



A Need-Based Approach to Developing a Sustainable Extension Program for Food Vendors

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ABSTRACT

The Philippine College Foundation (PCF), through its Hospitality Department, upholds its commitment to providing relevant and responsive extension services. A needs assessment was conducted in Barangay Poblacion, Valencia City, Bukidnon to identify the key challenges faced by the local food vendors. Utilizing a descriptive research design, the study gathered data through validated surveys and key informant interviews to evaluate the community's understanding and awareness of food safety and hygiene. The findings revealed a strong need for capacity-building initiatives to improve knowledge and skills on food safety, hygiene, waste management, and quality control. The results of the assessment served as the basis for designing the project SAFE (Safety Practices, Assessment, Food Protection, and Education).

INTRODUCTION

Philippine College Foundation (PCF) is a higher education institution in the country that practices the four-fold function, which includes instruction, research, extension, and production. Community extension is one of the four-fold functions that creates collaborative efforts and volunteerism with the other departments under the institution. The initiatives are effectively conducted by high-caliber faculty and student volunteers from the Department of Hospitality Management (DHM). Utilizing community services through education is a powerful tool to change society and a great solution to a certain community problem (Garcia & Uy, 2025; Morre & Uy, 2025; Uy et al., 2023). Extension programs bring the expertise of the faculty, staff, and students outside the institution into a specific area to study the needs of a community. Volunteers can formulate and implement recommendations and solutions through research (Nerona, 2022).

A needs assessment is essential for identifying certain challenges that food vendors face. Through the needs assessment initiated by the Department of Hospitality Management (DHM) under the Philippine College Foundation (PCF), researchers and extension implementers are able to understand the gaps in knowledge, resources, and support that limit food vendors from providing maximum safety products. A study conducted by Cruz et al. (2022) found that tailored extension programs that integrate food safety and regulatory compliance can significantly improve the efficiency of an informal business.

Food safety and hygiene are global concerns that must be managed effectively, especially in unindustrialized areas. Data analysis from the World Health Organization (WHO) in 2015 showed that there are two million incurable cases of food poisoning in rural areas. The World Health Organization (WHO) also stated that 600 million foodborne illnesses are caused by poor food safety and hygiene practices (Tuglo, 2021). Some studies show that 12-18% of foodborne illnesses are due to food contamination and inappropriate hygiene practices by food vendors.

In the Philippines, there is a policy that regulates food safety, known as the Republic Act 10611, the Food Safety Act of 2013 (FSA), and the Code on Sanitation in the Philippines. It develops and improves food safety standards in the country. These policies need to be strengthened as they positively contribute to the well-being of every Filipino. Rustia et al. (2021) stated that the enactment of the Food Safety Act of 2013 and the establishment of food safety guidelines, such as the Code on the Sanitation of the Philippines and the Philippine National Codex Organization, prove that it is vital for a stronger Philippine food safety regulatory system. According to Labana et al. (2024), urbanization and the proliferating population growth are the main factors that contribute to the rapid growth of food vending. Food vendors play a critical role in food safety and controlling foodborne diseases through awareness and adherence to food safety. It is important that food vendors are aware of policies to ensure food safety.

A study by Addo-Tham (2020) found that street foods and food stalls are becoming a major source of cooked food for most individuals in developing countries. These food vendors around the schools are, therefore, growing at a very fast rate worldwide. Food vendors are essential to supply the students' necessities during their stay on the campus of the Philippine College Foundation, where they provide affordable and a variety of food options for the students, faculty, and staff. In spite of the importance of food vendors in the institution, maintaining safety practices remains a challenge because of the lack of training and knowledge, which makes it even more challenging for them to ensure food safety. Since they are situated around the institution of the Philippine College Foundation, the institution must ensure the safety practices of the food vendors by screening them medically and conducting training catered to the local government units.

Given these problems, the study sought to determine the age, gender, years in the stall, and training in food safety, hygiene, waste management, and quality control. Moreover, the study systematically sought to evaluate the needs of food vendors in and around the Philippine College Foundation (PCF) to inform the conduct of an effective extension program that addresses the challenges and provides actions for the food vendors. As an output, the study aimed to propose a comprehensive and effective training program for the food vendors.

