

BODY Image, Eating Habits and Motivation of Students Toward Physical ACTIVITY

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ABSTRACT

This descriptive-correlational research aimed to determine the influence of body image and eating habits on motivation toward physical activity among Grade 12 senior high school students in Sta. Maria District, Division of Davao Occidental. This study adapted and used three research instruments to determine the level of body image, eating habits, and motivation toward physical activity of Grade 12 senior high school students. The results showed that Grade 12 senior high school students had high levels of body image, eating habits, and motivation toward physical activity. Additionally, the results revealed that body image and eating habits were significantly associated with motivation to engage in physical activity among Grade 12 senior high school students. Lastly, the results indicated that body image and eating habits significantly influenced motivation to engage in physical activity among Grade 12 senior high school students.

KEYWORDS: *Physical Education, body image, eating habits, motivation, Philippines*

INTRODUCTION

Adolescent physical inactivity is viewed as a public health burden worldwide (Sawyer et al., 2012). A study by Guthold et al. (2020) revealed that most adolescents lack motivation to engage in physical activity for health benefits most of the time. Notably, 80 percent of teenagers worldwide are not physically active (World Health Organization, 2020). Hence, low participation in physical activity may indicate a need for sufficient motivation to engage in exercise (Teixeira et al., 2012).

More likely, physical education teachers frequently have difficulties

getting their students to participate actively in physical activity during physical education time and outside the school (Bailon et al., 2018). Further, adolescents' physical activity levels decline between 12 and 15 years quickly (Cooper et al., 2015). The World Health Organization (2018) found that 81 percent of young people ages 11 to 17 do not meet WHO recommendations for physical activity, such as 60 minutes of moderate-to-vigorous physical activity per day.

According to a study by Hallal et al. (2012), 31.1 percent of people worldwide and 17 percent of people in Southeast Asia (SEA) reported being physically inactive in the context of ASEAN. In the Philippines, nearly 40 percent of Filipinos need to be more active, based on a recent survey on global trends in inactivity. According to Guthold et al. (2018), 50% of Filipino women and 30% of Filipino men need to be more active. Additionally, Dumlao-Abadilla's (2017) findings of the Sun Life Financial Asia Health Index show that the number of Filipinos who do not regularly exercise is among the highest in Asia. He added that this behavior stems from Filipinos' lack of time, internal motivation, and involvement in other activities that could divert their attention from exercise.

Likewise, students in higher education have rigorous and busy schedules for their academic and extracurricular endeavors (Teixeira et al., 2021). Increased calorie intake and decreased physical activity make students more likely (Clemente et al., 2016). Female students at the tertiary level were found to participate in physical activity at a lower rate than male students (Alkahtani & Awad, 2016), perhaps due to lower motivation among female students (Hickey & Mason, 2017).

In line with this, the World Health Organization (WHO) and the Department of Health (DOH) of the Philippines' 2015 Global School-based Student Health Survey (GSHS) revealed that just 12.1 percent of male and 11.6 percent of female students aged 13 to 17 in Davao City engaged in physical activity. Further, 62.5 percent of the participants in the Quismundo et al. (2019) study, which included people from the Davao Region, were physically inactive. Furthermore, it was shown that participants aged 18 to 65 do not engage in moderate-to-vigorous physical activity as part of their jobs.

Further, body image plays a significant role in motivating students to engage in physical activity. Based on the findings, body image can impact exercise. Body image has been linked to general physical activity involvement

and participation in physical education (Kantanista et al., 2015). According to the findings, psychoeducation, media literacy, and lifestyle modifications, such as enhancing the sense of embodiment, the ability to reject exercise and nutritional fallacies, and shifting from an unhealthy to a healthy focus on the body, may promote a positive body image (Sundgot-Borgen et al., 2018). Various interventions encouraging positive body image among student-aged populations have been shown to be helpful in systematic reviews (Alleva & Tylka, 2021; Sundgot-Borgen et al., 2019).

