

Beyond Competence: Personal and Environmental Determinants of Nutrition Program Implementation Among Local Government Nutrition Officers in the Philippines

Mark Julius Postre Fabi

Student, AGO Medical and Educational Center Graduate School of Health

Abstract— Nutrition Action Officers play a critical role in translating national nutrition policies into effective community-based interventions; however, successful implementation depends not only on professional competency but also on the personal and environmental conditions that support their work. This study examined the professional competencies of Local Government Nutrition Officers and determined the personal and environmental determinants associated with nutrition program implementation in the Philippines. A descriptive cross-sectional survey design was employed among 31 City and Municipal Nutrition Action Officers in Camarines Sur. Data were collected using a structured questionnaire assessing competency based on the Knowledge, Skills, and Attitudes (KSA) framework, personal factors, environmental support factors, and implementation challenges. Findings revealed that Nutrition Officers demonstrated a very high level of competency, with knowledge, skills, and attitudes receiving consistently high ratings. Professional competency was significantly associated with personal factors, particularly self-efficacy, confidence in managing nutrition programs, and advocacy capacity. Environmental factors, including training and technical assistance, Local Chief Executive support, and financial resources, were also significantly associated with competency. Despite high competency levels, respondents reported challenges related to limited resources, competing responsibilities, sociocultural barriers, political changes, and weak multisectoral coordination. The findings suggest that strengthening local nutrition programs requires an approach that goes beyond individual competency development by creating supportive governance systems, ensuring adequate resources, and institutionalizing nutrition workforce capacity within local government structures.

Keywords— Nutrition Action Officers; Public Health Workforce; Professional Competency; Nutrition Program Implementation; Local Nutrition Governance.

I. INTRODUCTION

Malnutrition remains one of the most persistent and complex public health challenges worldwide, affecting population health, human development, and socioeconomic progress. Despite decades of global efforts, many countries continue to experience the overlapping burden of undernutrition, micronutrient deficiencies, overweight, and obesity. This “triple burden of malnutrition” has created increasing pressure on health systems to develop effective, sustainable, and context-specific nutrition interventions. Addressing this challenge requires not only evidence-based policies and programs but also a capable public health workforce that can translate

these strategies into effective community-level actions.

In the Philippines, malnutrition continues to be a significant public health concern despite the implementation of national nutrition policies and programs. The Philippine Plan of Action for Nutrition (PPAN) serves as the country’s framework for addressing nutritional problems through coordinated interventions involving government agencies, local government units (LGUs), and community stakeholders. The success of these programs depends largely on effective implementation at the local level, where nutrition services are delivered directly to communities. The National Nutrition Council (NNC) emphasized the importance of strengthening LGU

nutrition structures through the establishment of functional nutrition offices and competent personnel who can coordinate, implement, and monitor nutrition programs effectively (National Nutrition Council, 2021).

At the local government level, City and Municipal Nutrition Action Officers (C/MNAOs) serve as key actors in translating national nutrition policies into community-based programs. They function as operational leaders of local nutrition initiatives, coordinating with different sectors, supervising Barangay Nutrition Scholars (BNS), facilitating nutrition planning, and monitoring program implementation. Their roles require a combination of technical expertise, leadership ability, communication skills, and organizational support. Therefore, the effectiveness of local nutrition programs depends not only on the presence of policies but also on the competency and capacity of the individuals responsible for implementation.

Workforce competency has become an important consideration in public health systems because knowledge alone does not automatically result in effective practice. The Knowledge, Skills, and Attitudes (KSA) framework provides a useful approach for examining professional competency by considering the integration of technical knowledge, practical abilities, and professional values required for effective performance. In public health settings, competent professionals must possess not only knowledge of policies and interventions but also the skills to coordinate programs, engage stakeholders, manage resources, and respond to implementation challenges (Rabarison et al., 2013). Thus, assessing competency among Nutrition Action Officers provides valuable insight into the capacity of local health systems to deliver sustainable nutrition services.

However, professional competency does not operate independently from the environment in which health workers function. Bandura's Social Cognitive Theory (1986, 1997) explains that individual behavior and performance are influenced by the reciprocal interaction between personal factors, environmental conditions, and behavioral outcomes. In the context of

Nutrition Action Officers, personal factors such as self-efficacy, confidence, professional experience, and leadership capability may influence their ability to perform their responsibilities. At the same time, environmental factors such as leadership support, availability of financial resources, training opportunities, and institutional structures may either enable or constrain their ability to apply their competencies effectively.

