

# An Investigation into the Efficacy of a Structured Teaching Program on Hypnobirthing Knowledge Among Final-Year GNM Students in Designated Nursing Schools in Vijayapur

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## Abstract

*Pregnancy is a lengthy journey that is best navigated with support. The process of labor is often overwhelming, involving intense sensations and emotions. Women benefit from having supportive individuals with them to assist in coping with the challenges of labor. Regardless of the level of childbirth preparation or prior experiences, women require a combination of psychological and physical coping methods during labor and childbirth. The term “labor” refers to the rhythmic contraction and relaxation of uterine muscles, leading to the gradual effacement and dilation of the cervix, ultimately resulting in the expulsion of the products of conception—comprising the fetus, placenta, and membranes—through the birth canal.*

**Keywords:** Pregnancy, birth canal, fetus, placenta, psychological and physical coping methods

## INTRODUCTION

*We believe that every woman has within her the power to call upon her natural instincts to bring about the best possible birthing for her baby and herself.*

—Marie F. Mongan

Labor is commonly perceived as one of the most uncomfortable occurrences in human life, and its intensity varies significantly from one woman to another and even between different pregnancies. The degree of pain experienced is influenced by various factors, including parity, the dimensions and structure of the pelvis, the presentation and position of the fetus, and the strength of uterine contractions [1–3].

Due to the complications during childbirth, approximately 78,000 women die each year in India. This means that on an average every 7 minutes, one woman dies during birth or giving birth to a child. There

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exist numerous approaches for managing pain during labor, encompassing techniques such as controlled breathing, hypnosis, yoga, meditation, walking, massage, or applying counter pressure, altering positions, taking a bath or shower, and the use of medications like analgesics, tranquilizers, and regional anesthesia. The administration of medications for pain relief during labor has been a practice since the mid-19th century, and contemporary options include various drugs classified primarily as analgesics or anesthetics to assist mothers in coping with the challenges of childbirth. Analgesics relieve but do not completely

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stop pain. Any medication a woman takes can affect her baby. In most of cases, women report the sensation of breathing difficulties, and some of the medication's effect on the chest muscles, although it produces no real danger, it can provoke anxiety. Breathing during labor is not meant to be a distractive technique such as visualization or massage. You will acquire the ability to better understand and manage your body. Breathing patterns can benefit during a different phase of contractions [4].

A report from the Indian Council of Medical Research indicated that 25% of infants in India are delivered via cesarean sections, with 18% of these surgeries being elective. There has been at least a 25% rise in the number of women opting for caesarean sections in the past few years in Delhi, as they do not want to go through pain like all expectant mothers [5].

Numerous women initially opt for natural childbirth but later change their preference, while others intend to receive pain medication but end up delivering the baby before having the opportunity to do so upon arriving at the hospital. It is always best to know mothers' options before they enter into labor. Weighing the options about pain relief during labor and delivery women need to be educated on all the different type of pain management by talking to the health care providers [6].

Medications have been used for labor and delivery pain relief since the 19th century. Today there are several drugs available to help mothers endure the pain of childbirth. Most of them can be classified as either analgesics or anesthetics. Analgesics relieve but do not completely stop pain. Any medication a woman takes can affect her baby. In most of the cases, women report the sensation of breathing difficulties, and some of the medication's effect on the chest muscles, although it produces no real danger, it can provoke anxiety [7].

Hypnobirthing enables individuals to undergo childbirth in a serene and relaxed environment, devoid of the fear and tension that can hinder the natural functioning of birthing muscles. Marie F. Mongan introduced this approach in 1990. Hypnobirthing serves as a comprehensive birth education program, empowering expectant mothers to maintain control and enhance their birthing experience. The program includes instruction on uncomplicated yet targeted self-hypnosis, relaxation, and breathing techniques. Importantly, Hypnobirthing is not associated with any specific belief system [8].

Studies suggest that medical interventions are crucial for preserving lives and ensuring maternal comfort, and their routine use has become more common in typical childbirth scenarios. However, this increased prevalence may elevate the likelihood of related complications and result in a less satisfactory birthing experience. Utilizing antenatal hypnosis has been linked to a decreased requirement for pharmacological interventions during childbirth. Employing hypnosis represents a straightforward and cost-effective means to enhance the childbirth process, diminish complications associated with pharmaceutical interventions, generate cost savings in maternity care. This trial aims to furnish evidence that can guide clinical practices in this regard [9].