Furthermore, eating habits correlate well with physical activity. In the study of Allafi et al. (2014), both men and women who consumed breakfast, fruit, and vegetables had significantly positive relationships with physical activity. Also, Stea and Torstveit (2014) state that breakfast accounts for about 25 percent of one's daily caloric intake, and multiple studies suggest that eating it regularly lowers the risk of obesity and positively affects Body Mass Index, thereby promoting active participation in physical activity. Likewise, Storey et al. (2012) mentioned that increased physical activity and participation can boost academic performance.

In this manner, according to the readings by Saez et al. (2021), other areas focused on motivation for physical activity. However, the variable was paired with gender, amount of activities, and sports satisfaction among university students aged 18–29 using a quantitative design, bivariate analysis, and exploratory analysis. Meanwhile, the Christofaro et al. (2021) study focused on physical activity and improved eating habits during the COVID-19 pandemic among adults aged 18 and above, with respondents either university students or older adults, using a quantitative research design. Further, the researcher came across a study that examined the combined impact of body image, eating habits, and students' motivation toward physical activity, specifically Grade 12 senior high school students, using a descriptive-correlational design with multiple regression analysis. Lastly, the studies mentioned above were conducted internationally, while the present study was conducted in the Philippines.

No research has yet examined the relationships among body image, eating habits, and motivation for physical activity in Davao Occidental. The researcher felt the need to conduct this study urgently, given identified research gaps in methods, geography, and groups, focusing on Grade 12 students in a post-pandemic landscape marked by sedentary behavior. The findings of this research will help physical education teachers better grasp the numerous reasons

students participate in different physical activities. Further, understanding which aspects of students' body image and eating habits significantly impact their motivation for physical activity may be vital to helping physical education teachers design strategies by revealing what drives student participation in such activities. Moreover, educational leaders can use the data to develop enhancement programs that meet students' needs and motivations for physical activity.

Theoretical Lens

This study was anchored on the Self-Determination Theory (SDT) by Deci and Ryan (1985). Self-determination theory is a method of studying human motivation that focuses on a person's ability to control their actions. It is based on the motivating factors of physiological and psychological demands, including competency, autonomy, and relatedness, and draws on early motivation theory (Ryan & Deci, 2000). Additionally, the self-determination theory confirms that people are active beings driven to develop, overcome obstacles, and incorporate new experiences into their sense of self (Ryan & Deci, 2000). The SDT was employed in this study to investigate the relationships among body image, eating habits, and students' motivation for physical activity. Additionally, the theory was applied to determine how senior high school students' motivation toward physical activity was influenced by body image and eating habits.

METHODS

Research Design

In this study, the researcher employed a quantitative research method, specifically a descriptive correlational design, to analyze numerical data. According to Watson (2015), the quantitative research method uses statistical or numerical data to ascertain the underlying cause of specific events using a scientific method. Further, a descriptive research design was employed in this study, which is used when the goal is to explain the state of the situation at the time the study was conducted (Singh, 2007). This study used a correlational research design to examine the association among body image, eating habits, and students' motivation toward physical activity among senior high school students. According to Creswell (2014), a correlational research design is a quantitative research technique used to define and quantify the strength of a relationship or association between two or more variables. Furthermore, a descriptive correlational design determines the relationships among variables and produces static images of situations (McBurney & White, 2009). Also, it describes the

elements and their relationships naturally. In this study, the independent variables are body image and eating habits, and the dependent variable is students' motivation toward physical activity. The most appropriate research design for this study was the descriptive-correlational one. This research used a Likert-scale survey questionnaire to collect quantitative data. The researcher determined the status of students' body image, their level of eating habits, and their motivation toward physical activity by analyzing the data using various statistical tools. Additionally, statistical tools were employed to examine the relationships among senior high school students' body image, eating habits, and motivation toward physical activity. Moreover, no experiments will be performed on the respondents for this study.