Previous studies have demonstrated that successful nutrition program implementation requires more than technical knowledge among health workers. Endris et al. (2023) reported that barriers to nutrition intervention implementation include inadequate resources, heavy workloads, insufficient leadership engagement, and limited prioritization of nutrition services. Similarly, Ouedraogo et al. (2020) highlighted the importance of multisectoral collaboration, community participation, capacity building, and sustainable resource mobilization in strengthening nutrition programs. These findings suggest that improving nutrition outcomes requires addressing both individual workforce capacity and the broader organizational systems that support implementation.

In the Philippine context, Glorioso et al. (2024) identified competency gaps among Municipal Nutrition Action Officers, particularly in policy formulation, advocacy, and development of nutrition information and education materials. Their findings emphasized the need for targeted capacity-building programs that are aligned with the actual roles and responsibilities of Nutrition Officers. Likewise, Viajar et al. (2022) emphasized that strong local leadership, adequate resources, legislative support, and effective governance mechanisms are essential factors influencing the success of local nutrition programs.

Although existing studies have examined nutrition workforce capacity and program implementation challenges, limited research has simultaneously explored how professional competency interacts with personal and environmental determinants among Local Government Nutrition Officers. Many competency assessments focus primarily on individual

knowledge and skills, while implementation studies often examine organizational barriers separately. A more comprehensive understanding is needed to determine whether competent Nutrition Officers are adequately supported by the systems in which they work. This perspective is particularly important in decentralized health systems, where LGUs carry significant responsibility for planning, financing, and implementing public health programs.

Camarines Sur provides an important setting for examining these issues because local nutrition implementation occurs within diverse municipalities and organizational contexts. Although Nutrition Action Officers play a central role in coordinating nutrition initiatives, variations in institutional support, resource availability, workload demands, and community conditions may influence how effectively programs are implemented. Understanding these factors can provide evidence for developing more responsive workforce development strategies, strengthening local nutrition governance, and improving the sustainability of nutrition interventions.

Therefore, this study aimed to examine the professional competencies of Local Government Nutrition Officers and determine how personal and environmental factors influence the implementation of nutrition programs in the Philippines. Specifically, it assessed the level of competency of Nutrition Officers based on knowledge, skills, and attitudes; determined the relationship between competency and personal factors such as self-efficacy, confidence, and professional attributes; examined the association between competency and environmental factors including leadership support, training and technical assistance, financial resources, and institutional support; and identified the challenges experienced by Nutrition Officers that affect effective and sustainable nutrition program implementation.

II. METHODOLOGY

This study employed a descriptive cross-sectional survey design to assess the professional competencies of Local Government Nutrition Officers and determine the personal and environmental factors associated with nutrition program implementation in Camarines Sur,

Philippines. The study was anchored on the Knowledge, Skills, and Attitudes (KSA) framework and Bandura's Social Cognitive Theory, which recognizes that professional performance is influenced by the interaction between individual capabilities and environmental conditions. The respondents consisted of City and Municipal Nutrition Action Officers (C/MNAOs) from the 35 municipalities and two cities of Camarines Sur. Of the 37 identified C/MNAOs, 31 participated in the study after accounting for one resignation and five non-participants. Participation was voluntary, and informed consent was secured prior to data collection.

Data were collected using a structured questionnaire adapted from the instrument developed by Glorioso et al. (2024), with modifications made to align with the objectives and context of local nutrition program implementation. The instrument consisted of four components: demographic and professional characteristics of respondents, competency assessment based on knowledge, skills, and attitudes, personal and environmental factors influencing competency, and challenges affecting nutrition program implementation.

Content validation was conducted through registered nutritionists/dietitians, experienced Nutrition Action Officers from other provinces, and the research adviser.

The reliability of the instrument was established through Cronbach's alpha testing, obtaining excellent internal consistency values of 0.940 for the KSA competency scale and 0.958 for the personal and environmental factors scale.

Data gathering was conducted after securing approval from relevant authorities, with questionnaires distributed through printed copies and electronic forms while maintaining confidentiality and anonymity of responses.

The collected data were analyzed using descriptive and inferential statistical procedures. Frequencies and percentages were used to summarize the demographic and professional profiles of respondents, while weighted means and standard deviations were

computed to determine competency levels in the domains of knowledge, skills, and attitudes.

