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Level of Practice on Traditional Farming Methods in Ensuring Food Sustainability Among Parents

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Index Terms:

traditional farming, food availability, food accessibility, food utilization and food stability

Abstract. This study determined the level of practice of traditional farming methods in ensuring food sustainability among parents in Little Baguio, San Fernando, Bukidnon. Specifically, it examined the extent of traditional farming practices and assessed the level of food sustainability in terms of availability, accessibility, utilization, and stability. It also investigated the significant relationship between traditional farming methods and food sustainability, as well as differences in the level of practice when grouped according to selected profile variables. A descriptive–correlational research design was employed in the study. The respondents consisted of 150 parents engaged in farming, primarily beneficiaries of the government's Pantawid Pamilyang Pilipino Program (4Ps), selected through purposive sampling. Data were collected using a researcher-made questionnaire. Statistical tools such as mean and standard deviation were used to determine the levels of variables, Pearson Product–Moment Correlation was applied to test the relationship between variables, and t-test was utilized to determine significant differences. The findings revealed that the level of practice of traditional farming methods among parents was high. Similarly, the level of food sustainability was high in terms of availability, accessibility, and stability, and very high in terms of utilization. Moreover, results showed a significant relationship between traditional farming methods and food sustainability. However, no significant difference was found in the level of practice when respondents were grouped according to profile variables. The study concluded that traditional farming methods significantly contribute to achieving food sustainability among parents. It is recommended that these practices be sustained and further strengthened, while agricultural support programs should be enhanced to promote sustainable food production and improve household food security.

Introduction

Sustainable agriculture has emerged as a key issue to the food security as well as environmental custodianship. Their traditional farming processes have been used over time thus serving an important role in ensuring a proper balance in the ecology, natural resource interventions as well as sustaining the food needs of the local communities. Although farming is now becoming more modernized, the practices are still applicable in many rural families, where subsistence and cultural legacy are among the factors contributing to the practices. It is important to know the degree to which these traditional practices are practiced by the parents as it indicates the level of investment made by the parents in believing in food sustainability not to mention the capability of parents to impart the same knowledge and values to the young ones. This research seeks to look at how parents are applying the traditional farming techniques and the level to which these techniques can be applied in their homes in ensuring sustainable food production.

Food sustainability is one of the most burning international problems of the 21st century. Food sustainability by the Food and Agriculture Organization (FAO, 2008) is when individuals always have physical, social and economic access to adequate, safe and nutritious food to satisfy their dietary requirements. Sustainability in food needs a mixture of contemporary technologies and the continuation of the well-established traditional agricultural methods.

Nations all over the world are putting increased efforts to achieve food security and maintain environmental sustainability. In particular, in the United Nations Sustainable Development Goals (SDGs) and SDG 2 Zero Hunger, sustainable agriculture is emphasized and sustainable communities are empowered to feed themselves (United Nations, 2015). The re-appearances of traditional knowledge on agriculture are advocated in most developing nations as a way of adapting to climate change and biodiversity degradation (Altieri et al., 2015). Traditional farming is still appreciated in terms of its resilience to assist in the food sustainability of the households, despite the technological development.

The problem of food security in the Philippines is a significant matter, and approximately 2.9 million households face hunger because of poverty, inflation, and insufficient availability of food (Philippine Statistics Authority [PSA], 2022). To overcome this problem, the Department of Agriculture (DA) encourages the use of modern technology and native farming. Sustainable production has been promoted by the use of programs such as the Organic Agriculture Act of 2010 (RA 10068) and the Rice Competitiveness Enhancement Fund, which maintain the local practices (DA, 2021). Formal schooling and extension programs support the communities to make sustainable food decisions.

Food sustainability at the regional and provincial levels has direct consequences to the rural households especially in communities that rely on farming. The families in Mindanao, as an example, use small-scale agriculture and local food production. Nevertheless, low educational attainment, lack of farm inputs, and market ties are some of the issues that make parents unable to maximize the utilization of traditional farming to secure food (FAO & DA, 2020). Meanwhile, the rural parents are the custodians of indigenous knowledge, including seed saving, use of organic fertilizers, intercropping, among others, keeping food accessible to their families. With the help of appropriate education, these practices can be used as potent means of keeping food sustainable.

More locally, Bukidnon has traditionally practiced communities based on traditional farming as a basis of food production. Part of the indigenous practices still being transmitted to the parents include corn and rice inter crop, root crop farming, and application of livestock waste and plant residues into the soil to act as organic fertilizers. With modernization and foreign influence, however, these practices have been on the decline with the younger generations favoring farming methods which are more focused on short-term gains over long-term sustainability as well as reliant on chemicals and cash crops. The continued existence of poverty, lack of resources, and shifting consumption trends necessitate the need to rethink the role of traditional farming, which, in combination with education, will enhance the food sustainability at the household level.

