

Personal Hygiene Practices and Food Sanitation Awareness as Correlates to Students' Health

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ABSTRACT

This study dealt with the influence of personal hygiene practices and food sanitation awareness on students' health. The primary goal of this study was to examine the level of personal hygiene practices, food sanitation awareness, and students' health in terms of their respective indicators and to find out the significant relationship between personal hygiene practices and students' health as well as the relationship between food sanitation awareness and students' health and identify which domains of personal hygiene practices and food sanitation awareness significantly influence students' health. A quantitative-correlational design was used in this study, which involved 270 respondents from different sections of senior high school. The statistical methods employed in this study were the average weighted mean, spearman's rho, and multiple regression analysis. The findings of the study revealed that the three variables obtained a very high level. Moreover, there was a significant relationship between personal hygiene practices and students' health, as well as food sanitation awareness and students' health. Further, oral hygiene and food sanitation practices significantly influenced students' health. In conclusion, personal hygiene practices and food sanitation were vital in promoting students' health.

Keywords: Caregiving, Personal Hygiene Practices, Food Sanitation Awareness, Philippines

INTRODUCTION

Personal hygiene practices are essential for maintaining students' health, which includes regular hand washing and overall cleanliness that help prevent the spread of illnesses (Berhanu et al., 2021). However, many schools face challenges in ensuring students follow these practices regularly (Azanaw, 2021). A study in school kitchens in Espírito Santo, Brazil, has highlighted that poor hygiene among food handlers often leads to higher rates of food-borne diseases towards the student, negatively affecting the student's general health (Da Victoria et al., 2021). Additionally, in a divisional city in Bangladesh, it was observed that some students lack awareness about proper sanitation practices, including food safety and school environment cleanliness, increasing health problems (Kabir et al., 2021). Also, in Saudi Arabia, students frequently miss school due to health issues caused by different illnesses, which greatly affect their studies and well-being (AlSayyari & AlBuhairan, 2020).

In the Philippines, Filipinos emphasized personal hygiene, with daily bathing, oral care, and clean clothing being vital, especially in the Panaytayan community (Linga & Brinosa, 2024). Jusayan (2022) highlighted personal hygiene as essential for preventing infections, reducing disease spread, and fostering social acceptance and community well-being. Strong hygiene habits create a healthy environment and can inspire positive changes in mindset and lifestyle (Gomez et al., 2019). Personal hygiene involves routines that maintain bodily cleanliness (Delea et al., 2020). Also, a study in Binan City, Laguna, found that good hygiene is crucial for preventing infectious diseases and promoting overall health (Corpuz et al., 2020).

Furthermore, applying food sanitation awareness for students' health and creating and sustaining clean and healthy circumstances for the production and consumption of our food depends on several actions highlighted

by food hygiene and sanitation (Adling, 2022). The level of awareness and availability of resources was a significant predictor of the extent of compliance with implementation rules and regulations on sanitation, as well as food safety (Palapar & Rio, 2022). Supporting the recent study in Tarlac City, emphasized that food sanitation awareness for students is essential as a self-learning tool and a necessity for an active life (Collado, 2020).

In Region XI, particularly in Davao City, personal hygiene practices and food sanitation awareness among students has been critical in addressing health-related issues (Alcazaren et al., 2023). Poor hygiene practices, including improper hand washing and unsafe food handling, are major contributors to the spread of food-borne illnesses and infections in school environments (Babor et al., 2024). Even with sufficient knowledge of hygiene and food safety, many students and food handlers do not consistently implement safe practices, creating a gap that heightens health risks and contributes to school illness outbreaks (Limon, 2021). This gap between awareness and practice raises the risk of contamination, potentially resulting in health issues such as food poisoning and spreading diseases like salmonella, helminth infections, dehydration, and associated malnutrition (Hinlayagan, 2022).

Research Objectives

1. To determine the level of Personal Hygiene Practices among Students in Lorenzo S. Sarmiento Sr. National High School in terms of:

- 1.1 Hand Hygiene;
- 1.2 Body Hygiene; and
- 1.3 Oral Hygiene.

2. To determine the level of Food Sanitation Awareness among Students in Lorenzo S. Sarmiento Sr. National High School in terms of:

- 2.1 Knowledge of food sanitation;
- 2.2 Attitudes towards food sanitation; and
- 2.3 Practices towards food sanitation.

3. To determine the level of Students' Health in Lorenzo S. Sarmiento Sr. National High School in terms of:

- 3.1 Physical Health;
- 3.2 Social well-being; and
- 3.3 Hygiene and Sanitation.