Hypnobirthing courses impart relaxation techniques beneficial for both the mother and the baby, irrespective of the birthing experience. If any form of medical intervention becomes necessary, the mother will be better equipped to stay composed and in command. Women who have undergone planned cesarean sections for medical reasons attest to being completely at ease before, during, and after the procedure. Many report that they needed little or no medication following the birth, and they were able to return to normal functioning in a very short period of time [10].

Hypnobirthing is a natural approach, not manipulation, aiming to calm the mind so that the body can function according to its inherent design. The utilization of positive thinking, relaxation, visualization, breathing exercises, and physical preparation in hypnobirthing contributes to fostering a joyful and comfortable pregnancy, even for mothers uncertain about achieving an intervention-free birth. Building confidence, trust, and positive anticipation leads to a serene, gratifying, and bonding birth experience, rightfully belonging to every mother.

While the term “hypnobirthing” might evoke images of individuals in trances amidst flowers, it fundamentally involves learning relaxation techniques — understanding how to attain and sustain a relaxed state during labor and childbirth. Scientific evidence supports that hypnobirthing diminishes the necessity for pain relief during labor, enhancing the overall enjoyment of the birthing process for the mother [11].

### NEED FOR THE STUDY

*Giving birth should be your greatest achievement not your greatest fear.*

—Jane Weideman

The experience of childbirth is a precious memory that mothers should always cherish. Rather than something to be feared, childbirth is viewed in hypnobirthing as a natural and life-affirming process. The founder of hypnobirthing, Marie Mongan, challenges the misconception that pain is an inherent part of giving birth. She presents compelling medical evidence to assert that it is societal influences, not our bodies, that have turned childbirth into a distressing moment. Mongan emphasizes that releasing the fear associated with birth, a fear that causes tension and constriction, can also alleviate the pain. Hypnobirthing aligns with the ancient practice of childbirth as a celebration of life, asserting that it is a normal, natural, and healthy function for women. According to this philosophy, birth can be achieved gently and calmly for the majority of women who are not in high-risk situations. Hypnobirthing is a series of techniques and approaches that prepare a mother for as relaxing and gentle a birth experience as possible. It is based on the premise that much of the pain associated with childbirth is stress and anxiety related and can be largely eliminated with careful preparation. Hypnobirthing techniques involve visualization, stress-reduction techniques, breathing exercises, and relaxation programs all completely safe and proven effective for all mothers, at all stages of pregnancy [12].

In 2001, a report in the *Journal of Family Practice* examined the impact of hypnosis on labor processes and birth outcomes for pregnant adolescents. The findings of the study indicate that the use of hypnotic techniques during labor and delivery can serve as an effective intervention, leading to a decrease in complications, a reduction in surgical interventions, and a shorter postpartum hospital stay [13].

In 2003, evaluations revealed that women who employed hypnosis during labor expressed higher satisfaction with pain management compared to those utilizing alternative and complementary pain management methods. Additionally, a more recent review from 2004 indicated that women utilizing hypnosis did not require analgesia and reported less severe pain compared to those in non-hypnosis groups [14].

A research study was undertaken to evaluate the knowledge and attitudes of health professionals concerning hypnobirthing. A non-probability convenient sampling method was employed to select 100 health professionals from the Obstetrics and Gynecology (OBG) and Pediatric Departments at M.S. Ramaiah Hospitals in Bangalore. Data collection utilized a structured knowledge questionnaire to assess knowledge and a structured opinionnaire to evaluate attitudes. The overall knowledge scores of health professionals indicated that 82% possessed insufficient knowledge, 18% had moderately adequate knowledge, while none demonstrated adequate knowledge. The mean percentage score for overall knowledge was 40.40% with a standard deviation of 4.47, suggesting that the participants had inadequate knowledge regarding hypnobirthing. The study concluded that the knowledge about hypnobirthing is inadequate among health professionals. Hence the study recommended that there is a need of further research studies to improve the knowledge of hypnobirthing among public [15].

From 2005 to 2010, 17% of US hypnobirthing mothers delivered via cesarean, compared to the national average of 32%. Only 23% of hypnobirthing mothers who opted for vaginal birth used epidural anesthesia, in contrast to the national average of 71%. Additionally, 9.5% of hypnobirthing mothers chose home birth, surpassing the national average of less than 1%, while 6% opted for freestanding birth centers, compared to the national average of less than 1%.

