Summer Internship Report

at

PUBLIC HEALTH FOUNDATION of INDIA (IIPH, Delhi), Gurgaon, Haryana

(April 18th to June 17th, 2022)

A Report

By

MAHEK GUPTA

PGDM (Hospital and Health Management)

2021-2023

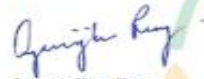**International Institute of Health Management Research, New Delhi**

30 June 2022

To whomsoever it may concern

This is to certify that Ms Mahek Gupta has successfully completed her internship from 18 April 2022 to 17 June 2022 with Public Health Foundation of India (PHFI). During her internship she worked under the project "Strengthening Primary Healthcare and Human Resources for Health — Capacity Building of nursing professionals (SHAHAR)."

She was found to be hardworking and sincere during this period. We wish her the very best in all her future endeavours.

For **Public Health Foundation of India**

Aparajita Roy
Director— Human Resources

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: MAHEK GUPTA

Summer Internship Institution:

PUBLIC HEALTH FOUNDATION OF INDIA (IIPH-Delhi)

Area of Summer Internship:

URBAN HEALTH PROJECT, GURGAON

Attendance:

SATISFACTORY.

Objectives met:
- Contributed in development of modules for Nursing component.
- Systematic Review.
- Qualitative part of the study.

Deliverables:
- Courses [Leadership & Management, WASH, Communicable diseases]
- Systematic Review [Proposal making, search strategy].
- Qualitative [Indepth interview & Transcription & Translation].

Strengths:
- Self disciplined
- Inquisitiveness
- Time management.

Suggestions for Improvement:
- Communication
- Taking initiatives.

Signature of the Officer-in-Charge (Internship)

Date: 18/06/2022
Place: GURUGRAM, HARYANA

FEEDBACK FORM
(IIHMR MENTOR)

Name of the Student: MAHEK GUPTA

Summer Internship Institution: PUBLIC HEALTH FOUNDATION OF INDIA
(IIPH-Delhi)

Area of Summer Internship: URBAN HEALTH PROJECT, GURGAON

Attendance: SATISFACTORY

Objectives met: yes.

Deliverables: Complete Project Report and PPT

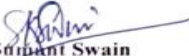Strengths: Sincere, Hardworking, Time Management

Suggestions for Improvement: NO

Signature of the Officer-in-Charge (Internship)

Date: 29/06/2022
Place: IIHMR, Delhi

Certificate of Approval

The Summer Internship Project of titled **"Strengthening primary healthcare and human resources for health (SHAHAR): Capacity Building of Nursing Professionals"** at **"Public Health Foundation of India (IIPH, Delhi)"** is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.

Dr. Sumant Swain
Assistant Professor
IIHMR, Delhi

ACKNOWLEDGEMENTS

It is my esteemed pleasure to present this research project by thanking everyone who helped me in this task I would like to thank my guide **Dr. Saurav Basu**, Assistant Professor in IIPH, Delhi, and **Dr. Subhralaxmi Dwivedy**, Senior Research Assistant in IIPH, Delhi helped me immensely throughout the tenure of my summer internship. They rendered their valuable advice, precious time, knowledge, and relevant information which enabled me to overcome every obstacle which came my way in e completion of this project.

I would also like to thank the extended team of PHFI (IIPH, Delhi) for their unlisted encouragement and their timely support and guidance till the completion of my project. Their active participation in all my questions and queries during my internship has made this journey a true success.

I would also like to acknowledge my mentor and teacher **Dr. Sumant Swain** for enriching this project with her advice and suggestions.

I would also like to thank **My Family and friends** who supported me throughout in development of this project.

TABLE OF CONTENT

ABBREVIATIONS

PHFI	Public Health Foundation of India
IIPHD	Indian Institute of Public Health Delhi
MCG	Municipal Corporation of Gurgaon
SHAHAR	Strengthening the Primary Healthcare and Human Resources for Health
IDI	In-depth interview
PHC	Primary Health Centre
GNM	General Nursing and Midwifery
ANM	Auxiliary Nursing and Midwifery
CBL	Competency-Based Learning

LIST OF TABLES

Table 1	Codebook
Table 2	List of Keywords
Table 3	PICOT Table
Table 4	Logic Grid for Search Strategy
Table 5	Revised PICOT Table

LIST OF GRAPHS

Graph 1	Diagram for the Qualitative Research
Photo 1	Screenshot of search run on PubMed
Photo 2	Screenshot of revised search run on PubMed

A. OBSERVATIONAL LEARNING

a) Introduction: Public Health Foundation of India (PHFI)

The **Public Health Foundation of India** (PHFI) is a not-for-profit public-private initiative working towards a healthier India. A national consultation, convened by the Union Ministry of Health and Family Welfare in September 2004, recommended a foundation that could rapidly advance public health education, training, research, and advocacy.

The PHFI focuses on broad public health issues, including services that are promotional, preventative, and therapeutic, many of which are typically overlooked in both policy planning and general comprehension. On March 28, 2006, in New Delhi, Dr. Manmohan Singh, the Prime Minister of India, officially launched PHFI. PHFI is aware that filling the shortage of health professionals is essential to providing a comprehensive and sustained response to public health issues in the nation, which in turn necessitates addressing health care from both the social and scientific perspectives of who needs it most.

Indian Institutes of Public Health (IIPHs) are higher education institutions founded by the Public Health Foundation of India These institutions, are located around the nation, and are solely dedicated to the multidisciplinary nature of public health. In priority areas of public health, IIPHs carry out interdisciplinary, health system-related teaching and training, policy- and program-relevant research.

The Public Health Foundation of India founded the Indian Institute of Public Health (IIPHs), which are higher education institute (PHFI). These institutions, dispersed around the nation, are solely dedicated to the multidisciplinary nature of public health.

VISION

Our vision is to strengthen India's public health institutional and systems capability and provide knowledge to achieve better health outcomes for all.

MISSION

- Developing the public health workforce and setting standards
- Advancing public health research and technology
- Strengthening knowledge application and evidence-informed public health practice and policy

VALUES

- **Transparency**
    - Uphold the trust of our multiple stakeholders and supporters
    - Honest, open, and ethical in all we do, acting always with integrity

- **Impact**
    - Link efforts to improving public health outcomes, knowledge to action
    - Responsive for existing and emerging public health priorities

- **Informed**
    - Knowledge-based, evidence-driven approach in all we do
    - Drawing on diverse and multi-disciplinary expertise, open to innovative approaches

- **Excellence**
    - Aim for the highest standards in all aspects of our work
    - Encourage, recognize and celebrate our achievements

- **Independence**
    - Independent view & voice, based on research integrity & excellence
    - Support academic and research freedom, contributing to public health goals and interests

- **Inclusiveness**
    - Strive for equitable and sustainable development, working with communities
    - Collaborate and partner with other public health organizations

1. **Introduction to the Project**

Study Title: Strengthening Primary Health Care and Human Resources for Health (SHAHAR)

This project aimed at improving the capacities of nursing professionals working with public health systems, functionaries within the Municipal Corporation of Gurgaon, and community-based organizations in Gurgaon to improve the delivery of urban health services within the municipal area. The project is aimed at building the capacities of staff as well as leaving behind sustainable structures for knowledge management. The project is to be implemented by the Indian Institute of Delhi (IIPHD) over eighteen months.

