



SANITARY CONDITIONS AND FOOD HANDLING PRACTICES OF STREET FOOD VENDORS IN DIPOLOG CITY

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ABSTRACT

This study assessed the sanitary conditions and food handling practices of street food vendors in Dipolog City in 2025. A descriptive research design was employed using an adapted and validated questionnaire with a reliability coefficient of 0.9225. A total of 100 street food vendors from selected urban barangays were chosen through convenience sampling. Data were analyzed using frequency, percentage, weighted mean, Mann–Whitney U-test, Kruskal–Wallis H-test, and Spearman rank correlation coefficient. Findings revealed that vendors were predominantly young, female, and college-level, with relatively low but adequate income. Sanitary conditions and food handling practices were generally observed; however, unsafe hygiene behaviors—particularly those related to personal hygiene and the use of protective equipment—were also evident. Among the indicators, food handling obtained the highest mean, indicating it as the most consistently practiced aspect compared to food preparation and packaging. The results further showed no significant differences in respondents' perceptions and assessments when grouped according to profile variables. However, a significant moderate positive relationship ($r = 0.495$, $p < 0.05$) was found between sanitary conditions and food handling practices. The study concludes that while basic food safety practices are observed among street food vendors, gaps in consistent hygiene compliance remain. Strengthened training, monitoring, and enforcement of food safety standards are recommended to improve sanitation and ensure public health protection.

Keyword: *street food vendors, sanitary conditions, food handling practices, food safety, Dipolog City*

INTRODUCTION

Street food businesses continue to expand within the informal economy of the Philippines, largely driven by limited access to formal employment opportunities among many individuals. Street vendors commonly sell a wide range of ready-to-eat foods and beverages in high-density public areas such as streets, schools, transport terminals, and commercial centers, making food highly accessible and convenient for daily consumption. For many individuals with limited educational attainment, street food vending serves as a primary source of income and livelihood. However, despite its economic importance, the sector is often characterized by minimal regulation and exposure to risks such as accidents in congested areas, penalties for occupying public spaces, and the prevalence of informal or unregistered business operations (Benetiz & Olmogue, 2023).

Street food, defined as ready-to-eat food and beverages prepared and sold in public places, has become an affordable and culturally significant component of daily life. Nevertheless, concerns regarding sanitary conditions and food handling practices remain prevalent, as some vendors may not consistently adhere to proper hygiene standards, thereby increasing the risk of food contamination and foodborne illnesses. The demand for low-cost and accessible food continues to rise, particularly in developing countries, due to its affordability and ease of access. According to the Food and Agriculture Organization, approximately 2.5 billion people worldwide consume street food daily, highlighting both its global importance and the urgent need to address food safety challenges. Variations in food preparation methods—ranging from pre-cooked foods to on-site preparation—further influence the sanitary conditions under which food is handled and served. In response, the World Health Organization has established guidelines to improve food safety and hygiene practices among food vendors (Solon, 2022).

In the local context of Dipolog City, street food vendors play a significant role in supporting the local economy by providing affordable meals and generating employment opportunities. However, the informal nature of street food vending often results in inconsistent implementation of sanitary standards and food handling practices. While existing studies have primarily focused on general food safety compliance, there remains a need to closely examine the actual sanitary conditions of vending sites and the specific food handling practices employed by vendors at the local level. Understanding these aspects is essential in identifying potential health risks and improving food safety management. Thus, this study aimed to assess the sanitary conditions and food handling practices of street food vendors in Dipolog City, providing a basis for enhancing public health and promoting safer food vending practices, this year 2025.