Research Locale

This study was conducted in the municipality of Sta. Maria is a beachfront municipality in the province of Davao Occidental. The 2020 Census found 57,526 people living there. This was equivalent to 1.10 percent of the Davao Region's total population, or 18.14 percent of the province of Davao Occidental's total population. Further, this study was conducted among three selected public national high schools in the municipality of Sta. Maria. These small, medium, and mega schools have 75 to 487 enrolled Grade 12 senior high school students. Furthermore, the three chosen schools were identified as Schools A, B, and C, which provide junior and senior high education.

Research Respondents

The respondents of this study were 224 Grade 12 senior high school students enrolled in the school year 2022- 2023. They were chosen from the selected three public schools in the Division of Davao Occidental, specifically in the municipality of Sta. Maria. Additionally, the respondents were chosen based on the following inclusion criteria: officially enrolled as grade 12 senior high school students for the academic year 2022–2023, who willingly provided written consent, and will be able to obtain their parent or guardian's written approval. Also, those students enrolled in the face-to-face modality are taking a physical education class.

Ethical Statement

This study was approved by the University of Immaculate Conception Research Ethics Committee (UIC-REC) and adhered to the principles of research ethics. Administrative clearance was secured before the data collection. Voluntary written informed consent was obtained from the 224 Grade 12

respondents, along with written parental or guardian approval for minor participants, ensuring their right to withdraw without penalty. In compliance with the Data Privacy Act of 2012, absolute anonymity was maintained by replacing all personal and institutional identities with alphanumeric codes. All completed survey questionnaires and digital datasets were kept in a secure, password-protected repository accessible only to the primary researcher for future reference.

RESULTS

Status of Body Image

Table 1

Status of Body Image of Grade 12 Students

Indicators	Mean	SD	Description
Appearance Orientation	3.59	.42	High
Appearance Evaluation	3.40	.50	Moderate
Overweight Preoccupation	3.22	.81	Moderate
Body Areas Satisfaction Scale	3.62	.63	High
Overall Mean	3.46	.35	High

Table 1 presents the status of body image among Grade 12 students in terms of body orientation, body appearance, overweight preoccupation, and body areas satisfaction scale. It shows that the overall mean body image score is 3.46, which is described as high. It implies that a positive body image is oftentimes manifested. In addition, the standard deviation is 0.35, which is less than 1, indicating that the respondents' ratings are practically identical.

This study's results parallel those of Bevan et al. (2021), which confirm that adolescents attending high school have a positive body image. Similarly, the results of this study align with those of Godina and Zadorozhnaya (2016), which show that boys and girls in both age groups positively evaluate their body appearance as average and their body shape as satisfactory or reasonable. Correspondingly, this study's results support those of Holmqvist and Frisen (2012) and Meier et al. (2014), who found that teenagers are generally aware of their bodies' functionality and aesthetics. Moreover, Australia (2012) stated that body image is one of the most essential personal worries for adolescents, especially females.

The indicator with the highest mean is the Body Areas Satisfaction Scale. The means of this indicator body areas satisfaction scale ranged from 3.47 to 3.77. The category mean is 3.62, which is considered high, indicating that students' positive body image is often evident. It gives the impression that the students are pleased with their lower torsos. In addition, it indicates that students are pleased with their facial features, such as their eyes, nose, and lips, as well as their complexion, or the color of their skin. The study's results are consistent with those of Prnjak et al. (2019), which revealed that body satisfaction among female and male athletes is high. It means that they are content with their body appearance. Further, this result is similar to that of Grogan et al. (2021), which found that adolescents were highly satisfied with their bodies across sites, and that teenagers who had already entered puberty were more likely to feel content with their facial features and complexion. Meanwhile, the indicator with the lowest mean is overweight preoccupation. The means of this indicator's overweight preoccupation ranged from 2.84 to 3.58. The category mean is 3.22, which is moderate, indicating that the student sometimes manifested a positive body image. The results of this study are consistent with those of Divecha et al. (2022), who found that students preferred fasting as the top measure for weight control. Moreover, the study's results support those of Salih et al. (2023), who found that obese high school students are highly worried. Also, this result aligns with the study by Chen et al. (2020), which found that obesity increases stress and affects students academically and physically.