Details of the project

1) **Development and Delivery of Certificate Programme on Primary Health Care for Nursing Professionals**

This particular component of the program will aim to achieve the following objectives.

- To assess the knowledge and skills of early and mid-level nursing professionals for effective delivery of primary care services in community health settings

- To develop a competency-based primary health care teaching program for nursing professionals in selected domains

- To assess the effectiveness of the education certificate program on the knowledge and skills of the nursing professionals in the selected health domains.

- To identify and report the barriers and challenges in the implementation of the certificate program amongst nursing professionals.

2) **Capacity building of Municipal Corporation of Gurgaon (MCG)**

The following objectives will be aimed to be achieved.

- To improve capacities of various staff of MCG at different levels to deliver services that have a public health impact through various capacity-building programs

- To create sustainable systems within MCG to meet shortly to medium-term capacity-building needs of staff at different levels.

3) **Capacity Building of community groups**

The specific objectives of this component are as follows.

- To map the community-based organizations engaged in urban health issues in Gurgaon.

- To identify, develop and deliver capacity-building initiatives for CBOs in Gurgaon in the domain of urban health

- To develop a synergistic structure with the Government, civil society, and citizens for improved delivery and uptake of urban health services in Gurgaon.

ACTIVITIES UNDERTAKEN:

- Part of the study: "SHAHAR (Strengthening primary healthcare and human resources for health) – Capacity Building of Nursing Professionals".

- Contributed to one of the components of the study

- The study was conducted in two parts. Contributed in both the parts:

Qualitative study: Contributed to the following activities:

1. Literature review

2. Preparation of an in-depth interview guide

3. Piloting

4. Consent

5. Visited PHCs in Gurgaon for taking IDIs

6. Transcription and translation

7. Analysis

8. Prepared the course outline for the same

9. After making the course outline, I contributed to the preparation certificate program modules.

Systematic review: Contributed to the following activities:

1. Defining the research question using the PICOT framework.

2. Contributed to making the search strategy using MESH terms and BOOLEAN operators.

3. A systematic literature review was conducted.

4. Relevant studies are selected by using the Rayyan software

LEARNING:

The internship was a particularly rich learning experience. Some of the key insights that I gained from this internship were-

- A lot of meaningful discussions happened during designing the questionnaire, which helped me to review the reporting formats and suggest changes to some of them.

- I learned a great deal while collecting data as it brought out the communication skills in me. I came to know about the situation from other people's perspectives also which made me appreciate the issue more.

- I understood the importance of primary data and its proper analysis and interpretation and what role they play in the bigger picture.

- We should not take data at its face value, but try to see through the obvious and then try to interpret it. The insights that I gained will help me in the data interpretation process. It helped me understand how human errors can happen or technical errors (due to the way indicators are defined) and how can they lead to inaccuracies in the data or give false results.

- Helped me realize the importance of communication skills and teamwork.

- Helped sharpen my observational and analytical skills, especially being able to see things (impact of programs) in the larger picture and appreciate how social determinants come into play.

- Sometimes very simple insights into people's lives can shed light on or explain difficult questions. I learned a lot from the field experience and discussions I had with the frontline workers.

A. PROJECT REPORT

Study Title: Strengthening Primary Health Care and Human Resources for Health (SHAHAR)

Introduction:

Primary healthcare is a period used to describe the first contact an individual has with the health system when they have a health trouble or problem that is not an emergency. It is the phase of the health system that humans use most and might also be provided, for example, by a regular practitioner (GP), physiotherapist, or pharmacist.

It is the fundamental bundle of vital health offerings and products wanted to stop disease, promote health, and control illness. Primary health care commonly covers about eighty percent person's health wants during their lifetime. Human sources for health (HRH) or health personnel – are described as all humans engaged in movements whose main intent is to enhance positive health outcomes. Human sources for health are recognized as one of the six core building blocks of a health system. Human resources for health consist of physicians, nursing professionals, pharmacists, midwives, dentists, allied health professions, community health workers, social health workers, and different health care providers, as properly as fitness administration and assist features personnel like cleaners, guards, etc. who add vital values as part of the wider health systems.

LITERATURE REVIEW

The previous literature reviews conducted are taken to predict the gaps in strengthening the capacity of nursing professionals. A qualitative study was conducted using a conventional content analysis approach, IDIs were conducted at the participant's workplace, and FGDs were conducted amongst the nursing faculties. The results included developing a context base curriculum, interactive collaboration among nurses and faculties, and design and implementation of the standard clinical guidelines. Strong intention and active participation of stakeholders are needed.

A study was conducted to identify the reasons for the gap between teaching and experience in nursing and present suggestions to overcome it. Results indicated that the reasons for the gap were lack of qualification for instructors, lack of communication between theory and practice teachers, lack of support, and a complex curriculum.

One of the study's results shows that participants had positive learning experiences and got appraisals for their knowledge. This study is done for final year Bachelor's Nursing students' see experiences in learning a newly developed curriculum, their knowledge outcome, and the degree of agreement with knowledge requirements. An instrumental multiple case study was conducted with interviews, concept mapping, and a domain knowledge list.

To explore the issue of the gap between theory and practice in the perspective of student nurses within the context of readiness of clinical setting for coaching nursing students to provide them with an opportunity to link theory and practice, a descriptive quantitative cross-sectional design was used throughout three consecutive months. Subjects were selected conveniently from 5 main hospitals in the Gaza strip. The results of the study are there was a significant agreement among student nurses about the role of availability of setting in reducing the theory-practice gap, and that the process of orientation to the place of training could contribute to bridging the gap.

A study was conducted to describe and analyze the capacity building of nurses in health services in hospitals. This research is qualitative with a case study approach. The focus of the research is the extent to

which the steps of the nurse capacity-building process in health services in hospitals. The instrument used in this study was the researcher himself. Data collection was done by interview, observation, and literature review. The results showed that the capacity-building process carried out by the hospital had gone well, but it needed to be improved in terms of the spiritual and technological abilities of nurses so that it would improve the quality of health services.

The research was conducted to evaluate the effectiveness of a project to build the capacity of an undergraduate nursing program in Vietnam and to share lessons learned. A thorough case report was prepared. From June 2014 through June 2016, a bachelor's program would be offered in Vietnam. A case report was examined in light of the project's methodology, and the results of two years' worth of work were assessed. After five rounds of curriculum workshops, a practice-based curriculum redesign and two fundamental nursing disciplines were created. Two nursing professionals were sent out to give guidance on how to apply the new subjects to increase application efficiency. According to every development assistance committee criterion established by the Organization for Economic Co-operation and Development, the experts' evaluation's outcome was good.

A study was done to examine the collaboration between US and Haitian institutions' nursing faculties, where educators from Haiti earned graduate degrees with a focus on leadership and instruction. This was the first time a university in Haiti conferred a master's degree in nursing. Interviews and participant observations among 28 people were used to obtain data for a longitudinal qualitative study. The cross-sectional recurrent analysis looked at themes and perceived shifts in leadership behavior. The themes that emerged prominently were elevated professional prestige, transformative leadership challenges to leadership practice, and leadership as a nurse educator and in the clinical setting. A better understanding of nursing, greater perceptions of leadership potential, and more sophisticated management techniques are the outcomes of graduate nursing education.