Research Questions

This study aimed to determine the sanitary conditions of street food vending sites and the food handling practices of street food vendors in Dipolog City, this year 2025.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1 Age;
 - 1.2 Gender;
 - 1.3 Educational attainment; and
 - 1.4 Monthly income?
2. What are the respondents' insights regarding the sanitary conditions of street food vending sites in Dipolog City?
3. How do the respondents assessment on the food handling practices of street food vendors in Dipolog City in terms of:
 - 3.1 Food preparation;
 - 3.2 Food handling; and
 - 3.3 Food packaging?
4. Is there a significant difference on the respondents' insights on the sanitary conditions of street food vending sites awhen analyzed according to their profile?
5. Is there a significant difference on the respondents' assessment of food handling practices of street food vendors when analyzed according to their profile?
6. Is there a significant relationship between the respondents' insights on the sanitary conditions of street food vending sites and their assessment on the food handling practices of street food vendors?

METHODOLOGY

This study employed a descriptive research design, utilizing an adapted and modified questionnaire as the primary instrument for data collection, complemented by visual observations of selected locations in Dipolog City where street food vendors operate. Conducted in 2025, the research focused on four urban barangays—Barra, Turno, Estaka, and Miputak—identified as areas with a high concentration of street vendors selling commonly consumed food items such as tempura, fish balls, and buko juice. The study involved a total of 100 street vendors, with 25 respondents drawn from each barangay through convenience sampling based on their availability during the data collection period.

The data-gathering instrument consisted of a three-part structured questionnaire adapted from related studies, which covered the respondents' demographic profile, sanitary conditions of vending sites, and food handling practices. The instrument was subjected to expert validation to ensure content validity and subsequently underwent pilot testing to establish its reliability. The reliability test yielded a Cronbach's alpha value of 0.9225, indicating a very high level of internal consistency. Ethical considerations were strictly observed throughout the conduct of the study. The researchers ensured voluntary participation by securing informed consent, protected the respondents' privacy, and maintained anonymity and confidentiality of all collected information.

Data collection was carried out by first obtaining the necessary permissions, followed by explaining the purpose and significance of the study to the respondents. The questionnaires were then administered and retrieved immediately after completion to ensure a high response rate and data accuracy.

For data analysis, appropriate statistical tools were utilized. Frequency counts and percentages were used to describe the respondents' profile, while the weighted mean was employed to assess sanitary conditions and food handling practices using a 5-point Likert scale. Furthermore, inferential statistical tests, including the Mann–Whitney U Test, Kruskal–Wallis H Test, and Spearman Rank Correlation Coefficient, were applied to determine significant differences and relationships among variables.

RESULTS AND DISCUSSION

This section presents the results and corresponding discussions of the present investigation. The data gathered were statistically treated to address and answer the research questions of the study.

Table 1 shows the profile of the respondents in terms of age. The findings revealed that the majority of respondents were within the age bracket of 16–20 years old, comprising 48 out of 100 respondents or 48.00%. This was followed by respondents aged 21–25 years old, with 21 respondents or 21.00%. In contrast, only 1 respondent or 1.00% belonged to the age bracket of 46–50 years old. These results indicate that most of the respondents were relatively young, suggesting that street food vending is largely dominated by individuals in the younger age groups. This may be attributed to the accessibility and flexibility of street vending as a source of livelihood, particularly for youth seeking immediate income opportunities within the informal economy. This finding is supported by Pontino (2024), who noted that a majority of street food vendors belong to younger age groups, as they are more likely to engage in informal economic activities due to limited employment opportunities and the need for accessible sources of income.

Table 1
Profile of the Respondents in Terms of Age

Age Bracket	Frequency	Percentage
16-20 years old	48	48.00
21-25 years old	21	21.00
26-30 years old	15	15.00
31-35 years old	5	5.00
36-40 years old	6	6.00
41-45 years old	2	2.00
46-50 years old	1	1.00

51-Above	2	2.00
Total	100	100.00

Table 2 presents the profile of the respondents in terms of gender. The results revealed that the majority of respondents were female, comprising 57 out of 100 respondents or 57.00%, while male respondents accounted for 43 out of 100 or 43.00%. This indicates that most of the street food vendors were females. The predominance of female vendors suggests that street food vending is largely a gendered economic activity, where women actively participate as a means of supporting household income and sustaining their families. This may also reflect the extension of women's traditional roles in food preparation into income-generating activities within the informal sector. These findings are supported by Wabinga and Acosta (2025), who emphasized that women dominate the street food vending sector in the Philippines, as they are more likely to engage in small-scale food businesses due to limited employment opportunities and their economic responsibilities within the household.