4. To determine the significant relationship between Personal Hygiene Practices and Students' Health in Lorenzo S. Sarmiento Sr. National High School.

5. To determine the significant relationship between Food Sanitation Awareness and Students' Health in Lorenzo S. Sarmiento Sr. National High School.

6. To determine which of the domains in Personal Hygiene Practices would influence Students' Health in Lorenzo S. Sarmiento Sr. National High School

7. To determine which of the domains in Food Sanitation Awareness would influence Students' Health among students in Lorenzo S. Sarmiento Sr. National High School.

METHODOLOGY

This study employed quantitative non-experimental research design that uses correlational technique to describe the hypothetical existence of a relationship between three defined variables and to determine the direction and degree of that relationship if one exists. When the purpose is to describe the condition of the situation as it existed at the time of the study to investigate the causes of a particular phenomenon, the descriptive correlation method

is considered appropriate. Correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them.

A correlation reflects the strength and direction of the relationship between two or more variables (Bhandari, 2021). In correlational research it refers to a non-experimental research method which studies the relationship between two variables with the help of statistical analysis (Devi et al., 2023).

This survey dealt on quantitative data about the said phenomenon. The quantitative aspect is an appropriate schedule for gathering the data designed for the target respondents to answer the questions. The process of gathering the data used questionnaires. The focus of the study would be to determine the influence of personal hygiene practices and food sanitation awareness on students' health among the Senior High School students in the Lorenzo S. Sarmiento Sr. National High School.

Population and Sample

Simple random sampling was employed in selecting the respondents for this study. The subjects included 270 senior high school students in Lorenzo S. Sarmiento Sr. National High School, male or female, and currently enrolled in the semester year 2024-2025. These individuals were considered ideal respondents due to their direct involvement in themselves, aligning with the study on student's personal hygiene and food sanitation awareness on their health. According to Memon et al. (2020), a sample size of 200-400 respondents were considered minimum ratios. In the case of senior high school student in Lorenzo S. Sarmiento Sr. National High School, out of a population of 904 individuals, a random sample of 270 respondents were selected. Moreover, we employed stratified random sampling and simple random sampling in selecting the respondents.

The target respondents were the senior high school students including male and female enrolled in the current school year 2024-2025. They were our target respondents due to the fact that they are more likely to take care of themselves, especially that they are in a middle adolescent stage, wherein their hormones are already changed, and they need to become fully aware of having personal hygiene and also in terms of food sanitation to help their body become healthy. The sample size was computed using the Raosoft sample size calculator. Shown in table 1 was the respondents of the study, which were the senior high school students among Lorenzo S. Sarmiento Sr. National High School, for the school year 2024-2025.

Section	Population	Respondents
A	53	16
B	50	15
C	52	16
D	39	12
E	57	16
F	47	14
G	47	14
H	39	12
I	52	16
J	42	13
K	45	13
L	46	14
M	55	16
N	55	14

O	46	14
P	38	11
Q	57	17
R	45	13
S	48	14
Total	904	270

Table 1. Population and Sample size of Respondents

Statistical Tool

The following statistical tools were utilized for the data analysis and interpretation.

Mean. This statistical tool would be used to determine the level of personal hygiene practices, food sanitation awareness, students' health of the students Lorenzo S. Sarmiento Sr. National High School in Mawab, Davao de Oro.

Spearman's rho. This statistical tool would be employed to determine the significance of the relationship between personal hygiene practices, food sanitation awareness, students' health of the students in Lorenzo S. Sarmiento Sr. National High School in Mawab, Davao de Oro.

Multiple Regression Analysis. This statistical tool would be used to determine the influence of personal hygiene practices, food sanitation awareness, students' health of the students in Lorenzo S. Sarmiento Sr. National High School in Mawab, Davao de Oro.

RESULTS

Level of Personal Hygiene Practices

Shown in Table 2 shows the level of personal hygiene practices across three indicators: hand hygiene, body hygiene and oral hygiene. The overall mean score of 4.35, categorized as very high, with a standard deviation of 0.50, indicating a very high level of personal hygiene practices among the Grade 11 and 12 senior high school students. This entails that the respondents' responses to the level of personal hygiene practices in terms of hand hygiene, body hygiene, and oral hygiene.

The cited overall mean score was the result obtained from the following computed mean scores from highest to lowest: 4.59 or very high for body hygiene with a standard deviation of 0.56; 4.42 or very high for hand hygiene with a standard deviation of 0.57; 4.04 or high for oral hygiene with a standard deviation of 0.70.

