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# Effectiveness of Continued Nursing Education programme on Knowledge regarding concept of Middle Level Health Provider (MLHP) in bridging Health Gap at Peripheral level among Undergraduate Nursing Students of selected Nursing College at Bangalore South, Karnataka, India

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**Abstract:**
The public health system in India was designed with an architectural correction in mind to deliver Primary Health Care. The Indian government has introduced a new position under mid-level healthcare providers: the community health officer. When patients are seeking treatment at HWCs, MLHPs also serve as the primary healthcare providers.
**Aim:** The aim of this study was to determine the effectiveness of Continued Nursing Education Programme on enhancing the Knowledge of Undergraduate Nursing Students on concept of MLHP.
**Methodology**: Quantitative approach with one group Pre-test and Post-test Research Design was used for the study. The Sample Consist of Undergraduate Nursing Students and Non probability purposive sampling technique was used for this study. Study conducted in selected Nursing College of Bangalore. The sample size was 60 Undergraduate Nursing students. Data was gathered through Structured Knowledge Questionnaire on various Concept of MLHP.
**Result:** Post-test Mean percentage knowledge score (Mean percentage =74.28 and SE = 0.341) was found higher than Pre-test Mean percentage knowledge score (Mean percentage = 49.48 and SE = 0.348). Enhancement of Mean Percentage was 24.80%.
**Conclusion:** The study found that Continued Nursing Education Programme was effective in improving the knowledge of undergraduate nursing students on Concept of MLHP. For MLHPs to perform better, they must have access to ongoing training materials.

**Keywords:** Middle Level Health Provider (MLHP), Continued Nursing Education (CNE), Primary Health Care, Health and Wellness Center, Undergraduate Nursing Students

## INTRODUCTION

India and other developing nations have doubled the disease burden, and community-level health care is extremely underdeveloped. The nation needs medical professionals and facilities to provide the necessary healthcare support in order to overcome health issues. Therefore, for universal health coverage, every nation needs a strong collection of healthcare facilities and community-level expertise. The Indian government is aiming to make healthcare services easily accessible to everyone.[1-2]

The World Health Organization (WHO) states that the most effective way to guarantee equitable and efficient access to healthcare is through Primary Health Care (PHC). Ensuring access to primary level curative care is crucial to PHC because it lowers mortality and the need for secondary and tertiary care[3].

A National commitment to implementing PHC has also increased in India. The public health system in India was designed with an architectural correction in mind to deliver PHC. A health and wellness center (HWC) was to be established as the PHC hub, with one HWC for every 5000 people [5]. For PHC in India, the rise of HWC represents a huge development[4].

Since HWCs seek to provide comprehensive services to rural populations of 5,000 or less, they are emerging as a viable means of implementing PHC in India. In the near future, it will be impossible to assign doctors to such a grassroots position [5].

The most recognizable healthcare providers are doctors and nurses, but other allied health specialists and community health workers are equally important. To close the enormous gaps in the availability and caliber of healthcare services, India requires mid-level healthcare professionals in a variety of roles, including nurse practitioners, physician assistants, and community health workers. In particular, they are necessary for primary care.

The Indian government has introduced a new position under mid-level healthcare providers: the community health officer. They are referred to as community health providers under the new NMC bill. A multifaceted, multiskilled workforce that plays complementary roles and provides competent, all-encompassing, ongoing, and compassionate care is the ideal for the health sector[6-7]. For more than a century, mid-level healthcare professionals have played a crucial role in many nations in attaining optimal health. Task shifting as a change agent at the community level has also improved the rates of morbidity and mortality.

Mid-level health worker can be defined as ‘Front-line health workers in the community who are not doctors but who have been trained to diagnose and treat common health problems, to manage emergencies, to refer appropriately and to transfer the seriously ill or injured for further care[3].

The current PHC initiative in India has the capacity to manage ambulatory care for illnesses through the deployment of non-physician MLHP cadre of CHOs in rural facilities. They ought to receive additional training in order to be able to handle the majority of patients who visit the health and wellness centers. Additionally, based on an evaluation of potential complications, their training ought to prepare them for appropriate referrals to higher facilities. For MLHPs to perform better, they must have access to ongoing training materials, treatment plans, and medications. PHC's goal is to make a wide range of primary care services accessible to the public, and the implementation of this goal will depend heavily on having skilled mid-level providers[8].

In the case of CHOs, their basic qualification is BSc nursing, in which they are mostly trained on the nursing part of patient care, and in the six-month bridge course, they have been introduced to their primary care provider role, which was not sufficient for them to attain knowledge on all aspects of

patient care. This shows that if they are given continuously on the job training, they can provide adequate and rational health care at HWCs.