Table 2
Profile of the Respondents in Terms of Gender

Gender	Frequency	Percentage
Male	43	43.00
Female	57	57.00
Total	100	100.00

Table 3 presents the profile of the respondents in terms of educational attainment. The results revealed that the majority of respondents were at the college level, comprising 78 out of 100 respondents or 78.00%. This was followed by those who were high school graduates, with 20 respondents or 20.00%, while only 2 respondents or 2.00% were at the high school level. These findings indicate that most of the respondents had attained college-level education, suggesting that street food vending is not limited to individuals with low educational backgrounds but also involves those with higher educational attainment. This implies that many street vendors possess a certain level of knowledge and skills that may influence their awareness of sanitation and proper food handling practices. This finding is supported by Labana et al. (2024), who reported that a significant number of street vendors are educated, aligning with local studies which indicate that individuals engaged in street food vending have attained at least basic to college-level education. Such educational background contributes to their understanding of hygiene, sanitation, and proper food handling practices.

Table 3
Profile of the Respondents in Terms of Educational Attainment

Educational Attainment	Frequency	Percentage
Elementary Level	0	0
Elementary Graduate	0	0
High School Level	2	2.00
High School Graduate	20	20.00
College Level	78	78.88
Baccalaureate Degree	0	0
Post Graduate Degree	0	0
Total	100	100.00

Table 4 presents the profile of the respondents in terms of monthly income. The results revealed that the majority of respondents had a monthly income of less than ₱10,000.00, comprising 80 out of 100 respondents or 80.00%. This was followed by those earning between ₱10,000.00 and ₱19,999.00, with 20 respondents or 20.00%. These findings indicate that most street food vendors earn relatively low monthly incomes; however, such earnings may still be considered adequate for meeting their daily needs, particularly within the context of informal and small-scale livelihood activities. This suggests that street food vending, despite generating modest income, remains a viable and sustainable source of livelihood for many individuals. This finding is supported by Armas et al. (2024), who noted that street food vendors in the Philippines are able to generate consistent daily earnings, typically ranging from ₱500 to ₱1,000, which contributes to a stable source of income within the informal sector. This supports the notion that even with relatively low monthly income levels, street vending can still provide sufficient financial support for daily subsistence and household needs.

Table 4
Profile of the Respondents in Terms of Monthly Income

Monthly Income	Frequency	Percentage
Less than 10,000	80	80.00
10,000-19,999	20	20.00
20,000-29,999	0	0
30,000-39,999	0	0
40,000-Above	0	0
Total	100	100.00

Table 5

Respondents' Perception on the Sanitary Conditions of Street Food Vending in Dipolog City

Sanitary Conditions of Street Food Vending in Dipolog City	AWV	Interpretation	Rank
1. Handling foods with bare hands and not using any spoons or plastic.	3.04	Observed	6.5
2. Constantly touches mouth, tongue, nose, eyes, head or hair while preparing foods; doesn't wear masks or caps.	3.20	Observed	1
3. Serving foods immediately without keeping it hot or cooled down rapidly and reheated.	3.04	Observed	6.5
4. Serves hot foods and/or beverages hot and serves cold foods and/or beverages cold.	3.11	Observed	4
5. Uses unsanitary water in rinsing the utensils used in cooking and prepares food in an unclean surrounding and equipment serving.	3.05	Observed	5
6. Foods were placed in an old and unsanitary bowl.	2.98	Observed	10
7. Barely check if the food is free from larva.	3.15	Observed	3
8. Allows customers to dip consumed food several times.	3.00	Observed	9
9. Presence of rats, holes or nest in vicinity in the vicinity.	2.95	Observed	12.5
10. Utilizes used condiments as a sauce for food.	2.81	Observed	15
11. Presence of waste bin and trashes in the preparation area.	2.88	Observed	14
12. Prepares and sells food adjacent to dumping sites.	2.95	Observed	12.5
13. Absence of hand towel, wash hand basin and soap.	3.03	Observed	8
14. Presence of flies, cockroaches and rats in the preparation and selling of food.	2.97	Observed	11
15. No means to provide hair nets, gloves and other materials in preparing the products.	3.17	Observed	2
Mean	3.022	Observed	