Table 2: Level of Personal Hygiene Practices

Indicators	Mean	SD	Descriptive Equivalent
Hand Hygiene	4.42	0.57	Very High
Body Hygiene	4.59	0.56	Very High
Oral Hygiene	4.04	0.7	High
Overall	4.35	.50	Very High

Level of Food Sanitation Awareness

Shown in in Table 3 are the mean scores for the indicators of Food Sanitation Awareness, with an overall mean of 4.37 and described as very high with a standard deviation of 0.51. The high level could be attributed to the

high rating given by the respondents in all indicators. This indicates that the respondent's responses to the level of food sanitation awareness are very much positive in terms of knowledge of food sanitation, attitude towards food sanitation, and practices towards food sanitation.

The cited overall mean score was the result obtained from the following computed mean scores from highest to lowest: 4.43 or very high for knowledge of food sanitation with a standard deviation of 0.52; 4.38 or very high for attitude towards food sanitation with a standard deviation of 0.61; and 4.31 or very high for practices towards food sanitation of 0.64.

Table 3: Level of Food Sanitation Awareness

Indicators	Mean	SD	Descriptive Equivalent
Knowledge towards Food Sanitation Awareness	4.43	0.59	Very High
Attitude towards Food Sanitation Awareness	4.38	0.61	Very High
Practices towards Food Sanitation	4.31	0.64	Very High
Overall	4.37	0.51	Very High

Level of Students' Health

Table 4 presents the mean scores of student's health as perceived by the Grade 11 and 12 senior high school students in terms of physical health, social well-being and hygiene and sanitation. The overall mean is 4.25 with an equivalent description of very high and with a standard deviation of 0.75. This implies that the respondents' responses to the level of student's health are very much positive in terms of physical health, social well-being and hygiene and sanitation.

The cited overall mean score was the result obtained from the following computed mean scores from highest to lowest: 4.47 or very high for hygiene and sanitation with a standard deviation of 0.57; 4.16 or high for physical health with a standard deviation of 1.92; and 4.12 or high for social well-being with a standard deviation of 0.70.

Table 4. Level of Students' Health

Indicators	Mean	SD	Descriptive Equivalent
Physical Health	4.16	1.92	High
Social Well-being	4.12	0.7	High
Hygiene and Sanitation	4.47	0.57	Very High
Overall	4.25	0.75	Very High

Significance on the Relationship Between

Personal Hygiene Practices and

Student' Health

The One crucial purpose of this study is to determine whether or not personal hygiene practices has a significant relationship with student's health. Appended table 5 shows that the Shapiro-Wilk test had a p-value of <.001, indicating that the distribution was not normal. Moreover, Spearman's rho was used to determine the correlation between the two variables. The results of the computation are shown in Table 5.

Likewise, the results revealed that personal hygiene practices has a significant relationship with student's health. This result is due to a p-value of <.001, which is less than the 0.05 p-value. Hence, this leads to the decision that the null hypothesis which stated that there is no significant relationship between personal hygiene practices and

student's health, is rejected. Moreover, Spearman's rho value which is 0.604 further means that there was a moderate correlation between personal hygiene practices and student's health.

Table 5: Significant Relationship Between Personal Hygiene Practices on Student's Health

			Personal Hygiene Practices
Students' Health	Spearman's rho	0.604	
	p-value	<.001	

Significant of the Relationship Between

Food Sanitation Awareness and

Student' Health

Likewise, the results revealed that food sanitation awareness and student health have a significant relationship. This result is due to a p-value of <.001, which is less than the 0.05 p-value. Hence, this leads to the decision that the null hypothesis, which stated that there is no significant relationship between food sanitation awareness and student's health, is rejected. Moreover, Spearman's rho value, which is 0.644, further means that there was a moderate correlation between food sanitation and students' health.

Table 6: Significance on the Relationships Between Food Sanitation Awareness on Students' Health

		Food Sanitation Awareness		
Students' Health	Spearman's rho	0.644	Students' Health	
	p-value	<.001		

Multiple Regression Analysis on the Influence of the Domain of Personal Hygiene Practices and Students' Health

The data shown in Table 7 are the regression coefficients to test the significant influence of personal hygiene practices and student's health among Grade 11 and 12 senior high school students. Using the Multiple Regression Analysis, the data revealed that the influence of personal hygiene practices and student's health among Grade 11 and 12 senior high school students has a f-value of 11.117 and a corresponding significance p-value of <.001, which is significant.