Personal and environmental factors were measured using a five-point Likert scale, and the relationship between competency and influencing factors was examined using Spearman's rank correlation coefficient due to the ordinal nature of the variables and the sample size.

Implementation challenges reported by respondents were categorized and analyzed through thematic coding to identify recurring barriers affecting nutrition program delivery.

Ethical principles were observed throughout the study, including voluntary participation, informed consent, confidentiality, and the use of collected data solely for research purposes.

III. RESULTS

Level of professional competency of Local Government Nutrition Officers

The findings presented in Table 1 revealed that Local Government Nutrition Officers demonstrated a very high level of professional competency across the three domains of Knowledge, Skills, and Attitudes (KSA), with an overall competency mean score of 4.59 (SD = 0.82).

Among the competency domains, knowledge obtained the highest rating (M = 4.81, SD = 0.21), followed by attitude (M = 4.53, SD = 1.02) and skills (M = 4.44, SD = 1.24).

These findings indicate that Nutrition Officers possess strong familiarity with national nutrition policies, program frameworks, and their responsibilities in implementing local nutrition interventions.

Table 1. Perceived Professional Competency of Local Government Nutrition Officers Based on Knowledge, Skills, and Attitudes (KSA)

Competency Domain	Indicator	Mean	SD	Interpretation
Knowledge	Understands PPAN goals and strategies	4.87	0.18	Very High
	Clear grasp of MNC/CNC roles and responsibilities	4.87	0.18	Very High
	Knowledgeable on latest SAM management policies	4.87	0.18	Very High
	Understands UHC Law in relation to local nutrition service delivery	4.61	0.30	Very High
	Overall Knowledge Mean	4.81	0.21	Very High
Skills	Proficient in providing technical guidance and supervision to BNSs	4.52	1.06	Very High
	Skilled in gathering, processing, and interpreting local nutrition data	4.48	1.09	Very High
	Capable of preparing LNAPs, proposals, and budgets for LGU funding	4.48	0.96	Very High
	Effectively leads and facilitates multi-sectoral meetings	4.29	1.31	Very High
	Overall Skills Mean	4.44	1.24	Very High
Attitude	Believes NAO role is critical to LGU public health agenda	4.65	1.01	Very High
	Open to adopting new and innovative approaches	4.61	0.92	Very High
	Maintains motivation and commitment despite resource constraints	4.32	1.14	Very High
	Overall Attitude Mean	4.53	1.02	Very High
Overall Competency Mean		4.59	0.82	Very High

The high knowledge scores particularly reflect strong understanding of the Philippine Plan of Action for

Nutrition (PPAN), Municipal/City Nutrition Committee roles, Severe Acute Malnutrition (SAM)

management policies, and the relationship between Universal Health Care (UHC) implementation and local nutrition services. This suggests that continuous exposure to nutrition policies, technical guidelines, and capacity-building activities has strengthened the technical foundation of Nutrition Officers. Similar findings were reported by Glorioso et al. (2024), who emphasized that competency development among Municipal Nutrition Action Officers requires continuous professional development focused on policy implementation, advocacy, and communication skills.

Although the skills domain was also rated very high, it obtained the lowest mean among the three competency areas. The relatively lower score in leading and facilitating multisectoral meetings ($M = 4.29$) suggests that coordination and partnership-building remain areas requiring further improvement. Nutrition programs require collaboration among multiple sectors, including health, education, agriculture, and social welfare; therefore, technical knowledge alone may not guarantee successful implementation. This finding supports Sarybay et al. (2025), who noted the existence of a gap between nutrition knowledge and the actual application of nutrition practices among health professionals.

The results support the argument of the present study that effective nutrition program implementation requires going beyond competence. While Nutrition Officers possess adequate technical knowledge and positive attitudes, their ability to translate these competencies into sustainable programs depends on leadership, coordination skills, and supportive institutional environments. This aligns with the Knowledge–Skills–Attitudes framework and Social Cognitive Theory, which emphasize that professional performance is shaped by both individual capabilities and contextual factors.

Relationship between professional competency and personal factors

The findings in Table 2 demonstrated that personal factors were significantly associated with the professional competency of Local Government Nutrition Officers. The overall personal factors score showed a strong positive significant relationship with competency ($\rho = 0.623$, $p < 0.001$). Among the personal factors, the ability to lobby for increased nutrition budgets showed the strongest relationship ($\rho = 0.687$), followed by confidence in managing and sustaining nutrition programs ($\rho = 0.612$) and the ability to handle political or administrative challenges ($\rho = 0.571$).

