

*Full Length Research Paper*

# **Body image, self-esteem and health behaviour among senior high school students in Offinso Municipality of Ashanti Region, Ghana**

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**Body image perception has become a public health issue globally. Positive or negative feelings about one self can be influenced by individual and environmental factors. Research has shown that dissatisfaction with body image can have an impact on an individual's quality of life including an individual's self-esteem, interpersonal confidence, eating and exercise behaviours. This study investigated the relationship between body image, self-esteem and health behaviour and explored factors affecting body image among senior high school students in the Offinso Municipality of the Ashanti Region. A cross-sectional design with multistage sampling techniques was used to select 561 students for the study. Basic descriptive statistics such as percentage counts, frequencies, Pearson Correlation and regression analysis were used to analyse the data. Findings showed a significant relationship between body image and self-esteem ( $r=.587$ ), no significant relationship between body image and health behaviour ( $r = -.002$ ), and also between self-esteem and health behaviour ( $r = .057$ ). Family influence ( $\beta =.361$ ,  $p =.000$ ) was the strongest predictor of body image. There were gender differences in body image ( $t(553) = -5.124$ ,  $p = .000$ ,  $\eta^2 = .43$ ), self-esteem ( $t(553) = -5.530$ ,  $p = .000$ ,  $\eta^2 = .47$ ) and health behaviour ( $t(553) = -2.083$ ,  $p = .038$ ,  $\eta^2 = .18$ ) among students. Students who have body image concerns are more likely to have low self-esteem, while family could be important in helping students develop positive body image.**

**Key words:** Body image, self-esteem, health behaviour, students, Ghana.

## **INTRODUCTION**

Body image is a subjective picture of an individual's physical appearance and emotions and can be broadly defined as a multidimensional construct which describes internal, subjective representations of physical appearance and bodily experience, attitude towards the

body, particularly, size, shape and aesthetics (Firdevs and Sevil, 2015; Tylka and Wood-Barcalow, 2015). It is the mental representation created of what an individual thinks they look like and this may or may not bear a close relation to how others actually see them. The way a

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person perceives his/her body is influenced by a variety of factors including the degree of importance one's physical appearance has on one's overall sense of self (Spurgas, 2005).

An individual can either be satisfied or dissatisfied with his or her body. When someone is dissatisfied with his/her body or specific parts of it, it is termed as having a negative body image. People may perform actions to hide or change the body without regard to health implications and this can result in body image disturbance. Body image disturbance is usually caused by a feeling of inadequacy in comparison to a benchmark of the perfect or ideal body, whether real or imagined (Clay et al., 2005).

Studies have shown that adolescents have a negative body image due to the media, family influence, peer influence, and the changes experienced during adolescence (Frost and McKelvie, 2005; Davidson and McCabe, 2006). Body image can have serious implications for people's emotional and physical well-being and it is a critical part of adolescent development (Markey, 2010).

Another variable of importance to this study is self-esteem. Self-esteem can be defined as an evaluative element of how a person values, supports, approves or disapproves himself or herself (Frost, and McKelvie, 2005). Brown and Marshall (2006) view self-esteem as a capacity to construe events in ways that promote, maintain, and protect feelings of self-worth. Thus, implying that persons with high self-esteem have a strong love for themselves which makes them dwell on their positive qualities and react to events in such a way as to maintain feelings of self-worth.

There are different factors that can influence self-esteem. Genetic factors that help shape overall personality can play a role, but it is often our experiences that form the basis for overall self-esteem (Bastianello et al., 2014). Those who consistently receive overly critical or negative assessments from caregivers, family members, and friends, for example, will likely experience problems with low self-esteem (Chang and Suttikun, 2017).

The study of health behaviour in both healthy and unhealthy populations is an important area where health psychology can and has made important contributions to improving health (Conner and Norman, 2017).

Health behaviour encompasses a large field of study that cuts across various fields, including psychology, education, sociology, public health, epidemiology, and anthropology. Conner and Norman stipulated that, health behaviour is any activity undertaken for the purpose of preventing or detecting disease or for improving health and well-being. Health behaviours are influenced by the social, cultural and physical environments in which we live and work (Short and Mollborn, 2015). They are shaped by individual choices and external constraints. Positive health behaviours help promote health and

prevent disease.

