

Knowledge on Maternal and Young Child Nutrition of Service Providers and Functionality of Nutrition Committees in Selected Areas in the Philippines

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RESEARCH ARTICLE

Abstract

Background: The Philippines continues to face the problem of double burden of malnutrition. Local nutrition committees have been formed to address maternal and child malnutrition. The committee is composed of various stakeholders whose awareness and knowledge of nutrition concepts are varied. Likewise, the functionality of the local nutrition committees is varied. It is important to know the level of awareness and knowledge of the service providers as this affects the functionality of the local nutrition committees in delivering nutrition services.

Objective: This study aimed to examine the awareness and knowledge of service providers on selected nutrition concepts and the functionality of local nutrition committees in selected areas in the Philippines.

Methodology: A cross-sectional study was done with members of the local nutrition committees, such as the Municipal Nutrition Action Officer and Municipal Health Officer as respondents. Data collection instruments were developed. Data were analyzed using descriptive analysis and Tobit regression model.

Results: The total knowledge and functionality scores were low and varied across regions. This is indicative of considerable possibilities for improvement in terms of the appropriate knowledge and good practices in health and nutrition interventions. There is a significant difference between the level of knowledge and of functionality, and data tend to suggest that knowledge does not necessarily translate to good practices in food and nutrition security services. Furthermore, the analysis showed that awareness of certain reference terms does not necessarily lead to a meaningful conceptual understanding of its dimensions, e.g. nature, basis, or mechanisms.

Conclusion: The level of knowledge that influences institutions and service providers' level of functionality merits serious consideration in terms of capability building needs. There is a need for a full comprehension of commonly used concepts and terms in nutrition at the local level since total or partial lack of understanding will not translate to practice. The variability in the level of knowledge and functionality can serve as the basis for prioritization.

Keywords: *Nutrition Security, Policy and Development, Nutrition Governance, Tobit Regression, Functionality*

Introduction

The prevalence of stunting and wasting among children remains high in the Philippines. In recent years, the country has faced the increasing problem of obesity not just in adults but also in children [1]. This situation makes the country nutrition insecure. In addressing these problems, the delivery of nutrition services at the local government level hinges on the functionality of the local units of health,

agriculture, education, social welfare and development, among others. As the sphere of government closest to the people, it plays a strategic role in influencing the different aspects of local government and the mechanisms of nutrition service delivery at the ground level. In turn, functionality begins with knowledge, and its translation thereof, into actions. Achieving nutrition security being the most basic of human needs, inevitably becomes central in the promotion of local development.

In the Philippines, the Maternal and Young Child Nutrition Security Initiative in Asia (MYCNSIA), implemented in three regions, was intended to reduce stunting levels among under three year-old children and reduce anemia rates among children 6-35 months old and pregnant women. In addition to supporting the government in implementing more effective nutrition interventions, MYCNSIA also aimed to institutionalize nutrition security in the policy development agenda of the Philippines and assist in strengthening capacities and information systems. Consequently, operationalizing the above at the level of the local institutions also comes with expectations for a common understanding of concepts and terms.

There is a structure used for organized action in addressing the nutrition insecurity or malnutrition at the national and local levels. At the local level, the provincial, city, municipal and barangay nutrition committees (P/C/M/BNC) are organized to manage and coordinate the planning, implementation, monitoring, and evaluation of local hunger-mitigation and nutrition action plan as a component of the local development plan [2]. The P/C/M/BNC is organized under the purview of the Department of Interior and Local Government (DILG). The DILG, by virtue of the Local Government Code or RA 7160 that mandates LGUs to provide basic social services like health and nutrition, has encouraged LGUs to 1) translate the priorities for action of PPAN 2011-2016 into specific programs, projects, and activities covered by adequate funding to achieve the scale for desired outcome and; 2) organize/re-organize/strengthen functional local nutrition committees [3].