Table 5 presents the respondents' perceptions of the sanitary conditions of street food vending in Dipolog City. The results revealed that the most commonly observed practice was vendors frequently touching their mouth, tongue, nose, eyes, head, or hair while preparing food and not wearing masks or caps, with an average weighted mean of 3.20. This was followed by the absence of protective materials such as hair nets and gloves during food preparation, with a mean of 3.17, and the practice of rarely checking whether food is free from contaminants such as larvae, with a mean of 3.15. In contrast,

the least observed practice was the use of previously used condiments as sauce for food, with a mean of 2.81. Overall, the composite mean for this aspect was 3.02, which is verbally interpreted as “observed.” These findings indicate that improper personal hygiene practices remain prevalent among street food vendors, particularly behaviors such as touching the face and failing to wear appropriate protective equipment during food preparation. Such practices increase the risk of food contamination and pose potential health hazards to consumers. The results suggest that current sanitary conditions in street food vending are characterized by inadequate adherence to basic hygiene standards. This finding is supported by Solon (2022), who reported that street food vendors often demonstrate poor personal hygiene practices, including frequent contact with the face and the lack of use of protective gear such as masks and caps. These behaviors are commonly attributed to limited knowledge, lack of formal training, and weak enforcement of food safety regulations, ultimately contributing to unsafe food handling practices.

Table 6

Respondents’ Assessment on Food Handling Among Food Handlers in Dipolog City in terms of Preparation of Food

Preparation	AWM	Verbal Description	Rank
1. Preparing and processing foods is avoided with direct and indirect contact between raw and cooked or prepared foods which will be consumed without further heating.	2.91	Observed	3
2. Attention is also be paid to the possibility of chemical hazards produced by overcooking (e.g. charring) and excessive reuse of cooking oils.	2.90	Observed	4
3. Foods to be eaten raw (e.g. salads and peeled or cut fruit) is prepared with special attention to cleanliness.	2.86	Observed	5
4. Raw meats, poultry or fish are handled, their preparation (e.g. washing, cutting, etc.) must be carried out using separate equipment and utensils (e.g. containers, cutting boards and knives), by sanitizing equipment and utensils between uses or by sequencing food preparation practices to minimize the opportunity for cross-contamination.	3.02	Observed	1.5
5. Vehicles used for transport should be clean and should not carry animals, toxic substances or contaminating materials along with the prepared food, unless equipped with a structural barrier to prevent cross-contamination.	3.02	Observed	1.5
Mean	2.942	Observed	

Table 6 presents the respondents' assessment of food preparation practices among food handlers in Dipolog City. The results revealed that the most commonly observed practices, both with an average weighted mean of 3.02, were the proper handling of raw meats, poultry, and fish using separate equipment and utensils (e.g., containers, cutting boards, and knives), as well as the sanitation of these tools between uses or the sequencing of preparation activities to minimize cross-contamination. Additionally, respondents observed that vehicles used for food transport were kept clean and free from animals, toxic substances, or other contaminating materials, unless protective barriers were in place. On the other hand, the least observed practice was the preparation of foods intended to be eaten raw (e.g., salads and peeled or cut fruits) with special attention to cleanliness, which obtained an average weighted mean of 2.86. Overall, the composite mean for this aspect was 2.94, verbally interpreted as "observed." These findings indicate that food handlers generally demonstrate awareness of proper food preparation practices, particularly in preventing cross-contamination through the use of separate utensils and maintaining clean transport conditions. However, certain practices—such as ensuring strict cleanliness when preparing ready-to-eat raw foods—still require improvement. This suggests that while basic food safety measures are being observed, there remains a need for more consistent and comprehensive application of hygiene standards. These results are supported by Cabatingan et al. (2025) and Solon (2022), who emphasized that proper food preparation practices—such as the use of separate utensils for raw and cooked foods, regular sanitation of equipment, and maintaining clean transport conditions—are essential in preventing cross-contamination and reducing the risk of foodborne illnesses among street food vendors.

