16)	
Dorm	50 (13)	12 (7)	38 (17)	
Occupation				0.000
Full-time	150 (37)	127 (71)	23 (10)	
Part-time	39 (10)	16 (9)	23 (10)	
Don't work	211 (53)	36 (20)	175 (80)	
Health worker				0.012
Yes	44 (11)	27 (15)	17 (8)	
No	145 (36)	116 (65)	29 (13)	
Missing	211 (53)	36 (20)	175 (79)	
Income				0.000
<675,000 L.L.	78 (20)	28 (16)	50 (23)	
675,000-1,500,000 L.L.	125 (31)	86 (48)	39 (18)	
>1,500,000 L.L.	56 (14)	52 (29)	4 (2)	
Missing	141 (35)	13 (7)	128 (57)	
Height	168.75 ± 9.18	176.26 ± 7.28	162.81 ± 5.40	0.000
Weight	68.21 ± 14.78	78.78 ± 11.94	59.80 ± 10.94	0.000
BMI	23.77 ± 3.81	25.31 ± 3.22	22.55 ± 3.81	0.000
Health problem				0.015
Yes	38 (10)	10 (5)	28 (13)	
No	362 (90)	169 (95)	193 (87)	
Body satisfaction				0.004
Non-satisfied (0-5)	39 (10)	9 (5)	30 (14)	
Satisfied (6-10)	361 (90)	170 (95)	191 (86)	

Table 1: Socio-demographic characteristics of the participants. (BMI: body mass index; *p-value is for gender difference based on Chi square and t-test).

Men and women were classified based on self-reported height and weight, and through calculation of BMI to the following categories (Table 2).

Based on calculated BMI, 60% of participants had normal BMI, 56% were underweight, with 34% were overweight and obese. Men tend to be more overweight and obese than women who are mostly of normal BMI (72%), and 9% only were underweight ($p < 0.001$) (Table 2).

Body image: 59% of participants reported being satisfied with their body image, with a major gender difference, where women (65%) tend to be satisfied more than men (52%) with their body image ($p = 0.013$) (Table 3).

Physical activity: Participants self-reported the number of days/week they did physical activity for at least one hour, they were asked about last week and a typical week, with women being more sedentary, while men are engaged in more days of physical activity (Table 4).

BMI category	Total	Men N (%)	Women N (%)	p-value*
Underweight (<18.5)	21 (56)	1 (1)	20 (9)	0.000
Normal (18.5-24.9)	240 (60)	80 (45)	160 (72)	
Overweight (25-29.9)	103 (26)	75 (42)	28 (13)	
Obese (≥ 30)	31 (8)	19 (11)	12 (5)	

Table 2: BMI categories of study participants.

Gender	Body Satisfaction*		p-value
	Satisfied (%)	Not satisfied (%)	
Men	88 (52)	82 (48)	0.013
Women	126 (65)	69 (35)	
Total	214 (59)	151 (41)	

Table 3: Body satisfaction analysis of study participants. *Based on cut off 4, less than 4 being satisfied, more than 4 being unsatisfied.

Days	60 minutes/ past 7 Days		60 minutes/ typical weeks	
	Men (%)	Women (%)	Men (%)	Women (%)
0	54 (30)	77 (35)	55 (31)	89 (40)
1	24 (13)	47 (21)	24 (13)	43 (19)
2	37 (21)	34 (15)	28 (16)	28 (13)
3	23 (12)	24 (11)	27 (15)	30 (14)
4	14 (8)	19 (9)	16 (9)	11 (5)
5	14 (8)	12 (5)	16 (9)	11 (5)
6	3 (2)	2 (1)	6 (3)	4 (2)
7	10 (6)	6 (3)	7 (4)	5 (2)
Total	179	221	179	221

Table 4: Physical activity/days for study participants.

According to WHO, adults aged 18-64 should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity [9], which means adults must engage at least 3 days/week to cover the minimal duration of physical activity in order to be physically active.

Gender	Physical activity		p-value
	Not active	active	
Men	134 (41)	45 (59)	0.005
Women	190 (59)	31 (41)	
Total	324	76	

Table 5: Physical activity based on gender difference.

According to the results, men are significantly physically active more than women ($p=0.005$), where 59% of physically active participants are men and meet physical activity recommendations based on self-reported durations (Table 5).

Association between body image and healthy lifestyle

The results obtained in this paragraph are based on the statistical tool Pearson correlation. The coefficient obtained from Pearson analysis that explain the association between body satisfaction perception of the study subjects and their healthy lifestyle behaviors was negative ($r=-0.109$, $p=0.037$). Despite being significant, this coefficient was not high enough to deduce a strong relation between the study participant's body satisfaction perception and their healthy lifestyle behaviors. The correlation is of moderate strength.