IMPLEMENTATION AND METHODS

The study used a descriptive research design to gather information about the pressing needs of food vendors in Purok-6, Poblacion, Valencia City, Bukidnon. This area was selected as the research locale because it is the immediate community near the Philippine College Foundation. Moreover, the majority of faculty, staff, and students spend their mealtime in the identified food stalls. Hence, it is a good avenue to provide services about food safety and hygiene for the mutual benefit of the food vendors and the institution. Twenty-one (21) food vendors served as the respondents of the study. The instrument utilized was a researcher-made survey questionnaire, which was validated by three experts in the field of research and community service.

The data collected was investigated using descriptive statistical tools such as frequency, mean, and percentages in order to provide a straightforward summary of findings, which makes it clear to the readers. The weighted mean was specifically utilized to evaluate and quantify the needs of food vendors to ensure that every response is appropriate based on its relative importance in food safety and hygiene. Moreover, insights from respondents were gathered from a questionnaire through focus group discussion (FGD) to further substantiate the needs of respondents. To ensure a consistent data interpretation, the following scale was utilized, facilitating an accurate assessment of the findings:

Table 1. Assessment of Findings

| Scale | Range | Descriptive Interpretation | Qualitative Interpretation |
|-------|-----------|----------------------------|----------------------------|
| 5 | 4.51-5.00 | Very Aware | Highly Needed |
| 4 | 3.51-4.50 | Ware | Needed |
| 3 | 2.51-3.50 | Moderately Aware | Moderately Needed |
| 2 | 1.51-2.50 | Unaware | Not Needed |
| 1 | 1.00-1.50 | Very Unaware | Highly Not Needed |

A letter of permit was submitted and approved by the Barangay Captain of Poblacion, Valencia City, Bukidnon, to allow the study to proceed. Prior to the distribution of the needs assessment survey, food vendors were given informed consent about the study and its possible outcome, including their right to decline participation without consequences. Data privacy was strictly observed to secure the confidentiality of the participants. After the study was completed, the findings were shared with the participants in order to promote transparency and let the food vendors understand how important the study is.

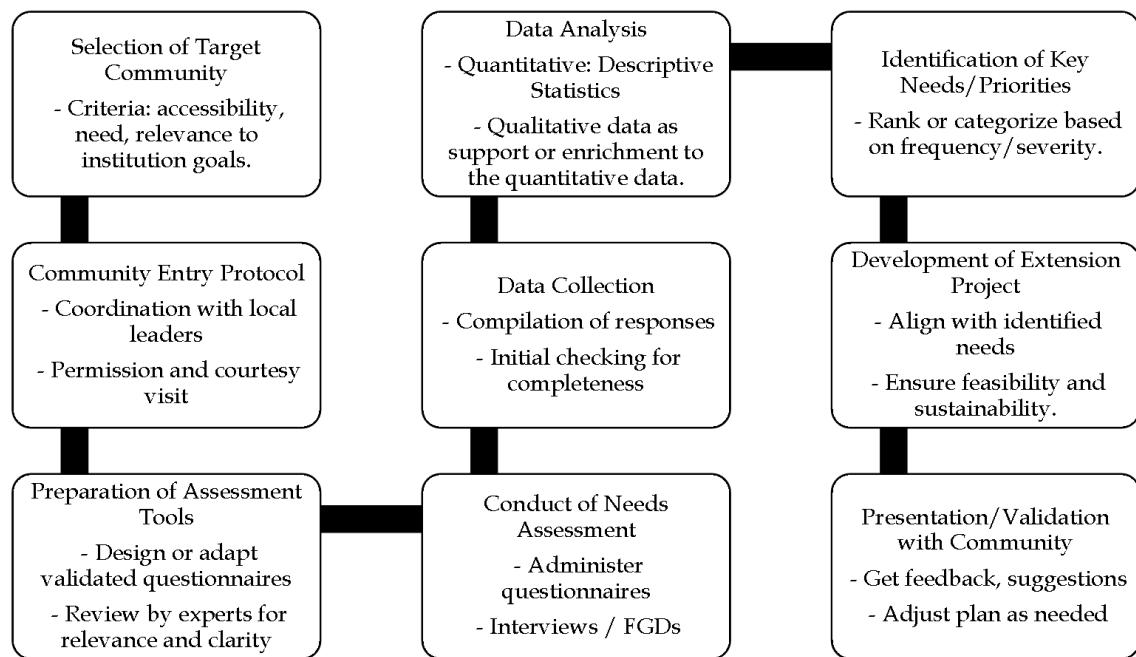


Figure 1. Community Needs Assessment Process (Armada & Uy, 2025)

