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Towards A Sustainable Community Mental Health Program: Understanding Its Manpower Needs And Building Its Workforce Strategy

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Abstract.
In program management, manpower is considered as one of the fundamental resources and aspects to consider for successful execution. The manpower needs are crucial for understanding and managing operational efficiency and program sustainability and outcomes.
One of the important health initiatives of the Philippine government in recent years is the community mental health program. This has been rolled out since 2019 in Region IVA, Philippines (also known as CALABARZON). This highlights the referral pathway between primary health care centers and mental health facilities for the management of persons with mental health conditions. Based on the review of its initial implementation, this initiative has able to achieve an estimated 11% cost-saving on the government's expenditures on mental health. To sustain this successful result, this study has been conceived with the objectives of determining the program's manpower needs and of recommending actions to address any gaps for a more sustainable quality management of this community mental health program
There are 409 healthcare workers assigned in this program who were part of the study. The majority of them are female and bachelor graduates, whose ages range from 31-40 years old. The manpower needs of the program include proper training, a good incentive scheme, and higher pay for healthcare workers. As such, the study proposed two approaches: (1) supporting the continuous competence training and capability building initiatives, and (2) developing incentive- payment schemes for the community mental health workers

Keywords: community mental health program, CALABARZON, Region IVA, Philippines

1.0 Introduction

Due to the need to strengthen the primary healthcare system in the Philippines, it is necessary that the community- based health programs should be successfully deployed and sustained.
Community health delivery initiatives of the Philippine's Department of Health (DOH) play a key role in providing primary healthcare services to the Filipino people. One of these initiatives is the community mental health program. This program is in response to the mandates of the Philippine Mental Health Act (Republic Act No. 11036). This law requires a shift of a healthcare delivery system towards a community-based mental health care, with the intent to make the mental health services more accessible and integrated within primary healthcare system.
The Community Mental Health Program (CMHP) of the Center for Health Development- Region IVA (also known as CALABARZON region) is one of the pilot initiatives that results from the passage of the RA # 11036. The program, which started in 2019, establishes and creates a referral pathway between health centers and specialized mental health facilities for the management of persons with mental health conditions (Janairo, et al, 2021).
After one year of the program's implementation, patients with mental health conditions, specifically schizophrenia, have experienced improved clinical outcome. The government has also able to save an estimated eleven percent (11%) on their mental health expenses versus the prior fiscal year, when this program has not yet been implemented (Janairo, et al, 2021). This simply illustrates the value of integrating mental health services at the community level, where location of the services matters to the people (Syam, S and Cote, M, 2010)
Despite of these favorable outcomes, there are challenges that this program has faced, especially on how to make the quality of this program more sustainable. One of these challenges is the workload of the community health workers.
It is said that incorporating mental health into primary healthcare is important in meeting the population needs, but in doing so in low-income countries like the Philippines, where other competing issues are more urgent creates several challenges and confusion among the health workers (Jenkins et al., 2010).
To address the preceding concerns, it is necessary to understand the manpower needs of this program and to develop tangible recommendations that will make the program's quality management more sustainable and successful.

2.0 Methodology

2.1 Research Design

This study employed a quantitative descriptive research approach to collect relevant data from the involved healthcare workers who were deploying this mental health program in CALABARZON.

Quantitative research design is very essential in providing objective and measurable insights into research problems like this study. It also helps researchers test hypotheses, determine relationships between variables, and generalize findings to larger populations. The strength of this study design lies in its ability to produce reliable, objective and unbiased results, identify trends, and simplify complex issues through numerical data and statistical analysis (Tenny S., et al, 2022)

2.2 Participants and Sampling Technique

The sample size for the study was determined using a Raosoft calculation tool. The computed minimum sample size is 384 healthcare workers, who were part of the community mental health program of Region IVA.

2.3 Research Instrument

The study adapted the tool developed by Nyakala, K. and T. Munyai (2017). The tool was modified for local use. Pilot testing of the instrument was done and its reliability was examined by utilizing a Cronbach Alpha a >0.70 reliability test, in addition to a t-test validity.