This research, therefore, seeks to examine level of practice on the conventional farming practices in food sustainability among the parents. Through these considerations, the study aims at identifying the opportunities and challenges encountered by households in attaining food security in the household. The results will be expected to give information that will empower educators, local leaders, and policymakers to develop programs that empower sustainable food practices at the grassroots level.

Methodology

The research design employed in the study was descriptive-correlational research design. The descriptive section will seek to establish the educational attainment of parents, their use of traditional farming methods, as well as, the extent of food sustainability at their households. The correlation aspect attempted to explore the connection among the education level of the parents, the application of the traditional production method, and the food sustainability within the community. The design is considered suitable because it will enable the researcher to describe variables in their natural occurrences and to examine potential relationships among them without alteration of conditions

The study was conducted in the Barangay of Little Baguio, San Fernando, Bukidnon community where farming is a major source of livelihood. The area is also one of the identified communities with families under the Pantawid Pamilyang Pilipino Program **(4Ps).** The chosen locale represents a rural area where both formal education and traditional farming practices intersect in daily household and livelihood activities. Its combination of traditional farming practices and household food management systems makes it a suitable setting for the study on food sustainability. The community will be selected purposively due to its active involvement in farming, accessibility to the researcher, and relevance to the problem under investigation. The community is chosen because of the good practices that they have been doing when it comes to farming some of these are Crop Choices & Ecological Knowledge**,** Shared Work & Community Cooperation**,** Knowledge Transmission **and** Adaptation & Integration of New Practices.

The study respondents were 150 parents who were involved in farming in the Barangay Little Baguio community, San Fernando, Bukidnon. The respondents were chosen among the total number of 185 identified beneficiaries of the 4ps and only those who passed the inclusion criteria were incorporated in the final sample.

In particular, the researchers targeted at parents who are directly engaged in the agricultural production and whose children are still at the stage of household-based food production. Favoritism was provided to recipients of the Pantawid Pamilyang Pilipino Program (4Ps) of the government since they are households in which farming serves as a major source of livelihood and family support. The purposive sampling method was used to make sure that only those people who had the appropriate knowledge and experience in the field of farming and education of their children would be considered.

Therefore, the only sample size of 150 respondents is the sample that fulfilled the criteria set by the researcher to guarantee that the information obtained is relevant and credible to undertake the intended study. The sample was calculated in relation to the number of qualified farming households and beneficiaries of 4Ps in the community thus providing sufficient representation and validity of the results.

This study employed a purposive sampling technique, a non-probability sampling method used to select respondents based on specific characteristics and the purpose of the research by Palinkas et al (2015). This method is appropriate because not all parents in the community are engaged in farming or are responsible for household food management. The target respondents were parents who are 4Ps beneficiaries residing in Barangay Little Baguio, San Fernando, Bukidnon. They have met the inclusion criteria: (1) actively engaged in farming using traditional or mixed methods, (2) residing within the community, and (3) responsible for household food management and decision-making. The list of 4Ps beneficiaries were obtained from the Municipal Social Welfare and Development Office (MSWDO) in coordination with the Barangay 4Ps Parent Leaders. From this list, qualified respondents were identified based on the set criteria. The researcher personally approached the selected participants to invite them to take part in the study.

The instruments used in this study was adopted from the works of Farmonaut (2025) The Science of Sustainable Agriculture. Traditional and Modern Farming Practices Report. Maguigad (2020). Community-based Farming and Food Security in Mindanao. UNESCO (2017) on education for sustainable development, and the **F**ood and Agriculture Organization (FAO, 2018**)** on food sustainability frameworks. Adapted from: FAO (2018). Sustainability Assessment of Food and Agriculture Systems (SAFA) Indicators. Ingram (2017). Four Dimensions of Food Security: Availability, Accessibility, Utilization, and Stability. World Bank (2025). Philippine Sustainable Agricultural Transformation Program. Gonzales & Reyes (2020). Household Food Resilience and Traditional Farming in Rural Philippines.

The questionnaire was designed to measure three core variables: parents' educational attainment, the extent of their traditional farming practices, and the level of food sustainability in their households. The first part will obtain categorical data on educational attainment, the second part will assess Role of Education in Food Sustainability**,** the third part will evaluate Perceived Influence of education on food sustainability, and the fourth part traditional farming methods.