RESULTS AND DISCUSSION

The demographic profile of the food vendors during the needs assessment survey is displayed in Table 1. The profile obtained was based on their age and educational attainment, indicating the importance of proper training that is relevant to their age and educational background. The data show that 3 (15%) were in the age range of 18-24 years old. There were 7 (35%) who belong to the age range of 25-34 years old, 6 (30%) who belong to the age range of 35-44 years old, 2 (10%) who belong to the age range of 45-54, and 2 (10%) who belong to the age range of 55 above. Furthermore, the data collected shows that food vendors' educational attainment is mostly at the high school level, with a frequency of 10

(50%), 1 (5%) of them are at the elementary level, 3 (15%) are elementary graduates, 2 (10%) are high school graduates, and 4 (20%) are college-level graduates. Despite this, food vendors have already gained enough experience in the vending business. Moreover, the data reveals that most of the vendors 8 (40%) have been operating for 6-10 years. Notably, 2 (10%) of the vendors are operating for more than 10 years, 5 (25%) for 3-5 years, indicating a stable commitment to their business. However, 2 (10%) of new vendors have been operating for 6-11 months and 3 (15%) for 1-2 years, which indicates that they are still new to the area and must be part of the training to adapt properly to food safety practices.

The data presented in Table 1 highlights the need for training programs for the food vendors in and around the institution of the Philippine College Foundation. For younger vendors, there is an opportunity for them to be introduced to innovative food safety practices, while the older vendors may enhance their knowledge and skills and receive a more hands-on training that will help address their needs and challenges with the contemporary concepts and processes. There was a significant range of high school level, which indicates that training processes and procedures may need to be simplified to provide an engaging and understandable experience for the majority of the participants. A study conducted by Mekelle (2023) found that the duration or experience of food vending affects the improvement of food safety and hygiene practices. In particular, experienced vendors are more likely to follow hygienic guidelines and to have improved skills and knowledge related to food safety and hygiene. The demographic profile emphasizes the necessity of conducting training that is specific to the backgrounds, abilities, and learning styles of varied vendors. Providing a diverse approach to training maximizes the effectiveness of food safety and sustainable initiatives.

Table 2. Respondent's Demographic Profile

| Profile Variables | Frequency | Profile Variable |
|-------------------------------|-----------|------------------|
| Age | | |
| 18-24 years old | 3 | 15% |
| 25-34 years old | 7 | 35% |
| 35-44 years old | 6 | 30% |
| 45-54 years old | 2 | 10% |
| 55-64 above | 2 | 10% |
| Educational Attainment | | |
| Elementary Level | 1 | 5% |
| Elementary Graduate | 3 | 15% |
| High School Level | 10 | 50% |
| High School Graduate | 2 | 10% |
| College Level | 4 | 20% |
| Vendor Duration | | |
| 6-11 months | 2 | 10% |
| 1-2 years | 3 | 15% |
| 3-5 years | 5 | 25% |
| 6-10 years | 8 | 40% |
| 10 years above | 2 | 10% |

Table 2 indicates the results of the food safety assessment with a standard deviation of 1.270, which shows that food safety training and awareness are essential for the target participants. Each of the indicators within the food safety section was rated as "Needed." It shows how important it is for the food vendors to receive training and awareness of food safety to enhance their skills and knowledge. The participants agree to have the training following training such as proper food storage (4.19), understanding the use and maintenance of clean utensils and equipment (4.10), knowledge of cross-contamination prevention during food preparation (4.05), familiarity with the food safety regulations and standards (4.05), and guidance on maintaining the correct temperature for perishable foods (3.95).