A study was done to evaluate the applicability (ease of use), usability (relevance, clarity, and quality of information), and accessibility (structure and form) of several new safe motherhood midwifery education modules. A two-week clinical skills course and an eight-day orientation to using the modules were followed by a survey and focus group sessions. The study population is made up of 36 teachers, 82 midwives, nurse-midwives, and auxiliary nurse-midwives from practice settings, as well as 60 post-basic midwifery students. Overall, it was discovered that the introductory material and the technical substance of the modules, as well as the directions for both teachers and students, were simple to grasp and utilize. The language was understandable, the graphics were clear, and the material was presented in an orderly and simple manner.

In the rural Pune district of India, a study is being done to evaluate the efficacy of a complementary mix of directed and self-directed learning methodologies for developing important maternal and newborn health-related skills in ANMs. Through engaging lectures and skill demonstrations, the master trainers instructed ANMs. Descriptive statistics were used to statistically evaluate the improvement and retention of information, skills, and feedback. The viewpoints and experiences of stakeholders were examined through thematic analysis of qualitative data. 348 and 125 rural ANMs respectively accessed directed and self-directed learning. The focused learning helped ANMs develop their clinical abilities in eclampsia care and maternal and neonatal resuscitation. Those with little job experience improved their talents more than they did their knowledge. They were able to engage actively through skill display, sharing, and problem-solving thanks to self-directed learning.

Evidence-based practice (EBP) knowledge must be integrated into nursing students' classrooms and clinical instruction. The purpose of this study was to locate, review, and identify any research gaps related to the use of evidence in clinical education by nursing students. Students' use of evidence in clinical education was the subject of a scoping review that described the breadth, depth, and character of the research activity. The most frequently mentioned obstacles include a lack of understanding and proficiency in EBP, unfavorable attitudes regarding EBP among nurses, instructors, and students, and a lack of support in the clinical setting. The tactics

that were evaluated comprised stand-alone interventions as well as educational sessions and EBP projects, either separately or in combination. The majority of the intervention studies—all but two—reported favorable subjective or objective results.

To find out the gap between nursing theory and practice, a relevant literature review was done to recognize the gaps. Various recommendations were made based on the gaps. They include spending more time in clinical practice, exchanging roles, changes in curriculum, training on palliative care, etc.

A thorough assessment of studies on the development of nurses' practice-based research competence was conducted. The Quality Assessment and Validity Tool for Correlation Studies assessed and provided feedback on the articles' quality. The evaluation includes eight quantitative investigations. This study intended to find and assess examples of clinical nurses' practiced research capacity improvement. Building research capacity necessitates the growth of research ability to provide knowledge that improves quality and patient safety. To nurses' scientific attitudes and capabilities, nurse leaders are crucial for building an evidence-based practice and research culture.

The inclusion and exclusion criteria are outlined, with papers that focus on capacity building, learning plans, or professional development plans in public health and related settings—such as non-governmental organizations, governmental agencies, or community-based organizations related to public health or healthcare—are included. In this systematic study, the efficacy of treatments aimed at enhancing public health practice's capacity was evaluated. The objective is to strengthen capacity-building interventions by informing them. A total of 38 papers were evaluated for relevance and methodological quality; 24 had low scores and were disqualified from the synthesis due to poor quality. The other 14 papers were comprised. For each of the research projects, the right tool was chosen for quality assessment.

Together, the authors developed the scope of this review's objective and an implementation strategy. A search strategy, inclusion and exclusion criteria, a methodology for screening articles, the right way to judge the methodological quality of studies, suitable headings for data extraction, and methods for synthesizing results were all part of this approach. This systematic review's objective is to identify the underlying theories, models, and frameworks supporting capacity-building interventions that are pertinent to the practice of public health. The objective is to strengthen public health organizations' capacity-building methods and services. This review covered nineteen papers. There were found to be 28 theories, models, and frameworks in all. There are four models (Ecological and Transformational Learning), two theories (Diffusion of Innovations and Transformational Learning), and the two frameworks that were most frequently stated were one framework (Bloom's Taxonomy of Learning) and two frameworks (Interactive Systems Framework for Dissemination and Implementation). The two frameworks that were most frequently stated were one framework (Bloom's Taxonomy of Learning) and two frameworks (Interactive Systems Framework for Dissemination and Implementation).

A study was conducted in which content analysis of the curriculums and course descriptions and syllabuses of academic and applied bachelor, and master levels and their comparison were done. The gap analysis aimed to provide information on existing evidence-based nursing competence conditions in the curriculum, the content of course description, and the syllabus of academic and applied bachelor's and master's levels in nursing. In the analysis for academic bachelor level, in this moment and structure, only 3 subjects in Kazakhstan's everyday education practice respond to the National Education Standard demands/ suggestions.

To explore the challenges faced in nursing education in an advanced healthcare environment. Through literature review, challenges faced were recognized i.e, aligning education with practice environment, curriculum enhancement, nursing as part of integrated healthcare, faculty development challenges, technological challenges, cultural diversity in nursing education, and economic challenges. Options for addressing the challenges were enumerated like BSN- quality and safety, implementation of bridging programs, academic/practice partnerships, internships, development, and test of innovative program models, simulation: the future of nursing education, and interprofessional education.

To explore the problem of the disconnect between theory and practice from the viewpoint of student nurses within the framework of the clinical setting's suitability for mentoring nursing students to provide them the chance to connect theory and practice. a cross-sectional, descriptive, quantitative design across three consecutive months. Five of the Gaza Strip's primary hospitals were conveniently used to choose subjects. There was broad consensus among student nurses regarding the role of setting accessibility in closing the theory-practice gap and the potential contribution of the orientation process to closing the training site's border with the Gaza Strip.

To explore experiences of final year Bachelor of Nursing students learning in a newly established curriculum, quality of knowledge outcome, and degree of agreement with knowledge demand. A concept map, a domain knowledge list, and interviews were used in an instrumental multiple case study. The findings indicate that one-third of the participants enjoyed their learning experiences and received praise for the quality of their knowledge.

Discussion paper based on an exemplar. This article's goal is to outline the results of a regional capacity-building partnership between Thailand and Laos that promotes midwifery education in support of UN Sustainable Development Goal 3. The achievement of sustainable development goals requires partnerships. These regional alliances might be quite successful in developing long-lasting capacity-building initiatives.

The purpose of this study was to outline the methods Malawi is doing to enhance nursing education. The study's specific goals were to examine tactics in use and identify stakeholders and their targets for practices with other nations facing comparable difficulties in nursing education. This cross-sectional descriptive study used a contemporaneous mixed-method approach. A survey was completed by 166 individuals, including educators and nurse practitioners. In addition, one-on-one interviews were conducted with eight nurse educators and fifteen nurse practitioners. The perspectives expressed by respondents on the implementation of nursing education were diverse. Six themes emerged in terms of tactics taken to improve nursing education: capacity building, competency-based curriculum, regulation, clinical learning environment, transformative teaching, and infrastructure/resources.