This means that the level of personal hygiene practices influences the student's health since the probability is less than 0.05. The coefficient of determination (R^2), which is 0.111, connotes that 11.1% of the variation in the level of personal hygiene practices influences the student's health. The remaining 89.9% is chance variation, which suggests that other factors beyond the scope of this study may also be attributed to student's health.

Table 7: Multiple Regression Analysis of the Influence of The Domain of Personal Hygiene Practices to the Student's Health

Personal Hygiene Practices	Coefficients	t-value	p-value	Decision
				$\alpha=0.05$
Hand Hygiene	0.047*	0.577	0.564	Ho is not Rejected
Body Hygiene	0.064*	0.83	0.407	Ho is not

				Rejected
Oral Hygiene	0.272*	4.022	0.001	Ho is
				Rejected
Dependent Variable: Students' Health				

* $p < 0.05$ $R = 0.334$ * $R^2 = 0.111$ * $F\text{-ratio} = 11.117$ $p\text{-value} = < .001$

Multiple Regression Analysis of the Influence of the Domain of Food Sanitation Awareness to the Student's Health

Data shown in Table 8 are the regression coefficients to test the significant influence of food sanitation awareness and student's health. Using the Multiple Regression Analysis, the data revealed that the influence of food sanitation awareness and student health has an f-value of 16.268 and a corresponding significance p-value of $< .001$, which was significant.

This means that the level of food sanitation awareness influences the student's health since the probability is less than 0.05. The coefficient of determination (R^2) which is 0.156 indicates that 15.6% of the variation in the level of food sanitation awareness the student's health. The remaining 84.4% is chance variation which suggests that other factors beyond the scope of this study may also be attributed to student's health.

Table 8: Multiple Regression Analysis of the Influence of Food Sanitation Awareness to Students' Health

Foitatod Sanion Awareness	Coefficients	t-value	p-value	Decision
				a=0.05
Knowledge towards Food Sanitation	0.149*	1.952	0.052	Ho is not
				Rejected
Attitude towards Food Sanitation	0.021*	0.253	0.801	Ho is not
				Rejected
Practices towards Food Sanitation	0.280*	3.814	0.001	Ho is
				Rejected
Dependent Variable: Students’ Health				

* $p < 0.05$ $R = 0.394$ * $R^2 = 0.156$ * $F = 16.268$ $p\text{-value} = < 0.001$

DISCUSSIONS

Level of Personal Hygiene Practices

The respondents' level of personal hygiene practices in Lorenzo S. Sarmiento Sr. National High School is very high. This further means that the overall personal hygiene practices of the students in Lorenzo S. Sarmiento Sr. National High School is considered manifested and very evident.

The study's results strongly indicate a significant correlation between personal hygiene practices and students' health among senior high school students, confirming the findings of Berhanu et al. (2021), which indicate personal hygiene practices are essential for maintaining student health and will help to prevent the spread of illnesses. Furthermore, effective personal hygiene practices among students are crucial to maintaining a healthy and clean body that will help them face reality. The indicator of body hygiene was described as very high. Nurudeen et al. (2020) state that body hygiene is taking care of oneself; it is also referred to as maintaining the

cleanliness of one's body and clothing to improve overall health and well-being.

Level of Food Sanitation Awareness

The respondents' level of food sanitation awareness in Lorenzo S. Sarmiento Sr. National High School is very high. This means that it is manifested and evident among the respondents in Lorenzo S. Sarmiento Sr. National High School.

Furthermore, these findings relate to the claim made by Chen & Antonelli (2022), stating that a mix of awareness, education, and social influence shapes students' attitudes toward food sanitation. Thus, explaining their capacity to manage and prevent food-borne diseases demonstrates their resilience and proactive attitude to addressing potential health issues within the school campus as a student.

Level of Students' Health

The respondents' level of students' health at Lorenzo S. Sarmiento Sr. National High School is very high. The high level of students health means that it is manifested and evident among the respondents in Lorenzo S. Sarmiento Sr. National High School. With that, it aligned to the study of Chow et al. (2022), stating that nutrition and exercises are well-recognized and observed across multiple organ systems; these beneficial effects enhance overall resilience, health span, and longevity. Therefore, prioritizing your health with a balanced mechanism will result in a good outcome. Pituk et al. (2019) state that increasing physical activity among students is important to promote physical fitness and help students manage the demands of student life. This fosters the support of your own health by maintaining the balance of healthy living.