In scoring the responses of the parents in terms of their educational attainment, traditional farming practices, and food sustainability, a 5-point Likert scale was utilized. This scale was used to systematically quantify the respondents' perceptions and practices, allowing qualitative responses to be converted into measurable numerical data for statistical analysis. The use of this scale is appropriate for studies that aim to determine the extent level of observed practices and conditions, as it provides a standardized basis for interpretation and comparison of responses.

Each response was assigned a corresponding numerical value, and the computed mean scores were interpreted using the scale below:

This scaling method, based on the Likert-type format developed by Rensis Likert (1932), enables the researcher to determine the overall level of respondents' practices and conditions, facilitating clear interpretation of the data in terms of degree or intensity.

The data for this study were gathered in a systematic manner to ensure validity and reliability. First, the researcher will seek formal approval from the Barangay Captain of Barangay Little Baguio and community leaders to conduct the study among selected parents in the community. Once permission is granted, the researcher orients the identified respondents regarding the purpose of the study, the procedures involved, and their rights as participants, emphasizing confidentiality and voluntary participation.

Survey questionnaires were adopted from established instruments related to education, farming practices, and food sustainability, were then distributed to the respondents. Sufficient time were provided for them to complete the questionnaires, and clarifications were addressed as necessary. After the retrieval of the accomplished forms, the responses were carefully checked for completeness and accuracy. The collected data were then encoded, organized, and analyzed using appropriate statistical tools to answer the research questions and test the hypotheses of the study.

The data that were gathered from the respondents were treated using both descriptive and inferential statistics. Frequency and percentage were used to describe the profile of the respondents in terms of demographic characteristics. Weighted mean was utilized to determine the level of education's role, the extent of traditional farming practices, and the degree of food sustainability in the community.

To test the relationship between the independent variables (education and traditional farming practices) and the dependent variable (food sustainability), the Pearson Product-Moment Correlation Coefficient (Pearson r) will be applied. This were determined whether there is a significant relationship between the identified variables. The hypotheses were be tested at a 0.05 level of significance**,** which will serve as the basis for accepting or rejecting the null hypothesis.

This study was adhered to established ethical standards to ensure the protection of the rights and welfare of the respondents. Prior to data collection, the researcher secured formal approval from the Barangay Captain and community leaders. The purpose of the study, as well as the procedures involved, was clearly explained to the parent-respondents before they participate. Informed consent forms were provided, ensuring that participation is voluntary and that respondents have the right to withdraw at any point without conditions.

Confidentiality was strictly observed by keeping all responses anonymous and using the data solely for academic purposes. Codes rather than names were used to identify responses to maintain privacy. The information gathered will not be disclosed to anyone outside the research team and were presented only in aggregated form. Furthermore, the questionnaires will not include sensitive or harmful questions that could cause discomfort to the participants.

Finally, the study was ensured respect for cultural values, traditions, and practices of the community, particularly in relation to traditional farming methods. The researcher will maintain honesty, integrity, and objectivity in conducting the study and reporting its results.

Results and Discussion

The level of practice on traditional farming methods of food sustainability among parents.

Indicator	Mean	SD	Interpretation
Practicing home-based food gardening for daily needs.	4.05	1.180	High Level
Practicing intercropping (planting different crops together).	4.04	1.035	High Level
Using organic fertilizers (e.g., compost, manure).	4.04	1.029	High Level
Conserving soil and water (e.g., mulching, contour farming).	3.99	1.193	High Level
Practicing crop rotation to maintain soil fertility.	3.87	1.197	High Level
Practicing community cooperation in farming (bayanihan).	3.85	1.212	High Level
Storing seeds for the next planting season.	3.81	1.297	High Level
Practicing natural pest control (e.g., using herbal pesticides).	3.80	1.204	High Level
Using animal waste or crop residues as fertilizer.	3.59	1.233	High Level
Overall	**3.89**	**0.698**	**High Level**

Table 1 Level of practice on traditional farming methods of food sustainability among parents.

Table 1 reveals that the general practice level on the traditional forms of food sustainability through farming methods by the parents is high (Mean = 3.89, SD = 0.698). Some of the indicators, which included home-based food gardening done on a daily basis (Mean = 4.05, SD = 1.180) had the highest mean. This is then followed by intercropping (Mean = 4.04, SD = 1.035) and application of organic fertilizers which includes compost and manure (Mean = 4.04, SD = 1.029). There were other indicators that also rated high in mean rating like conserving soil and water (Mean = 3.99, SD = 1.193), utilizing native or traditional seed varieties (Mean = 3.89, SD = 1.171) and practicing crop rotation in order to maintain soils fertility (Mean = 3.87, SD = 1.197).. Similarly, community cooperation in farming or bayanihan (Mean = 3.85, SD = 1.212), storing the seeds

to be used in the next planting season (Mean = 3.81, SD = 1.297) and practicing natural pest control (Mean = 3.80, SD = 1.204).