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Hypnobirthing is rooted in the fear–tension–pain concept, emphasizing that a healthy woman with a healthy baby and a healthy labor can achieve a normal, pain-free birthing process when she trusts the natural course of birth and remains free from fear while staying appropriately relaxed.

Contrary to the belief that hypno-anesthesia is the sole method for achieving comfort during labor, some courses with a hypnosis influence assert that women have successfully given birth for thousands of years without relying on numbing medication or specific childbirth techniques. Hypnosis is meant to change negative beliefs and to imprint positive impressions so that when it is time for the birthing a woman can trust her body and is free of fear. The only way to get through labor is with an anesthetic, it implies that birth itself does not work. It empowers families through education, fear release and relaxation techniques so that birth works as it should. Hypnobirthing childbirth classes provide a complete picture of the labor process, birth, and bonding. It explains how the uterine muscles work in harmony with breath and how fear and hormones affect the birthing process.

The anatomy of the birthing body and the birthing process is explained. It teaches families to choose, engage, and work with the care provider attending the birth. It also teaches birth planning and how to remain flexible in the birth process.

Hypnobirthing focus is on how to get out of the head and tune into (and trust) the birthing body, relaxation and deepening, release of fear, birth companion support, birth planning, bonding and how to ask questions during the process to feel empowered to make decisions. Hypnobirthing is not only a collection of tools and techniques but also a philosophy centered on providing a gratifying, serene, and stress-free birthing experience. It is grounded in the belief that every baby should enter the world in an environment marked by gentleness, calmness, and joy. With proper physical, mental, and spiritual preparation, a mother can undergo childbirth in a smoother, more comfortable, and often pain-free manner. Childbirth, viewed as a natural, normal, and healthy function for women, relies on the instinctual knowledge of both women and babies. The program draws inspiration from the work of Dr. Grantly Dick-Read (1890–1959), an English obstetrician, whose book *Childbirth Without Fear* aimed to restore women to the innate gift of truly natural childbirth. The primary goal of the hypnobirthing program is to teach individuals how to relax both their bodies and the birthing process. By eliminating stress and fear from the mind, which trigger pain responses in the body, nature can then seamlessly facilitate birth in the same well-designed manner as it does for all other normal physiological functions. Hypnobirthing not only empowers the mother and father but also has a lasting, profound impact on the baby throughout their lifetime. It gives confidence and emphasizes the simplicity of a natural and calm birth. Our bodies are inherently designed to facilitate birth efficiently and comfortably, making it a potentially empowering and wonderful experience.

Hypnobirthing stands as a well-established and widely acknowledged program that prioritizes natural childbirth. Through the application of positive language, the program incorporates easily learnable techniques such as deep relaxation, breathing exercises, visualization, and affirmative positive thinking. These methods aim to diminish feelings of anxiety, stress, fatigue, and fear, consequently reducing the experience of pain. While hypnobirthing does not guarantee a flawless natural birth, it imparts the skills to achieve the best possible birthing experience under any circumstances. Many mothers often describe hypnobirthing as the most remarkable and empowering event in their lives [16].

After full consideration of the hypnobirthing method and its use in practice, a students could share this knowledge with antenatal mothers as well as experienced nurses in hospitals because soon after finishing their course most of the student nurse will join the bedside. So it is a beneficial way to improve knowledge regarding hypnobirthing. The student nurse could also educate the parents and other family members. The preceding information and prior research underscore the necessity for implementing a structured teaching program (STP) for final-year general nursing and midwifery (GNM) students in chosen nursing schools. Consequently, the researcher believes that conducting this study is imperative.

## OBJECTIVES

1. To gauge the extent of understanding concerning hypnobirthing among final-year GNM students.
2. To assess the effectiveness of the structured teaching program on hypnobirthing for final-year GNM students.
3. To determine the correlation between post-test knowledge scores and their respective socio-demographic variables.