OBJECTIVES OF THE STUDY:

1. General Objective:
   To improve the capacity of various functionaries within the urban governance system in Gurgaon, Haryana to deliver quality services that have an impact on urban public health.

2. Specific Objectives:
   - Development and Delivery of Certificate Programme on Primary Health Care for Nursing Professionals
   - Capacity Building of Municipal Corporation of Gurgaon (MCG)
   - Capacity building of Community Groups

STUDY 1: QUALITATIVE STUDY

METHODOLOGY:

a) Study Design: We carried out a qualitative explorative study among General Nursing midwives across Gurgaon using the In-Depth Interview Guide (IDI).
b) Study Period: This study was conducted over two months from 18th April to 17th June 2022.
c) Study area: This study is conducted in IIPH Delhi, Gurgaon. I was taken to the primary health center in Gurgaon.
d) Sampling Technique: The research participants were recruited using a convenient sampling approach.
e) Sample Size: The study was done among 17 GNMs working in different Urban Primary Healthcare Centres in Gurgaon. All the participants were GNMs who have done GNM courses and post-basic nursing and are working as staff nurses in the urban primary healthcare centers.
f) Research Instrument: The participants were interviewed face to face and telephonically in the Hindi language using predesigned and pretested In-Depth Interview guides (IDIs). IDI guide comprised of questions and probes and prompts to elicit their willingness to talk about the gaps they face in their curriculum and undertake the course as a refresher.
g) Data Analysis: The study's research objectives and voluntary essence were explained to the participants before each interview, and verbal and written consent was obtained. The interviews were audio-recorded and transcribed verbatim, and transcripts were translated into English. The translations were cross-verified by another researcher to avoid any bias in interpretation.

Example of Translation of one of the in-depth interviews

1. Please tell me about yourself.

(Probe: age, place of residence, marital status, family background, work experience, education, 10th class, when, from which college, duration)

My name is Suman Jaiswal. I am 33 years old. I live in Gurgaon. I am married and live in a joint family. I am in this profession for 10 years. Previously I was working in Kanpur. I did the GNM Course after the 12th standard. The duration of the course is 3.5 years. I did the course at a rural nursing institute.

2. Please tell me about your course curriculum in detail.

(Probe: duration of GNM course work, name of subjects, theory/practical, favorite subjects and why, neglected subjects)

The duration was 3.5 years, where 3 years was course work and 6 months was training in a civil hospital. We were taught many subjects like anatomy, physiology, psychology, fundamentals of nursing, community, and gynecology. Everything was taught well. My favorite subjects were fundamental nursing and anatomy.

3. Is there any subject which you think has not been taught? If yes, can you please tell me the reason?

(Probes: lack of staff, lack of study material, lack of understanding, no priority, lack of utilization in the job in future, any other issues)

No, all the subjects were taught well. Our teachers were very competent. I was happy with the education that I was getting. The study material was also sufficient. I am satisfied.

4. Please tell me about your work.

(Probes: when did you start, places of posting, nature of the job, like/ dislike responsibilities, day-to-day activities, generalized work)

My job responsibilities mostly include family planning-related work, OPD, vaccination, dressing injuries, and emergency cases. I do counseling about family planning. I clarify the doubts of patients. Then covid vaccination and other vaccines are managed by me.

5. After you started working, which subjects do you think are most applied?

(Probes: in clinical settings, in community settings)

I do work in the PHC only, no work is done in the community setting. As I am working in clinical settings fundamental of nursing is the most applied subject.

6. How much preventive aspect is practiced in day-to-day activities in your work?

(Probes: In UHSND, community meetings and mobilization, MCH activities, CD/NCD, screening, nutrition, hygiene, mental health, tobacco risk factors, referrals, intervention, will they do counseling if they are given training, barriers to disseminating learnings i.e, knowledge-based, time-based, opportunity-based, etc.)

I mostly practice preventive aspects when it comes to family planning-related work. I also counsel people about non-communicable diseases and mental health. In our area, urban health sanitation and nutrition day is conducted every 1 ½ month.

7. Have any refresher training been done?

(Probes: topics (non-covid related), how frequently, usefulness in practical life)

No such refresher training is been conducted for us.

8. Do you think some training can be helpful to strengthen your capacities for the community?

(Probes: what kind of training, benefits expected, subjects to be covered, mode of training)

Yes, training is required from time to time. Face-to-face training is better for us, as they are more interactive. We should be taught how to persuade people.

9. What would be your suggestion to overcome the gaps and challenges that you have faced in your curriculum?

(Probes: Clear guidance, more emphasis on particular subjects, training for changing roles)

There are no such suggestions from my side.

TABLE 1: CODEBOOK

THEME	SUB-THEME
Course Curriculum	Duration of the course, Subjects taught, Theory and practical, Favourite subjects
Gaps in curriculum	Lack of staff, Lack of study material, Lack of understanding, Other issues
Work-Life	Start of work, Places of posting, Nature of Job, Job responsibilities, Day-to-day activities
Application of curriculum	Most applied subjects, clinical settings, community settings
Preventive activities in day-to-day work	MCH activities, CD/NCD screening, Nutrition, Cancer
Training	Topics, Frequency, Usefulness in Practical life, Kind of training, Subjects to be covered, Mode of training

RESULTS (Findings):

- The duration of the GNM course is of 3.5 years. Subjects like fundamentals nursing, Anatomy, Community nursing, Gynecology, Psychiatry, Physiology, and Pediatric Nursing were taught. In the course, 3 years for the theory sessions and an internship for 6 months.

"The duration was 3.5 years, where 3 years was course work and 6 months was training in a civil hospital. We were taught many subjects like anatomy, physiology, psychology, fundamentals of nursing, community, and gynecology." (GNM, Tigra)

- According to the nurses their course curriculum was sufficient and understandable and their teachers taught well.

"All the subjects were taught well. Our teachers were very competent. I was happy with the education that I was getting. The study material was also sufficient. I am satisfied." (GNM, Tigra)

- Some of the nurses felt that there should be more emphasis on subjects like psychiatry and psychology. These subjects are not given much importance.

"I felt psychiatry was neglected and not taught well. The study material was not very comprehensible. I was afraid of the subject." (GNM, Chanderlok)

- The day-to-day work responsibilities of GNMs include family planning-related work, OPD, vaccination, dressing injuries, counseling about family planning, clarifying the doubts of patients, vaccination, and cold chain management.

"My job responsibilities mostly include family planning-related work, vaccination, dressing injuries, and emergency cases. I don't do counseling about family planning. That is usually done by our medical officer. I just inject the hormones. Then also if someone asks me, I clarify their doubts. Then covid vaccination and other vaccines are managed by me. The cold chain is supervised by me." (GNM, Fazilpur)

- According to most of the GNMs fundamentals of nursing, anatomy, and gynecology are the most applied subjects as they are working in a clinical setting.

"I do work in the PHC only, no work is done in the community setting. As I am working in clinical settings fundamental of nursing, gynecology is the most applied subject." (GNM, Chanderlok)

- GNMs practice preventive activities when it comes to family planning-related work, counsel people about non-communicable diseases and mental health, and counsel adolescents about taking proper nutrition and diet.