The survey employed five (5) Likert scales, with a maximum score of five (5) and a minimum score of one (1), with each scale's value represents a specific level of acceptability by the respondents to each of the questionnaire's indicator

2.4 Data Gathering Procedure

After the approval of the study proposal and the survey tool, the survey questionnaire was physically handed over to the community mental healthcare workers after obtaining their consent for the participation of this study. The participants answered the survey tool manually by filling-up the printed questionnaires. These responses were then electronically entered by the researcher to the Google Forms.

Quality check of the data was conducted. This quality check was done through data verification, cross-validation, data cleaning, consistency checks and outlier detection.

2.5 Data Analysis Procedure

Descriptive statistics were used to describe the characteristics of the study participants and summarize their survey responses using the mean and standard deviation. Meanwhile, the categorical variables describing the participants' characteristics, such as age group and marital status, were described using frequencies and percentages.

The mean score for all the items related to the program's quality management was computed for each study participant and then categorized into either acceptable (score $\geq$ 3.5) or not acceptable (score $\geq$ 3.4). Afterward, the association of sociodemographic variables with the acceptability of quality management was determined using the chi-square test. When the sample size requirement of the chi-square test was not met, Fisher's exact test was used instead. The significance level for the tests of the hypothesis was set at 0.05. Stata MP 14 for Mac (StataCorp LLC, College Station, TX) was used for this analysis.

2.6 Ethical Considerations

In this study, ethical issues were highly noted. The researcher adopted several moral practices in the conduct of this research. The study was approved by an institutional ethics committee. No names or other forms of personal identification were required to be submitted in the questionnaire to maintain the confidentiality and accuracy of the data. The community healthcare practitioners had also been asked for written permission by the researcher prior to answering the questionnaire. The study's goals were outlined in the permission letter, which also guarantees the quality and confidentiality of any information submitted by respondents. The participant was given pens to write with and was given enough time to read and comprehend the printed questionnaires before responding.

3.0 Results and Discussion

3.1 Demographic Profiles of Community Mental Health Workers

There are 406 community mental healthcare workers who participated in the study. The demographic profiles of these participants are summarized in Table 1.

Table 1. *Profile of the Respondents*

Profile	Frequency	%
Sex		
Male	105	25.9
Female	301	74.1
Total	406	100
Age		
21-30	103	25.4
31-40	167	41.1
41-50	78	19.2
51 and above	58	14.3
Total	406	100
Profile	Frequency	%
Highest Educational Attainment Bachelors	378	z3.1
Master's	20	4.9
Doctorate	8	2
Total	406	100
Marital Status		
Single	160	39.4
Married	214	52.7
Widowed	18	4.4
Separated	14	3.4
Total	406	100
No. of Training 1 to 5	274	67.5
6 to 10	84	20.7
11 above	48	11.8
Total	406	100
Years of Experience as community health worker		
1 to 10	290	71.4
11 to 20	81	20
21 to 30	21	5.2
31 and above	14	3.4
Total	406	100

The majority of respondents are female (n=301) (% = 74.1), Their age ranges from 31-40 (n=167) (%= 41.1). Most of the respondents have bachelor's degrees (n=378) (% 93.1). Meanwhile, 52 (n) (%=7) of the respondents are married. In terms of the number of years of trainings they received, 274 of the respondents have 1-5 years of training. However, the majority of the respondents who participated in the study have 1-10 years of experience as community health worker

These profiles are almost comparable to the findings of the study conducted by Picakciefe, et al (2015). In this study, most of healthcare workers have bachelor's degrees (ie nurses by profession) and most of them have at least 11 years of experience. (Picakciefe et al., 2015).

Meanwhile, according to Siram (2018), there is a dearth of medical officers as well as female healthcare and community mental health practitioners. Because of this, the community mental health program was incorporated to the current primary health care set-up of the region 4A.

3.2 Manpower Needs of Community Mental Health Workers

The manpower needs of the community health program is summarized in Table 2.