## Operational Definitions

1. *Evaluate*: This study examines the influence of a structured teaching program on knowledge related to hypnobirthing.
2. *Effectiveness*: In this study, effectiveness pertains to assessing the effectiveness of the structured teaching program by measuring the extent of achievement in the desired outcome, as indicated by the increase in students' knowledge scores through a self-administered knowledge questionnaire.
3. *Structured Teaching Program (STP)*: In this study, the STP denotes the systematically created instructional and teaching materials developed by the researcher for nursing school students to offer information about hypnobirthing.
4. *Knowledge*: In this study, knowledge pertains to the accurate answers provided by the participants in response to questions about hypnobirthing as obtained through a self-administered knowledge questionnaire.
5. *Hypnobirthing*: It refers to a complete birth education program, the goal is to help the mother to be in control and have better birth experience. It involves self-hypnosis, relaxation, and breathing techniques.
6. *Students*: In this study students refer to the students who are formerly admitted and enrolled in nursing schools, and are studying in final year GNM.

## ASSUMPTIONS

1. Students have inadequate knowledge regarding hypnobirthing.
2. Structured teaching program is an effective method to improve knowledge of hypnobirthing among nursing school students.

## HYPOTHESIS

$H_1$ : There will be significant difference between pre-test and post-test knowledge scores with selected socio-demographic variables.

$H_2$ : There will be significant association between the knowledge score with selected socio-demographic variables.

## Delimitations

This study is limited to:

1. Final year GNM students.
2. GNM nursing schools at Vijayapur.
3. 4 weeks for the study.

## Significance of the Study

- The study promotes the knowledge of final year GNM students regarding hypnobirthing.

## CONCEPTUAL FRAMEWORK

A conceptual framework serves as a theoretical foundation for scientifically addressing problems, emphasizing the selection, organization, and categorization of its concepts. It articulates functional relationships among events, extending beyond statistical connections. The current study aims to assess the effectiveness of a structured teaching program on knowledge about hypnobirthing among final-year GNM students in selected nursing schools in Vijayapur.

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The chosen conceptual framework for this study is based on Von Bertalanffy's General Systems Theory (1968), comprising key components like input, process, output, and feedback. In this framework, a system is defined as a set of interacting components within a boundary that filters the type and rate of exchange with the environment. All living systems are considered open, involving a continuous exchange of matter, energy, and information. Open systems interact with the environment, receiving input and delivering output in the form of matter, energy, and information (Figure 1).

For survival, systems must receive varying types and amounts of matter, energy, and information from the environment. The system regulates the type and quantity of input through the process of selection. By employing self-regulation, the system maintains equilibrium or homeostasis. Continuous processing of matter, energy, and information occurs within the system, releasing outputs. The system actively monitors itself and the environment, utilizing information to guide its functioning. This feedback of environmental responses to the systems output is utilized by the system for adjustment, correction, and accommodation of interactions with the environment. Feedback may be positive, negative, or neutral.

In the present study, the final-year GNM students were considered as an open system, because they receive information from the environment. These system concepts can be explained as follows.

### **Input**

It refers to the learners or target group with their characteristics, conditions of people and resources. The individuals' own personality affects their learning needs and interest as well as aids in influencing others. In this study input refers to the final year GNM students and their characteristics like age, religion, marital status, income of the family, type of family, area of residence, occupation, main source of information.

### **Process**

Process refers to the different operational procedures of the program. They include implementation and the factors that facilitate or block the implementation of various stages of program development.

In the present study, process refers to pre-test and post-test assessment of knowledge of final-year GNM student regarding hypnobirthing by using structured knowledge questionnaire and followed by administration of structured teaching program.