In terms of manpower, the P/C/M/BNC is composed of heads of units, such as health, agriculture, education, among others. Amidst the inequalities in nutrition security, there is the question on what and/or how do the local personnel tasked to deliver nutrition services know or perceive the subject of contention in nutrition improvement efforts. While there is a wide range of views regarding how nutrition security should be addressed, it is essential that concepts and their meanings remain universal. There are very limited studies on the stakeholders' knowledge on nutrition and on the functionality of local nutrition committees (LNC). Thus, this study aimed to examine the awareness of service providers on selected nutrition concepts and knowledge and functionality of local nutrition committees in selected areas.

Methodology

The data used in this study was a subset of the survey that was done for the project "An Assessment of the Nutrition Governance for Maternal and Young Child Nutrition Security," which was funded by the United Nations Children Fund (UNICEF).

The survey was conducted across 319 municipalities and cities. These were distributed as follows: 1) 114 municipalities were covered in the Bicol Region; 2) 133 in Western Visayas; and 3) 72 municipalities in Zamboanga Peninsula. Consent from the respondents was sought and the authors made sure that the respondents' personal details and answers were treated with utmost confidentiality.

The data collection instruments consisted of a municipal data checklist and separate questionnaires designed for each of the respondents. In the conduct of the data collection process, the Municipal Nutrition Action Officer (MNAO) and Municipal Health Officer were considered service providers of nutrition services. The MNAO, who is expected to be the coordinator of all activities related to maternal and young child nutrition security in the municipality, served as the primary source of data. In effect, the MNAO was the primary respondent. In cases when the information could not be solicited from the MNAOs, information from the Municipal Health Officers (MHOs), as the secondary respondent, was used. In cases when both the MNAOs and MHOs were unable to provide the information, the data generated from other respondents were used. While the general structure of the instrument was similar, the design allowed for the extraction of specific information; one respondent filled up for some data gaps in another; and allowed for the triangulation of information. Individual attributes were analyzed to generate an assessment of the respondents' level of knowledge and attitudes of the service providers as well as the functionality of the local nutrition committee.

Primary data pertaining to the stakeholders, extent of collaboration and functionality were also generated through structured checklists which were implemented or administered by field data enumerators to the following respondents: Municipal Health Officer (MHO); Municipal Nutrition Action Officer (MNAO); Municipal Mayor/Municipal Planning and Development Officer (MPDO); Municipal Social Welfare and Development Officer (MSWDO); Municipal Agricultural Officer (MAO); and Head of Local non-government organizations (NGOs)/ People's Organizations (POs)/Civil Society Organizations (CSOs).

Descriptive and inferential analyses were used. The descriptive part mainly characterized the level of knowledge of the service providers as well as the characterization of the level of functionality. The ability to be knowledgeable and attuned to commonly used terms in nutrition is essential for nutrition improvement to proceed. Such is the premise in the inclusion of the section on Knowledge Data Collection Scheme. Thus, a total of 17 reference terms were posed to the MHO and MNAO, namely, 1) Maternal and Young Child Nutrition Program (MYCNP), 2) City/Municipal Nutrition Committee/Council (C/MNC), 3) City/Municipal Nutrition Action Plan (C/MNAP), 4) City/Municipal Development Plan (C/MDP), 5) Nutrition Act of the Philippines (PD 491), 6) National Nutrition Council (NNC), 7) Food Security, 8) Food and Nutrition Security, 9) Malnutrition, 10) Stunting, 11) Wasting, 12) Low Birth Weights (LBW), 13) Millennium Development Goal 1: End or eradicate extreme poverty and hunger, (14) Millennium Development Goal 4: Reduce child mortality, 15) Millennium Development Goal 5: Improve maternal health, 16) Infant and Young Child Feeding (IYCF), and 17) Philippine Plan of Action (PPAN).

The question on awareness of the abovementioned terms initially elicited a response of either “yes” or “no”, meaning, the respondent was either aware or not aware of the term in question. Among those who answered “yes” to the respective reference terms, a probing question was posed to further gauge how the respondents conceptually understand the term. The count of responses inevitably varied from one term to another, by type of respondent and across regions, thus, the percentage as a proportion within the group whose answer was “yes” was used. To consolidate the open-ended answers, responses were labelled as “correct”, “incomplete or partially correct”, and “wrong” as guided by the key concepts for each reference term numbers 1 to 17.

