

Perception on body-image and its associated factors among undergraduates in selected faculties of a state university in Sri Lanka

Akurugodagama M S^{1*}, Munasinghe H C¹, Silvapulle W S¹, Hansika H M S¹, Siddeek N F¹,
Shiyam A², Amarasinghe Waas M D I³, Seneviwickrama K L M D²

¹Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

²Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

³Department of Psychiatry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

*me93662@sjp.ac.lk

Abstract

Background: Perception on body-image; the way individuals see or feel about their own physical appearance, can influence on one's mental well-being, self-esteem and lifestyle. Since there is a dearth of research on this in Sri Lanka, the perception of body-image among undergraduates, who are an active social group, demands comprehensive understanding.

Objective: To describe the perception on body-image and its associated factors among undergraduates in selected faculties of a state university in Sri Lanka

Method: A descriptive cross-sectional study was conducted among 389 undergraduates selected through convenience sampling from the faculties of Applied Sciences, Medical Sciences, Management & Commerce and Humanities & Social Sciences of the University of Sri Jayewardenepura. Data was collected through a validated, pre-tested, self-administered questionnaire circulated as a Google-form via social media. Perception on body-image, mental well-being and self-esteem were assessed using Body-focused shame and guilt scale (minimum 0, maximum 88, cut-off 37), WHO-5 well-being index (minimum 0, maximum 100, cut-off 40) and Rosenberg self-esteem scale (minimum 10, maximum 40, cut-off 28) respectively. All attributes were dichotomized using the means obtained from the pilot test.

Results: Majority of the participants were females (n=270, 69.4%). Median age was 23 years (IQR=4). Majority (n=242, 62.2%) showed normal BMI (18.5-24.9) and positive perception on body-image (n=234, 60.2%). However, 2 of every 5 undergraduates tend to have a negative perception on their body-image.

Among the participants who had negative perception on their body-image, 69.0% had poor mental well-being, 72.3% had low self-esteem and 61.3% were highly concerned on fashion & cosmetics to improve their appearance.

Conclusions: Negative perception on body image is a hidden problem among undergraduates in Sri Lanka. The association of gender, mental well-being, self-esteem and fashion of an individual with his/her body-image perception is significant.

Introduction

Perception on body-image is the way an individual sees or feels about his own physical appearance. With the globalization, external factors impose a larger scale influence on this, which can ultimately result in physical and psychological effects.

Previous studies have showed that the body-image has a close relationship with an individual's emotional expressivity [1]. Also, the decreasing age at which the body-image dissatisfaction occurs resulting in disordered eating patterns and lifestyle, has become a global public health concern [2]. Further, studies conducted overseas have indicated that body-image dissatisfaction can lead to harmful outcomes in university students and this was identified as a warning to the health policy makers to take instant actions [3].

Undergraduates are future professionals with potential impact on the society. Thus, their perception on body-image demands a comprehensive understanding and awareness. But studies conducted in Sri Lanka on this area is meagre, resulting a significant knowledge gap.

With this background, our research aimed to describe perception of body image and its associated factors among undergraduates in selected faculties of the University of Sri Jayewardenepura.

Methodology

A descriptive cross-sectional study was conducted through an online questionnaire among 389 undergraduates of four purposively selected faculties in the University of Sri Jayewardenepura, Sri Lanka using convenience sampling. The faculties selected were Applied Sciences, Humanities & Social Sciences, Management Studies & Commerce and Medical Sciences.

Eligibility criteria: Undergraduates of the selected faculties of Sri Jayewardenepura University, who have adequate access and skills to complete an online Google-form.

The calculated sample size was 384 which was computed using the prevalence study formula considering a prevalence of 50%.