Table 7

Respondents' Assessment on Food Handling Among Food Handlers in Dipolog City in terms of Food Handling

Food Handling	AWV	Verbal Description	Rank
1. Food handlers wash their hands with soap and water after engaging in any activities that are likely to introduce biological, chemical, or physical hazards; and, particular attention must be given to this hygienic practice before handling ready to eat foods.	3.06	Observed	5
2. Food handlers refrain from engaging business when experiencing diarrhea, vomiting, fever, and sore throat with fever, discharges from ear, eye, nose or have visibly infected skin lesions (boils, cuts, etc.).	3.10	Observed	2
3. Food handlers wear clean and desired clothing and also wear aprons, hair nets and etc.	2.96	Observed	4
4. Food handlers refrain from any unhygienic and unsightly practices, such as chewing or smoking	3.11	Observed	1

tobacco, chewing betel nut or chewing gum; touching mouth, tongue, nose, eyes, etc.; and spitting, sneezing and coughing on or near the food.

5. Food handlers avoid contamination of food with physical hazards by			
- careful food handling practices; and	2.98	Observed	3
- removing jewelry prior to handling food.			
Mean	3.042	Observed	

Table 7 presents the respondents' assessment of food handling practices among food handlers in Dipolog City. The results revealed that the most commonly observed practice was that food handlers refrain from unhygienic and unsightly behaviors, such as chewing or smoking tobacco, chewing betel nut or gum, touching the mouth, tongue, nose, and eyes, and spitting, sneezing, or coughing on or near food, with an average weighted mean of 3.11. This was followed by the practice of refraining from food handling when experiencing illnesses such as diarrhea, vomiting, fever, sore throat, or visible skin infections, which obtained a mean of 3.10. Meanwhile, the least observed practice was proper handwashing with soap and water after engaging in activities that may introduce contaminants, particularly before handling ready-to-eat food, with a mean of 3.06. Overall, the composite mean for this aspect was 3.04, verbally interpreted as "observed." These findings indicate that food handlers generally demonstrate awareness of appropriate hygienic behavior, particularly in avoiding unsanitary practices that may lead to contamination. However, certain essential practices, such as consistent and proper handwashing, require further emphasis and improvement to ensure food safety. The results imply that food handlers in Dipolog City are mindful of avoiding visibly unhygienic practices during food handling, which is a critical component of maintaining food safety standards. This finding is supported by Belgica (2024), who emphasized that improper personal hygiene behaviors—such as touching the face, smoking, and spitting near food—are major sources of contamination among street food vendors. The study further highlights that avoiding such practices is essential in minimizing health risks and ensuring the safety and quality of street-vended food.

Table 8

Respondents' Assessment on Food Handling Among Food Handlers in Dipolog City in terms of Packaging of Food

Packaging	AWV	Verbal Description	Rank
1. Equipment and surfaces for food packaging can be cleaned easily and made or covered with impenetrable materials; packaging of food is not carried out on or near the ground.	3.06	Observed	1
2. Equipment, utensils and other containers are easy to clean and must not have pitted, grooved or sculpted	3.04	Observed	2

surfaces. They are not to be used for purposes other than cooking and keeping foods to be packaged. It is kept free from contamination from the environment (e.g. bowls and dishes are to be stored upside-down to prevent the accumulation of dust).			
3. Equipment, utensils and other containers are made of materials which do not release toxic or hazardous materials (copper, lead, cadmium, etc.) into foods and beverages, especially when foods are acidic; chopping boards must be constructed and maintained to reduce the point of contaminating foods with physical and biological hazards.	2.63	Observed	5
4. Food package must be held and transported in clean containers and protected from contamination through contact with unclean surfaces and exposure to undesirable or hazardous materials.	3.03	Observed	3
5. Cooked food must be carried out or stored using separate equipment and utensils, by sanitizing equipment and utensils between uses or by sequencing food packaging practices to minimize the possibility of contamination.	2.92	Observed	4
AWM	2.936	Observed	