For knowledge and functionality, a total of 115 questions were crafted to generate responses from the respondents. For the series of questions, the responses were binary: yes or no. A positive response would represent a one-point addition to the total score. At the end of the process, an index was generated. For the knowledge component, the perfect score would be 45, which would be equivalent to an index value of one. Knowledge in this study was defined as awareness or understanding about facts, rules, principles, guidelines, concepts, theories, or processes needed to successfully perform a task [4].

For functionality, questions focused on inclusion of MNCHN in the Executive Legislative Agenda of the municipality, various nutrition services delivered and formulation of local nutrition action plan and its implementation. With a perfect functionality score, it was given an equivalent index value of one. Since functionality is an abstract concept, the study considered each positive response as a proxy indicator of a higher level of functionality of the respondent in the community.

To provide a more robust analysis, the study employed regression analysis to determine the relationship between the level of knowledge and functionality of the service providers, wherein functionality was the dependent variable and level of knowledge was the determinant along with other covariates. However, since the values of the dependent variable is an index (between 0 and 1), the ordinary least square regression is not appropriate because the values are limited to a narrow range. To address this issue, the study employed TOBIT regression as a special form of censored regression. This technique allows for adjustments of the parameter estimates owing to the censored values of the variables in the model. This model allows for consistent and unbiased estimates of the parameters even if the dependent variable is censored [5].

Following the above model structure, the empirical question relating functionality to the level of knowledge by service providers of nutrition interventions can be formally expressed as:

$$f_i^* = \alpha_0 + \alpha_1 k_i + \alpha_2 P_i + \alpha_3 Z_i + \varepsilon_i$$

$$f_i = \begin{cases} r & \text{if } f_i^* \leq r \\ f_i^* & \text{if } r < f_i^* < t \\ t & \text{if } f_i^* > t \end{cases}$$

Where:

- f_i^* – functionality rating
- K – knowledge rating
- P – total population of the community
- Z – total land area
- r – lower limit of the functionality rating
- t – upper limit of the functionality rating

Results

Level of Awareness

Among the Municipal Health Officers (MHOs) in Region 5, the reference term on MDG 4 earned the most correct answer, followed by reference terms on Low Birth Weight and MDG 5 (Table 1). The rest of the reference terms either had low percentage points for correct answer or had none at all. Among the MNAOs in the same region, the reference term that earned the most correct answer was on MDG 5, followed by Low Birth Weight and MDG 4, and the rest also had either low percentage points for correct answer or had none at all. On the other hand, the reference terms on Wasting, PD 491 and PPAN were the least well-described among the MHOs. Similarly, among MNAOs, the least well-described terms included reference terms on PPAN, PD 491 and Wasting.

In the same table, for Region 6, the reference terms, which earned the most percentage for correct description by the MHOs, included Low Birth Weight, followed by MDG 1. Among the MNAOs, the reference terms, which earned the most percentage for correct answer, were Low Birth Weight, Wasting, and MDG 1. On the other hand, reference terms on wasting, stunting, PD 491 and PPAN were the least-described by the MHOs. Among MNAOs, the reference terms that was least-described included stunting and PPAN.

The reference term on Low Birth Weight showed to be the well-described by the MHOs in Region 9, followed by MDG 5 on Improving Maternal Health. Among the MNAOs in the region, the reference terms well described were also the same as the MHOs, but in reverse order. On the terms least described by the MHOs, the list included PD 491, Wasting and Food Security. Among the MNAOs, the least well described was that of PD 491 and PPAN.

In contrast to reference term numbers 10 to 16 consisting of the concepts in stunting, wasting, low birth weight, MDGs, and IYCF, there seems to be a trend where reference term numbers 1 to 9 and 17 barely make a contribution to the percentage count for correct answers. Note that the latter set of reference terms are predominantly of mechanisms and/or institutions. This may imply tendencies to give little attention to existing institutions because they are perceived to be always present or at hand; at the same time, tendencies of this kind may pose as a setback in implementing nutrition and health programs for lack of internalization.