A structured pretested self-administered questionnaire in the form of a Google-form was prepared which consisted of the following sections and scales; Socio-demographics (5 items), Perception of body image - Body-Focused Shame and Guilt Scale (BFSGS - 11 items), Mental well-being - WHO-5 Well-being Index (5 items), Self-esteem - Rosenberg self-esteem scale (10 items), Fashion and cosmetic usage (7 items) and Eating patterns - Disordered Eating Attitude Scale (4 items). *Body-Focused Shame and Guilt Scale* [4]: Perception on body-image is illustrated by the total score of the BFSGS with higher scores indicating less positive perception on body-image. The total score of each participant was later dichotomized as 'Positive body-image perception' and 'Negative body-image perception' based on the mean of the pilot study (37). *WHO-5 Well-being Index* [5]: The raw score ranging from 0 to 25 is multiplied by 4 to give the final score, from 0 representing the worst imaginable well-being to 100 representing the best imaginable well-being. The total score of each participant was later dichotomized as 'Good' and 'Poor' based on the mean of the pilot study (40). *Rosenberg self-esteem scale* [6]: Scoring was done on a 4-point Likert scale with items 2, 5, 6, 8, 9 being reverse scored prior to the calculation of the total score. Higher scores indicate higher self-esteem. The total score of each participant was later dichotomized as 'High' and 'Low' based on the mean of the pilot study (28). *Fashion and cosmetic usage* [7]: One positive point for "yes", negative point for "No" & zero for "No opinion". Higher score indicates more concerned usage. The total score of each participant was later dichotomized as 'High' and 'Low' based on the mean of the pilot study. *Diet control* [8]: One positive point for "yes", negative point for "No" & zero for "No opinion". Higher score indicates more controlled diet. The total score of each participant was later dichotomized as 'High' and 'Low' based on the mean of the pilot study.

The pilot study: Conducted among undergraduates external to the study population. The cut-off values for the scales were obtained considering the respective means. Data analysis: The IBM SPSS (version 25.0) software was used. Descriptive statistics were presented as percentages, mean with SD and using tables. Associations were determined by using chi-squared test. Level of significance was considered as $p < 0.05$.

Ethical considerations: Ethical clearance for the study was obtained from the Ethical Review Committee of Faculty of Medical Sciences, University of Sri Jayewardenepura.

Investigators explained the purpose of this research to the participants via the information sheets and consent was obtained from them prior to the administration of the questionnaire. The decision to participate in the research is completely voluntary.

The questionnaire was carried on with adequate privacy, to make sure their information is not disclosed to the third parties during the process of data collection. None of their personal details was collected. Confidentiality of all records was guaranteed.

Results

A total of 389 responses were obtained. Relevant frequency distributions are elicited in table 1 & 2 and their associations in table 3.

Majority of the participants were females (69.4%, $n=270$), where 55.6% had a positive perception on body-image. 70.6% of the males had a positive perception on body-image. Here, males have a more positive perception when compared to women. ($P = 0.005$)

Both among the healthy (normal BMI) and the unhealthy (underweight, overweight & obese), approximately equal proportions had negative and positive body-image perceptions. ($P = 0.31$)

The range of age distribution was 19 to 29 years. Responses were dichotomized considering the median age (23 years) of the sample. In the >23 age group ($n=123$, 31.6%), 57.7% had a positive perception on body-image. In the ≤ 23 Age group, 61.3% had a positive perception on body-image. ($P = 0.50$)

Among the participants with a negative body-image perception, 69.0% had a poor mental well-being and 72.3% had a low self-esteem. Among the participants with a positive body-image perception, 55.6% had a good mental well-being and 57.7% had a high self-esteem. ($P = 0.005$, $P = 0.004$)

Among the participants with a negative body-image perception, 61.3% had a higher fashion usage and 52.3% had a poor diet control. Among the participants with a positive body-image perception, 55.1% had a lower fashion usage and 57.7% had a poor diet control. ($P = 0.002$, $P = 0.29$)

Body-shaming; the practice of making negative comments about a person's body shape or size. Among the participants who had not been subjected to body-shaming, 70.4% had a good body-image perception. Among who had been subjected to body-shaming, 45.3% had a poor body-image perception ($P = 0.003$). 220 (56.6%) responders were not engaged in any sports and among them, 54.1% had a good body-image perception. Among who were engaged in sports, 68.0% had a good body-image perception. ($P = 0.005$)

For the analysis, medical and applied science faculties were amalgamated into STEM* subject stream (278, 71.5%) while art and commerce faculties into non-STEM subject stream ($n=111$, 28.5%). In the non-STEM stream, 57.3% of the responses had a positive perception on body-image. In the STEM stream, 62.0% had a positive perception on body-image. ($P = 0.28$)

Table 1: The frequency distributions of gender, BMI and faculty of the study sample