Conversely, animal waste or crop residues as fertilizer (Mean = 3.59, SD = 1.233) had the lowest mean recorded in the indicators. Table 2 indicates that the general degree of practice on the traditional methods of food sustainability in traditional farming by the parents is High (Overall Mean = 3.89, SD = 0.698). This implies that the parents constantly participate in a number of sustainable farming activities that make their homes self-sufficient in terms of food sustainability. Out of the indicators, the mean calculated with the greatest value was 4.05 (SD=1.180) with the pretext of practicing home based food gardening to meet daily needs, implying that parents usually grow food in the home. This leads to the conclusions of the study by Altieri and Nicholls (2020) who have stated that home gardens can increase the food security of households, as they allow direct access to various food sources. The next are close behind and they are practicing intercropping (M = 4.04) and using organic fertilizer (M = 4.04) as they indicate that parents should practice soil friendly and biodiversity enhancing approaches. This is consistent with the results of Pretty et al. (2021), which discovered that intercropping and organic inputs are feasible in enhancing soil health, resilience, and long-term productivity.

There were also other indicators including conservation of soil and water (M = 3.99), traditional seed varieties (M = 3.89) and crop rotation (M = 3.87) which were rated highly, meaning that a significant number of parents are knowledgeable about the techniques that are sustainable in terms of preserving the fertility of the soil and ecological stability. These measures are congruent with literature by Smith et al. (2022) who claimed that the conservation of soil and water is a critical approach to sustainable agriculture and food security in the long term. Conversely, animal waste or crop residues used as fertilizer (M = 3.59, SD = 1.233) had the lowest mean stating that this practice might not be widely applied even though it has the advantages of being more sustainable. Hahn et al. (2020) discovered that conventional organic methods of recycling enhance soil nutrients but are not as widely used in regions with limited knowledge and labor or where facilities are at a disadvantage. The fact that the practice of several of the traditional modes of farming is high means that parents not only appreciate the concept of sustainability but also practice the commitment towards those practices that promote the short- and long-term ecological productivity and the food supply within the household.

The literature has highlighted that the traditional farming techniques which include home gardening, intercropping, organic fertilization, crop rotation, soil and water conservation, use of traditional seeds and community cooperation are the key to sustainable food production and household resilience (Altieri, 1995; Pretty et al., 2018; Gliessman, 2015). In line with these researches, the results presented in Table 1 indicate that parents possess high degree of practice (Overall Mean = 3.89, SD = 0.698). Those indicators are the practice of home-based food gardening to meet daily needs (M = 4.05) and the practice of intercropping (M = 4.04) are indicators of the involvement of parents in the methods that would facilitate the presence of biodiversity, soil fertility, and ecological balance. The slightly reduced mean in the use of animal waste or crop residues as a fertilizer (M = 3.59) can be attributed to the literature stating that some sustainable methods are less adopted because of the knowledge, labor, or resource constraints (Hahn et al., 2020).

Indicator	Mean	SD	Interpretation
Our household produces enough food for daily consumption.	4.21	0.959	Very High Level
We have diverse food sources from our farm (crops, livestock, etc.)	4.10	1.002	High Level
We store food and seeds for future use.	3.96	1.074	High Level
We rarely experience food shortage in our household.	3.53	1.202	High Level
Overall	**3.95**	**0.744**	**High Level**

Table 2 Level of food sustainability among parent in terms of food availability.

Table 2 shows that the general extent of food sustainability among parents in the area of food availability is high (Mean = 3.95, SD = 0.744). Out of the indicators, the highest mean was obtained in the indicator Our household produces enough food to be consumed daily (Mean = 4.21, SD = 0.959). The level of food availability is also high in other indicators. We have various sources of food in our farm (crops, livestock, etc.) (Mean = 4.10, SD = 1.002). On the same note, the statement that We store food and seeds to use later (Mean = 3.96, SD = 1.074) shows that households store food and seeds to ensure the future availability of food. Conversely, the lowest registered was "We rarely have food shortage in our household" (Mean = 3.53, SD = 1.202). Table 3 indicates that the food sustainability of the parents regarding food availability is High (Overall Mean = 3.95, SD = 0.744). This implies that families usually get sufficient food crop that is grown on their farms and other food sources.