Table 2: *Manpower Needs of Community Mental Health Program*

Indicators	Mean	Std. Deviation
1. Proper training in good medical procedures	**4.27**	0.66
2. Management provides top-notch	4.05	0.68
3. Healthcare professionals in the community	4.12	0.65
4. The community healthcare sector is driven	4.17	0.66
5. Healthcare providers in the community are	4.05	0.76
6. It is just to recognize performance when a community healthcare worker excels.	4.08	0.77
7. Community healthcare workers can participate in reward schemes utilized in healthcare centers.	**4.19**	0.77
8. I am content with the pay I received.	**2.59**	1.34
9. Good understanding of healthcare policy	4.09	0.70
10. The management backs the medical system.	4.00	0.70
11. I understand the procedure to apply quality	4.15	0.68
12. Attain the proper level of quality control in	4.06	0.72
13. Apply quality management to many tasks.	4.08	0.70
14. When I have issues with quality	3.89	0.81
15. Like some but not all components of quality management.	3.92	0.77
16. It is a waste of time to utilize the quality management procedures used in healthcare institutions.	**3.54**	1.02
17. The suitability of the services offered.	3.98	0.64
18. Patients' ease of access to offered	3.95	0.72
19. Competence of those providing mental	4.01	0.66
20. Acceptance of the patient services offered.	4.00	0.67
21. Effectiveness of specialists in mental health.	4.01	0.68
22. The mental health system's ongoing	3.88	0.68
23. Professionals in mental health are effective.	4.16	0.79

Indicators	Mean	Std. Deviation
24. Patients' and healthcare professionals'	4.00	0.78
25. Implications on quality of life connected to	3.58	1.01
26. Quality of life concerning community health	3.95	0.84
27. Medical expenses are covered by third	3.67	0.81
28. Patients who pay for medical expenses out-	3.59	0.87
29. A loss of formal labor market earnings.	3.58	0.82
30. Cost of compensating for lost income	3.63	0.81
31. Uncompensated production costs for	3.60	0.85
32. Consumption in the future is unrelated to	3.63	0.81
Overall Mean	**3.89**	**0.43**

Table 2 shows that the overall mean of manpower needs is 3.89 with a standard deviation of 0.43. Among the indicators, the two highest mean scores are:

- 1st: Indicator number 1 with a mean score of 4.27 (sd = 0.66). The respondents believed that "proper training in good medical procedures was received".
- 2nd: Indicator number 7 with a mean score of 4.19 (sd = 0.77). The respondents believed that "community healthcare workers have participated in reward schemes utilized in healthcare centers"

On the other hand, the indicators with the lowest mean scores are the following:

- 1st: Indicator number 8 with a mean score of 2.59 (sd =1.34). The respondents said that "I am content with the pay I received".
- 2nd: Indicator number 16 with a mean score of 3.54, (sd = 1.02). The respondents believed that there is a "waste of time to utilize the quality management procedures used in healthcare institutions".

Given these findings, it is apparent that community mental healthcare workers recognized the value of their training and the incentive programs related to their work. However, they are not satisfied with their pay as healthcare workers and they don't appreciate the value of a quality management system of the program.

In other studies, the manpower needs of healthcare workers vary. This information is supported by numerous conclusions about the demands on personnel and logistics across cadres and facility types as provided by Aytona et al. (2022). Some healthcare facilities displayed a staffing shortage and a high workload. Institutions require doctors, but there aren't enough of them to handle the high workload. In rural health facilities and municipal health offices, there is a physician shortage. Some institutions had more employees than the anticipated needs. The nurses in the rural health facilities showed severe task stress. Although midwives at village health stations displayed remarkably low task stress, a rural health facility without medical technologists is also considered necessary.

According to Razu et al. (2021), healthcare workers need sufficient support to handle their difficulties if they are to improve overall health outcomes during the pandemic. Jenkins et al. (2010) discovered that in addition to providing all the course handouts, ongoing district-level monitoring, and locally tailored good practice guidelines that participants can utilize for years after the training are necessary to reinforce the training.

3.3 Associations of Sociodemographic Variables with the Acceptability of the Program's Quality Management Table 3 shows the associations of sociodemographic variables with the acceptability of the program's quality management.