Table 3. Food Safety

| Indicators | Mean | SD | Qualitative Interpretation |
|---|------|-------|----------------------------|
| 1. Training in proper food storage. | 4.19 | 1.209 | Needed |
| 2. Understanding the use and maintenance of clean utensils and equipment. | 4.10 | 1.261 | Needed |
| 3. Knowledge of cross-contamination prevention during food preparation. | 4.05 | 1.396 | Needed |
| 4. Familiarity with food safety regulations and standards. | 4.05 | 1.284 | Needed |
| 5. Guidance on maintaining the correct temperature for perishable foods. | 3.95 | 1.203 | Needed |
| Overall Mean | 4.07 | 1.270 | Needed |

The findings in Table 3 indicate that the food vendors must undergo comprehensive training in the focus areas. Food vendors must have the knowledge and skills to properly follow and adapt to food safety standards. Such education is not only for compliance but a requirement for the participants to maintain a positive reputation within the school community. The results from Table 1 provide important areas where the food vendors should improve their practices to lessen the foodborne illnesses and enhance customer satisfaction. Ratasuk and Gajesanand (2023) examined the role of perceived food safety in customer trust. The study found that perceived food safety directly enhances customer trust and reduces perceived risk, which will result in increased customer trust. It highlights the importance of food safety knowledge in gaining customer loyalty, particularly when it is related to health concerns. Food vendors who are well-versed in food safety are more likely to build customer satisfaction and trust. The training to be implemented can empower the food vendors to have safer food-handling practices and preparation procedures that will elevate the standard of food safety in the area.

Table 3 presents the needs assessment results on hygiene with an overall mean of 3.90, which indicates that hygiene training practices are necessary for the food vendors. Each of the categories in this area was rated as "Needed," signifying a demand for improvement in the aspects of hygiene. The respondents agree to have a training on education on maintaining personal hygiene while preparing food, which had a mean of 4.10, training in cleaning and sanitizing food preparation surfaces (3.95), the importance of wearing protective clothing such as aprons, gloves, and hairnets (3.90), understanding the role of clean water in food preparation and washing (3.81), and training in proper handwashing techniques and practices (3.71).

Table 4. Hygiene

| Indicator | Mean | SD | Qualitative Interpretation |
|---|------|-------|----------------------------|
| 1. Education on maintaining personal hygiene while preparing food. | 4.10 | 1.221 | Needed |
| 2. Training in cleaning and sanitizing food preparation surfaces. | 3.95 | 1.359 | Needed |
| 3. Importance of wearing protective clothing such as aprons, gloves, and hair nets. | 3.90 | 1.338 | Needed |
| 4. Understanding the role of clean water in food preparation and washing. | 3.81 | 1.692 | Needed |
| 5. Training in proper handwashing techniques and practices. | 3.71 | 1.554 | Needed |
| Overall Mean | 3.90 | 1.433 | Needed |

Table 4 shows that the food vendors acknowledge the need for training, particularly in the areas of personal hygiene, surface cleaning, and the use of proper protective clothing. A study by Zenbaba et al. (2022) identified factors that are associated with hygiene practices, which are formal education and food safety training. According to the study, training for food safety that will introduce food handlers to hygiene fosters a five times greater likelihood of observing hygienic and proper food handling practices than the food handlers without such training. The result highlights the importance of proper training and skills enhancement for food vendors to lessen the risks of foodborne illnesses. As with the findings of this section, it is important to educate vendors on hygiene practices to reduce food contamination, comply with health standards, and improve product delivery to customers. Empowering vendors with safety and proper hygiene practices will not only comply with food safety regulations but also improve public health outcomes by reducing and preventing the risk of food hazards. Comprehensive training will help vendors maintain clean and safe food distribution, which boosts their reputation and business success.

Table 4 presents the needs assessment of the waste management with an overall mean of 4.25. It indicated that the food vendors are highly needed to have waste management training. Indicators were rated as “Needed,” reflecting a strong demand for proper tarring and skills enhancement in terms of managing food waste. According to the assessment results, the respondents agreed to have a training in understanding the health risks associated with improper waste management (4.48), training in maintaining a clean and odor-free waste storage area with a mean of (4.33), proper disposal methods for food waste to avoid contamination (4.19), introduction to eco-friendly practices for managing kitchen waste (4.14), and the segregation of recyclable and non-recyclable waste in food operations (4.10).