### **Output**

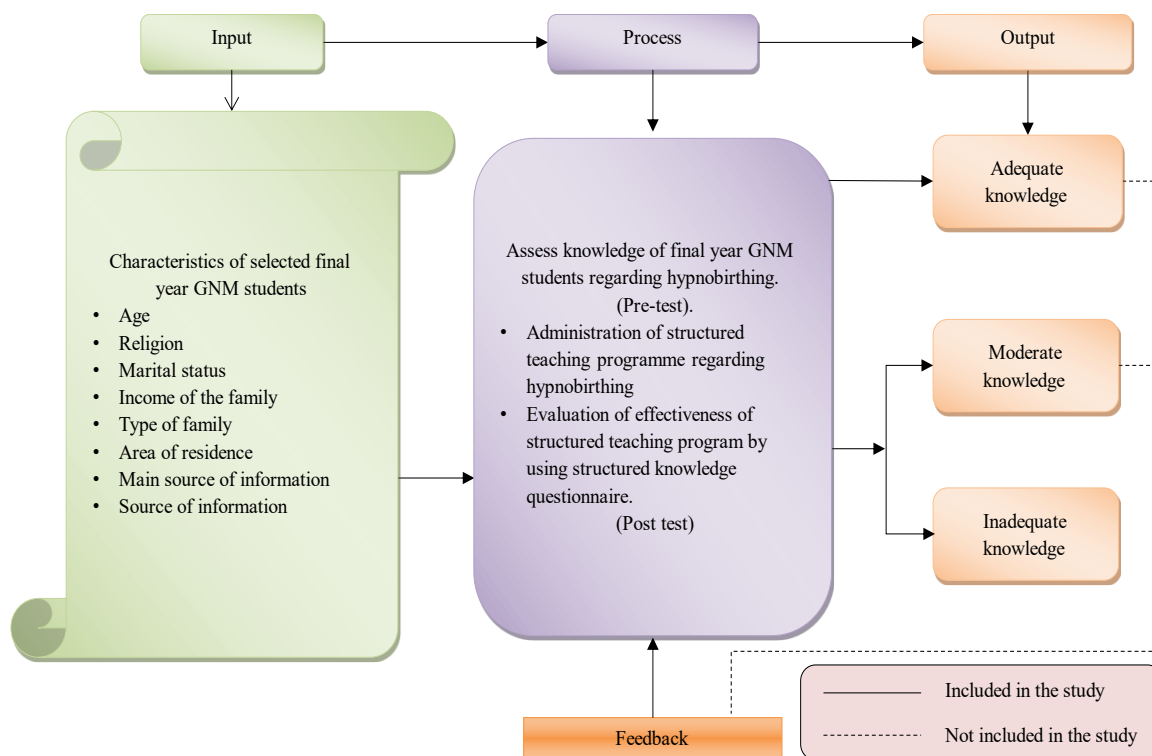
Output pertains to the energy, matter, or information released by the system as an outcome of its processes. In the current study, it denotes acquiring knowledge among final-year GNM students regarding hypnobirthing. This is achieved through a comparison between the pre-test and post-test knowledge scores of the subjects, that is, overall and area-wise.

### **Feedback**

Feedback is the process where the system's output is redirected back into the system as part of its input. In the context of the structured teaching program, final-year GNM students are anticipated to possess sufficient knowledge, acting as input to prevent complications. Mechanisms are employed to stabilize a particular action, directing efforts toward a goal. Any deviation from the goal prompts feedback in the form of information until the desired target is achieved. Notably, the investigator did not make any subsequent effort in this study to gather feedback after the post-test.

### **Environment**

The individual's environment is the constant that may influence the knowledge of final-year GNM students. The environment includes information received by final-year GNM students and from relatives, friends, mass media, and health personnel, etc.



**Figure 1.** Modified conceptual framework based on general systems theory of Von Bertalanffy (1968)

## REVIEW OF LITERATURE

*Literature is the art of writing something that will be read twice.*

—Cyril Connolly

The literature review in a research report serves as a concise overview of the existing knowledge on a particular problem, encompassing both known and unknown aspects of the issue. It is a critical step in the research process with primary objectives of building a robust knowledge foundation for conducting research and scholarly activities. Described as an analysis of relevant literature within a specific field or topic, a literature review aims to provide insights and understanding.

In a study focusing on antenatal hypnosis training and its impact on the childbirth experience, a brief intervention involving an antenatal course in self-hypnosis for facilitating easy childbirth was conducted. The study involved 1,222 healthy nulliparous women categorized into three groups during pregnancy. The groups included a hypnosis group, participating in three 1-hour sessions teaching self-hypnosis for childbirth ease, a relaxation group attending three 1-hour sessions focusing on various relaxation methods and mindfulness, and a usual care group receiving standard antenatal care. Results indicated that women in the hypnosis groups reported a better childbirth experience compared to the other two groups, with mean scores of 42.9 in the hypnosis group, 47.2 in the relaxation group, and 47.5 in the care-as-usual group. The study concluded that a brief course in self-hypnosis significantly improved women's childbirth experiences based on this large randomized trial. Consequently, the study recommended further research on hypnobirthing, specifically targeting specific subgroups [17].