Table 3: *Associations of sociodemographic variables with the acceptability of quality management (N=406)*

Sociodemographic Variables	Not Acceptable		Acceptable		
	Frequency	%	Frequency	%	p-value
Sex					0.498
Male	10	9.52%	95	90.48%	
Female	36	11.96%	265	88.04%	
Age (in years)					0.007**
21-30	3	2.91%	100	97.09%	
31-40	20	11.98%	147	88.02%	
41-50	12	15.38%	66	84.62%	
51 and above	11	18.97%	47	81.03%	
Highest educational attainment					0.382[a]
Bachelor's	42	11.11%	336	88.89%	
Master's	4	20.00%	16	80.00%	
Doctorate	0	0%	8	100%	
Marital status					0.141[a]
Single	13	8.12%	147	91.88%	
Married	31	14.49%	183	85.51%	
Widowed	2	11.11%	16	88.89%	
Separated	0	0%	14	100%	
Number of training					0.012*
1-5	25	9.12%	249	90.88%	
6-10	9	10.71%	75	89.29%	
11 and above	12	25.00%	36	75.00%	
Years of experience					0.477[a]
1-10	33	11.38%	257	88.62%	
11-20	7	8.64%	74	91.36%	
21-30	4	19.05%	17	80.95%	

a Fisher's exact test was used since the sample size requirement of the chi-square test was not met
** P<0.05, ** P<0.01, *** P<0.001*

Table 3 shows the following results:

- Age was significantly associated with the acceptability of quality management (P=0.007). In particular, a higher proportion of younger employees (≤30 years) reported that quality management was acceptable compared to older employees (≥31 years).
- The number of trainings received was also significantly associated with the acceptability of quality management (P=0.012). Employees who received fewer trainings (5 or less) reported that quality management was acceptable compared to those who received more trainings (6 or more).
- Other sociodemographic variables were not significantly associated with quality management (P>0.05).

These results conform with the study conducted by Khaled Abdoh Almuntaser Ali, et al (2022) on the impact of quality management system on the health services of Sana'a Hospitals in Yemen. The study shows that age and training are factors that affect the acceptability of healthcare workers in the quality management system of their institution. The younger the age of the workers, the higher their acceptability of the quality management system framework. Furthermore, continuous training show that it improves the acceptability of the workers on their institution's quality management framework. Other demographic factors, however, do not have that kind of significant relationship with the said acceptability outcome (Khaled Abdoh Almuntaser Ali, et al, 2022).

There may be other factors that may impact the acceptability of healthcare workers on the quality management framework for a specific health

program. Areas of particularly high mismatch are between perceived provider appropriateness and measures of acceptability and feasibility/sustainability in population health management and the use of evidence-based clinical models to enhance physical wellness where patient engagement in specific activities and tools varied. Although adding patient input was also found to be challenging, patients are considered as highly important in social and peer support (Progovac et al., 2021).

Dela Cruz and Ortega-Dela Cruz (2019) stressed the critical role played by the national government in coming up with workable solutions to issues and concerns to effectively supply healthcare services in the country. Findings by Muhorakeye and Biracyaza (2021) show that despite their lack of knowledge of mental health issues, their family members were essential to their successful health intervention.

It is of these principles that the community mental health program that has been deployed by the Department of Health Region IVA has become successful. It provides quality care to patients with good clinical outcomes. The program has provided an estimated cost saving of 11% of its mental health budget versus the prior fiscal year (Janairo, er al, 2021). This simply shows that the program should focus on how to sustain the quality of its services.

3.4 Proposed Interventions for a Sustainable Community Mental Health Program

Given the results of this study, a proposed quality management system framework and its accompanying relevant intervention strategies have been developed with the goal to build a sustainable quality community mental health program.