Regardless of the type of respondent, Region 5 had the lowest percentage points for correctly described terms and at the same time, the highest percentage for least-described terms or wrong answers (Table 1). On the other hand, Region 9 had the highest percentage points for correctly

Table 1. *Summary on awareness of concepts in nutrition*

Region	Respondents	Categories									
		Correct		Incomplete		Incorrect		Cannot describe		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Bicol	MHO	81	6	648	52	507	40	21	2	1257	100
	MNAO	70	6	771	62	410	32	0	0	1251	100
Western Visayas	MHO	178	10	892	49	564	30	199	11	1833	100
	MNAO	130	8	840	51	486	29	200	12	1656	100
Zamboanga Peninsula	MHO	136	23	326	56	115	20	7	1	584	100
	MNAO	107	18	345	60	90	15	42	7	584	100
All Regions	MHO	395	11	1866	51	1186	32	227	6	3674	100
	MNAO	307	9	1956	56	986	28	242	7	3491	100

described terms, as well as the lowest of least-described terms. Region 6, whose absolute response count was the most by virtue of its size of respondents, also showed the most proportion of answers initially categorized as “aware” to have ended up with answers saying “cannot describe.”

In general, the frequency counts were lowest for “correct” responses, regardless of reference term, type of respondent and region. The descriptions of the reference terms clustered in the “incomplete or partially correct” answers, followed by answers in the “wrong” category.

Descriptions labelled as “incomplete or partially correct” would stop short at the mention of the physiological groups involved or part of, and nothing else, or with an action left hanging as to whom it is intended for. For instance, the MYCNP would be described as “Child nutrition, with importance on breastfeeding”, or with “Safe motherhood.” Similarly, Food Security was frequently described as “Availability of food”, Malnutrition as “A state of nutrient deficiency”, Stunting as just “Height for age”, Wasting as having “Low weight” and IYCF as “About breastfeeding” or “Complementary feeding.”

Among the wrong answers, the most common reason for classifying them as such was because of answers made up by just repeating and/or rearranging the words in the reference term. For example, MYCNP was described as “Program for mothers and children”, NNC as “National Council for Nutrition”, Food Security as “Secured food”, and PPAN as “Action plan.” This creates doubts as to whether or not such kind of answers simply came about for lack of words and/or time, and not necessarily for meaning. Either way, this manner of describing the reference terms implies uncertainty as to the level of their conceptual understanding of the terms, and of their internalization.

Examples of answers which totally deserved to be categorized as “wrong” include the following: MYCNP described as “Under IYCF Program” or a “Feeding Program”; C/MNAP as “Health records of the municipality”; Stunting as “Height is not right for weight” or “Low weight for height”; Wasting as “Weight for age” or “Same as stunting”; Low Birth Weights as “Newborn below 3000 g” or “Below 2 kg birth weight”; and IYCF as “Supplementary feeding.” Such answers can make one think how supposedly basic concepts reach various stakeholders at the local level. Consequently, reasonable doubts exist on what and how information is relayed considering the requirement for an

effective and appropriate data management system within and among various sectors and levels.

Some respondents described the terms posed to them through how they experience them operationally, rather than giving their conceptual description of the reference terms. Examples are as follows: MYCNP, “Hard to acquire the material”; C/MNC, “It exists but not functional”, “No permanent MNAO”, “Needs to conduct more meetings”; C/MNAP, “Not all are implemented due to limited fund”, “Made by MNAO”; C/MDP: “No one is making”, “More on the physical aspect of development”; Food Security, “Limited food”; Malnutrition, “Rampant”; MDG 1, “Just heard about it.” Accounts of this kind provide a quick impression on how the reference terms are operationalized at the local level. If to follow through, a study on how awareness leads to practice and their gaps, may be worth pursuing in aid of program planning and implementation.