**Objectives:**

- To assess the Pre-Test Knowledge of Under Graduate Nursing Students regarding concept of MLHP.
- To determine the effectiveness of CNE Programme on enhancing the Knowledge of Under Graduate Nursing Students on concept of MLHP.
- To find out association between Pre-test knowledge on concept of MLHP and selected demographic variables.

**Hypothesis:**

**H1:** There will be significant difference between Pre-test and Post-test knowledge score of Subjects on Concept of MLHP.

**H2:** There will be significant association between Pre-test knowledge score with selected demographic variables.

**Variables under Study:**

- **Dependent variable:** Include knowledge on Concept of MLHP.
- **Independent variable:** In this study Independent variable is Continued Nursing Education programme.
- **Demographic variable:** Age, Sex, Course and Previous Exposure to CNE on MLHP.

**Assumption:**

Graduate Nursing students may not have adequate knowledge on Concept of MLHP.

**Delimitation:**

The study will be delimited to Under Graduate Nursing Students who are pursuing 4$^{th}$ year B.sc (Nursing) and 3$^{rd}$ Year GNM.

**Material and Methods**:

**Sources of data:** The data was collected from 4$^{th}$ Year B.sc (Nursing) and 3$^{rd}$ Year GNM Nursing students in selected college of Bangalore.

**Research approach:** Quantitative research approach.

**Research design:** One group Pre-test and Post-test research design.

**Research settings:** Study conducted in selected Nursing College of Bangalore.

**Population:** The population of the study comprises Undergraduate Nursing Students

**Sample:** The Sample Consist of Undergraduate Nursing Students.

**Samapling technique:** Non probability purposive sampling technique was used for this study.

**Sample size:** The required minimal sample size is 60.

**Sampling Criteria:**

**Inclusion Criteria:**

- Under Graduate Students who was available at the time of data collection and attending Continued Nursing Education Programme on Concept of MLHP.

**Exclusion Criteria:**

- Under Graduate Students who were not available at the time of data collection.

**Data Collection Tool:**

The data collection tool consists of two sections:

Section I: Socio-demographic data.

Section II: Structured Knowledge Questionnaire on Concept of MLHP.

**Results**

**Section I: Demographic characteristic:**

**Table No 1: Distribution of subjects according to frequency and percentage:**

**N= 60**

| Sl No | Demographic variables | | Frequency | Parentage |
|---|---|---|---|---|
| 1 | Age in Years | 20 – 21 | 20 | 33.3 |
| | | 22 – 23 | 35 | 58.3 |
| | | 24-25 | 5 | 8.3 |
| | | 26 and above | 0 | 0 |
| 2 | Sex | Male | 17 | 28.3 |
| | | Female | 43 | 71.7 |
| 3 | Course | Bsc Nursing | 37 | 61.7 |
| | | General Nursing And Midwifery | 23 | 38.3 |
| 4 | Previous exposure to CNE on MLHP | Yes | 13 | 21.7 |
| | | No | 47 | 78.3 |

From the above table-1, demographic characteristic of samples found that majority 58.3% of the samples were in the age group of 22-23 Years, 71.7% of the samples were females, 61.7% were undergoing B.Sc nursing program and 78.3% of the samples were not exposed to any CNE program on MLHP.

**Section II:**

**Comparison of Pre-test and Post-test knowledge score of subjects on Concept of MLHP.**

**Table no 2: Distribution of Subjects based on Pretest Knowledge level**

**N=60**

| SL NO | LEVEL OF KNOWLEDGE | FREQUENCY | PERCENTAGE |
|---|---|---|---|
| 1 | Inadequate (≤ 9) | 11 | 18.33 |
| 2 | Moderate (10-18) | 49 | 81.66 |
| 3 | Adequate(19-25) | 00 | 00 |