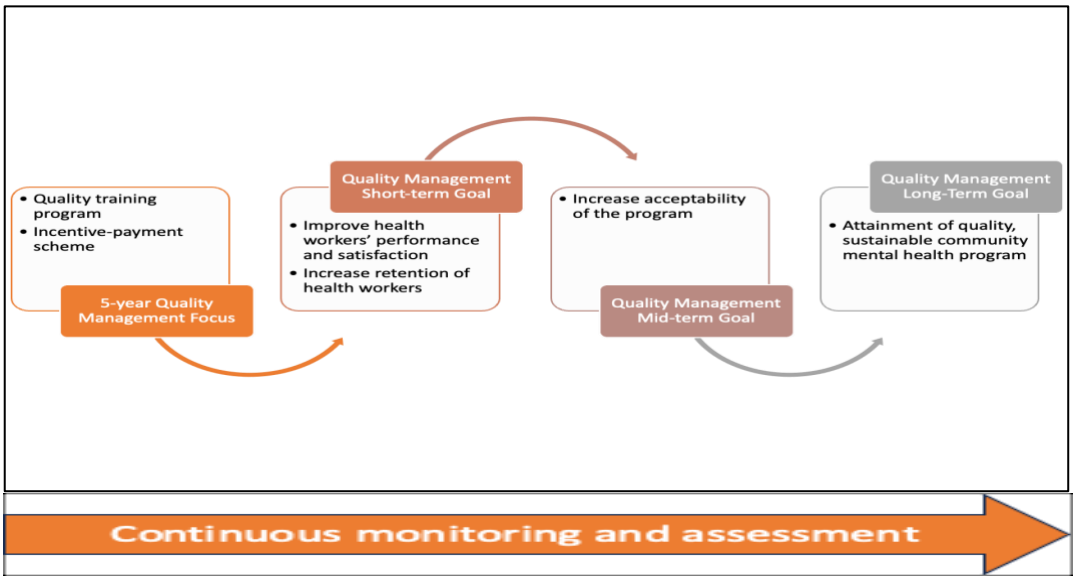

Figure 1. *Proposed Quality Management Framework for Community Health Care Program*

Based on the results, the proposed quality management framework should focus on how to sustain the success of this program and how will this proposed framework be well accepted by the community mental health workers.

Support for continuous quality training and improvement on the pay through an incentive-payment scheme for the workers is needed to improve the acceptability of the quality management system of the program.

The continuous quality training should employ a collective learning type of approach. Collective learning is a training process that allows participants to interactively analyze and interpret organizational experience. This is the type of learning or training approach that has been shown to be effective in improving healthcare quality and safety (Sarah Singer, et al, 2015). This approach is well recommended in this quality management framework to offset the inverse relationship of the number of trainings received by the healthcare workers with their acceptability to the quality management system.

Meanwhile, the incentive-payment scheme for healthcare workers is designed to address the lowest mean score of manpower needs. According to the study of Thomas Gadsden et al (2021), incentive-based intervention, either financial or behavioral, for community health workers in Indonesia is well accepted by the concerned stakeholders. It also improved motivation and service delivery outcomes (Thomas Gadsden, et al, 2021). As such, this approach will also help improve the acceptability of the older population of the community mental healthcare workers to the program's quality management framework.

Mallari, E., et al (2020) has established that incentive payment scheme and training to gain technical

knowledge and skill by the health workers, specificially baranngay health workers, are essential to sustain the manpower needs of a community-based health program in the Philippines

This five-year framework has the following proposed timelines and goals:

- Short term – first 2 years after its deployment
- Midterm term – on its 4th year of implementation
- Long term – on its 5th year and beyond

Continuous monitoring of the framework is to be instituted accordingly.