Research stipulates that body dissatisfaction is linked to critical mental health problems, including eating disorders, low self-esteem and depression (Grabe et al., 2008).

The development of body image dissatisfaction is more pronounced during adolescence (Seo and Lee, 2013). Majority of students in the senior high schools are in the adolescent bracket and body image is central to adolescent's self-definition, because they have been socialized to believe that appearance is an important basis for self-evaluation and for evaluation by others (Thompson et al., 1999).

There is adequate literature on body image and self-esteem in the developed countries (Cash and Smolak, 2011; Davidson and McCabe, 2006; Markey, 2010) but same cannot be said about Ghana which is a developing country irrespective of how crucial body image and self-esteem are on the health of the youth.

Most of the studies conducted in Ghana are on predominately female college or university students. For example, Ntim and Sarfo (2015) investigated the relationship between body image and eating disorders among female students of the University of Ghana. Asumeng (2015) studied the relationship between body image satisfaction and psychological well-being in (9) African countries. Asumadu-Sarkodie and Owusu (2015) on the other hand investigated media impact on students' body image in the University for Development Studies. All these previous studies neglected the most vulnerable group, that is, the youth in senior high schools, who are mostly between the ages of 13 to 18 years.

According to the Ghana Statistical Service (2014), the population of Offinso Municipality like many other parts of the country, is generally a youthful one. This situation demonstrates the "Youth Bulge" phenomenon (Lin, 2012) with youthful energy that could be harnessed and directed into productive ventures. Therefore, efforts should be directed towards addressing any problem that could be confronting young people within this age bracket.

These have necessitated this current study and which sought to investigate body image, self-esteem and health behaviour of students in senior high schools within the Offinso Municipality of the Ashanti Region, Ghana.

The purpose of the study therefore was to examine body image, self-esteem and health behaviour and explore factors affecting body image among senior high school students in the Offinso Municipality of the Ashanti Region. The study specifically sought to find out the body image perception of students in senior high schools within the Offinso Municipality. Secondly, the study was to investigate the relationship between body image, self-esteem and health behaviour among students in senior high schools within the Offinso Municipality, and thirdly, it was to determine whether or not there are any gender differences in body image, self-esteem and health

**Table 1.** Number of students to be selected from the three senior high schools.

Name of school	Gender	T. Population	Sample Size	Percentage
Dwamena Akenten SHS	Boys	1200	117	21
	Girls	1050	103	18
<b>Total</b>		<b>2250</b>	<b>220</b>	<b>39</b>
Namong Sec Tech SHS	Boys	1050	103	18
	Girls	805	79	15
<b>Total</b>		<b>1855</b>	<b>182</b>	<b>32</b>
St. Jerome SHS	Boys	950	95	17
	Girls	670	66	11
<b>Total</b>		<b>1620</b>	<b>159</b>	<b>28</b>
<b>Grand total</b>		<b>5725</b>	<b>561</b>	<b>100</b>

behaviour among students in senior high schools within the Offinso Municipality. In addition, the study was to establish how body image and self-esteem influence health behaviour of students in senior high schools within the Offinso Municipality. Finally, the study was to identify factors that predict body image perception of students in senior high schools within the Offinso Municipality.

## METHODOLOGY

A descriptive cross-sectional design was employed for this study. A cross-sectional design is the process of collecting data in a specific period.

### Participants

The study was conducted among students (both boys and girls) in the three senior high schools in Offinso Municipality namely Dwamena Akenten SHS (2250), Namong Secondary Technical SHS (1855) and ST Jerome SHS (1620 Students). These schools have a total of 5725 students with only 40 being boarders and 60% being day students. A little over half of the students (56) are boys and the rest (44%) are girls. The average age of the girls in these Senior High Schools is 15 years, while the average age of boys is 16 years (GES Offinso Municipality, 2019).