The indicator that received the highest mean, namely Our household produces enough food to consume on a daily basis (M = 4.21, SD = 0.959), indicates that the majority of the households can rely on the output of the farm and have their daily

food needs. This is in accordance with the results of Jones and Tschirley (2020) who have concluded that self-produced food is a major food security contributor in households, particularly when it comes to rural farming.

The fact that parents control a variety of sources of crop and livestock, such as our farm (M = 4.10) is expressed in the statement that they are able to have a variety in the diet, and become less dependent on the market shopping. Preparedness and buffering of food supply is shown by storing food and seed to be used in the future (M = 3.96), which aligns with the results of the FAO (2021) study that food and seed storage and preservation practices increase the food stability of households. In the meantime, the highest score of 3.53 (M) achieved by the item We rarely experience food shortage with the highest category of high. This means that food availability is not limited but certain households can be at times characterized by food deficiency especially during lean seasons as observed by Maxwell et al. (2021) who reported that even productive households can plunge into seasonal food shortages due to lack of proper storage systems.

The availability of food is high showing that the traditional methods of farming favor family demands. The intermittent changes, however, are indicative of a necessity in adopting improved storage and risk aversion measures that would provide the benefit of consistency throughout a year. Chapter 2 emphasized the fact that household agricultural activities, crop diversification, and food preservation lead to food security and shield against shortages (FAO, 2018; Leroy et al., 2015). In line with this Table 3 indicates that the food sustainability lies largely in the area of availability (Overall Mean = 3.95), with the highest mean in the category of our household produces enough food to be consumed on a daily basis (M = 4.21). This reflects the fact that parents depend on home-grown self-produced food and diversified crops, in line with the results that integrated farming enhances food security in the household (Gonzales and Reyes, 2020).

Indicator	Mean	SD	Interpretation
We can easily access food from our own farm.	4.15	1.035	High Level
Community cooperation helps us access food resources.	4.05	1.086	High Level
We have enough income to buy food we cannot produce.	3.82	0.997	High Level
Food prices in our area are affordable for our family.	3.66	1.158	High Level
Overall	**3.92**	**0.715**	**High Level**

Table 3 Level of food sustainability among parent in terms of food accessibility.

As Table 3 shows, the food sustainability in terms of accessibility is also High (Overall Mean = 3.92, SD = 0.715). This implies that the parents usually have access to food which can be produced in a farm or otherwise.

The mean with the highest value was We can easily access food in our own farm (M = 4.15, SD = 1.035); it demonstrates that the centrality of farm production is related to access in a rural environment (Headey and Alderman, 2020).

The significance of social capital and bayanihan (community cooperation) in sharing resources is emphasized in "Community cooperation helps us access food resources" (M = 4.05), which is consistent with the results of Putnam (2020), who also reported a positive effect of community networks on the accessibility of resources and welfare. On the other hand, the lowest mean was obtained with the statement of Food prices in our area are affordable (M = 3.66), it could be assumed that farm production increases access to basic services, but still, economic barriers influence the possibility of purchasing food products that households cannot produce. Smith and Haddad (2022) state that the level of income and food prices has a direct impact on the food availability, especially in rural areas. Farm production and community collaboration are also valid in ensuring that parents have access to food, but other external problems such as market prices are still in the thoughts of overall access to food.

It was indicated in literature that farm production, income and community cooperation improve access to food (Pretty, 2008; Headey and Alderman, 2020). This is verified in Table 3 which indicates that there is a high degree of food accessibility (Overall Mean = 3.92). The role of the household production and community networks in food availability is reflected in such indicators as: we can easily access food in our own farm (M = 4.15) and community cooperation helps us access food resources (M = 4.05). The low scores in economic variables, such as, food prices in our area are affordable (M = 3.66) draw on the persistence of external factors on accessibility, which is consistent with the literature on rural food systems (Smith and Haddad, 2022).

Indicator	Mean	SD	Interpretation
Parents ensure that children eat healthy and diverse food.	4.29	0.922	Very High Level
Our family consumes nutritious and well-balanced meals.	4.27	0.802	Very High Level
Farming knowledge helps us make nutritious food choices.	4.27	1.023	Very High Level
We follow safe food preparation and storage practices.	4.07	1.011	High Level
Overall	**4.23**	**0.675**	**Very High Level**

Table 4 Level of food sustainability among parent in terms of food utilization.