Table 5. Waste Management

| Indicator | Mean | SD | Qualitative Interpretation |
|--|------|-------|----------------------------|
| 1. Understanding the health risks associated with improper waste management. | 4.48 | 0.928 | Needed |
| 2. Training in maintaining a clean and odor-free waste storage area. | 4.33 | 1.238 | Needed |
| 3. Proper disposal methods for food waste to avoid contamination. | 4.19 | 1.289 | Needed |
| 4. Introduction to eco-friendly practices for managing kitchen waste. | 4.14 | 1.315 | Needed |
| 5. Segregation of recyclable and non-recyclable waste in food operations. | 4.10 | 1.375 | Needed |
| Overall Mean | 4.25 | 1.229 | Needed |

Comprehensively, the food vendors acknowledge the essentiality of practicing proper waste management, especially in understanding the health risks, maintaining a clean storage area, and adopting eco-friendly practices. Proper waste management is important for ensuring food operations that do not contribute to environmental degradation and public health problems. Improper food waste disposal significantly contributes to greenhouse gas emissions, which are more likely to produce methane that is much harmful than carbon dioxide (World Wildlife Fund, 2025). Improper food waste management not only harms the environment but also poses a direct risk to human health. According to the findings, conducting training and workshops about sustainable environment and proper hygiene practices will result in safer food production and compliance with eco-friendly standards that are now essential to consumers and food safety standards. Effective implementation of proper waste management practices will not only lessen environmental degradation and mitigate health risks but also protect natural resources and encourage sustainability efforts in food operations.

Table 6 shows the assessment survey results on the quality control area with an overall mean of 3.96. It shows that quality control training and practices are needed, but to a lesser extent than food safety, hygiene, and waste management. All indicators within the category of quality control were rated "Needed," which clearly indicates that the food vendors acknowledged how important to have improved quality control in their daily operations. The food vendors agreed to have training in checking raw materials for freshness and quality (4.10), education on food labelling and expiration date monitoring (4.00), understanding the importance of customer feedback for improving quality (3.95), familiarity with techniques for consistent portion sizing and presentation (3.90), and knowledge of hazard identification and corrective actions in food preparation (3.86).

Table 6. Quality Control

| Indicator | Mean | SD | Qualitative Interpretation |
|---|------|-------|----------------------------|
| 1. Training in checking raw materials for freshness and quality. | 4.10 | 1.261 | Needed |
| 2. Education on food labeling and expiration date monitoring. | 4.00 | 1.265 | Needed |
| 3. Understanding the importance of customer feedback for improving quality. | 3.95 | 1.396 | Needed |
| 4. Familiarity with techniques for consistent portion sizing and presentation. | 3.90 | 1.300 | Needed |
| 5. Knowledge of hazard identification and corrective actions in food preparation. | 3.86 | 1.389 | Needed |
| Overall Mean | 3.96 | 1.322 | Needed |

Table 6 findings suggest that food vendors recognized the importance of receiving training and skills enhancement in quality control, specifically in ensuring the good quality of ingredients, proper labeling, and consistent portion sizes of products served. Although these were marked as significant, findings show a less pressing need than for food safety, hygiene, and waste management, which were also marked "Needed." Meeting consumer expectations and improving vendor reputation depend on maintaining quality standards, which is essential for the good of everyone in the Philippine College Foundation. Implementing food quality control measures prevents malpractices in food preparation and prevents food contamination, which is also necessary to protect consumers from foodborne illnesses. Quality control procedures help identify food risks associated with quality and safety. It ensures that a safe and quality product can only be reproduced and consumed by the customers. Training enhances food vendors' skills and helps them gain new knowledge, which empowers them and can significantly contribute to providing consistent,

high-quality, and safe food products, which will increase customer satisfaction and create loyal customers.

"Ganahan kayo mi nga naay activity nga buhaton ang PCF para kami ma tabangan ug ma-improve sa among adlaw-adlaw nga pangianbuhì. Sa tinuod lang, daghan sa amoa ang wala naka agi ug seminar sa food handler. Unta kani maka hatag ug dugang ka-alam bahin sa sakto nga pamaagi sama sa pag prepara sa pagkoan nga among ibaligya. Kani nga iniatib ang among gina hulat nga ma hatag sa government authority pero wala damha nga ang PCF diay ang unang mo tabang namo maka tuon. Mas maayo pud nga ana-a ra sa duol and mag implement ani nga iniatib para duol ug mas dali sa amoa maka tambong sa buluhaton nga mga training and seminar".