Based on the above result, the participant's body image perception and their healthy lifestyle behaviors are inversely related due to the negative coefficient obtained above. As per the questionnaire, the cut off of satisfaction score was 4; the value that is greater than 4 means "not satisfied" whilst a score of less than 4 means "more satisfaction", such that as this score goes down; more satisfaction exists in correlation with higher score of health promoting life style. Among the six subscales included, the strongest but negative correlation ($r=-0.335$) was between "spiritual growth" and "body image perception" ($p<0.001$).

A moderate but negative correlation among "interpersonal relationships" was statistically significant ($r=-0.292$, $p<0.001$).

The option "Health responsibility" was significantly related to the "body image perception" ($r=0.172$, $p=0.001$), and a significant positive association exists between "physical activity" and "body satisfaction perception" ($r=0.113$, $p=0.031$). This means that being responsible concerning the health behaviors and physical activity are directly related to body satisfaction.

Nutrition and stress management were not significantly related to body image, with low Pearson coefficient (Table 6).

Variables	Body satisfaction	
	Pearson Correlation	p-value
Healthy lifestyle score	-0.109	0.037
Health responsibility	0.172	0.001
Physical activity	0.113	0.031
Nutrition	0.077	0.143
Spiritual growth	-0.335	0.000
Interpersonal relations	-0.292	0.000
Stress management	-0.082	0.116

Table 6: Correlation between body image and health promoting lifestyle.

Discussion

This study, aimed to investigate the relationship between body image perception and healthy lifestyle behaviors among adults of both

genders, as well as difference in satisfaction and lifestyle behaviors among men and women.

According to the results, a moderate but statistically significant correlation exists between body image and healthy lifestyle behaviors including physical activity. Research suggests that positive body image shows respect for the body by attending to its needs, and thus engaging in health-promoting behaviors [10]. Body Image is a multifaceted construct consisting of body appreciation, an internal orientation toward the body, and satisfaction with the body's capabilities [11-13]. Individuals who appreciate their bodies recognize that their bodies are unique, and they accept their flaws as well as their assets [10]. For satisfaction, research has primarily focused on body dissatisfaction among women, and college women have been shown to engage in risky weight-loss behaviors including dieting, using laxatives, self-induced vomiting, and excessive exercise [14]. Recent studies reveal body image disturbances in men are manifested in concerns about both weight and muscularity, suggesting body dissatisfaction among men may be more complex than among women [14]. Based on this study, women were satisfied with their image more than men (65% compared to 52% being satisfied); reverse to the results of similar studies and to what is expected, based on Lebanese culture considerations. Since body image is traditionally considered a 'female problem' [15] and men find a greater variety of body shapes to be socially acceptable than women, whereas women have a narrower range of what is considered the ideal' body image [16]. Men tend to be quieter about their body negativity, seeking treatment less frequently or holding off on treatment longer than women due to shame [15,17]. Men body image tends to be more misunderstood than women body image. Men are presumed to be mainly concerned with a "perceived lack of muscle," when in fact men body image can be much more complex. On the other hand, the presumed concern for women is not as off the mark: weight [16].

In relation with BMI, significant difference in BMI between genders appeared in the results. Women were mostly of normal BMI or underweight, but more satisfied with their body image. This may be related to the idea predominant ideal beauty in Western societies which relies on thin women and men with hypertrophied muscles [17]. Thinness is perceived to increase social acceptance, and promote acknowledgement of negative eating attitudes to attain body ideals [17] which reflects women higher satisfaction with lower BMI even below normal cut off.

The sociocultural theory purports that mass media influence an individual's perceptions of what the ideal body is [18]; yet, it is also influenced by a culturally defined standard of beauty or ideal of beauty [19].

However, higher BMI and percentage of overweight and obesity were found among men. Men perceived themselves to be more overweight and more muscular than they actually were. They also believed that the men body women perceived to be the most attractive was significantly more muscular than the actual ideal men body that the women chose [20].

Overweight and obesity among men were associated with more physical activity. Women reported to be more sedentary and not meeting the physical activity recommendations as was found by other researchers, men had higher rates of participation in physical activity than did women [21,22]. Body dissatisfaction in men is more related to lack of muscle mass than fat mass, which explains more engagement in physical activity than women that seek other solutions to control their weight including dieting and pharmacology.

Literature has focused mainly on women in studying body image and its perception, however men can also be affected and have distorted body image as well as women or even more as shown by results, but body image influence health behaviors and tend to increase engagement in healthy lifestyle especially physical activity, mainly in men.

Conclusion

In conclusion, body satisfaction and health-promoting lifestyle were not strongly related. Many factors play an important role in drawing out own image of the person not lifestyle only, body image is a multifactorial construct that is affected by physiological, psychological and social factors. However, through this sample and reverse to the expected, women reported being satisfied with their body image more than men did. The lack of muscles among men decreased the degree of satisfaction and promoted them to engage in physical activity more than women that reported being more sedentary. Among men, body satisfaction means muscularity, while women think more about weight and excess fat mass.