Extent of the Eating Habits

Table 2

Extent of the Eating Habits of Grade 12 Students

Indicators	Mean	SD	Description
Knowledge	3.44	.68	High
Feeling	3.87	.65	High
Problem	3.05	.65	Moderate
Overall Mean	3.46	.54	High

Table 2 presents the status of Grade 12 students' eating habits in terms of knowledge, feelings, and problems. The overall mean for eating habits is 3.46, which is considered high. It has a standard deviation of 0.54. It implies that students' positive eating habits are often evident.

The indicator with the highest mean is feeling. The means of this indicator's feelings ranged from 3.55 to 4.10. This indicator has a category mean of 3.87, which is high, indicating that students' positive eating habits are often evident. This suggests that consuming nutritious food contributes to a sense of comfort and alleviation of stress among students. Moreover, this suggests that students exhibit greater dietary discipline, actively selecting and preparing nutritious meals daily. The results of the study are similar to those of Bremner et al. (2020), who found that patients following a Mediterranean-style diet reported reduced stress and felt more relaxed in their bodies. Additionally, this result affirms the study by Sares-Jaske (2019), which shows that teenagers strongly emphasize following a tight diet to lose weight. Also, this finding aligns with those of Mujcic and Oswald (2016), who found that eating healthy foods, such as fruits and vegetables, increases happiness, life satisfaction, and well-being. Moreover, Schnettler et al. (2017) reported that students, adolescents, and adults who reported that food was important to their well-being had higher levels of life and food satisfaction. Meanwhile, the indicator with the lowest mean is a problem. The means of this indicator problem ranged from 2.61 to 3.78. This particular indicator of the extent of the eating habits reflects a category mean of 3.05, described as moderate, which means that the positive eating habits of students are sometimes evident. It gives the impression that students tend to respond favorably when they are asked to go out with someone. It gives the impression that students have a limited selection of nutritious foods. The result of this study confirms that of Banik et al. (2020), which found that friends are the primary reason teenagers visit fast food restaurants. This finding is similar to that of Fatikhani and Setiawan (2019), who found that students go to fast-food restaurants because their friends persuade them to eat unhealthy food. Likewise, these findings are consistent with those of Sick et al. (2019), which found that students reject healthy food because it tastes and smells bad and has an undesirable appearance and texture.

Level of Motivation toward Physical Activity

Table 3

Level of Motivation of Students toward Physical Activity

	Mean	SD	Description
External Regulation	3.02	.87	Moderately High
Introjected Regulation	3.38	.88	Moderately High
Identified Regulation	4.15	.70	High
Intrinsic Motivation	4.21	.73	Very High

Overall Mean	3.69	.58	High
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Table 3 shows the level of motivation toward physical activity, with an overall mean of 3.69, indicating a high level of motivation. This means that students' motivation toward physical activity is often observed. It has a standard deviation of 0.58, which is less than 1, indicating that the respondents' ratings are practically the same. The findings suggest that students believe engaging in physical activities can lead to improved well-being, enhanced physical health, and greater enjoyment. Additionally, students may experience negative emotions, such as sadness and remorse, if they fail to engage in physical activities. This finding aligns with the research by Saez et al. (2021), who posited that motivation is a consistent factor in engaging in physical activity. Furthermore, the results of this study align with the research by D'Abundo et al. (2014), which posited that children who engage in physical activity for positive rather than negative motivations exhibit higher levels of satisfaction with physical activity.

