

Health and Body Image Perception among adolescent students residing at social welfare hostels in a rural community from Andhra Pradesh.

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Article Received: 05-11-2022

Revised: 25-11-2022

Accepted: 18-12-2022

ABSTRACT:

Background: Adolescence is a transition between childhood and adulthood with changes in physical, cognitive, emotional and attitudinal domains. During this unique period adolescents' critical behaviour makes them vulnerable to health problems. Their perception of wellbeing is often different unlike adults. They may not perceive diseases as a major threat and fail to listen to the health advice. Body image dissatisfaction in adolescents makes them prone to eating disorders, depression and low self-esteem. Added to this, there is unavailability of basic health care infrastructure to adolescents especially in rural areas. Understanding of health and positive body image is crucial for appropriate health in adolescents. **Aim:** This study was done to understand adolescents' perception of health and body image with respect to their age and gender and to refer them to get early health intervention if needed. **Methodology:** A field based cross sectional study was done on 240 school boys and girls between 13 to 15 years residing at four social welfare hostels in a rural area. A pre validated questionnaire on health awareness and their body image perception was used. **Results:** Health awareness in both boys and girls were found to be 83.3%, whereas body image satisfaction was seen in 45.8% of adolescents of which 48.3% were boys and 43.3% were girls and was statistically insignificant. Though with age there was increase in health awareness and body satisfaction in both boys and girls this was not statistically significant. **Conclusion:** Health awareness among adolescent school students residing in hostels at a rural area was good compared to their body satisfaction.

Key words: Health awareness, Body dissatisfaction, School children, Hostel

INTRODUCTION:

Adolescence is a period between 10 and 19 years of age who constitute about 21.4% of India's population [1, 2]. It is a transition between childhood and adulthood with changes in cognitive, physical, emotional and attitudinal areas putting them at risk for negative affective experiences [2, 3]. Perception of health and well-being among young people is often different from that of adults as they may not see the disease as a major threat [1]. Perceived health is an important part of quality of life and is dependent on multidimensional components such as physical, mental, social and economic domains [4]. There is high

degree of correlation between health perceptions, appropriate nutrition, and positive body image [5]. Adolescence is a critical period as their behaviour makes them vulnerable to usage of tobacco, drugs, poor eating behavior and to acquire sexually transmitted infections [6]. Adolescents in Indian rural areas are often devoid of basic health care facilities and hence their health perception is utmost important to get early health care [6]. Body image is a dynamic awareness of how one's body looks, feels and moves which are shaped by perception, emotions and physical sensations which can change in relation to mood and environment. It is influenced by self-evaluation and

self-esteem and estimated by the societal standards and cultural definition of appearance [2]. Body image disturbance can either be perceptual relating to over or underestimation of body size or attitudinal involving dissatisfaction with body shape or size [7]. Their body image distortion correlates with increased psychological distress and is a diagnostic criterion for disordered eating [7]. Studies have shown that body image dissatisfaction occurring during late childhood and adolescence is associated with shame, embarrassment, and anxiety about their physical appearance more so in young females [4, 5, 8]. Very few studies have explored the body image perception, body image satisfaction and weight changing patterns among young girls in less urbanised cities of India [2, 9]. As local sociodemographic, environmental and cultural factors play a significant roles in the development of body image dissatisfaction, such local studies are need of the hour to provide appropriate health education to our adolescents' so that they achieve good health and body satisfaction [10]. With this background present study was undertaken on students residing at social welfare hostels from rural Andhra Pradesh to determine their health perception and understanding of their body image as well as its association with their age and gender.

MATERIAL AND METHODS:

Aims and Objectives:

To assess the perception regarding health and body image among adolescent boys and girls of age 13-15 years residing in social welfare hostels in rural areas of Kuppam and to determine their association with age and gender.

Study design: Field-based cross-sectional study.

Study population: Adolescent boys and girls aged 13-15 years studying in 8, 9 and 10 standards.

Study area: Social welfare hostels for girls and boys located in rural areas of Kuppam, Andhra Pradesh.