"I mostly practice preventive aspects when it comes to family planning-related work. I also counsel people about non-communicable diseases and mental health. In our area, urban health sanitation and nutrition day is conducted every 1 ½ month." (GNM, Tigra)

- Many trainings are conducted on topics like NCD, family planning, and contraceptives. GNMs want training on mental health, stress management, cancer, TB, health, and hygiene should also be conducted.

"Yes, training is required from time to time. Face-to-face training is better for us, as they are more interactive. We should be taught how to convince people." (GNM, Tigra)

After doing the IDIs according to the findings course outline was prepared.

COURSE OUTLINE

Prepared a course outline for the selected sub-topics for the course.

Community Nutrition

INTRODUCTION:	Community nutrition is the promotion of good health through nutrition and the prevention of related illnesses in the population.
LEARNING OBJECTIVES:	a. Learn the nutrition requirements of different age groups of the population b. counsel about pediatric nutrition needs, pregnant mothers, hypertension, and diabetes affected group c. knowledge of low-cost diets
MODE:	Online
COMPETENCIES:	- Introduction to community nutrition. - Enumerate the list of the community nutrition program. - Emerging issues in community nutrition**.**

2. Water, Sanitation, and hygiene

INTRODUCTION:	Hygiene and safe drinking water are essential for maintaining human health and wellbeing. Safe water, sanitation, and hygiene (WASH) systems are not only essential for good health, but they also support livelihoods, education, dignity, and the development of resilient communities with wholesome surroundings.
LEARNING OBJECTIVES:	a. knowledge about prevention of waterborne diseases b. counsel about waste and excreta (animals and humans) disposal c. role of community mobilization in sanitation

COMPETENCIES:	• The problems of Water, Sanitation, and Hygiene. • Describe WASH in emergencies • Strengthening WASH systems • Discuss the inadequacy of WASH affecting children.

3. Growth and development in the pediatric age group

INTRODUCTION:	This module will explain basic concepts of growth and development of the pediatric age group.
LEARNING OBJECTIVES:	a. understanding the indicators of growth and development of pediatric group b. knowledge of counseling the parents of the children about the growth and development of pediatric age group (milestones)
COMPETENCIES:	• Basics of Growth and Development. • Stages of Growth and Development • Enumerate the Development of Theories • CDC Schedule for Vaccinations

4. Non-communicable diseases

INTRODUCTION:	Non-communicable diseases threaten to kill more people than all infectious diseases put together. This module sensitizes participants to the various approaches to the prevention of non-communicable diseases, approaches, and multidisciplinary and multi-sectoral approaches.
LEARNING OBJECTIVES:	a. Epidemiology of NCDs

	b. Primary prevention of Understanding NCDs c. Support continuum of care, adherence, and health outcomes d. Counsel and support for tobacco cessation, avoidance of alcohol, and a healthy diet
COMPETENCIES:	• The participants would be able to define non-communicable diseases and their types. • Define the causative agents, prevention, and care of control. • Enumerate causes and phases of NCDs.

5. Health Promotion and Health Communication

INTRODUCTION:	Health promotion and Health communication are integral elements of public health practice and can offer significant contributions betterment of public health outcomes in a country. They are powerful tools that can bring about change at critical levels- starting from the individual right up to national policies and international forums.
LEARNING OBJECTIVES:	a. knowledge and practice of behavior change communication b. knowledge of c. national health programs d. Concept of One health and prevention of zoonoses
COMPETENCIES:	• Defining communication and its types. • Describe the communication process and its elements. • Defining health promotion and its concepts.

	• Enumerate Models of Health Promotion.

6. Leadership and management

INTRODUCTION:	Leadership and management would help managers to build their understanding to analyze how employees' work contributes to or minimizes the effectiveness and productivity of the organization.
LEARNING OBJECTIVES:	a. Define basics of organizational behavior b. State about models of leadership, managerial roles, functions, styles, decision making, Conflict resolution, frustration, and burnout
COMPETENCIES:	• Definition and difference between leadership and management. • Principles and traits of a good leader • Management and Leadership theories and Models

7. Infectious diseases

INTRODUCTION:	This module highlights and covers common infectious diseases in our country. It also seeks to discuss the strategies employed for the control of these diseases.
LEARNING OBJECTIVES:	a. State the causes, prevention, identification, and IMNCI-based management of diarrhea, pneumonia, measles, etc b. Recognize Zoonotic diseases and other emerging infections: epidemiology and prevention
COMPETENCIES:	• The participants would be able to define infectious diseases and their types. • Define the infectious disease agents.

	• Enumerate causes and phases of infectious diseases.

8. Antenatal care for a positive pregnancy experience

INTRODUCTION:	Antenatal care is a very important component of reproductive and child health. This module is designed to assist nurses to acquire the comprehensive knowledge and skills necessary for providing care for normal and high-risk pregnant women.
LEARNING OBJECTIVES:	a. Apply the knowledge to counsel pregnant women b. Practice screening of pregnant women for NCDs c. State the importance of IFA, Calcium, and other supplements
COMPETENCIES:	• State definition and goals of antenatal care. • Enumerate the schedule cycle for antenatal care. • Enumerate the laboratory examinations/physical examination. • Health promotion during the pregnancy (Hygiene, Sleep cycle, Exercises, etc.)

## 9. AYUSH in primary care

INTRODUCTION:	Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy are together known as the Indian system of medicine is an antique system of healthcare that persists despite the advent of Modern Allopathic practice.

LEARNING OBJECTIVES:	a. Compare and discuss awareness among people regarding AYUSH and its services b. Construct a link between AYUSH services to the prevention of NCDs and other diseases
COMPETENCIES:	• Define AYUSH and its components.

10. Concepts of Epidemiology

INTRODUCTION:	This module provides an introduction to key concepts, methods, and topics in epidemiology, focussing especially on the practical aspects.
LEARNING OBJECTIVES:	a. State basic concepts of epidemiology b. List the fundamentals of Outbreak investigation and surveillance
COMPETENCIES:	• Define epidemiology and principles of epidemiology. • Application of epidemiology in Public Health • General guidelines for outbreak investigations

Graph 1: Diagram for the Qualitative Research
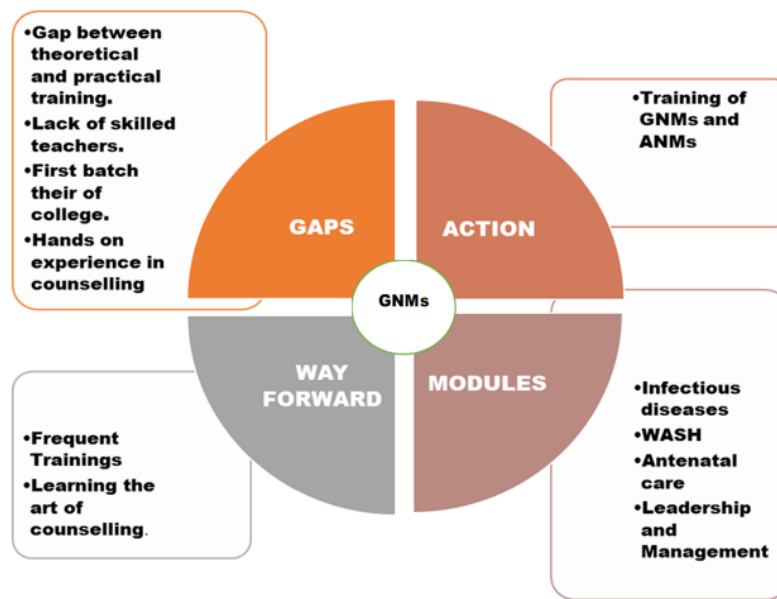
DISCUSSION:

- Results indicated that the reasons for the gap were, the gap in theory and practical training, lack of support, and a complex curriculum.