The indicator with the highest mean is intrinsic motivation. The means of this indicator ranged from 4.13 to 4.32. The category mean is 4.21, described as very high. This means that students' motivation toward physical activity is consistently observed. This suggests that students participate in physical activities for personal enjoyment. Moreover, this implies that students consistently exhibit motivation to engage in physical activities because they desire to improve their physical well-being. The result was similar to that of Wilson et al. (2020), which found that intrinsic motivation had the highest mean score among the given types of motivation. Also, their study found that females are very interested in monitoring their outcomes and progress. Further, these findings support Ryan and Deci's (2000) view that, on the continuum of self-determination, an individual who engages in intrinsic regulation maintains an activity for a longer period than those who engage in other forms of self-regulation. Meanwhile, the indicator with the lowest mean is external regulation. The means of this indicator's external regulation ranged from 2.93 to 3.15. The category mean is 3.02, described as moderately high. This means that, in terms of external regulation, students' motivation toward physical activity is sometimes observed. It can be argued that students may be motivated to engage in physical activities on some occasions due to recognition from peers or others in their social environment. Moreover, it suggests that students do not place significant importance on actively engaging with their peers. The result of this study contradicts that of Vaquero-Solis et al. (2022), which found that students

are more motivated to engage in physical activity when people tell them to do so. Moreover, the finding aligns with the study by Wilson et al. (2003), which found that external regulation was not significantly correlated with exercise behavior or physical fitness. This demonstrates that neither external benefits nor penalties can motivate someone to engage in physical activity or meaningful exercise.

Significance of the Relationship of Body Image and Eating Habits to Motivation toward Physical Activity

Table 4

Significance of the Relationship of Body Image and Eating Habits to Motivation toward Physical Activity

Independent Variables	Motivation Toward Physical Activity		
	R	P-value	Remarks
Body Image	.34	.000	Significant
Eating Habits	.51	.000	Significant

Table 4 shows the relationship between body image, eating habits, and motivation toward physical activity. It shows that body image and motivation towards physical activity have a significant positive relationship (two-tailed p-value = .000, $r = .34$, $p < .05$). This means that as body image improves, motivation towards physical activity also increases. This suggests that adolescents with higher body image satisfaction are more likely to engage in physical activities, such as exercise and sports.

The findings are consistent with Ramsey's (2018) study, which found that those with higher levels of body appreciation frequently reported exercising more intuitively than those with lower levels of appreciation. Similarly, women and adolescents with a positive body image engage more in exercise because they appreciate it and participate in physical activities such as sports (Frisén & Holmqvist, 2010; Wood-Barcalow et al., 2010). Moreover, the results of this study are consistent with those of Sabiston et al. (2019), which showed that positive body image was associated with greater participation in physical activities. Further, this finding aligns with the study by Han et al. (2023), which suggests that body image had a significant moderating effect on students' physical activity.

Similarly, the result shows that the eating habits of the students and motivation towards physical activity have a significant moderate relationship with a two-tailed p-value of .000, and $r = .51$ ($p < .05$). This implies that if the status of eating habits increases, the level of motivation towards physical activity also significantly increases. The findings support the study by Burke et al. (2017), which found that individuals who adopted healthy eating behaviors also ate more fruits and vegetables, thereby increasing their engagement in physical activity. Moreover, Maenhout et al. (2020) revealed that positive eating habits have a correlation to physical activity, implying an increase in eating habits is also a good indicator of active participation in physical activity. It implies that the more knowledgeable the students are about healthy foods and the importance of nutrition, the more they engage in physical activities.

The results of this study were consistent with those of Erdogan's (2023) study, which found a significant relationship between eating habits and participation in exercise programs. Also, the findings are consistent with those of Psouni et al. (2016), who reported that people in the healthy segment engaged in more leisure activities and exercised for longer periods. Additionally, they tend to have more positive attitudes and intentions toward healthy food and physical activity. They appeared to have higher scores in understanding physical exercise and in having a balanced diet. Moreover, the result supports the view of Naughton et al. (2015), who found a connection between healthy eating motivation and active lifestyles. People who were highly driven to follow a healthy diet typically had healthier food profiles, engaged in more physical activity, and watched less television.