Table 4 indicates the food sustainability level of parents in relation to food utilization and food stability and the general level is very high (Mean = 4.23, SD = 0.675). Some of the indicators that have the highest mean were "Parents make sure that children consume healthy and various food (Mean = 4.29, SD = 0.922). On the same note, the mean of Our family consumes nutritious and well-balanced meals (Mean = 4.27, SD = 0.802) and Farming knowledge helps us make nutritious food choices (Mean = 4.27, SD = 1.023) was also very high.

The other indicator, which is that of following safe food preparation and storage practices (Mean = 4.07, SD = 1.011), though slightly lower, still falls under the high level. As indicated in Table 5, the food sustainability in relations to utilization and stability is Very High (Overall Mean = 4.23, SD = 0.675). This implies that parents do not only produce food, they also make sure that the food that is produced is healthy, safe and it is utilized in the house setting.

Such indicators as the ones that state that parents make sure that children feed on healthy and diverse food (M = 4.29) and that our family feeds on healthy and well-balanced meals (M = 4.27) imply the emphasis that dietary quality is of the first priority. This supports Jones et al. (2021) who determined that the household that has access to a variety of farm products has a better nutritional outcome. The implication of "Farming knowledge assists us in making nutritious food choices" (M = 4.27) is that agricultural literacy is part of healthy consumption patterns, which agrees with Ruel et al. (2021), who also found that farming knowledge had a connection with the quality of the household diet.

We follow safe food preparation and storage practices (M = 4.07) though slightly lower but also suggests high food management behavior of the household. FAO (2021) emphasizes that safe use practices also minimize waste and maintain food quality enhancing food sustainability. This implies that utilization and stability are very high; this translates to the fact that households are producing sufficient food and converting it into nutritious meals, which enhances health outcomes and resilience to food insecurity. Table 6 shows the degree of food sustainability on the part of parents regarding food stability with the overall high degree (Mean = 4.00, SD = 0.662). One of the indicators, we participate in community efforts to maintain local food supply (Mean = 4.17, SD = 1.035), has the highest mean. There are also strong practices as reflected in some other indicators, such as, "We have coping strategies when there is a food shortage (e.g., food sharing, preservation) (Mean = 4.07, SD = 1.008) and our household can supply food when there is a dry or rainy season (Mean = 3.98, SD = 0.930). The one whose mean is the lowest is the indicator Our farming practices can withstand climate-related challenges (Mean = 3.79, SD = 1.145)

Indicator	Mean	SD	Interpretation
We participate in community efforts to maintain local food supply.	4.17	1.035	High Level
We have coping strategies during food shortages (e.g., food sharing, preservation).	4.07	1.008	High Level
Our household can sustain food supply during dry or rainy seasons.	3.98	0.930	High Level
Our farming practices can withstand climate-related challenges.	3.79	1.145	High Level
Overall	**4.00**	**0.662**	**High Level**

Table 5 Level of food sustainability among parent in terms of food stability.

According to Table 5, the stability of parents in terms of food is High (Overall Mean = 4.00, SD = 0.662). The idea of community participation to ensure local food availability, such as We participate in community efforts to maintain local food supply (M = 4.17), has strategies to build and support local food systems, which aligns with the recommendations of the FAO (2021) on the idea of community resilience.

Preparedness is also evident in the fact that they have coping mechanisms when there is a shortage of food (We have coping strategies during food shortages (M = 4.07), including food sharing and food preservation practices that mitigate against instability, a finding that supports the results of Maxwell et al. (2021) on community coping strategies. Although both Our household can maintain food supply during dry or rainy seasons (M = 3.98) and Our farming practices can withstand climate related challenges (M = 3.79) recorded high values, the slightly lower values suggest that the parents are vulnerable to climate variability, which is a common problem in Porter et al. (2022), who discovered that climate resilience is still a challenge to the small holder farms. Nonetheless, climate resilience is one of the areas where support and adaptation measures can be improved.

Chapter 2 highlighted that food utilization and stability mean that appropriate nutrition, food handling safety, and environmental resilience (Jones et al., 2016; FAO, 2021). As noted in Table 4, the percentage of utilization and stability are very high (Overall Mean = 4.23), with parents making sure that children take healthy food (M = 4.29) and use the farming knowledge to make healthy decisions (M = 4.27). Table 5 also indicates that there is high stability (Overall Mean = 4.00) where participants in the community participate and use coping strategies during shortages. Such findings are in line with existing literature that argues the significance of household expertise, village collaboration, and conventional agriculture when it comes to upholding steady and nutritious food provisions (HLPE, 2020; Pretty, 2008).