The sample size for the study was estimated at 374 students out of the total student population with a 95% confidence level and a confidence interval of 5. This sample size was deduced using Miller and Brewer (2003) mathematical formula.

$$n = N / [1 + N(\alpha)^2]$$

$$n = 5725 / (1 + 5725) (0.05)^2$$

$$n = 5725 / 15.3125$$

$$n = 373.88$$

Where, n is the sample size, N is the sample frame (that is, target population),  $\alpha$  is the error margin and 1 is the constant term.

However, Ogah (2013) and Cohen et al. (2007) have stipulated that, the larger the sample size the better for cross sectional studies. Therefore 50% of the estimated sample size was added to the sample size making it 561 students. This adjustment was also done to cater for non-response of some questionnaires. Multistage sampling was used to select participants from the population. Stage one; stratified sampling was used to select respondents from the

senior high schools in the Municipality. This was achieved by adopting Babbie's (2005) formula which is given as;  $K/N \times n$ , Where: K = Population of students in a school, N = Total population of all three schools, n = Sample size.

Dwamena Akenten SHS –  $2250/5725 \times 561 = 220$ , Namong Sec Tech SHS –  $1855/5725 \times 561 = 182$  and St. Jerome SHS –  $1620/5725 \times 561 = 159$

In stage two, simple random sampling technique (The Fishbowl draw) was used to select respondents in the various schools based on the number determined earlier. Students in each form were grouped into two (boys and girls). 'YES' or 'NO' was written on pieces of papers, folded and placed in a bowl for students to pick. Students who picked YES in their various schools were selected for the study (Table 1).

### Instrument

A questionnaire comprising of 41 items taken from the Body Shape Questionnaire ([BSQ], 16 items, Rosenberg Self-Esteem Scale ([RSES], 10 items) and the Health Behaviour Questionnaire for Adolescents ([HBQA], 15 items was used to collect data.

Items from the modified version of the Body Shape Questionnaire (BSQ 16), were used to measure concerns about body image dissatisfaction and the experience of "feeling fat" among the adolescents. The items were measured on a six-point Likert scale ranging from never (1 point) to always (6 points). Some items from the BSQ 16 look like this, "Have you noticed the shape of other people and felt that your own shape compared unfavourably?" and "Have you felt ashamed of your body?" The BSQ 16 was developed by Cooper et al. (1987) has reported Cronbach alphas ranging between 0.82 and 0.88, with a test-retest correlation coefficient of 0.97.

The 10 items from the Rosenberg Self-Esteem Scale (RSES) measured on a four-point Likert scale, ranging from strongly agree (3 points) to strongly disagree (0 point) were used to assess self-esteem among the adolescents through agreement with self-evaluative statements such as "On the whole I am satisfied with myself." The Rosenberg Self-Esteem Scale (RSE) was developed by Rosenberg (1965) with test-retest correlations in the range of .82 to .88, and Cronbach's alpha in the range of .77 to .88.

The researchers designed an instrument called the Health Behaviour Questionnaire for Adolescents (HBQA) from literature. The HBQA scale consists of 15 items that are measured using a Likert scale that ranges from Strongly Agree to Strongly Disagree (4 points). Both face and content validity of the instrument were determined by experts in the area of health and physical education

**Table 2.** Frequency and percentage of body image concerns of students.

Level of concern	Frequency	Percentage
No concern	140	25.2
Mild concern	141	25.4
Moderate concern	219	39.5
Serious concern	55	9.9
Total	555	100

Source: Field survey, Researchers (2019).

from the University of Cap Coast, Ghana. A pre-test was conducted to ensure the reliability of the instrument. The pre-test was conducted at Akomadan Senior High School located in the Offinso North District. This Senior High School was selected because it had similar characteristics to those in the Offinso Municipality.

The instrument was pilot tested using students from Akomadan Senior High School. Using the test-retest method of determining reliability of an instrument, a correlation Coefficient of 85 was obtained, indicating a high reliability of the 41 item questionnaire used.