Table 2. Relationship Between Overall Competency and Personal Factors Among Local Government Nutrition Officers

Personal Factors	Spearman's rho (ρ)	p-value	Interpretation
Capacity to lobby for increased nutrition budget	0.687	<0.001	Strong positive significant relationship
Confidence in managing and sustaining nutrition programs	0.612	<0.001	Strong positive significant relationship
Ability to handle political or administrative challenges	0.571	<0.001	Moderate positive significant relationship
Overall Personal Factors Score	0.623	<0.001	Strong positive significant relationship

These findings indicate that competency among Nutrition Officers extends beyond technical knowledge and includes personal confidence, leadership capability, and advocacy skills. Nutrition Officers who are more confident in managing programs and advocating for resources may be more

capable of overcoming implementation barriers and ensuring continuity of nutrition services. This supports Bandura's Social Cognitive Theory, which highlights self-efficacy as a major determinant of human behavior and performance. Individuals with stronger self-efficacy are more likely to initiate actions, persist

despite difficulties, and successfully achieve professional goals.

The strong relationship between advocacy capacity and competency highlights the importance of the Nutrition Officer's role as not only a technical implementer but also a policy advocate within local government systems. Since nutrition programs often compete with other local priorities, officers must possess the confidence and communication skills necessary to influence decision-makers and secure resources.

These results are consistent with findings from Viajar et al. (2022), who emphasized that effective local nutrition programs require strong governance mechanisms, leadership engagement, and the ability of implementers to mobilize support from local

stakeholders. Therefore, strengthening personal competencies, particularly leadership, advocacy, and self-efficacy, should be incorporated into future capacity-building initiatives for Nutrition Officers.

Association between professional competency and environmental factors

The results presented in Table 3 showed that environmental factors were significantly associated with the competency of Local Government Nutrition Officers. The overall environmental factors score demonstrated a strong positive significant relationship with competency ($\rho = 0.624$, $p < 0.001$). Among the identified environmental factors, training and technical assistance had the strongest association ($\rho = 0.659$), followed by support from the Local Chief Executive ($\rho = 0.629$) and adequate financial resources ($\rho = 0.583$).

Table 3. Relationship Between Overall Competency and Environmental Factors Among Local Government Nutrition Officers

Environmental Factors	Spearman's rho (ρ)	p-value	Interpretation
Training and technical assistance	0.659	<0.001	Strong positive significant relationship
Support from the Local Chief Executive	0.629	<0.001	Strong positive significant relationship
Adequate and timely financial resources	0.583	<0.001	Moderate positive significant relationship
Overall Environmental Factors Score	0.624	<0.001	Strong positive significant relationship

These findings demonstrate that competency development does not occur independently from the organizational environment. Even highly capable Nutrition Officers require institutional support, adequate resources, and leadership commitment to effectively perform their roles. Continuous training and technical assistance provide opportunities for officers to update their knowledge, strengthen implementation skills, and respond to emerging nutrition challenges.

The significant relationship between Local Chief Executive support and competency highlights the importance of political commitment in local nutrition governance. Local government leaders influence the prioritization of nutrition programs through budget

allocation, policy support, and organizational decisions. This finding supports Viajar et al. (2022), who identified leadership support, legislative backing, and adequate logistical resources as essential facilitators of successful nutrition program implementation.

Furthermore, the relationship between financial resources and competency indicates that skills and knowledge must be supported by available operational resources.

Without sufficient funding, transportation, materials, and personnel, Nutrition Officers may struggle to fully apply their competencies. Endris et al. (2023) similarly identified resource limitations, workload pressures,

and insufficient leadership engagement as major barriers affecting nutrition program implementation.

Therefore, strengthening local nutrition systems requires a dual approach: improving individual competencies while simultaneously creating supportive organizational environments. This reflects the central argument of the article that sustainable nutrition implementation requires going beyond competence toward institutional strengthening.

Challenges experienced by Local Government Nutrition Officers that affect the effective and sustainable implementation of nutrition programs.