A survey study was conducted on hypnobirthing with the aim of examining how Australian participants enrolled in the hypnobirthing program compared to other studies utilizing hypnosis for childbirth. Out of 81 participants, 46 (51%) did not use any pain medication during labor. The overall discomfort level reported for labor and birth was 5.8 out of 10, with 32% of participants scoring below 5.8, including two participants who reported zero discomfort. The survey results indicated that the average duration for both stages of labor was shorter in the hypnobirthing group compared to general

population figures. The researchers concluded that the majority of women in the hypnobirthing group expressed increased confidence, relaxation, reduced fear, heightened focus, and a greater sense of control. The study concluded that having their partner involved and support will help to ease and comfort of labor and childbirth and bring the satisfaction. Hence the study recommended that through the health education we can improve more knowledge regarding hypnobirthing among couples [18].

A randomized controlled trial and quasi-randomized controlled trial involving 1213 women were conducted to investigate the efficacy and safety of hypnosis for pain management during labor and childbirth. The objective was to assess the impact of hypnosis on pain relief, pharmacological pain relief usage, spontaneous vaginal birth, pain intensity, duration of labor, and maternal hospital stay. Significant statistical heterogeneity was observed in the data related to the use of pharmacological pain relief and spontaneous vaginal birth.

While there was some indication of benefits for women in the hypnosis group compared to the control group, particularly in terms of pain intensity, duration of labor, and maternal hospital stay, these findings were derived from individual studies with a limited number of participants. In one study with 60 women, pain intensity was lower in the hypnosis group than in the control group. Additionally, the same study revealed that the average duration of labor from 5 cm dilation to birth was significantly shorter for women in the hypnosis group. However, women in the hypnosis group tended to stay in the hospital for more than 2 days after giving birth compared to those in the control group.

The investigators concluded that despite some promising findings, there is a scarcity of studies assessing the use of hypnosis for labor and childbirth. Therefore, the study recommended further research to comprehensively evaluate the clinical utility of hypnosis for pain management in maternity care [19].

A study was undertaken to elucidate the impact of hypnosis on pain alleviation during labor and childbirth. Six pregnant women underwent training in self-hypnosis for labor, and the outcomes were analyzed using Colaizzi's procedure. The women articulated their experiences with hypnosis during labor, describing sensations of relief, consolation, heightened self-confidence, satisfaction, diminished perception of labor pain, transformation of pain into pressure, reduced fear of natural childbirth, diminished fatigue, and alleviation of anxiety. They reported an enhanced focus on the uterus and cervical muscle, heightened awareness of all labor stages, and the cultivation of "positive thoughts." In comparison to their previous childbirth experiences, the participants found the births to be exceedingly satisfactory [20].

A pilot study was carried out in South Australia, involving 3249 women with parity and gestation delivering after 37 weeks. The study aimed to evaluate the impact of hypnosis by prospectively collecting data on the use of hypnosis in childbirth preparation. Birth outcomes of women practicing antenatal hypnosis were then compared with controls matched for parity and gestational age. Prospective data on women employing self-hypnosis for childbirth preparation were gathered between August 2002 and August 2004. The birth outcomes of hypnosis-practicing women were compared with retrospective data from control women matched for parity and gestational age.

The study revealed that out of 77 antenatal women consecutively taught self-hypnosis, nulliparous parturient using hypnosis required fewer epidurals (36% compared to 53% in the control group) and less augmentation (18% vs. 36%). The conclusion drawn from the study was that the clinical findings align with recent meta-analyses indicating favorable outcomes associated with the use of hypnosis in childbirth. Consequently, the study recommended the need for adequately powered randomized trials to further clarify the effects of hypnosis in childbirth preparation [21].

A randomized study was undertaken on antenatal hypnosis training for childbirth in the maternity unit of South Australia, aiming to associate it with a reduced requirement for pharmacological



interventions during childbirth. This single-center, randomized controlled trial employed a three-arm parallel group design in the largest tertiary group. Group 1 participants received antenatal hypnosis along with an audio compact disc for reinforcement. Group 2 involved antenatal hypnosis training in preparation for childbirth with an audio compact disc on hypnosis administered by a nurse without training in hypnotherapy. Group 3 participants continued with their usual preparation for childbirth without any additional intervention. If proven effective, hypnosis could serve as a straightforward, cost-effective method to enhance the childbirth experience, reduce complications linked to pharmacological interventions, and lead to cost savings in maternity care. The outcomes of this trial are expected to provide evidence to guide clinical practice [22].