- As per the say (GNMs) they need more practice-based training sessions with more hand-holding by the instructors for a better understanding of the subject. Standard operating procedures (SPOs) are to be made for better clinical practice.

- Most of the GNMs are of the view that prior orientation about the subject will give better results during training sessions.

- As per the need of the hour, more training is needed in non-communicable diseases (NCD) and stress management.

- Capacity building requires the development of skill-based curriculum research that enhances quality and patient safety.

CONCLUSION:

- The training of the GNMs is needed and should be done regularly.

- The needs-based assessment should be done from time to time and the training should cater to their needs.

- The training should not be theoretical but practical with daily life scenarios.

LIMITATIONS:

I faced quite a few challenges during my internship. Some of them are:

- Being a part of a research organization, I didn't have any exposure to the interventions that take place in the field and have a big impact than the studies. I was hoping to observe such activities which have a direct impact on people rather than studies.

- Collection of data was a big challenge that faced me as I had to travel long distances alone at odd hours to interact with the workers. They were either available in the early morning or late evening. Being a female, I felt unsafe going and talking to them at such hours in the respective locations.

- I had trouble while analyzing the qualitative data as I had to make immediate notes which many times wasn't possible because of the odd hours and busy schedules of the nurses.

RECOMMENDATIONS:

- I was hoping to acquire more analytical skills when I was working there, which couldn't be catered to.

- Transportation facilities should be provided when someone is going for fieldwork. As it is very difficult to find public transport at odd hours.

STUDY 2: SYSTEMATIC REVIEW

SEARCH STRATEGY

Theme: Capacity Building of nursing professionals.

Rationale: Building capacity of nursing professionals (ANMs and GNMs) in preventive care. Using competency-based learning for a better understanding of real-world performance and better outcomes.

Objectives: 1. To explore how competency-based learning can be conceptualized for the capacity building of nursing professionals.

2. To fill in the gaps in the knowledge of nurses through competency-based learning.

Review Methods:

1. **Criteria for considering studies for the review**

a. Type of Study: Qualitative study

b. Types of participants: The study includes ANMs and staff nurses from PHCs.

c. Types of intervention: Competency-based learning

d. Types of outcome measures: Competency acquired in primary care and public health.

Primary outcome: To study the gaps in the learning of nurses.

Secondary outcome: Capacity building of nursing professionals through CBL.

Design: A qualitative study using systematic research criteria.

Data sources: Electronic searches in the following database will be carried out: PubMed, Science Direct, Scopus, DOAJ, and Google Scholar.

Keywords: Gaps, Nursing professionals, Community Health Workers, Preventive care, Public Health, Capacity building.

RESEARCH QUESTION: Does competency-based learning improves the capacity building of nursing professionals in primary care management?

LIST OF KEYWORDS

Table 2: List of Keywords

Key concepts	Search words	Controlled words
Capacity building	Community-based, facilitation, strengthening,	Capacity building, Capacity strengthening
Competency-based learning	proficiency-based, mastery-based, outcome-based, performance-based, and standards-based education	Competency-based learning, outcome- and context-oriented, learner- and patient-centric, core-competencies, strengthen,
Nursing professionals	Staff Nurse, ANM	Nursing professionals, Nurses

Public Health	Preventive care, Community Health, Community care	Public Health, Community Health, Primary Healthcare
Primary health care	Health care, Community healthcare,	Care, Primary Health, Primary care, Community care

BOOLEAN OPERATOR

AND- Capacity building AND nurses, Capacity building AND staff nurses, Competency-based learning AND capacity building, Nursing professionals AND Competency-based learning.

OR- Capacity OR competence OR strengthening, Public Health OR nursing professionals, Context- oriented OR competency-based learning, Community care OR staff nurse.

PICOT Format

Table 3: PICOT Table

Population	Intervention	Comparison	Outcome
Nursing Professionals	Competency-based learning	Conventional learning/None	Competencies acquired in primary care / public health

LOGIC GRID

Table 4: Logic Grid for Search Strategy

Capacity building   AND   Staff Nurses   AND   Community care

| Capacity building[mh] OR Short-Term Courses*[tiab] OR Curricula*[tiab] OR Online Education*[tiab] OR Online Learning*[tiab]	Nurses[mh] OR Nursing Personnel*[tiab] OR nursing*[tiab] OR Registered nurses*[tiab] OR Public Health Nurses*[tiab]	Community networks[mh] OR Community care*[tiab] OR Community health network*[tiab]

1: MH (Capacity building) capacit* OR competenc* OR capabilit*OR building OR develop* OR strengthen* OR increas* Short-Term Courses* OR Curricula* OR Online Education* OR Online Learning*
2: MH (Primary Health Care) OR community OR district OR health OR preventive OR primary care OR center OR division OR community OR district OR health OR preventative OR primary OR facilit* OR health OR medic*
3: MH (Nursing professionals) OR Nursing personnel OR Nurse* OR Nursing OR Registered nurses OR Public Health Nurses OR ANMs OR Frontline workers
4. MH (Public health) OR Community OR District Health OR Preventive Medicine OR Community Healthcare