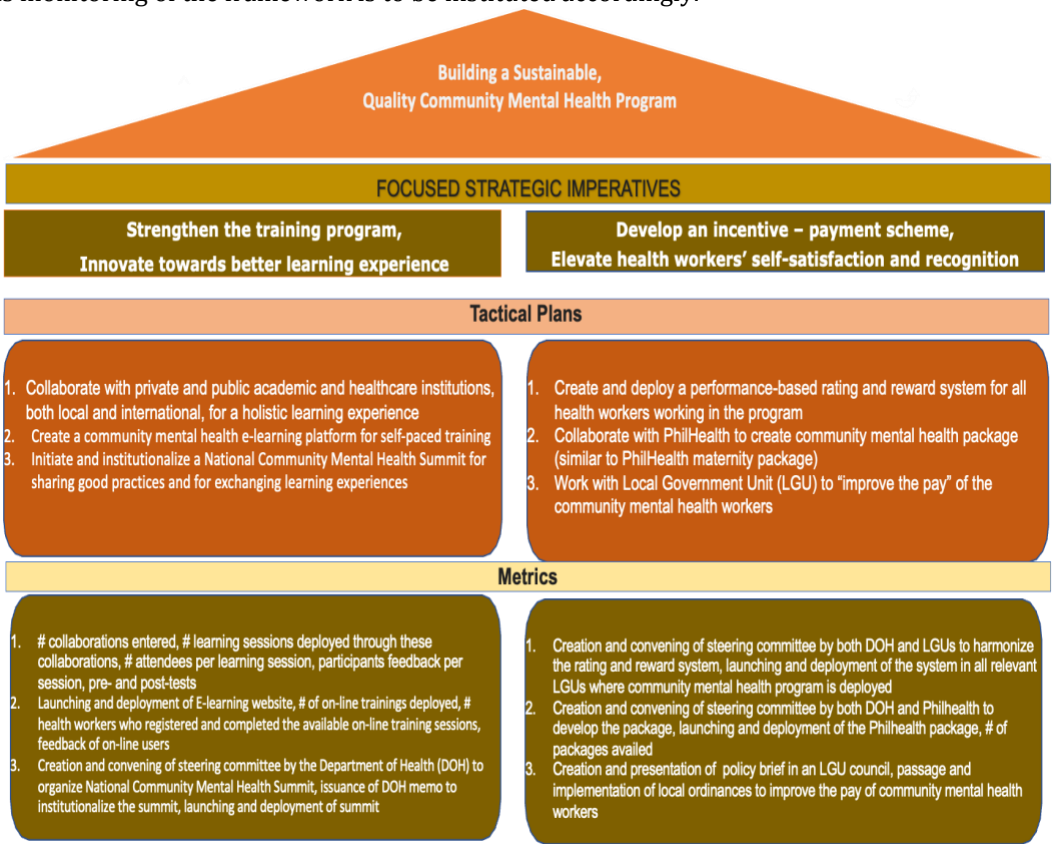

Figure 2. *Recommended Intervention Strategies*

To support the proposed framework, an intervention strategy house (Figure 3) has been developed. This house contains the goal of the framework, which is to build a sustainable quality community mental health program. The interventions will focus on two areas: training and incentive-payment scheme.

The recommended training plans should include collaborations with local and international academic and facility- based institutions, digitalization of the modules for self-paced learning and institutionalization of community mental health summit. These trainings should be anchored on the collective learning approach principles.

Meanwhile, the incentive-payment scheme should be more prioritized than increasing the salary or pay of the employees. This is so because an increase in pay in the government sector is a bureaucratic process that may require long periods of approval. Hence, incentive-payment scheme model will be a more pragmatic approach. The incentives can be either monetary and/or non-monetary rewards. PhilHealth package for mental health cases should also be explored given that Philippine Mental Health Bill has been enacted. These will provide an alternative means to improve the income (or pay) of the community mental health workers.

Specific tactics or activities have been proposed to support these intervention strategies. Relevant metrics have also been enumerated in Figure 2 to track the progress of these activities to ensure that the quality management framework is achieved accordingly.

4.0 Conclusion

Based on the results of the study, majority of the respondents, the community health workers who were part of community mental health program of Region 4A, Philippines, were female, between the ages of 31 and 40, were married, had a bachelor's degree, and had one to five years of experience in the primary healthcare. Most of them were not contented with the pay they received. Nevertheless, they recognized the value and quality of their training.

The age of these community health workers and the number of trainings they received are found to have

a statistically significant relationship with their perceived quality management and acceptability of the community mental health program. Other demographic factors do not affect respondents' perception of the quality management system and their acceptability of the mental health program.

A quality management system framework for community mental health program has been proposed based on these findings. This proposed framework focuses on two aspects: (1) providing support for continuous quality training using collective learning type of approach and (2) improving the pay of the community mental health workers through an incentive-payment scheme. Recommended intervention strategies are also developed to support this framework.

Given that this study has been done in one geographic region, it is necessary that this type of data gathering will be upscaled to the national level. This is to validate the findings of this study. As such, a more comprehensive and robust framework will be developed to ensure that the highest quality of the community mental health program will be deployed across the country

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