It would be interesting to focus further research on men regarding body image perception and engagement in healthy lifestyles.

Limitations

Limitations of our study include its design, being cross-sectional. Second, the sample size taken is small due to limited time and funding. Third, the study population was limited to Lebanese University Hadath Campus, thus the findings of this study may not be representative for the population despite that the Lebanese University students had the most representative distribution based on origin. It would be better to widen the range of survey and include more participants from different regions and those far from the field of education and university enrollment. It would be interesting to study differences between subjects within university domain and those who are not within the field.

This study showed that the relation between body satisfaction and healthy lifestyle behaviors was not strong due to the fact that body image is multifactorial construct that depends on many factors other than healthy lifestyle behaviors. More studies on the body image perception and effect on life domains are still under focus. As part of health policy, health care providers should be encouraged to assess and discuss clearly the weight, the shape, and the aging-related concerns with all mature women and men. Also, health care should maintain sensitivity when talking about weight management. Exercise and physical activity may be a primary mechanism for enhancing body image, and future studies should explore best practices for how to incorporate exercise and physical activity into body image interventions. Detailed longitudinal studies are needed to understand body satisfaction in diverse populations and by weight status.

References

1. Cash TF (2012) Encyclopedia of body image and human appearance. Academic Press, Elsevier, London, UK, and San Diego, CA, USA.
2. Tykla TL, Wood-Barcalow NL (2015) What is and what is not positive body image? Conceptual foundations and construct definition. *Body Image* 14: 118-129.
3. Pender NJ, Murdaugh CL, Parsons MA (2011) Health promotion in nursing practice (6th edn). Upper Saddle River, NJ, USA.

4. Presnell K, Bearman SK, Stice E (2004) Risk factors for body dissatisfaction in adolescent boys and girls: A prospective study. *Int J Eat Disord* 36: 389-401.
5. Byely L, Archibald AB, Garber J, Brooks-Gunn J (2000) A prospective study of familial and social influences on girls' body image and dieting. *Int J Eat Disord* 28:155-164.
6. Wilkosz ME, Chen JL, Kennedy C, Rankin S (2011). Body dissatisfaction in California adolescents. *J Am Acad Nurse Pract* 23: 101-109.
7. Baker L, Gringart E (2009) Body image and self-esteem in older adulthood. *Ageing Society* 29: 977-995.
8. World Health Organization (WHO) (2017) Physical activity and adults: Recommended levels of physical activity for adults aged 18-64 years.
9. Homana KJ, Tylka TL (2014) Appearance-based exercise motivation moderates the relationship between exercise frequency and positive body image. *Body Image* 11: 101-108.
10. Avalos L, Tylka TL, Wood Barcalow N (2005) The body appreciation scale: Development and psychometric evaluation. *Body Image* 2: 285-297.
11. Frisén A, Holmqvist K (2010) What characterizes early adolescents with a positive body image? A qualitative investigation of Swedish girls and boys. *Body Image* 7: 205-212.
12. Wood-Barcalow NL, Tylka TL, Augustus-Horvath CL (2010) "But I like mybody": Positive body image characteristics and a holistic model for young-adult women. *Body Image* 7: 106-116.
13. Grossbard J, Neighbors C (2009) Body image concerns and contingent self-esteem in male and female college students. *Sex Roles* 60: 198-207.
14. Shurts B (2013) Men and body image: Current issues and counseling implications. *J Couns Develop* 91: 428-435.
15. Walid El, Ansari (2010) How do I look? Body image perceptions among university students from England And Denmark. *Int J Environ Res Public Health* 7: 583-595.
16. Lalonde B (2010) Bain: Body image perceptions: Do gender differences exist? *Psi Chi. The International Honor Society in Psychology* 15: 1089-4136.
17. Mousa TY, Mashal RH, Al-Domi HA, Jibril MA (2010) Body image dissatisfaction among adolescent schoolgirls in Jordan. *Body Image* 7: 46-50.
18. Morrison TG, Morrison MA, Hopkins C (2003) Striving for bodily perfection: An explanation for the drive for masculinity in Canadian males. *Psychol Men Masculin* 4: 111-120.
19. Olchowska-Kotala A (2013) Body satisfaction and time spent on physical activity in Polish students. *Hum Mov* 14: 285- 290.
20. Olivardia R, Pope HG, Borowiecki JJ, Cohane GH (2004) Biceps and body image: The relationship between muscularity and self-esteem, depression, and eating disorder symptoms. *Psychol. Men Masculin* 5: 112-120.
21. Seo DC, Torabi MR, Jiang N, Fernandez-Rojas X, Park BH (2009) Cross-cultural comparison of lack of regular physical activity among college students: Universal versus transversal. *Int J Behav Med* 16: 355-359.
22. Behrens LK, Dinger MK (2007) Motion sensor reactivity in physically active young adults. *Res Q Exerc Sport* 78: 1-8.