The findings in Table 4 revealed that despite the high competency levels of Nutrition Officers, several structural and contextual challenges continue to affect nutrition program implementation. The major challenges identified included socio-cultural barriers, manpower limitations, inadequate resources, political changes, and weak intersectoral collaboration. Among the reported challenges, cultural practices affecting nutrition behaviors recorded the highest frequency, followed by limited budget allocation, multiple

responsibilities among Nutrition Officers, lack of transportation for monitoring activities, and leadership changes affecting program continuity.

The presence of socio-cultural barriers indicates that effective nutrition interventions require more than technical program delivery. Community beliefs, dietary practices, and parental participation strongly influence the adoption of recommended nutrition behaviors. Habte et al. (2022) emphasized that awareness and knowledge alone are insufficient to achieve nutrition improvements because community acceptance and behavioral change are critical components of successful interventions.

Manpower and resource-related challenges further demonstrate the gap between competency and implementation capacity. Although Nutrition Officers possess strong knowledge and skills, many remain designated officers with additional responsibilities beyond nutrition work. The absence of dedicated nutrition offices, limited support staff, and competing workloads may reduce their ability to focus on program planning, monitoring, and evaluation.

Table 4. Challenges Affecting Nutrition Program Implementation Reported by Local Government Nutrition Officers

Challenge Category	Major Challenges Identified	Frequency
Program Management	Lack of transportation for monitoring activities	13
	Difficulty sustaining activities after project completion	10
	Delays in nutrition data submission	8
Manpower Complement	NAOs handling multiple responsibilities	13
	Lack of staff assisting nutrition programs	12
	Absence of designated nutrition office	10
Socio-Cultural Factors	Cultural practices affecting nutrition behaviors	16
	Lack of interest from parents	11
Resource Limitations	Limited budget allocation for nutrition programs	14
	Insufficient materials/equipment for nutrition activities	10
Political Will	Changes in leadership affecting program continuity	13
	Lack of local ordinances supporting nutrition programs	6
Linkages	Limited cooperation from partner agencies	9
	Weak collaboration among LGU offices/departments	5

These findings are consistent with Endris et al. (2023) and Ouedraogo et al. (2020), who identified inadequate resources, fragmented coordination, weak institutional support, and workload challenges as common barriers to effective nutrition program

implementation. Therefore, improving nutrition outcomes requires not only competent personnel but also sustainable governance mechanisms, dedicated staffing, adequate funding, and stronger multisectoral partnerships.

Overall, the findings reinforce the article's central message: competency is necessary but insufficient without supportive personal and environmental conditions that enable Nutrition Officers to transform knowledge and skills into effective public health action.

IV. CONCLUSION & RECOMMENDATION

This study demonstrates that Local Government Nutrition Officers in Camarines Sur, Philippines possess a very high level of professional competency in terms of knowledge, skills, and attitudes, indicating strong technical capacity and commitment toward nutrition program implementation. However, the findings emphasize that competency alone does not fully determine program effectiveness. Professional competency is significantly influenced by personal determinants, particularly self-efficacy, confidence in program management, and advocacy capacity, as well as environmental determinants such as leadership support, training and technical assistance, and availability of financial resources. Despite the high competency levels of Nutrition Officers, persistent implementation challenges—including inadequate manpower, limited resources, sociocultural barriers, political transitions, and weak multisectoral coordination—continue to affect the sustainability of local nutrition initiatives. Therefore, strengthening nutrition outcomes requires an integrated approach that combines workforce competency development with supportive governance systems, institutional commitment, and enabling environments that allow Nutrition Officers to effectively translate their knowledge and skills into meaningful community-based nutrition actions.

Based on the findings, Local Government Units (LGUs) should strengthen nutrition governance by moving beyond reliance on designated Nutrition Officers toward more institutionalized and sustainable workforce structures. LGUs are encouraged to establish dedicated nutrition offices or clearly defined nutrition functions, provide adequate staffing support, allocate sustainable financial resources, and ensure protected time for Nutrition Officers to perform nutrition-related responsibilities. Continuous competency development programs should be

implemented, focusing not only on technical knowledge but also on leadership, advocacy, budgeting, monitoring and evaluation, and multisectoral coordination skills. Local leaders should also strengthen policy support, improve collaboration among government sectors, and develop community-based strategies addressing cultural and behavioral barriers affecting nutrition practices. Through the combined improvement of individual competencies and organizational support systems, local nutrition programs can become more responsive, sustainable, and effective in addressing malnutrition challenges.

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