Level of Knowledge and Functionality

Table 2 outlines the comparative mean Knowledge and Functionality scores across the three regions covered in the study. The general pattern indicated that Western Visayas region exhibited the highest score for both knowledge and functionality components with estimates of about 0.67 and 0.45, respectively. Bicol region came next with an estimated knowledge and functionality scores of about 0.59 and 0.43, respectively. In Zamboanga, the estimates were 0.49 and 0.38 for knowledge and functionality, respectively. While the pattern is still apparent, the variability and differences in the scores imply issues that are critical in the implementation of MNCHN interventions.

Knowledge score (K score) was considerably higher at 0.60 compared to Functionality score (F score) of about 0.43. Further, the K score ranged from as low as 0.49 in Zamboanga to about 0.67 in Western Visayas. Similarly, F score ranged from 0.39 in Zamboanga and in Western Visayas, about 0.46. These differences are notable because

Table 2. Knowledge (K) and Functionality (F) Score by region

Region	K score	F score
Bicol	.5921	.4360
Western Visayas	.6730	.4555
Zamboanga Peninsula	.4908	.3879
Total	.6029	.4333

they highlight the variation across the region and point to the implication that knowledge may not necessarily be translated into functionality in nutrition intervention.

Further, the pattern indicates that while the scores were highest in Western Visayas, the difference between K and F scores was also highest at about 0.21. Conversely, in Zamboanga where the estimates were lowest, the difference between K and F scores was also lowest at about 0.10. This must be noted in the implementation of nutrition interventions because at the lower levels of scores, knowledge and practice tend to converge; but at the higher level scores, the gap between knowledge and functionality tends to widen.

This pattern in the difference between knowledge and practice is also reflected across provinces within regions (Table 3). However, there are provinces within a region where the differences are notable. In Zamboanga where the

K scores and F scores are relatively lower, the closest gap is in the province of Zamboanga Sibugay with an estimated difference of only about 0.07. The highest gap in the region is about 0.11, which is exhibited in Zamboanga del Sur. In contrast, the closest gap in the Western Visayas region is about 0.15 in Negros Occidental, which is still over the highest gap in Zamboanga and the highest gap in the region is shown in the province of Capiz with an estimated difference of roughly 0.26. In Bicol, the lowest gap is in the province of Sorsogon while the highest is in Camarines Norte, estimated at 0.20.

Table 4 shows the parameter estimates of the Tobit model. The results show that the level of functionality is significantly influenced by the level of knowledge of the service providers. This implies that knowledge is an important component of competency [4,6,7] and without the applicable knowledge; a task will not be performed accordingly. Moreover, the nutrition program management

Table 3. *Difference in knowledge and functionality rating by province*

Region	Province	Knowledge score	Functionality score
Bicol	Albay	.6139	.4733
	Camarines Norte	.5894	.3804
	Camarines Sur	.5671	.3852
	Masbate	.5639	.4306
	Sorsogon	.6624	.5510
	Catanduanes	.5988	.4815
	Total	.5918	.4381
Western Visayas	Aklan	.7048	.4975
	Antique	.7359	.4767
	Capiz	.6947	.4249
	Iloilo	.7195	.4925
	Negros Occidental	.5308	.3771
	Guimaras	.7845	.5523
	Total	.6730	.4563
Zamboanga Peninsula	Zamboanga del Norte	.4379	.3365
	Zamboanga del Sur	.5174	.4006
	Zamboanga Sibugay	.5125	.4421
	Total	.4872	.3865
Total		.6020	.4340

Table 4. *Parameter estimates of the Tobit model*

Functionality rating	Coefficient	S.E.	t	p-value
Knowledge rating	.9130854.	.0449639	20.31	0.000
Land size	1-89e-09	1.56e-09	1.21	0.225
Population	3.543-07	2.74e-07	1.29	0.197

log likelihood=134.20622

tobit regression

lr chi2(3) = 375.86

pseudo r2=3.4981

number of obs = 316

prob > chi2 = 0.0000

starts with the understanding of its basic terminologies and principles [8]. The use of a committee composed of different sectors working on nutrition is said to be the most effective way to reduce malnutrition, however, there is also little evidence about how to implement it in other countries [9]. The multisectoral approach can be difficult to implement possibly due to competing institutional mandates, low priority given to nutrition, and limited training of nutrition workers on how to integrate to other sectors.