Duration of the study: 2 months

Sample size: 240

(Based on a Delhi study[2], where the two proportions: 53% of boys & 40.6% of girls found to be satisfied with their body, is taken for calculating sample size at 95% Confidence Interval)

Inclusion criteria: All the adolescent boys and girls of 13-15 years age group residing in the selected 4 hostels.

Exclusion criteria: students with any self-reported chronic illness and those who were unavailable during data collection.

Sampling technique:

Stratified sampling technique was done with respect to three age groups and both genders of the study subjects so that proper representation of each subgroup is present.

Study materials:

1. Pre-tested semi-structured validated Proforma containing 4 parts: Socio-demographic and other details

Questionnaire regarding health perception modified based on Israel study [5].

Questionnaire regarding Body image perception modified based on Delhi study [2].

Anthropometric details like Height and Weight measurements, and BMI.

2. Height measuring scale and Weighing scale (accurate and calibrated to zero)

3. Growth charts

Ethical clearance: Ethical clearance was obtained from the Institutional Human Ethics Committee reference No PESIMSR/IHEC/77/2018

Data collection: With written permission from the Mandal Education Department Officer, the social welfare hostels were visited by the investigator and approval was taken from the hostel in-charge. The study procedure was explained to the hostel inmates in English as well as in their local language. A written informed consent was obtained from every participant. Data was collected by a questionnaire filled by the students after they have read and understood the questions which was checked by the investigator. Each question in the questionnaire had 5 choices 1 and 2 represented aware or satisfied, 4 and 5 were unaware or dissatisfied, 3 is not sure or doesn't know. As far as possible the students were asked to write their choice correctly. For analysis only 1 and 2 were taken as definitely aware or satisfied. All the students had general clinical examination and anthropometric measurements by the investigator who was trained for the same. The students who were found to be deviant on clinical examination were referred to the nearest health care facility. Data collection visit was also used to give them health education on general health and to address their concerns which are not the part of this study.

Data analysis: The data was entered into MS Excel 2010 version sheet and was coded. Analysis was done using SPSS software version 20. For descriptive analysis, the categorical variables were analysed using percentages and the continuous variables were analysed by calculating mean or standard deviation. For inferential analysis, Chi square test was applied to assess the significant associations, where $p < 0.05$ was considered as statistically significant.

RESULTS:

Table 1: Age and Sex distribution of the study participants (No=240)

Gender	Age in years Number & %			Total No & %
	13	14	15	
Male	40 (50%)	40(50%)	40(50%)	120(50%)
Female	40(50%)	40(50%)	40(50%)	120 (50%)
Total	80	80	80	240

The above table shows of the 240 students, boys and girls were 120 each and 40 students of each sex belonged to 13-15 years of age.

Table 2: Health perceptions among the study participants (No =240)

Question Number	Questions related to Health perceptions	Aware (No & %)	Unaware (No & %)
Q1	Are you aware good health is important?	240 (100)	0 (0)
Q2	Are you aware / practice eating proper food?	237 (98.8)	3 (1.2)
Q3	Are you aware/ practice Physical exercise daily?	238 (99.2)	2 (0.8)
Q4	Do you practice brushing teeth daily?	240 (100)	0 (0)
Q5	Do you practice taking bath daily?	238 (99.2)	2 (0.8)
Q6	Do you practice washing hands before eating food?	239 (99.6)	1 (0.4)
Q7	Are you aware/use hygienic cloth or sanitary pads during monthly periods?(For girls only)	92 (76.7)	28 (23.3)
Q8	Do you Diet or eat any special food to maintain weight?	71 (29.6)	169 (70.4)
Q9	Do you eat Junk food regularly?	67 (27.9)	173 (72.1)
Q10	Do you know good health is requirement for high energy at school?	233 (97.1)	7 (2.92)
TOTAL= (1895/2280) x 100		1895 (83.3%)	385(16.7%)