#### Data collection

Firstly, an approval was sort from the Institutional Review Board (IRB) of the University of Cape Coast, Ghana, to conduct this study. After the approval had been given, introductory letters were obtained from the Department of Health, Physical Education and Recreation of the University of Cape Coast, which was presented to authorities of the three Senior High Schools in the Offinso Municipality. A suitable time for the research was arranged with each of the heads of the three Senior High Schools and that was in the morning, just after the first break. Respondents were picked in every school through a simple random sampling technique. Students in each form were grouped into boys and girls and 'YES' or 'NO' was written on pieces of papers and folded for students to pick. The number of 'YES' was equal to the number needed in each form. Students who picked YES in their various schools, Forms and gender were selected for the study.

After the selection process, a vivid explanation was given to the students sampled for the study, the purpose of the research as well as their right to opt out of the study if they so wished and the need for them to answer the questions individually. The researcher also assured them of the confidentiality and promised not to release the data for any other purpose apart from the purpose it is meant for. After the explanation, the questionnaires were personally administered to the respondents. The questionnaires were collected personally by the researcher after they all completed it.

#### Data analyses

Data collected from the schools were analysed using IBM SPSS Statistics version 23.00. Data were screened thoroughly to remove missing data and also to make sure that it met some statistical assumptions such as normality, Linearity, multicollinearity and Homoscedasticity. Basic descriptive statistics such as percentage counts and frequencies were used to analyse body image perception of students. Pearson's product moment correlation was used to analyse the relationships between health behaviour, self-esteem, and body image. Regression was used to analyse how body image and self-esteem predicted health behaviour among the students. The independent sample t test was used to analyse

gender differences in body image, self-esteem and health behaviour.

## RESULTS

Initially, a total of 561 students were selected for the study but after administering the questionnaires, six were partially completed and therefore were rejected. The analysis was done using a sample size of (555) students instead of (561) students. (300) of the students were males representing 54.1 of the sample size while (255) of the students are females also representing 45.9% of the sample size.

#### Level of body Image perception of students in the senior high schools

The results in Table 2 showed that 10 (n=55) of the participants had serious body image concern, 40% (n=219) had moderate concern, 25 (n=141) mild concern, and 25% (n=140) had no body image concern.

#### *The relationship between body image, self-esteem and health behaviour among students in the senior high schools*

It was found that the correlation between body image and self-esteem was statistically significant ( $r=.587$ ). However, between body image and health behaviour the correlation was not statistically significant ( $r = -.002$ ). Similarly, between self-esteem and health behaviour the correlation was not statistically significant ( $r = .057$ ). This is indicated in Table 3.

#### *Gender differences in body image, self-esteem and health behaviour among students in the senior high schools*

Result in Table 4 revealed that, there was a statistically significant difference in body image scores between male and female students ( $t(553) = -5.124$ ,  $\eta^2 = .43$ ). Female students ( $M = 40.24$ ,  $SD = 13.45$ ) scored higher on body

**Table 3.** Correlation among body image, self-esteem and health behaviour.

Variables	Self esteem	Health behaviour	Body Image
Body image	0.587		
Self esteem		0.057	
Health behaviour			-0.002

P < 0.01, N = 555.

**Table 4.** Independent sample t-test showing gender differences in body image, self-esteem and health behaviour among students in senior high schools.

Variables	Gender	N	Mean	Std deviation	T	df	sig
Body image	Male	300	34.6500	12.23300			
	Female	255	40.2392	13.45222			
Self-esteem	Male	300	19.8600	4.13328			
	Female	255	21.8980	4.54347			
Health behaviour	Male	300	38.0767	4.40554			
	Female	255	38.8392	4.16888			

P < .05, N = 555.

**Table 5.** Results of regression analysis showing predictors of body image perception among students in the senior high schools.