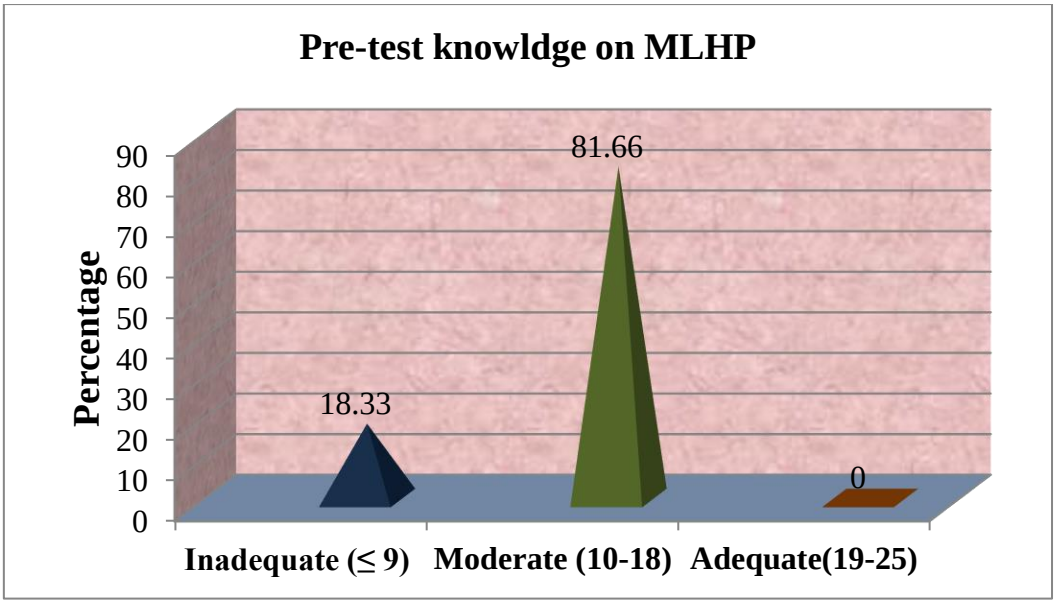


**Fig no3: Cone diagram showing Pre-test knowledge levels of the Undergraduate Nursing students on MLHP.**

The above diagram shows that among the 60 respondents; Most of 49 (81.66%) had Moderate level of knowledge and none of the subjects had adequate knowledge on MLHP.

**Table no 3: Distribution of Subjects based on Post-test Knowledge level**

**N=60**

| SL NO | LEVEL OF KNOWLEDGE | FREQUENCY | PERCENTAGE |
|---|---|---|---|
| 1 | Inadequate (≤ 9) | 00 | 00 |
| 2 | Moderate (10-18) | 24 | 40.00 |
| 3 | Adequate(19-25) | 36 | 60.00 |

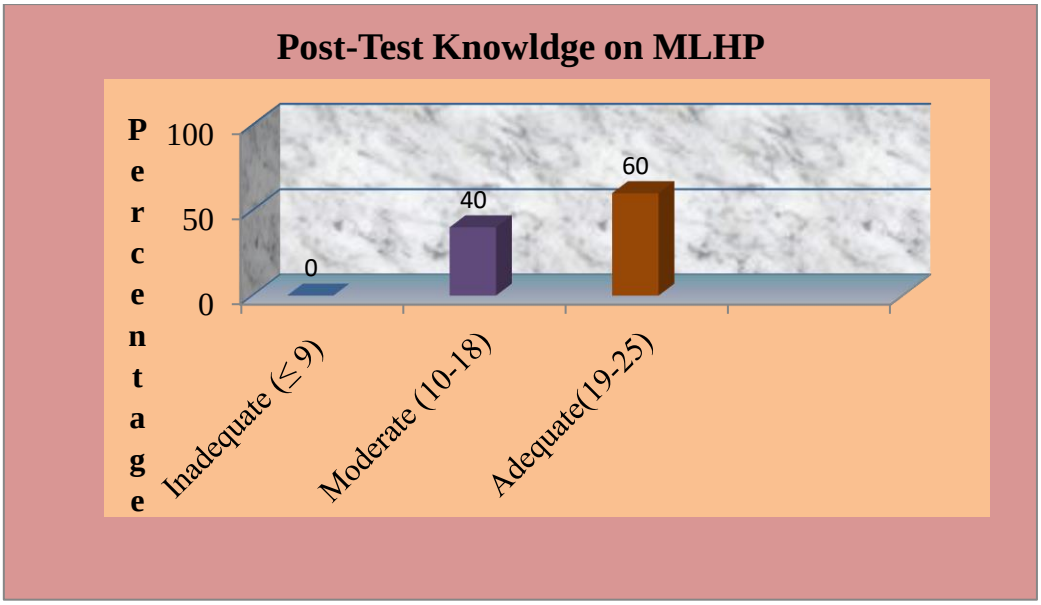


**Fig no 4: Bar diagram showing Post-test knowledge levels of the Undergraduate Nursing students on MLHP.**

The above diagram shows that among the 60 respondents; Majority of 36 (60%) had Adequate level of knowledge and about (40%) had moderate knowledge on MLHP.