Discussion

The service providers have low and varied levels of awareness of the reference terms or concepts. This result demonstrates that awareness of certain reference terms does not necessarily lead to a meaningful conceptual understanding of its dimensions, e.g. nature, basis, or mechanisms. For as long as there is confusion in the meanings of Wasting and Stunting among those who are expected to have measured and/or mitigated the extent of the problem, or of cut-off points of Low Birth Weight that come in gradation even within the same city or municipality, it will be very difficult to convey what one aims to achieve. In addition, it will also be difficult for service providers to translate plans into actions, or of any other functions for that matter in the scheme of governance for maternal and young child nutrition. It seems that promoting nutrition is no different from brand awareness as applied in marketing. That is, crucial terms and concepts should be well known and easily recognizable by its stakeholders for them to be able to effect functionality of purpose. And, as in achieving successful brand awareness, targeting the right audience such as the members of the C/MNC may close in on their knowledge gap.

Of similar importance is having a plan aimed at increasing awareness among the said target audience along with specific actions. To start with, purposive teach-ins may

serve to refresh on the language of nutrition as they are commonly used at all levels. As evidenced in this study, it is no longer practical to assume that the terms used in nutrition are “common knowledge.” The more functionally aware the stakeholders are of the terms in use, conceptual or practical, the more likely they are to work alongside with each other and other levels. In addition, there is a need for continuous knowledge appreciation activities so that knowledge is translated into practices. These can be done through more effective capability building models and conduct of regular workshops or seminars.

The problem of malnutrition is multi-factorial, and solutions require multi-sectoral actions, hence, the P/C/M/BNC is organized in each local government unit (LGU). The gaps in awareness and knowledge by service providers should have been overcome if the P/C/M/BNC is organized and cohesive enough in the exchange of information, problem identification and program formulation in the LGU. The service providers are the prime movers of actions to solve the problems in the community. If nutrition improvement is not a felt need because only a selected few knew malnutrition and considered it as vital information in the LGU, then it is possible that actions to fight malnutrition will be limited. Integrating nutrition concerns to the different sectors in the community starts with regular sharing of correct information on nutrition. Since the prevalence of underweight is one of the poverty indicators used at the LGU level, this information can serve as basis to promote collective, collaborated, coordinated, and cooperated efforts and actions for nutrition improvement.

There are very few countries that have nutrition committees similar in structure and function to the P/C/M/BNC. In India, there is the so-called Village Health, Nutrition and Sanitation Committees [11]. The committee is composed of mostly women from the village and not

heads of units of the local government. The challenges facing the committees included irregular meetings, members' limited understanding of their roles and responsibilities, restrictions on planning and fund utilization, and weak linkages with the broader health system. In Zimbabwe and Uganda, there are similar nutrition committees that are mandated to promote, plan, and/or implement a national plan to address food insecurity and malnutrition through coordinated multi-sectoral action [12]. They have similar functions and structure with that of the Philippine's National Nutrition Council. The criteria for functionality include having a lead person or focal person for nutrition, committee members with specific assignments, regular meetings, monitoring of programs/projects/activities, and formulation of a plan. However, there is no evaluation of its functionality as well. The functionality aspect of nutrition committees falls under nutrition governance which includes the elements of existence of an intersectoral mechanism to address nutrition, among others [14].