Variable	r	p-value	Interpretation
Level of Practice on Traditional Farming Methods	.711	.000	Significant

Table 6 Test of significant relationship between the level of practice of traditional farming methods and food sustainability among parents.

Table 6 indicates the significance test of the relationship that exists between traditional farming practices level and food sustainability among parents. The correlation coefficient (r = 0.711) is high and positive, which implies that as the engagement in the traditional farming practices increases, the sustainability of food increases. The p-value 0.000 verifies that such relationship is statistically significant. Thus, the null hypothesis is discarded. Table 7 indicates that the correlation coefficient (r = 0.711, p = 0.000) means that there is a strong positive correlation between the degree of practice of traditional farming methods and food sustainability. This implies that the more people are practicing sustainable farming, the more they will be food sustainable. Altieri and Nicholls (2020) and Pretty et al. (2021) have confirmed this finding because these authors highlighted the benefits of traditional and agroecological farming systems like home gardens, intercropping, and soil conservation in terms of productivity, resilience, and household food security. The powerful association supports the fact that traditional systems of farming are effective tools of improving the sustainability of food in the homes. This means that the policy can be a major support of these practices to strengthen the rural food systems.

The positive significant correlation (r = 0.711, p = 0.000) is in line with the literature providing that engagement in traditional farming practices improves household food security and resilience (Altieri and Nicholls, 2020; Pretty et al., 2021). This establishes that the extent of food sustainability in terms of availability, accessibility, utilization and stability is greater in parents who actively engage in sustainable farming practices. The recent research by Smith and Haddad (2022) proves that the culture of adopting sustainable agriculture is not dependent on the demographic diversities and more on the access of resources, cultural traditions, and societal norms, which indicates the integration of the culture with the idea of food sustainability and its general acceptance.

According to the research findings, the community parents have shown high degree of practicing the traditional farming techniques, which go a long way in enhancing food sustainability in their families. As it is seen in Table 1, the following practices are prevalent: home-based food gardening (M = 4.05), intercropping (M = 4.04), and the use of organic fertilizers (M = 4.04). This is in line with the Social Learning Theory (1977) of Albert Bandura that focuses on learning by observation and modelling since parents were role models, passing their knowledge of sustainable farming and managing their food responsibly to the children. It is through such practices that parents are able to ensure their own food security as well as strengthen the intergenerational passing of farm knowledge and farming practices. The reason why soil and water conservation methods (M = 3.99), crop rotation (M = 3.87), and the use of traditional seed varieties (M = 3.89) were adopted so much is also an indication of the practical implementation of the principles of sustainable agriculture as outlined in the Farmonaut (2025) Science of Sustainable Agriculture report. The practices show a combination of diversified farming, agroecological control, and climate responsive practices that are used to increase soil fertility, ecological equilibrium and overall household stability. On the same note, the significant positive correlation between the degree of traditional farming practice and food sustainability (r = 0.711, p = 0.000) confirms the results of Maguigad (2020), who note that households that maintain traditional practices are more resilient, maintain the presence of diverse and nutritious diets, and experience food security over time versus those those who use only modern practices.

Regarding food sustainability, Table 2 and Table 3 demonstrate that families have high level of food availability (M = 3.95), and accessibility (M = 3.92), and that families produce enough food to consume on a day-to-day basis, have a variety of food sources and enjoy the community collaboration. This result can be associated with the Sustainable Livelihoods Framework because the households can manage human, natural, and social resources to ensure they have their food resources and also indicates the practical applicability of community-based initiatives, including bayanihan, to sustain their access to local resources. Similarly, the scores of food utilization and stability (M = 4.23 and 4.00) are very high which means that parents are aware of proper and nutritious nutrition and well-balanced meals, adopt safe food storage practices, and engage in cooperation in ensuring food supply. These practices are in accordance with Agroecology ideals and underline the ecological and cultural significance of combined methods of traditional practices and informed decision-making to realize sustainable household food systems. Further, Table 7 analysis of demographic variables proves no notable differences between the practice of traditional farming methods based on the grouping of the variables by age, gender, or educational level. This implies that individual traits are not as important as the cultural practices, resource availability and educational enlightenment in the adoption of sustainable practices. This observation is a complement to the theoretical basis of the research as it would show the role of education, social learning, and community involvement in encouraging the use of traditional farming methods by various parent portrayal.