Variables	B	$\beta$	T	Sig	R	R <sup>2</sup>	F
Body image	-12.578		-8.944	0.000	0.865	0.748	326.57
Family/Parental influence	5.680	0.361	11.015	0.000			
Friends/peer influence	2.452	0.160	5.286	0.000			
Community influence	0.360	0.029	1.346	0.179			
Role model influence	5.329	0.321	10.876	0.000			
Media influence	3.145	0.182	6.267	0.000			

Source: Field survey, Researchers (2019).

image scores than their male counterparts ( $M = 34.65$ ,  $SD = 12.23$ ). Results in Table 4 also indicated that there was a significant difference among males and females on self-esteem scores ( $t(553) = -5.530$ ,  $\eta^2 = 0.47$ ). Female students ( $M = 21.90$ ,  $SD = 4.54$ ) reported significantly higher levels of self-esteem scores than male students ( $M = 19.86$ ,  $SD = 4.13$ ). Results in Table 4 further revealed that there was a significant difference in health behaviour scores among male and female students ( $t(553) = -2.083$ ,  $\eta^2 = 0.18$ ). Female students ( $M = 38.84$ ,  $SD = 4.17$ ) scored higher than males ( $M = 38.08$ ,  $SD = 4.41$ ).

#### **Factors that predict body image perception of students in the senior high schools**

Table 5 revealed that the overall multiple regression model was significant ( $F(5, 549) = 326.57$ ,  $p = 0.000$ ,  $R^2$

$= 0.748$ .) as R Square ( $R^2$ ) of 0.748 explains 75% of variance in body image among students in the senior high schools. However, Table 5 showed that the most reliable predictor of body image perception among the students is family/parental influence ( $\beta = 0.361$ ,  $p = 0.000$ ). Role model influence ( $\beta = 0.321$ ,  $p = 0.000$ ), media influence ( $\beta = 0.182$ ,  $p = 0.000$ ), and friends/peers influence ( $\beta = 0.160$ ,  $p = 0.000$ ), were all significant predictors of body image. However, community/society influence did not significantly predict body image among the students ( $\beta = 0.029$ ,  $p = 0.179$ ).

#### **How body image and self-esteem influence the health behaviour of students in the senior high schools**

The results in Table 6 revealed that the overall logistic regression model was not significant ( $-2\text{LogL} = 747.333$ ,

**Table 6.** Influence of body image and self-esteem on health behaviour among students in the senior high schools.

Variables	B	Wald	Df	Sig	OR	95% CI
Self esteem	0.033	1.896	1	0.169	1.034	0.986 - 1.084
Body image	-0.004	0.224	1	0.636	0.996	0.980 - 1.012
Constant	-0.932	4.982	1	0.026	0.394	

Source: Field survey, Researchers (2019).

$\chi^2 = 2.075$ ,  $p = .354$ ) as Nagelkerke R Square ( $R^2$ ) of .005 explains 0.5% of variance in health behaviour among students in the senior high schools. With this percentage contribution to the entire model, the result showed the entire model was statistically significantly. However, the result shows that body image (OR = .996, 95% CI = .980 – 1.012,  $p = .636$ ) and self-esteem (OR = 1.034, 95% CI = 986 – 1.084,  $p = .169$ ) as predictors of health behaviour were not statistically significant.

## DISCUSSION

The purpose of this study was to examine body image, self-esteem and health behaviour and explore factors that influence body image perception among senior high school students in the Offinso Municipality of the Ashanti Region, Ghana. The finding on body image perception showed that majority (75%) of senior high school students within the Offinso Municipality had body image concerns ranging from mild to serious concerns. These findings agree with the position of Seo and Lee (2013) that the development of body image dissatisfaction is more pronounced during adolescence. Banat (2016) also found a high prevalence of body image dissatisfaction among senior high school students in the Cape Coast Metropolis. The findings imply that body image concerns are no longer problems for only advanced countries, even in developing countries like Ghana, these body image concerns are increasing rapidly among the youth (Asumadu-Sarkodie and Owusu, 2015).

The correlation analysis indicated a moderate positive relationship between body image and self-esteem. This finding agrees with previous literature (Dohnt and Tiggemann, 2006; Abdulnabi, 2014) that body image is associated with self-esteem. The finding also revealed that there was no statistically significant relationship between body image and health behaviour. This finding contradicts what has been established in previous studies that poor body image can have a negative effect on healthy lifestyle behaviours (Wilkosz et al., 2011). Research also turns to suggest that people with positive body image show respect for the body by attending to its needs, and thus engaging in health-promoting behaviours (Tylka, 2013) contrary to what the current study found. This may be due to the fact that health behaviour is a

multifactorial construct that depends on many factors other than body image.