Relative to the functionality results, while functionality of services may be presented from the perspective of demand and supply sides, this study presented more of the supply side. It is based only on the workers or members of the municipal nutrition committee's response to various questions or items in relation to maternal and child health and nutrition. The municipal nutrition committee (MNC) is the mechanism for planning, implementing, monitoring, evaluating and coordinating the Municipal Nutrition Action Plan (MNAP). To achieve nutrition improvement, the MNC must be functional. Functionality can be achieved first through the strong leadership of the municipal mayor in providing political, moral and administrative leadership in the implementation of the Municipal Nutrition Action Plan (MNAP); convening and presiding over the MNC meetings; attending key activities of the MNC and advocating for the creation of a plantilla position for the MNAO and the Barangay Nutrition Scholars (BNS); and ensuring that programs for nutrition improvement are integrated in the local development plan and the local development investment plan [8]. There is a need to incorporate functionality with good governance which refers to the effective, efficient, accountable exercise of public authority for the provision of a public good, in this case, nutrition [9].

In addition, the dedication of the MNAO in doing the additional task of coordinating nutrition efforts plays a great role in the functionality of the MNC. The MNAOs are considered prime movers of nutrition not only because of

their important role in nutrition program management but also because of their valuable contributions in improving the nutrition situation of the country. While they target families and villages in their respective areas, their collective efforts have an impact in the entire country. However, there should be a shift in the old role of MNAO from event organizers to advocates and mentors of politicians on nutrition improvements. The MNAO should influence the thinking of the mayor and the local legislators on matters affecting nutrition or ultimately putting nutrition in the priority of the LGUs [8].

Moreover, cooperation and commitment of the members of the MNC to coordinate and work with each other are prerequisites for a functional MNC. Each member of the committee should carry out the mandates of their respective sectors but with a "nutrition flavor" and in coordination with other sectors. The MNC should establish and nurture linkages with other mandated councils, boards and committees in the locality to ensure that the MNAP goals of improving the nutrition situation are integrated in their sectoral plans. Lastly, the MNC should continue to have activities throughout the year that would sustain coordination, cooperation, and teamwork among the members. These may include workshops for formulating the MNAP to allow consultation and joint decision-making among members; quarterly meetings during which issues affecting the implementation of the nutrition plan could be discussed, and if possible resolved; inter-agency team field visits to nutrition program and project sites; and Program Implementation Review (PIR) to assess accomplishments and performance against targets set in the plan and to determine if the MNAP's objectives have been achieved. The PIR will enable the MNC to decide whether an intervention is worth continuing or not. In a functional MNC, each sector can help solve the problem of malnutrition. The key is to be able to weave each sector's contribution into a cohesive whole through shared decisions on priorities and targets [8].

Conclusions

In this study, awareness of concepts and knowledge and functionality scores were used as the quantitative measure indicating the degree of functionality of the institutions. It can be concluded that the level of the service providers' awareness of certain reference terms vary across regions and does not necessarily lead to a meaningful conceptual understanding of its dimensions, e.g., nature, basis, or mechanisms. There is a need for full comprehension of

commonly used concepts and terms in nutrition at the local level since total lack of or partial understanding will not translate to practice.

As to Knowledge and Functionality scores, the overall results were very low, which imply a low level of functionality. Further, the K and F scores were also divergent, particularly on the more substantive MNCHN concepts and practices. Among the service providers, the MHOs and the MNAOs had higher K and P scores relative to other stakeholders, which imply that knowledge is not shared and practices are not standardized or converted into standard operating procedures. Hence, there is a need to strengthen the extent of collaboration among stakeholders. A stakeholder analysis is recommended using the value chain framework so that the service providers can identify their roles and functions along the chain allowing stakeholders to have focused interventions tailored to the capabilities of their respective base-institutions.

Likewise, there is a considerable difference between the level of knowledge of service providers and the level of functionality of municipal nutrition committee. The findings of this study can be used as one of the basis for prioritizing interventions on nutrition at the local level. The knowledge and functionality scores can direct planners where to prioritize on the basis of the scores.

Acknowledgment

The authors wish to acknowledge the funding support from United Nations Children Fund (UNICEF) and the participation of local health and nutrition officers from regions of Bicol, Western Visayas; and Zamboanga Peninsula.

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