Photo 1: Screenshot of search run on PubMed
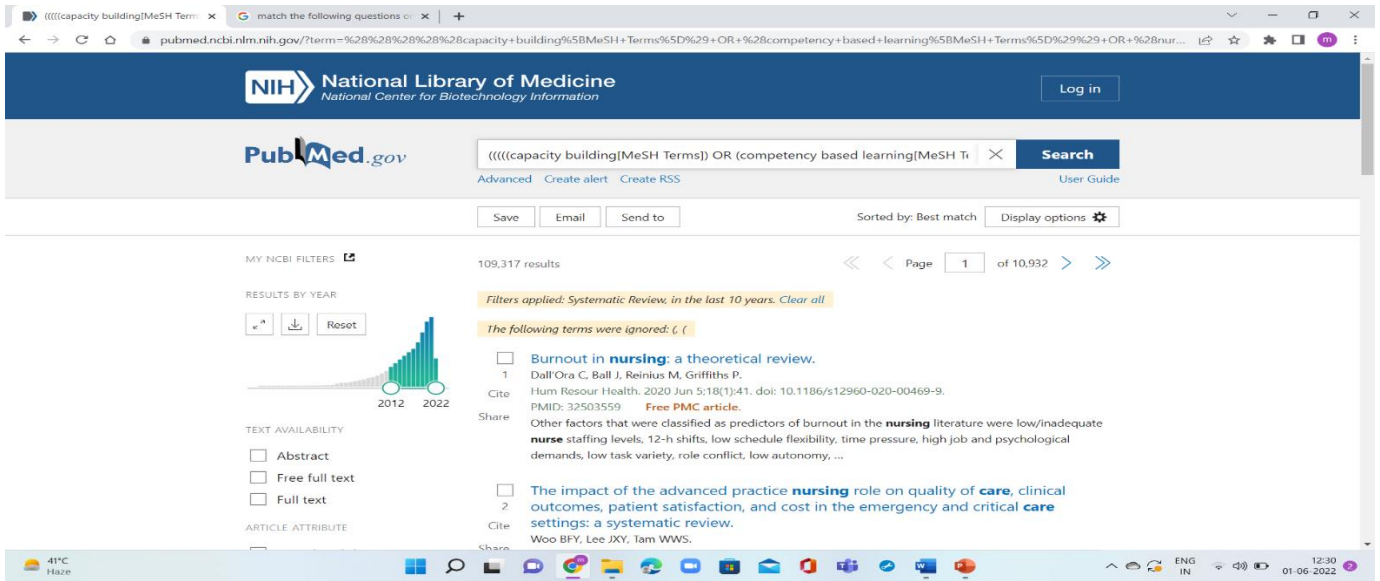
I ran the search strategy in PubMed advance searches. It can be seen this search strategy is giving a broader picture. The results shown are 1,09,317 something. This doesn't cater to the expectations, that's why a more refined search strategy is made.

Refined search strategy:

Rationale: Building capacity of nursing professionals (ANMs and GNMs) in preventive care. Using skill-based learning for a better understanding of real-world performance and better outcomes.

Objectives: To explore how skill-based learning can be conceptualized for the skill-building of nursing professionals.

To fill in gaps in the knowledge of nurses through skill-based learning.

Review Methods:

2. Criteria for considering studies for the review

e. Types of Studies: Qualitative study

f. Types of participants: The study includes ANMs and staff nurses from PHCs.

g. Types of intervention: Skill-based learning

h. Types of outcome measures: Competency acquired in primary care and public health.

 Primary outcome: To study the gaps in the learning of nurses.

 Secondary outcome: Capacity building of nursing professionals through skill-based learning.

Design: A qualitative study using systematic research criteria.

Data sources: Electronic searches in the following database will be carried out: PubMed, Science Direct, Scopus, DOAJ, and Google Scholar.

Keywords: Gaps, Capacit*, Nursing professionals, Training, Skill-based learning, Primary care, Preventive care, Public Health.

RESEARCH QUESTION: Does skill-based learning improves the capacity building of nursing professionals in primary care management?

Table 5: Revised PICOT Table

Population	Intervention	Comparison	Outcome
Nursing Professionals	Skill-based learning	Conventional learning/None	Technical skills Intra-Interpersonal skills Changes in career curve

Photo 2: Screenshot of revised search run on PubMed
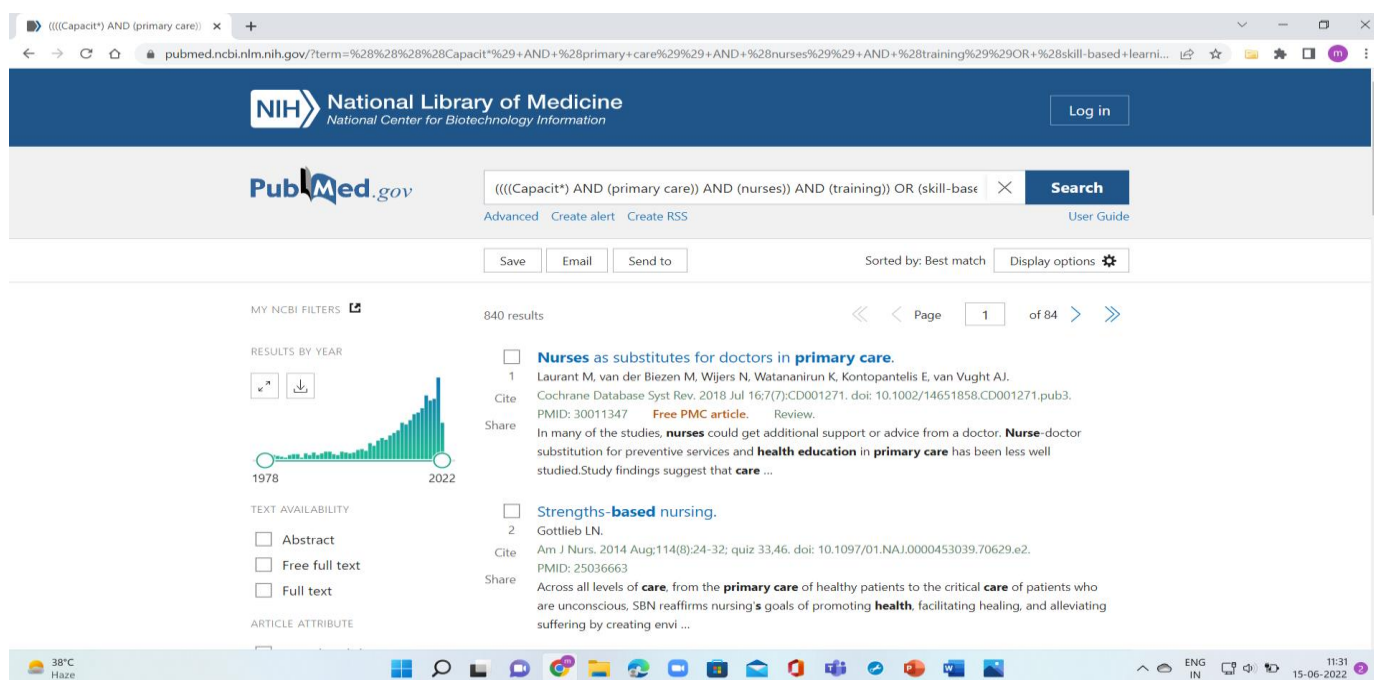
Results are shown after the revised search strategy. Now, only 840 results were shown.

The results are imported to a platform named Rayyan where three authors work together on the finalization of the relevant literature. First, title screening is done, abstract screening is done and finally, full-text screening is done. After that, based on the preparation checklist for the data, synthesis, and analysis are done. The analysis is based on the type of data synthesized. In the case of our study, it is continuing.

BIBLIOGRAPHY:

Ajani, Khairulnissa, and Salima Moez. "Gap between Knowledge and Practice in Nursing." *Procedia - Social and Behavioral Sciences* 15 (December 31, 2011): 3927–31. https://doi.org/10.1016/j.sbspro.2011.04.396.

Akram, Abu Salah. "Gap between Theory and Practice in the Nursing Education: The Role of Clinical Setting." *JOJ Nursing & Health Care* 7, no. 2 (April 3, 2018). https://doi.org/10.19080/JOJNHC.2018.07.555707.

Bahun, Mateja. "Nursing Education in Kazakhstan," n.d., 48.

Dema, Tshering. "Competency-Based Framework for Staff Nurses 1st Edition 202," n.d., 51.