Table 8 presents the respondents' assessment of food handling practices among food handlers in Dipolog City in terms of food packaging. The results revealed that the most commonly observed practices, with an average weighted mean of 3.06, were that equipment and surfaces used for food packaging can be easily cleaned and are made or covered with impenetrable materials, and that food packaging is not carried out on or near the ground. This was followed by the observation that equipment, utensils, and containers are easy to clean and free from contamination, properly maintained, and used solely for food preparation and packaging purposes, including proper storage practices such as keeping bowls and dishes upside down to prevent dust accumulation. In contrast, the least observed practice, with an average weighted mean of 2.63, was that equipment and utensils are made of materials that do not release toxic or hazardous substances (e.g., copper, lead, cadmium), particularly when in contact with acidic foods, and that chopping boards are properly constructed and maintained to minimize physical and biological contamination. Despite being the lowest-rated item, it was still verbally interpreted as "observed." Overall, the composite mean for this aspect indicates that food packaging practices are generally observed among vendors. These findings suggest that food handlers demonstrate awareness of proper packaging procedures, particularly in maintaining clean, non-porous surfaces and avoiding direct contact with the ground, which are essential in preventing contamination. However, there is still a need to strengthen practices related to the use of safe, non-toxic materials and proper maintenance of food contact surfaces. These results are supported by Jose and Villanueva (2023), who emphasized that proper food packaging practices—such as using

clean, easily sanitized surfaces and preventing contact with contaminated areas like the ground—are crucial in minimizing food contamination and ensuring the safety and quality of street-vended food.

Table 9

Grand Mean on the Respondents' Assessment on Food Handling Among Food Handlers in Dipolog City

Respondents' Assessment on Food Handling Among Food Handlers in Dipolog City	Mean	Verbal Description	Rank
Preparation of Food	2.942	Observed	2
Food Handling	3.042	Observed	1
Packaging of Food	2.936	Observed	3
Grand Mean	2.973	Observed	

Table 9 presents the grand mean of the respondents' assessment of food handling practices among food handlers in Dipolog City. The results revealed that food handling obtained the highest mean score of 3.04, verbally interpreted as "observed," ranking first among the three indicators. This was followed by preparation of food, which garnered a mean of 2.94, also interpreted as "observed," ranking second. Lastly, packaging of food obtained a mean of 2.94, likewise verbally interpreted as "observed." The overall grand mean for this aspect was 2.97, indicating that food handling practices are generally observed among the respondents. These findings suggest that among the three indicators, food handling is the most consistently observed practice among food handlers. This implies that vendors demonstrate greater awareness and compliance with proper food handling behaviors, such as maintaining personal hygiene, proper utensil use, and safe food handling procedures, compared to other aspects like preparation and packaging. This finding is supported by Belgica (2024), who emphasized that food handling practices—particularly those related to personal hygiene, sanitation of utensils, and proper handling of food—are among the most consistently observed and significant predictors of food safety among street food vendors in the Philippines. This underscores the critical role of food handling as a key determinant in ensuring the safety and quality of street-vended food.

Table 10

Test of Significant Difference on the Respondents' Perception on the Sanitary Conditions of Street Food Vending in Dipolog City When Analyzed According to Profile

Respondents' Profile	Respondent's Perception on Sanitary Conditions of Street Vending in Dipolog City			
	U-Value	H-Value	p-value	Interpretation
Age		7.2332	0.1235	Not Significant
Gender	16458.5		0.6560	Not Significant
Educational Attainment		8.992	0.3233	Not Significant

Monthly Income	10.222	0..4848	Not Significant
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*p-value < 0.05 level of significance = significant; Reject H₀