Again, there was no statistically significant relationship between self-esteem and health behaviour among the students. A study by Lowery et al. (2005) revealed that self-esteem was positively related to health-related behaviours in general among first year college students and that, the more positive their health-related behaviours, the higher their self-esteem and their body control. The findings by Lowery et al.(2005) disagrees with the position of the current study that there is no statistically significant relationship between self-esteem and health behaviour among the students.

The results from the independent sample t-test revealed that female students scored higher on their body image and self-esteem than their male counterparts. The finding imply that female students have higher body image concerns, higher self-esteem and also exhibit more positive health behaviours than male students. These findings agree with Thapa (2016), who found that females were more vulnerable for body image dissatisfaction than their male counterparts.

Generally, female adolescents are more dissatisfied with their bodies than males (Chen et al., 2010) and this is well supported in the current study. Furthermore, Liu et al. (2019) did indicate from their study that body dissatisfaction was more common in female subjects than their male counterparts. The finding on self-esteem also agrees with that of Bhamani et al. (2014) who reported that, female adolescents scored higher on the variable of self-esteem than their male counterparts.

Family influence was found to be the strongest predictor of body image followed by role model influence, media influence, friends/peer influence, and community/society influence. The findings meant that parental nurturance is important throughout the developmental process and appears to be an especially significant factor in the development of young adolescents (Windle, et al., 2011). The possible reason is that, family environments have been found to have significant influence when it comes to young people's body image; both explicit weight-related comments and implicit parental modelling may have adverse effects on adolescents (Neumark-Sztainer et al., 2010). These findings are consistent with previous studies (Curtis and Loomans, 2014; Hardit and Hannum, 2012) that revealed

the family as having significant influence on body image perception of young people.

The results of the logistics regression analysis indicated that, body image and self-esteem have very little influence on the health behaviour of students in the senior high schools. This implied that student's perception about their physical appearance and how they value themselves have a trivial effect on how they behave towards their health. The finding agrees with that of Moustafa et al. (2018) who concluded that the relationship between body satisfaction and health behaviours was not strong due to the fact that health behaviour is a multifactorial construct that depends on many factors other than body image and self-esteem.

## Conclusion

Students with body image concern can lead to body dissatisfaction and are more likely to have a greater body image discrepancy and low self-esteem. Body image has some effect on people's emotions, feelings and self-worth and thus it influences self-esteem. Female students are more likely to use unhealthy means to alter their body than their male counterparts. Male students are more likely to engage in negative health behaviours than their female counterparts. Body image and self-esteem does not directly affect health behaviour among Senior High School students in Offinso Municipality. Comments by family members on physical appearance could easily affect the body image perception of their young ones.

The data presented in this study is limited to students in the three senior high schools within the Offinso municipality and, therefore, the findings may not be applicable to other students outside this geographical setting. Students were not comfortable providing answers that presented them in an unfavourable manner even though they were assured of their privacy and confidentiality.

The Municipal Directorate of the Ghana Education Service, which is the body in charge of these senior high schools in the Offinso Municipality, should organise school-based preventive educational intervention programmes for students who have body image concerns to reduce the risks of developing body image dissatisfaction and to improve their self-esteem.

## LIMITATIONS

The data presented in this study is limited to students in the three senior high schools within the Offinso municipality and, therefore, the findings may not be applicable to other students outside this geographical setting. Students were not comfortable providing answers that presented them in an unfavourable manner even though they were assured of their privacy and confidentiality.

## RECOMMENDATIONS

The Municipal Directorate of the Ghana Education Service, which is the body in charge of these senior high schools in the Offinso Municipality, should organise school-based preventive educational intervention programmes for students who have body image concerns to reduce the risks of developing body image dissatisfaction and to improve their self-esteem.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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