		<i>N (%)</i>	<i>Total</i>
<i>Gender</i>	<i>Female</i>	270 (69.4)	389 (100%)
	<i>Male</i>	119 (30.6)	
<i>BMI</i>	<i>Under weight (<18.5)</i>	82 (21.5)	381 (100%)
	<i>Normal (18.5-24.9)</i>	242 (63.5)	
	<i>Over weight (25-29.9)</i>	40 (10.5)	
	<i>Obese (>=30)</i>	17 (4.5)	
<i>Faculty</i>	<i>Applied Sciences</i>	132 (33.9)	389 (100%)
	<i>Humanities & Social Sciences</i>	64 (16.5)	
	<i>Management Studies & Commerce</i>	62 (15.9)	
	<i>Medical Sciences</i>	131 (33.7)	

Table 2: The frequency distributions of body-image perception, body shaming, mental well-being, self-esteem, fashion usage concern and diet control

		<i>N (%)</i>	<i>Total</i>
<i>Body-image perception</i>	<i>Negative</i>	155 (39.8)	389 (100%)
	<i>Positive</i>	234 (60.2)	
<i>Body-shaming</i>	<i>No/ not sure</i>	135 (34.7)	389 (100%)
	<i>Yes</i>	254 (65.3)	
<i>Mental well-being</i>	<i>Poor</i>	211 (54.2)	389 (100%)
	<i>Good</i>	178 (45.8)	
<i>Self-esteem</i>	<i>Low</i>	211 (54.2)	389 (100%)
	<i>High</i>	178 (45.8)	
<i>Fashion usage</i>	<i>Low</i>	189 (48.6)	389 (100%)
	<i>High</i>	200 (51.4)	
<i>Diet control</i>	<i>Low</i>	216 (55.5)	389 (100%)
	<i>High</i>	173 (44.5)	

Table 3: The associations of gender, age, BMI category, subject stream, body-shaming, mental well-being, self-esteem, fashion usage concern & diet control with body image perception

		<i>Body-image perception - N (%)</i>			<i>X²; df; p</i>
		<i>Negative</i>	<i>Positive</i>	<i>Total</i>	
<i>Gender</i>	<i>Female</i>	120 (44.4)	150 (55.6)	270 (100)	7.78; 1; 0.005
	<i>Male</i>	35 (29.4)	84 (70.6)	119 (100)	
<i>Age</i>	<i>> 23 years</i>	52 (42.3)	71 (57.7)	123 (100)	0.44; 1; 0.50
	<i><= 23 years</i>	103 (38.7)	163 (61.3)	266 (100)	
<i>BMI Category</i>	<i>Healthy</i>	95 (38)	155 (62)	250 (100)	0.99; 1; 0.31
	<i>Unhealthy</i>	60 (43.2)	79 (56.8)	139 (100)	
<i>Subject stream</i>	<i>STEM*</i>	100 (38)	163 (62)	263 (100)	1.12; 1; 0.28
	<i>Non-STEM</i>	55 (43.7)	71 (56.3)	126 (100)	
<i>Body-shaming</i>	<i>No/ not sure</i>	40 (29.6)	95 (70.4)	135 (100)	9.00; 1; 0.003
	<i>Yes</i>	115 (45.3)	139 (54.7)	254 (100)	
<i>Mental well-being</i>	<i>Good</i>	48 (26.9)	130 (73.1)	178 (100)	22.71; 1; 0.005
	<i>Poor</i>	107 (50.7)	104 (49.3)	211 (100)	
<i>Self-esteem</i>	<i>High</i>	43 (24.1)	135 (75.9)	178 (100)	33.69; 1; 0.004
	<i>Low</i>	112 (53)	99 (47)	211 (100)	
<i>Fashion usage</i>	<i>High</i>	95 (47.5)	105 (52.5)	200 (100)	10.06; 1; 0.002
	<i>Low</i>	60 (31.7)	129 (68.3)	189 (100)	
<i>Diet control</i>	<i>High</i>	74 (42.7)	99 (57.3)	173 (100)	1.11; 1; 0.29
	<i>Low</i>	81 (37.5)	135 (62.5)	216 (100)	

* STEM, stands for science, technology, engineering & mathematics and refers to any subject that falls under these four disciplines. Regarding this study:

Stem subject stream; Faculties of Medical sciences and Applied sciences. Non-stem subject stream; Faculties of Management studies & commerce and Humanities & social sciences

Discussion

The aim of this study was to describe the perception of body-image and its associated factors (socio-demographics, mental well-being, self-esteem and life style) among undergraduates in selected faculties of the University of Sri Jayewardenepura, Sri Lanka.