Significant Relationship Between Personal Hygiene Practices and Students' Health

The result of the study revealed that there was a moderate relationship between personal hygiene practices among the students. The computed spearman's rho value indicated a moderate correlation between the two variables.

These findings are consistent with the research of Hoyle (2023), emphasizing the pivotal role of personal hygiene practices in influencing students' health. Addressing these problems by improving hygiene education and implementing effective sanitation protocols to enhance students' health and reduce related risks is vital. Additionally, this collaborates with the Health Belief Model (HBM) of Luger (2013), which assumes that students are more likely to practice good hygiene if they perceive that they are susceptible to health issues like infections and believe that these practices can effectively prevent such problems.

Significant Relationship Between Food Sanitation Awareness and Student's Health

The results of the study revealed a significant relationship between perceived food sanitation awareness and students' health. The computed spearman's rho-value indicated a moderate positive correlation between these two variables.

This finding enhances our understanding of how knowledge of food sanitation, attitude towards sanitation, and practices towards food sanitation impact students' health. Students who are fully aware of food sanitation are likely to have a positive impact on their health. These results align with the study of Yunita et al. (2023), which argues that one of the reasons is not paying attention to personal hygiene and the environment in the process of food management. Food hygiene and sanitation support the prevention of food poisoning. Food sanitation awareness significantly influences students' overall health and their behavior in handling food. The principle of Sanitation Hygiene is an important factor in the operation of food and drink services to ensure service quality from the perspective of hygiene and food safety (Rustia, 2021).

Multiple Regression Analysis on the Influence of Personal Hygiene Practices on Students' Health

The regression coefficient is to test the significant influence of overall personal hygiene practices and students' health among Senior High School students. Using the Multiple Regression in JASP Software, the data reveal that the influence of personal hygiene practices towards student' health among Senior High School students has

a significant influence. Only 11.1% of the students' health among Senior High School students of Lorenzo S. Sarmiento Sr. National High School is influenced by the personal hygiene practices. Therefore, the significance level of the hypothesis of personal hygiene practices and students' health in Senior High School students is rejected.

These results corroborated to the study of Jusayan, (2022) emphasized that personal hygiene practices are essential for preventing diseases and promoting overall health, particularly important on students' practices minimizing the risk of illnesses such as colds and stomach infection which has been affected academically. As cited by Ahmed (2020), maintaining proper care on students' personal hygiene can reduce absenteeism caused by preventable illnesses, improving both students and academic outcomes

Multiple Regression Analysis of the Influence of Food Sanitation Awareness on Students' Health

The regression coefficient is to test the significant influence of overall food sanitation awareness and students' health among Senior High School students. Using the Multiple Regression in JASP Software, the data reveal that the influence of food sanitation awareness towards students' health among Senior High School students has a significant influence. Only 15.6% of Lorenzo S. Sarmiento Sr. National High School is influenced by the personal hygiene practices. Therefore, the significance level of the hypothesis of food sanitation awareness and students' health in Senior High School students is rejected.

Moreover, it affirms to the insights from Haryanto & Suryaningsih (2021) research highlight the importance of being knowledgeable about food sanitation in fostering a much healthier environment away from any food health risk outcomes. It also corroborated the study of Lee & Kim (2023) by stating that these practices are fundamental in preventing food-borne illnesses, Being more aware, learning proper preparation and sanitation from item to student itself can significantly reduce the risk of harmful bacteria spreading and decrease the student health care problems. Also, it aligns to the idea of Mahmood (2022) that to avoid harmful diseases, it is important to recognize the importance of food guidelines as one of the keys to preventing food-borne illnesses and any food bacteria.

CONCLUSION

Conclusions were drawn based on the results of the study. The study concludes that the level of influence of personal hygiene practices was very high, as well as its indicators, namely, hand hygiene, body hygiene and oral hygiene. Furthermore, the study also concludes that the level of influence of food sanitation awareness was very high, along with its indicators, namely, knowledge of food sanitation, attitude towards food sanitation and practices towards food sanitation. Moreover, the overall level of student's health was very high, encompassing the three domains: physical health, social well-being and hygiene and sanitation. Furthermore, the findings contradict the hypothetical assumption of no significant relationship between the influence of personal hygiene practices and food sanitation awareness on student's health among grade 11 and 12 senior high school students. Moreover, it was analyzed through spearman's rho product moment correlation that personal hygiene practices and food sanitation awareness have a moderate correlation with the student's health. Further, body and oral hygiene and food sanitation practices significantly influenced students' health. In conclusion, personal hygiene practices and food sanitation were vital in promoting students' health.

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