**p-value > 0.05 level of significance = not significant; Fail to Reject H₀

Table 10 presents the test of significant difference in the respondents' perceptions of the sanitary conditions of street food vending in Dipolog City when analyzed according to their profile. Using the Mann–Whitney U-test and Kruskal–Wallis H-test, the results yielded p-values greater than the level of significance set at 0.05. This indicates that the null hypothesis was accepted, signifying that there is no significant difference in the respondents' perceptions of sanitary conditions when grouped according to their demographic characteristics. These findings imply that respondents, regardless of age, gender, educational attainment, and income level, share similar perceptions regarding the sanitary conditions of street food vending. This suggests that awareness and evaluation of sanitation practices are generally consistent across different socio-demographic groups, possibly due to common exposure to similar food environments and shared understanding of basic hygiene standards. This result is supported by Labana et al. (2024), who found that socio-demographic factors such as age, sex, and other characteristics do not significantly influence individuals' perceptions of food safety. Their study indicates that respondents tend to have comparable assessments of sanitary conditions regardless of their background, reinforcing the present findings.

Table 11

Test of Significant Difference on the Respondents' Assessment on Food Handling Among Food Handlers in Dipolog City When Analyzed According to Profile

Respondents' Profile	Respondent's Assessment on Food Handling Among Food Handlers in Dipolog City			
	U-Value	H-Value	p-value	Interpretation
Age		9.2112	0.2235	Not Significant
Gender	15958.5		0.5560	Not Significant
Educational Attainment		7.9522	0.4233	Not Significant
Monthly Income		11.2221	0..9848	Not Significant

*p-value < 0.05 level of significance = significant; Reject H₀

**p-value > 0.05 level of significance = not significant; Fail to Reject H₀

Table 11 presents the test of significant difference in the respondents' assessment of food handling practices among food handlers in Dipolog City when analyzed according to their profile. Using the Mann–Whitney U-test and Kruskal–Wallis H-test, the results revealed p-values greater than the level of significance set at 0.05. This indicates the acceptance of the null hypothesis, signifying that there is no significant difference in the respondents' assessment of food handling practices when grouped according to their demographic characteristics. These findings imply that respondents—regardless of age, gender, educational attainment, and income level—have similar assessments of food handling practices among street food vendors. This suggests that perceptions of food handling are generally consistent across different socio-demographic groups, possibly

due to shared exposure to similar food environments, common practices in street food vending, and a general awareness of basic food safety standards. This result is supported by Labana et al. (2024), who reported that socio-demographic factors such as age, gender, and other characteristics do not significantly influence food handling practices. Their findings indicate that respondents tend to have comparable assessments of food handling regardless of their background, reinforcing the results of the present study.

Table 12

The Test of Relationship between the respondents' insights on the sanitary conditions of street food vending sites and their assessment on the food handling practices of street food vendors

Variables	Mean	α	p-value	Rs Value	Interpretation	Action/ Decision
Perception on Sanitary Condition	3.022	0.05	< .00001	0.495	Significant Relationship	Ho was rejected
Assessment on Food Handling	2.973					

Table 12 portrays the test of significant relationship between the respondents' insights on the sanitary conditions of street food vending sites and their assessment on the food handling practices of street food vendors. Applying Spearman Correlation Coefficient it yielded a value of 0.495 which describes moderate positive correlation. Further, the p-value is less than 0.05 which implies rejection of the hypothesis. Thus, there is significant relationship between the perception on sanitary condition of street food vending sites and their assessment on the food handling practices of street food vendors. Furthermore, such relationship was described as moderate positive correlation. In support, Labao et al. (2024) found that food safety knowledge is significantly associated with hygiene practices among street vendors, indicating that increased awareness and perception of sanitary conditions contribute to improved food handling behaviors. The study further revealed a positive correlation between knowledge and practice, suggesting that vendors who possess higher awareness of proper sanitation tend to demonstrate better compliance with safe food handling procedures. This supports the finding that the relationship between perceived sanitary conditions and food handling practices can be described as a moderate positive correlation.