Health perception among studied adolescents showed 100% were aware that health is important and were brushing their teeth daily. 99.2% were taking bath daily and considered physical exercise is needed for their health. 99.6% were washing their hands before eating food. 98.8% felt eating proper food is essential for good health. 97% felt good health is needed to keep energy level high at school. 76.7% of girls felt hygienic pad /cloth should be used during menstruation. With respect to eating 27.9% were eating junk food and 29.6% were aware of dieting or using special diet to maintain weight

Table 3: Body image perceptions among the study participants (No=240)

Question Number	Body image perceptions	Satisfied (No & %)	Dissatisfied (No & %)
Q1	Are you satisfied with your weight /body size?	149 (62.1)	91 (37.9)
Q2	Are you satisfied with your height?	135 (56.2)	105 (43.8)
Q3	Are you satisfied with your body shape?	186 (77.5)	54 (22.5)
Q4	Are you satisfied with body your complexion	164 (67.9)	77 (32.1)
Q5	Are you satisfied with size/ shape of your private parts?	149 (62.1)	91 (37.9)
Q6	Do you use/ aware of home remedies/creams for acne?	52 (21.3)	189 (78.7)
Q7	Do you worry about menstrual problems, moustache/beard?	40 (16.7)	200 (83.3)
Q8	Do you feel you should have been like your Peer/ role model?	90 (37.5)	150 (62.5)
Q9	Do you discuss your body image concerns with you peers?	82 (34.2)	158 (65.8)
Q10	Do you avoid going to family functions due to worries on body image?	48 (20)	192 (80)
TOTAL		1095 (45.8%)	1306 (54.2%)

Body image satisfaction among studied adolescents showed 62.1% were satisfied with body weight and their private parts, 56.2% with height, 77.5% with body shape, 67.9 % with body complexion. Common problems of adolescents

such as acne needing creams was seen in 21.3% and 16.7 % of study group if girl worried about menstrual problems or if boy about moustache or beard. 37.5% felt they should have been like their role model. 34.2% discussed their body concerns with peers. 20% avoided family functions because of their body image perceptions.

Table 4: Health & Body image perceptions in relation to Gender (No=240).

Variable	Gender		Total (No & %)	X ² -value (p-value)
	Male (n=120)	Female (n=120)		
Health perceptions				
Aware	100 (83.3%)	100 (83.3%)	200 (83.3%)	0.030 (0.86)
Not aware	20 (16.7%)	20 (16.7 %)	40 (16.7%)	
Body image perceptions				
Satisfied	58 (48.3%)	52 (43.3%)	110 (45.8%)	0.604 (0.43)
Dissatisfied	62 (51.7%)	68 (56.7%)	130 (54.2%)	

Table 4 Shows, of the 83.3% health literates' 83.3% were boys and girls each. Body image satisfaction was seen in 45.8% of study students of this 48.3% were boy and 43.3% were girls. Health perception was better than body satisfaction among our study subjects, there was no statistical difference in the health perception or body image satisfaction among boys and girls.

Table 5: Health & Body image perceptions in relation to Age (No =240)

Variable	Age group			Total (240) No & %	X ² -value (p-value)
	13 years (n=80)	14 years (n=80)	15 years (n=80)		
Health perceptions					
Aware	65 (81.2%)	67 (83.7)	68 (85%)	200 (83.3%)	0.551 (0.75)
Not aware	15 (18.8%)	13 (16.3)	12 (15%)	40 (16.7%)	
Body image perceptions					
Satisfied	31 (38.8%)	34 (42.5%)	45 (56.2%)	110 (45.8%)	5.471 (0.06)
Dissatisfied	49 (61.20%)	46 (57.5%)	35 (43.8%)	130 (54.2%)	

Table 5 shows, of the 83.3% health literates 81.2%, 83.7 %, 85% belonged to 13, 14, 15 years of age respectively which shows increase in health perception occurs with age but statistically insignificant. Among 45.8% students with satisfied body image, 38.8% belonged to 13 years, 42.5% belonged to 14 years and 56.2% belonged to 15 years of age showing again linear increase in body image satisfaction with increasing age which is again statistically insignificant.