"We are very happy that PCF is organizing an activity to help us improve our daily livelihood. Honestly, many of us have not attended a seminar on food handling. We hope that this will provide additional knowledge about the proper procedures, especially when preparing what we sell. This initiative is what we have been waiting for from government authorities, but we did not expect that it would be PCF that would be the first to help us learn. It is also better that the implementation of this initiative is nearby, so it will be easier for us to attend the training and seminar activities".

The statement from a food vendor implies the need for this project to be realized so that they can gain sustainable knowledge about food safety and hygiene practices. Food vendors were delighted to learn about the implementation of Project SAFE, which addresses their need for proper knowledge in the identified area. Most of them have not attended food handling seminars since each one of them was hired informally. Some of the vendors started by continuing the area that was passed by their acquaintances. Although they have a business permit, the name for the business permit, which they received and underwent proper training for, is not physically present. The project also aims to provide them with the necessary certificates that would qualify them in the food business industry. The certificates will authorize them and promote them as local vendors in the area.

Finally, the overall data shows that it is significant that food vendors receive hands-on and practical training in the areas of food safety, hygiene, waste management, and quality control. After a thorough evaluation of the significance of each area, Project SAFE will be implemented. S stands for safety practices, A for assessment, F for food protection, and E for Education. The project is essential in fostering food safety practices, mitigating foodborne illnesses, and enhancing food vendors in terms of food safety and hygiene practices. The topic is relevant in the Philippine College Foundation, where the health and safety of the students and employees are being acknowledged.

Table 7. Proposed Community Extension Program

| Project SAFE (Safety Practices, Assessment, Food Protection, and Education) | | | | |
|---|--|--|---|----------------|
| Key Result Areas | Specific Objectives | Project Activities | Persons Responsible | Timetable |
| Food Safety | <ul style="list-style-type: none"> • Ensure the proper food preparation standards are being followed. • Prevent foodborne illnesses due to improper food handling. • Implement strict food handling for the food vendors. | <ul style="list-style-type: none"> • Basic training on proper food handling. • Implementation of using a proper temperature control process. • Sanitation of food preparation and serving equipment. | <ul style="list-style-type: none"> • Faculty, staff, and student volunteer . • Food vendors • Barangay Health Office | Year 2025-2028 |
| Hygiene | <ul style="list-style-type: none"> • Maintain a clean and safe preparation area. • Prevent cross-contamination. • Ensure food vendors are following hygiene protocols. | <ul style="list-style-type: none"> • Daily sanitation of kitchen area and utensils. • Proper use of apron, hairnets, gloves, etc. • Regularization of proper handwashing . • Proper separation of hot and cold ingredients to prevent cross- | <ul style="list-style-type: none"> • Faculty, staff, and student volunteer . • Food vendors • Barangay Health Office | Year 2025-2028 |

| | | | | |
|------------------|--|---|---|----------------|
| | | contamination. | | |
| Waste Management | <ul style="list-style-type: none"> • Reduce excessive waste generation for every food production. • Promote responsible disposal and encourage recycling. • Optimize resources being utilized to minimize environmental impact. | <ul style="list-style-type: none"> • Implementing biodegradable and recyclable materials. • Proper placements of waste bins for vendors and customers. • Regular waste removal and coordination with the local authorities. • Reduction of food waste through portion control and proper storage to avoid spoilage. | <ul style="list-style-type: none"> • Faculty, staff, and student volunteers. • Food vendors • Barangay Health Office | Year 2025-2028 |

| | | | | |
|-----------------|---|---|---|----------------|
| Quality Control | <ul style="list-style-type: none"> • Promote consistent quality specification. • Reduce food waste and reproduction. • Increase customer satisfaction through high quality products. | <ul style="list-style-type: none"> • Regular ingredients quality check. • Customer feedback response. • Applying FIFO methods. • Consistent portion size. | <ul style="list-style-type: none"> • Faculty, staff, and student volunteer • Food vendors • Barangay Health Office | Year 2025-2028 |
|-----------------|---|---|---|----------------|

CONCLUSIONS AND RECOMMENDATIONS

The majority of food vendors are 25-34 years old, with a majority of educational attainment at the high school level. They mostly operate as food vendors in the area, ranging in age from 6 to 10 years old. The food vendors have the knowledge, but they need continuous training to enhance their skills and knowledge about food vending. The data identified were rated "Needed" specifically in food safety, hygiene, waste management, and quality control. In addition, respondents were glad to be the respondents, especially when they were informed that it would benefit their business and improve them professionally. A community extension project was proposed specifically to cater to the respondents' needs. Taking this into account, it is essential that the Philippine College Foundation and the local government of Barangay Poblacion, City of Valencia, Bukidnon, collaborate strongly to develop projects to address the food vendors identified needs. Additionally, it is highly advised to build a strong network with different stakeholders to create and secure necessary resources and expertise. Creating a strong collaboration will address the community needs, strengthen project implementation, and foster sustainable community development.