**Table 4: Comparison between Pre-test and Post-test knowledge scores**

**N=60**

| Aspects | Max. Score | Respondents Knowledge Scores | | | Paired 't' Test |
|---|---|---|---|---|---|
| | | Mean | SE of mean | Mean % | |
| Pre test | 25 | 12.37 | 0.348 | 49.48 | |
| Post test | 25 | 18.57 | 0.341 | 74.28 | 27.526** |

Maxi score = 25 Table valve $t_{59}$=1.96, P<0.05

** Highly Significant

The findings in the above table reveal that the Post-test Mean percentage knowledge score (Mean percentage =74.28 and SE = 0.341) was found higher than Pre-test Mean percentage knowledge score (Mean percentage = 49.48 and SE = 0.348). Enhancement of Mean Percentage was 24.80%.

It is evident from the data presented in Table 4 that calculated t value (27.526) was greater than table valve ($t_{59}$=1.96, P < 0.05). Hence research hypothesis was accepted. This indicates that Continued Nursing Education Programme was effective in improving the knowledge of undergraduate nursing students on Concept of MLHP.

**Section III:**

**Association of the Pre-test knowledge scores and selected demographic**

**Table no 5: Association between Pre-test knowledge score of Undergraduate Nursing Students on Concept of MLHP and selected demographic variables**

**N =60**

| Sl.No | Demographic variables | | Median and below | Above median | Total | Chi square value | df | p value | inference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Age in years | 20 – 21 | 9 | 11 | 20 | 1.677 | 2 | <0.05 | NS |
| | | 22 – 23 | 22 | 13 | 35 | | | | |
| | | 24-25 | 3 | 2 | 05 | | | | |
| | | 26 and above | 0 | 0 | | | | | |
| 2 | Sex | Male | 9 | 8 | 17 | 0.134 | 1 | <0.05 | NS |
| | | Female | 25 | 18 | 43 | | | | |
| 3 | Course | Bsc Nursing | 21 | 16 | 37 | 0.00 | 1 | <0.05 | NS |
| | | General Nursing And Midwifery | 13 | 10 | 23 | | | | |
| 4 | Previous exposure to CNE on MLHP | Yes | 8 | 5 | 13 | 0.160 | 1 | <0.05 | NS |
| | | No | 26 | 21 | 47 | | | | |

$\chi^2_{(1)}$ =3.841, P<0.05 $\chi^2_{(2)}$ =5.991, P<0.05

NS = Not significant

The data presented in Table 5 shows the association between Pre-test knowledge score of subjects on Concept of MLHP with selected demographic variable. The calculated chi-square value for all variables was less than table value. Hence it was concluded that Pre-test knowledge score of undergraduate nursing students on Concept of MLHP had no association with the selected demographic characteristics.

## DISCUSSION

In the present study Demographic characteristic of samples found that majority 58.3% of the samples were in the age group of 22-23 Years, 71.7% of the samples were females, 61.7% were undergoing B.Sc nursing program and 78.3% of the samples were not exposed to any CNE program on MLHP. In pre test Majority of the samples 49 (81.66%) had moderate level of knowledge and none of the samples had adequate knowledge on MLHP. In post test Majority of the samples 36 (60%) had adequate level of knowledge and about 24 (40%) had moderate knowledge on MLHP. Post-test Mean percentage knowledge score (Mean percentage =74.28 and SE = 0.341) was found higher than Pre-test Mean percentage knowledge score (Mean percentage = 49.48 and SE = 0.348). Enhancement of Mean Percentage was 24.80%. The calculated t value (27.526) was greater than table valve ($t_{59}$=1.96, P <

0.05). Hence research hypothesis was accepted. This indicates that Continued Nursing Education Programme was effective in improving the knowledge of undergraduate nursing students on Concept of MLHP.

The study findings is similar to another study which found more than half are females (63%), The Mean age of CHOs is lower (26.24 years), most of them were recent B.Sc Nursing graduates appointed. It found that the overall competence scores of CHOs were lower than MOs and RMAs.

## CONCLUSION

The transition to a mid-level healthcare provider will alleviate the burden on overworked physicians and specialists, particularly in rural health settings, as there is a scarcity of physicians and specialists. Mid-level healthcare providers are limited in their ability to practice medicine at the mid-level only to those who meet the requirements outlined in any regulations, which will have a preponderance of physicians practicing primary and preventive healthcare. To ensure continuous knowledge acquisition and skill enhancement, it is necessary to have regular on the job training sessions for both the MLHP Carders.

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