Table 6: Health & Body image perceptions in relation to Age among Male (No=120) and female students (No=120)

Variable	Age group in years (Males) No & %			Total (120) No & %	X ² -value (p-value)
	13 (n=40)	14 (n=40)	15 (n=40)		
Health perceptions					
Aware	32 (80%)	34 (85 %)	34(85%)	100 (83.3%)	0.48 (0.78)
Not aware	8 (20 %)	6 (15 %)	6 (15%)	20 (16.7%)	
Body image perceptions					
Satisfied	16 (40 %)	17 (42.5 %)	25 (62.5%)	58 (48.3%)	4.872 (0.08)
Dissatisfied	24 (60 %)	23 (57.5 %)	15 (37.5%)	62((51.7%)	
Age group in years (Females) No & %					
Health perceptions					
Aware	33(82.5 %)	33(82.5 %)	34(85%)	100 (83.3%)	0.125 (0.93)
Not aware	7 (17.5 %)	7(17.5 %)	6 (15%)	19 (16.7%)	
Body image perceptions					
Satisfied	15 (37.5%)	17 (42.5%)	20 (50%)	52 (43.3 %)	1.289 (0.52)
Dissatisfied	25 (62.5%)	23 (57.5%)	20 (50%)	68 (56.7 %)	

Of the 83.3% of male students with health perception, 80% were 13 years, 85% were 14 and 15 years of age each. Increase in health perception with age is minimal suggesting even at 13 years boys had good health

awareness. 48.3% of male students were satisfied with their body image of this 40%, 42.5%, 62.5% belonged to 13, 14, 15 years of age respectively which increased with age especially at 15 years but was not statistically

significant Among 83.3% girls with health awareness 82.5% belonged to 13years and 14 years each, 85% belonged to 15 years of age which is statistically not significant suggesting health awareness was good at all the age group. 43.3% of girls with body image satisfaction belonged to 13-15 years of age with 37.5%, 42.5%, 50% body satisfaction respectively with increase in body satisfaction with age in girls, which is statistically insignificant.

DISCUSSION:

“Negotiating the adolescent stage is neither quick nor easy” is a quote by Virginia stair. Adolescence is a vulnerable period putting them at risk for health related issues and health literacy is an important standard to improve adolescent health care [2, 6, 9]. Positive Body image perception makes an adolescent satisfied with their body. Body dissatisfaction in childhood has emerged not only as predictor of various disordered eating and weight-related problems like frequent dieting, but a risk factor for the development of psychopathologies such as depression [11]. As sociodemographic, environmental and cultural factors influence the development of body image; local studies are needed to understand the adolescents’ perception of health and body image so that we can help the adolescents to accept health orientated national programmes. There are many studies on adolescent health status especially on magnitude and type of health issues, but there are only a few studies on their health awareness especially from rural areas [2, 12, 13]. Our pretested validated questionnaire assessed health awareness by life style practices which showed that health was important to all of them. 99.2% of our study students were aware that physical exercise is needed for a good health, higher than by V Mehta study by from rural Maharashtra, in which 93.13% students were aware of physical exercise [6]. A study by Hanna showed 34% college students exercised frequently and another study by Korn L on undergraduate students showed that 40% did not exercise [14, 5]. These differences are due to differences in the sociodemographic and cultural factors of study subjects and importance given to the exercise in their school curriculum. 83.3% of adolescents were health literates in this study, which is quite high. Our study school children were residing at hostel which had healthy life style practices as part of their hostel rules and our questionnaire mainly addressed them. All study adolescents volunteered to answer the health awareness questionnaire readily without any ambiguous answers. Comparison of health awareness with other studies were difficult due to lack of uniform questionnaire, some used life style questions others used reproductive health and body change questions or common symptoms of disease questions. With respect to eating, only 28% were eating junk food regularly and 29% were dieting or