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REFERENCES

- Addo-Tham, R., Appiah-Brempong, E., Vampere, H., Acquah-Gyan, E., & Gyimah Akwasi, A. (2020). Knowledge on food safety and food-handling practices of street food vendors in Ejisu-Juaben municipality of Ghana. *Advances in Public Health*, 2020(1), 4579573.
- Armada, W.E., & Uy, R. F., Jr. (2025). Assessment to Action: A Needs Based Approach to Developing Sustainable Criminology Extension Program. *Asian Journal of Community Services*, 4(5), 411-426. <https://doi.org/10.55927/ajcs.v4i5.151>.
- Cruz, A. M. (2022). Community-based extension programs: Enhancing local food vendor resilience. *Journal of Community Development*, 33(1), 45-68.
- Fund, W. W. (2022). Fight climate change by preventing food waste. Tech. rep.
- Garcia, J. R., & Uy, R. A., Jr. (2025). Successes and Challenges: The Lived Experiences of Extension Implementers in Community Development Programs. *Asian Journal of Community Services*, 4(3), 217-230. <https://doi.org/10.55927/ajcs.v4i3.60>.
- Labana, R. V., Dolar Jr, M. V., Ferrer, E. J. J., & Rabago, J. R. C. (2024). The awareness-to-agreement-to-adherence model of the food safety compliance: the case of street food consumers in Manila City, Philippines. *Journal of Public Health and Emergency*, 8.
- Maulu, S., Hasimuna, O. J., Mutale, B., Mphande, J., & Siankwilimba, E. (2021). Enhancing the role of rural agricultural extension programs in poverty alleviation: A review. *Cogent Food & Agriculture*, 7(1), 1886663.
- Morre, L. Y., & Uy, R. F., Jr. (2025). Community Needs Assessment as basis for Philippine College Foundation-Business Administration Department Community Extension Project. *Asian Journal of Community Services*, 4(2), 113-124. <https://doi.org/10.55927/ajcs.v4i2.38>.
- Ratasuk, A., & Gajesanand, S. (2023). Does food safety build customer trust? The mediating role of perceived risk in food delivery service in Bangkok during the COVID-19 pandemic. *Asia Social Issues*, 16(2), e253719-e253719.
- Rustia, A. S., Tan, M. A. P., Guiriba, D. N. S., Magtibay, F. P. S., Bondoc, I. R. J., & Mariano, C. B. D. (2021). Defining risk in food safety in the Philippines. *Current Research in Nutrition and Food Science Journal*, 9(1), 233-257.
- Tuglo, L. S., Agordoh, P. D., Tekpor, D., Pan, Z., Agbanyo, G., & Chu, M. (2021). Food safety knowledge, attitude, and hygiene practices of street-cooked food handlers in North Dayi District, Ghana. *Environmental health and preventive medicine*, 26(1), 54.
- Uy, R. F., Jr, Adora, I. G. R., Pilvera, C. J., Dibdib, S., Jaramillo, H., Arendain, J. R. E., & Laña, Q. (2023). Community Needs assessment as basis for the extension program of Philippine College Foundation. *International Journal of Scientific and Management Research*, 06(07), 71-87. <https://doi.org/10.37502/ijsmr.2023.6705>.
- Werkneh, A. A., Tewelde, M. A., Gebrehiwet, T. A., Islam, M. A., & Belew, M. T. (2023). Food safety knowledge, attitude and practices of street food vendors and associated factors in Mekelle city, Northern Ethiopia. *Heliyon*, 9(4).
- Zenbaba, D., Sahiledengle, B., Nugusu, F., Beressa, G., Desta, F., Atlaw, D., & Chattu, V. K. (2022). Food hygiene practices and determinants among food handlers in Ethiopia: a systematic review and meta-analysis. *Tropical Medicine and Health*, 50(1), 34.