Fawaz, Mirna A., Ayman M. Hamdan-Mansour, and Ahmad Tassi. "Challenges Facing Nursing Education in the Advanced Healthcare Environment." *International Journal of Africa Nursing Sciences* 9 (January 1, 2018): 105–10. https://doi.org/10.1016/j.ijans.2018.10.005.

Fordham, Amanda J. "Using a Competency-Based Approach in Nurse Education." *Nursing Standard (Royal College of Nursing (Great Britain): 1987)* 19, no. 31 (April 13, 2005): 41–48. https://doi.org/10.7748/ns2005.04.19.31.41.c3841.

Karvande, Shilpa, Vidula Purohit, Somasundari Somla Gopalakrishnan, B. Subha Sri, Matthews Mathai, and Nerges Mistry. "Building Capacities of Auxiliary Nurse Midwives (ANMs) through a Complementary Mix of Directed and Self-Directed Skill-Based Learning—A Case Study in Pune District, Western India." *Human Resources for Health* 18, no. 1 (June 17, 2020): 45. https://doi.org/10.1186/s12960-020-00485-9.

"Learning Professional Knowledge: Bachelor Nursing Students' Experiences in Learning and Knowledge Quality Outcomes in a Competence-Based Curriculum | SpringerLink." Accessed June 16, 2022. https://link.springer.com/article/10.1007/s12186-021-09274-4.

Saifan, Ahmad, Mohannad Aburuz, and Rami Masa'Deh. "Theory Practice Gaps in Nursing Education: A Qualitative Perspective." *Journal of Social Sciences* 11 (March 18, 2015): 20–29. https://doi.org/10.3844/jssp.2015.20.29.

Shoghi, Mahnaz, Mahbobeh Sajadi, Fatemeh Oskuie, Afsaneh Dehnad, and Leili Borimnejad. "Strategies for Bridging the Theory-Practice Gap from the Perspective of Nursing Experts." *Heliyon* 5, no. 9 (September 30, 2019): e02503. https://doi.org/10.1016/j.heliyon.2019.e02503.

Lode, Kirsten, Erik Sørensen, Susanne Salmela, Anne Holm, and Elisabeth Severinsson. "Clinical Nurses' Research Capacity Building in Practice—A Systematic Review." *Open Journal of Nursing* 05 (January 1, 2015): 664–77. https://doi.org/10.4236/ojn.2015.57070.

"A Comprehensive Approach to Undergraduate Nursing Students' Research Experiences | Journal of Nursing Education." Accessed June 14, 2022. https://journals.healio.com/doi/10.3928/01484834-20180102-12.

"A Comprehensive Approach to Undergraduate Nursing Students' Research Experiences | Journal of Nursing Education." Accessed June 14, 2022. https://journals.healio.com/doi/10.3928/01484834-20180102-12.

Bergeron, Kim, Samiya Abdi, Kara DeCorby, Gloria Mensah, Benjamin Rempel, and Heather Manson. "Theories, Models and Frameworks Used in Capacity Building Interventions Relevant to Public Health: A Systematic Review." *BMC Public Health* 17, no. 1 (November 28, 2017): 914. https://doi.org/10.1186/s12889-017-4919-y.

Charles, Lesley, Jean Triscott, Bonnie Dobbs, Jasneet Parmar, Peter George Tian, and Oksana Babenko. "Effectiveness of a Core-Competency–Based Program on Residents' Learning and Experience." *Canadian Geriatrics Journal* 19, no. 2 (April 8, 2016): 50–57. https://doi.org/10.5770/cgj.19.213.

DeCorby-Watson, Kara, Gloria Mensah, Kim Bergeron, Samiya Abdi, Benjamin Rempel, and Heather Manson. "Effectiveness of Capacity Building Interventions Relevant to Public Health Practice: A Systematic Review." *BMC Public Health* 18, no. 1 (June 1, 2018): 684. https://doi.org/10.1186/s12889-018-5591-6.

Fiset, Valerie J., Ian D. Graham, and Barbara L. Davies. "Evidence-Based Practice in Clinical Nursing Education: A Scoping Review." *Journal of Nursing Education* 56, no. 9 (September 2017): 534–41. https://doi.org/10.3928/01484834-20170817-04.

Lehane, Elaine, Heloise Agreli, Simone O' Connor, Josephine Hegarty, Patricia Leahy Warren, Deirdre Bennett, Catherine Blake, et al. "Building Capacity: Getting Evidence-Based Practice into Healthcare Professional Curricula." *BMJ Evidence-Based Medicine* 26, no. 5 (October 1, 2021): 246–246. https://doi.org/10.1136/bmjebm-2020-111385.

M. O'Heir, Judith. "Midwifery Education for Safe Motherhood." *Midwifery* 13, no. 3 (September 1, 1997): 115–24. https://doi.org/10.1016/S0266-6138(97)90001-2.

Suprapto, Suprapto, Rifdan Rifdan, and Hamsu Abdul Gani. "Nurse Capacity Building Strategy in Health Services in Hospitals." *Linguistics and Culture Review* 5, no. S1 (September 11, 2021): 832–38. https://doi.org/10.21744/lingcure.v5nS1.1467.

ANNEXURE:

a) TIME SCHEDULE:

S.No.	Name of the department	Date(s) of visit	% Of Time Spent	Interacted with (Name and Designation)
1.	Field Work	15 days	35%	Civil Surgeon, MCG Medical Officer, UPHCs, Gurgaon ANMs GNMs
2.	Desk Work		65%	Project Investigator, Research Assistant, Interns

b) IN-DEPTH INTERVIEW GUIDE

1. Please tell me about yourself.

(Probe: age, place of residence, marital status, family background, work experience, education, 10th class,

when, from which college, duration)

2. Please tell me about your course curriculum in detail.

(Probe: duration of ANM course work, name of subjects, theory/practical, favorite subjects and why, neglected

subjects)

3. Is there any subject which you think has not been taught? If yes, can you please tell me the reason?

(Probes: lack of staff, lack of study material, lack of understanding, no priority, lack of utilization in the job in

future, any other issues)

4. Please tell me about your work.

(Probes: when did you start, places of posting, nature of the job, like/ dislike responsibilities, day-to-day activities,

generalized work)

5. After you started working, which subjects do you think are most applied?

(Probes: in clinical settings, in community settings)

6. How much preventive aspect is practiced in day-to-day activities in your work?

(Probes: In UHSND, community meetings and mobilization, MCH activities, CD/NCD, screening, nutrition, hygiene, mental health, tobacco risk factors, referrals, intervention, will they do counseling if they are given training, barriers to disseminating learnings i.e, knowledge-based, time-based, opportunity-based, etc.)

7. Have any refresher training been done?

(Probes: topics (non-covid related), how frequently, usefulness in practical life)

8. Do you think some training can be helpful to strengthen your capacities for the community?

(Probes: what kind of training, benefits expected, subjects to be covered, mode of training)

9. What would be your suggestion to overcome the gaps and challenges that you have faced in your curriculum?

(Probes: Clear guidance, more emphasis on particular subjects, training for changing roles)

The below link is for the excel sheet with the responses of GNMs.

https://1drv.ms/x/s!AgL7uEXZovgxkDo9cB5sfEJ7kV3d?e=Cnd5cP