To the best of our knowledge, this is the first study done in order to assess this topic in Sri Lanka. We intend that this research will provide a statistical base for further assessments in this field.

The majority were female participants in our study. This is proportional to the total population of the university, which indicates that our sample was evenly distributed.

We assessed the BMI and categorized the study group according to their BMI score. Further, we dichotomized the whole study group as 'healthy' and 'unhealthy'. The unhealthy group consisted of the participants who varied from the normal BMI range. A majority of 62.7% had a normal BMI. This is similar to a study conducted in Morocco where anthropometric status and body-image perception among Moroccan university students was assessed. In that study a large proportion of the sample (72%) had normal-weight status having similar results to our study [9].

According to our study, a majority (60%) had a positive perception on their body-image. 40% were dissatisfied about their body-image. It is similar to a study conducted by Alharballeh & Dodeen in 2021 in UAE that showed 36.7% of the study population had body-image dissatisfaction [10]. It shows, above one third of the university students have negative feelings and attitudes toward their body-image. Despite the major cultural differences between UAE and Sri Lanka, the similar results depicted should be appreciated. As both the studies were conducted in universities, there is a limited chance of applying the results to the general public. But the fact that our study group comes from several areas of the country, helps in generalising the ideas to some extent.

In most of the previously conducted studies, the study groups were selected within a single faculty. But as our study involved multiple faculties in the university. The fallacy on body-image perception and subject stream has been checked here as we stratified the four selected faculties into two groups; 'STEM' (medical and applied sciences faculties) and 'Non-STEM' (art and commerce faculties). According to the results, there is no statistically significant difference on body-image perception of these groups other than slightly higher positive body-image perception among students in STEM subject stream, which could be due to chance.

Body-shaming is the practice of making negative comments about a person's body shape or size. According to our study 65.9% stated that they have been body-shamed at some point in their life. But the majority (60.2%) had a positive perception

about their body-image. The fact that despite having a positive perception on their body image, the majority have been subjected to body-shaming is a very important finding. This indicates that the social preference could be different from the individual's expectations.

Although age is a vital factor on determining perception of body-image [10], according to our research findings there is no significant difference on perception of body-image between age groups of below and above 23 years. This is mainly due to the fact that research is conducted among a group of internal undergraduates which is largely confined to the age between 20 - 30 years.

In vast variety of studies, the effect of negative body-image on mental well-being has been pointed out [1]. But the effect of negative mental well-being on body-image perception has not been addressed. In our study, the association between mental well-being and perception of body-image was observed excluding above two extremes.

Among the participants with a negative body-image perception, majority had a poor self-esteem and mental well-being while among the participants with a positive body-image perception, the majority had a good self-esteem and mental well-being. This result suggests that self-esteem and mental well-being show a positive association with body-image perception.

Considering the participants with negative body-image perceptions, the majority had a high fashion concern. Therefore, we could co-relate our results with a study which was conducted in UK with twelve 19–28 years old shoppers using self-administered questionnaire, which showed that there is a connection between fashion and the way someone sees his/her physical appearance [11].

Among all the participants, the majority had a poor diet control. This could be due to a recall bias of respondents when filling the relevant part of the questionnaire. However, the responses with negative body-image perception tend to have a more controlled diet. This co-relates with overseas research, where 385 Iranian medical students were included in a cross-sectional study via randomized stratified sampling, which revealed that abnormal eating attitudes were significantly related with body-image dissatisfaction [3].

Limitations

High probability of selection bias is observed due to the online mode of conduction using a convenience sampling. Since this study was a single centre study in a university based in Colombo district, interpretation of the findings to undergraduates from universities in remote districts is to be done with caution.

Conclusions

The majority has a positive body-image perception despite being subjected to body-shaming. A higher proportion with positive perception on the body-image was seen among males and those who engage in sports. Body-image perception is positively associated with mental well-being and self-esteem. Overall, 2 of every 5 undergraduates tend to have a negative perception on their body-image. Higher fashion concern was observed among individuals with negative body-image perception.

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Department of Community Medicine,
Faculty of Medical Sciences, University of Sri
Jayewardenepura, Sri Lanka

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