using special diet to maintain weight, as they stayed in hostel they consumed balanced diet provided in the hostels except at weekends when they visited their home. In a study by Hanna only 50% of college students ate healthy diet and 79.14% students were aware of healthy eating food as per a study by Mehta [14, 6]. In a study by Korn L 63% of males and 59% of female students perceived good health is important unlike our study in which 83.3% boys and girls were health literates [5]. High health awareness irrespective of gender and age in our study was due to their hostel rules on personal hygiene and exercise. Moreover, these areas were covered by health education under different programmes of field practice by our community medicine department. A study by Shubhangna Sharma concluded that informative and educable interventions seem to have a positive effect on health habits among adolescent girls by expansion of knowledge [15]. Adolescents experience significant body changes during puberty and body dissatisfaction results in shame, embarrassment, and anxiety about their physical appearance [2, 8]. Our study showed that 45.8 % of adolescents had over all body image satisfaction though individual body part perceptions were different .Body image satisfaction is highly variable as shown by different studies. Singh MM reported in 38%, Swati Dixit reported in 73.4% adolescent girls of age 10–19 years, Rashmi B M reported in 50.8% undergraduate BBM students [16, 17, 18] . Avita Rose Johnson et al reported body dissatisfaction in 79% of adolescents from a rural government school [19]. A study by Wasnik V showed 86.6% of the girls faced problems during menstrual periods and also pain in lower abdomen where as in our study 16.7% of girls had problems during menstruation [13]. Our study showed 48.3% of male students had body satisfaction when compared to 43.3% of female students whereas study by Jain N from East Delhi showed, body satisfaction in 53% of boys in contrast to 40.6% in girls, and also varied with age, weight, height, complexion questions [2, 3].Body satisfaction of girls in our study increased from 37.5% at 13 years, 42.5% at 14 years, and 50% at 15 years which is statistically insignificant. A study by Swati Dixit also showed. 69.9% girls had body satisfaction in 13–15 age groups, 76.5% in 10–12 years, 76.4% in 16–19 years [17]. A study by Rashmi B M on female Students of BBM College in Vijayapur, north Karnataka showed lower literacy level of mothers and opinions of relatives and friends significantly influenced body image satisfaction among study participants [18]. Adolescents are not open to discuss about their body image unlike their health issues though it affects them significantly as evidenced by our primary investigator. Unlike health awareness questionnaire, body image questionnaire was not easily answered by all adolescents especially girls in our study. Boys with increasing age became satisfied with

their body image 40% at 13 years, 42.5% at 14 years, 62.5% at 15 years in comparison to girls 38.5% at 13 years, 42.5% at 14 years and 50% at 15 years. During early adolescent period, it is difficult for the adolescent to accept physical changes in the body but with time they become more compliant especially boys due to their muscular body growth which is the norm for men. Dissatisfaction is more among girls in our study at all age groups when compared to boys as supported by other studies [2, 17]. This shows that girls don't accept their body changes as easily as boys due to the pressure of the society and the role of cultural factors on their body image. Our study had limitations. Adolescents belonged to only few schools and they don't represent all the adolescents from the rural community. The study was from hostels where uniform rules on lifestyle were followed by all the students and they may not be followed by students who reside at their home. Some adolescents need more time to get familiar with the investigator so that they can reveal more personal information. Hence Single visit by a young investigator may not establish good rapport with the adolescents especially girls in getting the questionnaire filled appropriately. Larger sample size is needed to assess more subjective questions. More visits are needed to establish the friendly, unthreatening relation with the adolescents so that can open up more easily. Hence a multicentre, large sample studies are further needed.

CONCLUSION:

Appropriate health awareness and body image satisfaction by adolescents are highly essential for physical and mental wellbeing. This can be achieved by regular health education strategies successful in creating awareness and alleviating their concerns. Promoting positive body image and overall personality development, apart from encouraging healthy lifestyles and other healthy practices among adolescents in community settings is pivotal in averting future health risks.

Source(s) of support: ICMR sponsored STS 2018

Acknowledgement:

we sincerely thank ICMR for encouraging students and faculty in conducting research work. Our sincere thanks to all the students of this study and the hostel staff for their cooperation

Conflicting Interest: None

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