Significance of the Influence of Body Image and Eating Habits Motivation Toward Physical Activity

Table 5

Significance of the influence of Body Image and Eating Habits to Motivation toward Physical Activity

Variables	B	t	p-value	Remarks
Body Image	.104	2.378	.018	Significant
Eating Habits	.068	7.116	.000	Significant
Holistic model				
R ²	.28			
F-value	43.46			

P-value	.000
Remarks	Significant

The result of the regression analysis is presented in Table 5. The data show that both variables—body image and eating habits—could significantly influence students’ motivation in their independent capacity ($p < .05$). Among the two variables, body image is the stronger influencer, with a higher beta coefficient of .104. It means that a unit improvement in the body image leads to a .104 increase in students’ motivation towards physical activities. On the other hand, the beta coefficient of .068 indicates that a unit improvement in eating habits results in a 0.068 increase in students’ motivation to engage in physical activity.

As to the regression model, the R-squared of .28 connotes that 28 percent of the variation in students’ motivation can be attributed to the combined influence of body image and eating habits. This means that there are other factors equivalent to 72 percent that are not covered in this study.

It implies that students who have a strong appreciation for their body appearance and knowledge about nutritious eating are more likely to be motivated to participate in physical activities. Moreover, students with a positive body image are much more likely to engage in physical activity than those with poor eating habits.

This aligns with the study by Panão and Carraça (2020), which found that body image and eating habits were associated with positive engagement in physical activities, such as exercise and sports. Moreover, this finding aligns with the study by Ljubičić et al. (2022), which found that people with a positive body image are actively engaged in physical activity to maintain their physique. At the same time, they believe that eating healthy foods and engaging in physical activity must go hand in hand to achieve a healthy lifestyle.

CONCLUSION

The students often demonstrated a positive body image; hence, the appearance orientation and body area satisfaction scales suggest that, in these domains, students' body image is evident. Meanwhile, appearance evaluation and overweight preoccupation suggest that, in these domains, students' body image is sometimes manifested. It proposes that students are conscious most of

the time when going out in public, take time to check their appearance in the mirror, and are very self-conscious about their grooming. Also, it implies that students like their looks just the way they are, like how their clothes fit them, and consider themselves good-looking. Furthermore, it indicates that students were constantly worried about becoming or being fat, very conscious of even small changes in their weight, and very satisfied with their overall appearance.

The indicators of knowledge and feeling imply that students' eating habits are oftentimes evident. Meanwhile, the indicator problem suggests that students' positive eating habits are sometimes evident. This suggests that students were aware of the importance of a healthy diet, knew healthy eating practices, and could prepare their own healthy meals. Moreover, students feel relaxed and peaceful when they eat healthy foods. Furthermore, students feel satisfied when they eat healthy food; they think only a few foods are healthy for them.

The finding indicates that the domain of intrinsic motivation shows that students' motivation toward physical activity was consistently observed, while the domain of regulation shows that it was often observed. Meanwhile, external and internal regulation indicate that students' motivation toward physical activity is sometimes observed. The result implies that students believe physical activities will help them feel healthier, and they enjoy doing it. Also, students would feel bad and guilty if they did not engage in physical activities. Furthermore, students were motivated because they believed physical activities helped them feel better.

Both body image and eating habits were positively associated with students' motivation to engage in physical activity. Specifically, as body image improves, students' motivation to engage in physical activity increases. Likewise, if the eating habit increases, students' motivation significantly increases. It implies that students who appreciate their body image are most likely to engage in physical activities such as exercise and sports. Likewise, it implies that the more knowledgeable the students are about healthy foods and the importance of nutrition, the more they engage in physical activities.

Body image and eating habits significantly influenced students' motivation to engage in physical activity. Findings further showed that both independent variables correspond to a specific increase in motivation towards physical activities. Additionally, body image significantly influences students'

motivation for physical activity more than their eating habits do. It implies that students who highly value their body image and know how to eat nutritious food are more likely to be motivated to participate in physical activities. Moreover, students with high body image are more likely to engage in physical activities than those with high eating habits.

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