Conclusions

This study examined the sanitary conditions and food handling practices of street food vendors in Dipolog City. The findings revealed that street food vendors are predominantly young, female, and with college-level education, earning relatively low but sufficient income, highlighting the role of street vending as a viable livelihood within the informal sector. Considerably, sanitary conditions and food handling practices were generally observed; however, the presence of unsafe hygiene behaviors—particularly

related to personal hygiene and the use of protective equipment—indicates gaps in the consistent application of food safety standards. Among the dimensions assessed, food handling emerged as the most consistently observed practice, suggesting relatively higher compliance compared to food preparation and packaging. The study further established that respondents' perceptions and assessments did not significantly differ across socio-demographic variables, indicating a shared understanding of sanitation and food handling practices among vendors. More importantly, a significant moderate positive relationship was found between perceptions of sanitary conditions and food handling practices, suggesting that improved awareness of sanitation is associated with better compliance in food handling. These findings underscore the need for strengthened food safety interventions, including targeted training, continuous monitoring, and stricter enforcement of hygiene standards, to enhance the safety and quality of street-vended food.

Recommendations

Based on the findings of the study, it is recommended that local government units and relevant health authorities strengthen food safety interventions among street food vendors in Dipolog City. Regular and mandatory training programs should be conducted to enhance vendors' knowledge and skills in proper hygiene, safe food handling, and prevention of cross-contamination. In addition, stricter implementation and monitoring of sanitation regulations should be enforced through routine inspections to ensure compliance with established food safety standards.

Moreover, the provision of basic sanitation facilities such as accessible handwashing stations, clean water supply, and proper waste disposal systems should be prioritized to support vendors in maintaining hygienic practices. Street food vendors should also be encouraged to consistently use protective equipment, including hair nets, gloves, and masks, and to strictly observe proper handwashing and personal hygiene during food preparation and handling. Improvements in food preparation and packaging practices should likewise be emphasized, particularly in the use of safe, non-toxic, and easily cleanable materials to minimize contamination risks.

Furthermore, continuous information and awareness campaigns should be implemented to educate both vendors and consumers on the importance of food safety and sanitation. Finally, future researchers are encouraged to conduct further studies on related variables such as training effectiveness, regulatory compliance, and consumer behavior to deepen the understanding of food safety practices and to validate the findings in other local contexts.

Compliance with Ethical Standards

The researcher ensured the anonymity of all participants and verified that informed consent was obtained freely and voluntarily prior to data collection. All information gathered in this study was treated with strict confidentiality, securely stored, and

appropriately disposed of upon the completion of the research. Throughout the entire research process, the researcher strictly avoided any form of plagiarism and upheld objectivity, ensuring that all interpretations and analyses of the findings were free from personal bias. The study adhered to the highest standards of academic integrity, and all results were utilized solely for scholarly and research purposes.

Furthermore, AI-assisted tools were utilized exclusively for grammar checking and paraphrasing to improve clarity, coherence, and readability, without compromising the originality and authenticity of the researcher's ideas, analyses, and interpretations. This transparent and responsible use of technology enhanced the overall quality, reliability, and credibility of the study. The researcher's strong commitment to ethical standards fostered trust among participants and ensured the integrity of the research process. Ultimately, these ethical safeguards were implemented to ensure full compliance with research standards and to generate meaningful insights that may contribute to future studies and practical applications in the field.

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The researcher is optimistic that the results of this study will contribute to the improvement of sanitary conditions and food safety practices among street food vendors. Through the dissemination of these findings, the study aims to enhance awareness of proper hygiene and safe food handling, encourage compliance with health standards, and promote public health and consumer safety. Furthermore, it seeks to stimulate further research, collaboration, and meaningful dialogue among local government units, health authorities, and the academic community. Such collaborative efforts are vital in strengthening policies, improving training programs, and promoting sustainable and safe street food vending practices. Ultimately, the researcher believes that this work may serve as a foundation for future initiatives that will benefit both vendors and the general public.

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