In general, the paper substantiates that education, conventional agricultural activities, and the collaboration between communities play an inseparable role in enhancing food sustainability. Parents are also learners and teachers and they practice sustainable farming following the indigenous knowledge and the current farming methods. Their initiatives strengthen the resilience of households, advance nutritional performance, and lead to sustainable ecology in the long-term which justifies the applicability of the Social Learning Theory, sustainable agriculture policies at Farmonaut, and study of community-based farming by Maguigad in Northern Mindanao. The results highlight that education and transmission of traditional farming methods between generations in the family are the major strategies to attain sustainable food systems at the household and community level.

Conclusion and Recommendations

The research results indicated that the general degree of practice on traditional forms of farming practices among parents was high, meaning that parents regularly use traditional farming innovations like home gardening, intercropping and application of organic fertilizers. This implies that it is true that traditional farming is a key practice among parents in ensuring food sustainability.

The results also indicated that the general food sustainability of parents was high in food availability, food accessibility and food stability and very high in food utilization. This means that parents can afford to offer adequate, available, healthy and consistent food to their families. This is also indicative of the fact that agricultural activities play a positive role to support household food supply.

Further, the results indicated that parents were significantly related to the level of practice of traditional farming methods with food sustainability. The finding showed that there was a significant positive relationship and this implies that the more the parents involved in the study adhere to traditional farming methods, the more likely that the food sustainability will be high.

Lastly, the results showed that the level of practice of traditional farming methods did not show any significant difference when formed according to age, gender, and level of education. This means that parents engage in traditional farming practices which is often the case irrespective of the profile of the parents.

According to the research results, it was established that parents are active practitioners of traditional farming and have a high degree of food sustainability. Conventional agriculture is vital in provision of food, food access, food use and food stability in households. In addition, the strong linkage that existed between traditional farming and food sustainability proves that traditional farming has a positive impact on maintaining household food supply. There are no major differences based on grouping according to profile, and this means that the traditional form of farming is practiced in vast majority without any concerns on demographic segments.

Following the results of this research, as well as, in accordance with its relevance, it is possible to recommend the following recommendations that will improve the idea of traditional farming practices and increase the level of food sustainability among parents in the community:

To the Parents. The parents have been encouraged to still engage in traditional forms of farming although they incorporate the knowledge acquired through formal education. In particular, they can use diversified cultivation, organic fertilization, rotating crop, and soil and water conservation methods to ensure ecological balance and a higher level of food security in

the household. Also, parents can attend community workshops or trainings on sustainable agriculture to enhance their skills in the area and to guarantee that they can use and store food properly at home.

To the Community Leaders. Programs that ensure food sustainability at the household and community levels should be encouraged by the community leaders. The local food systems can be enhanced by initiating community seed banks, cooperative farming and knowledge-sharing sessions on sustainable agricultural practices. Leaders can also arrange forums or extension courses to emphasize on the need to maintain indigenous farming knowledge as well as promote new methods to enhance productivity and resilience.

To Schools and Educators. Teachers are advised to incorporate sustainable agriculture, nutrition and environmental education in the curriculum. Practical activities, which focus on the modern and traditional farming techniques, can be conducted by means of school gardens, visiting farms, and project-based learning. Students can also be asked by the teachers to take note of the traditional farming methods observed in their families and communities and exchange their experiences to appreciate culture and pass-on the intergenerational knowledge.

To Policy Makers and Government Agencies. The government agencies, especially the Department of Agriculture (DA) and the Department of Education (DepEd) are urged to plan and execute policies to assist in adopting the traditional farming methods with the contemporary agriculture interventions. Programs would be in form of agricultural extension, smallholder farmer training, and promotion of community-based programs that provide an increase in the food availability, accessibility, stability, and use. Policymakers must also make sure that climate-adaptive agricultural policies and education campaigns are availed to rural families in order to enhance the resilience of the food system.

VCI (Valencia Colleges, Inc.) is urged to engage in promoting sustainable food and agriculture initiatives by including the community participation, on-the-job training, and research in its programs. The school will be able to host workshops, seminars, and project-based learning sessions in which students and parents will be engaged, and will help to create awareness about the traditional farming methods, family nutrition, and environmental stewardship. These efforts should be reinforced with collaboration with the local communities, government initiatives like 4ps, and agricultural experts, which will help VCI to become a hub of knowledge transfer, capacity-building, and the support of sustainable practices that result in a better food security and resilience of the households.

To Future Researchers. It is recommended to conduct additional research in the future to investigate the connection between education, traditional farming practices and household food sustainability in other rural settings. Other factors that the researchers can examine to give a more comprehensive picture of sustainable food systems include economic factors, adoption of new technology and climate resiliency. Moreover, longitudinal research might measure the effects of education interventions on the practice of traditional farming and food security within some time.

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Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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Appendices

No appendices are attached to this study.