A comparative study was carried out on the effectiveness of hypnosis for pain relief during labor and childbirth, comparing it with non-hypnosis interventions, no treatment, or placebos. The primary outcome measures included labor and analgesia requirements, as well as pain scores during labor. The study identified 5 randomized control trials (RCTs) and 14 non-randomized comparisons involving 8395 women where hypnosis was employed for labor and analgesia. Among the 4 RCTs that examined the primary outcomes, 1 RCT was rated poorly in quality assessment. Meta-analyses of the remaining 3 RCTs indicated that, compared to controls, fewer individuals utilizing hypnosis required analgesia, with a relative risk of 0.51. Additionally, one of the included non-randomized comparisons showed that women using hypnosis rated their labor pain as less severe than controls, while another demonstrated that hypnosis reduced opioid requirements and increased the incidence of less need for pharmacological analgesia during labor. The study concluded that there is a need for well-designed trials to confirm the effects of hypnosis in childbirth. Hence the study recommended that there is a need for further well-designed trails to improve effects of hypnosis during childbirth [23].

A study was conducted in county public health department on 42 teenaged patients. Participants in the study were randomly allocated to either a treatment group receiving a childbirth preparation protocol using hypnosis or a control group receiving supportive counseling. Both groups underwent the standard prenatal treatment protocol from medical staff, nurse practitioners, and hospital personnel. All women were unaware of their group assignments, and deliveries took place at the local teaching hospital. The session included the opportunity to practice hypnotic induction and deep relaxation, with suggestions aimed at framing pregnancy and childbirth as a healthy and natural process. The study concluded that hypnosis is supportive in preparing obstetric patients for labor and delivery, leading to reduced complications, surgeries, and hospital stays, which directly benefits both the mother and child and implies potential cost-saving benefits. As a result, the study recommended further research, particularly focusing on specific subgroups [24].

A study was carried out to assess the efficacy of hypnosis in converting a breech presentation to a vertex presentation in 100 pregnant women with fetuses in breech position at 37 to 40 weeks' gestation. A matched comparison group of women with similar obstetrical and socio-demographic parameters was included. The intervention group received hypnosis sessions with suggestions for general relaxation and the release of fear and anxiety. Hypnosis sessions were provided to the women until they gave birth or the baby converted to the vertex position, as deemed convenient and possible. The results indicated that 81% of the fetuses in the intervention group converted to vertex presentation, in contrast to 48% in the comparison group. This difference was found to be statistically significant. The study suggests that motivated subjects, under the guidance of a skilled hypnotherapist, may experience a higher incidence of fetal conversion from breech to vertex presentation [25].

A semi-prospective case study was conducted to evaluate the impact of hypnotherapy on the first and second stages of labor among 126 primigravid women and 136 multiparous women. Trained medical hypnotherapists administered six sessions of hypnotherapy during pregnancy. The study found that the mean duration of the first stage of labor for primigravid women after hypnosis was 6.4 hours, compared to 9.3 hours in the control group. In multiparous women, the corresponding values were 5.3 hours and 6.2 hours for the first stage and 24 minutes and 22 minutes for the second stage, respectively. The result

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of this study was use of analgesic agent was significantly reduced in both hypnotized groups compared with their control. Hence the study recommended that there is need of further research to improve knowledge of hypnobirthing among mothers [26].

A study was undertaken to assess the effectiveness of prenatal hypnosis in promoting uncomplicated childbirth. A randomized group comprising 520 pregnant women in their first or second trimester of pregnancy was selected to receive prenatal hypnosis. The objectives included reducing the fear of childbirth and parenthood, alleviating anxiety and stress, identifying specific fears that could complicate the labor process, and preparing women for the childbirth experience. Results indicated that women receiving prenatal hypnosis experienced significantly better outcomes compared to those who did not. Further examination suggested that hypnosis functioned by preventing negative emotional factors from contributing to complicated childbirth outcomes. The regular use of prenatal hypnosis could potentially enhance obstetric outcomes [27].

A study was conducted to evaluate the impact of hypnosis on the duration of labor. This randomized controlled trial involved 60 first-time mothers, along with a matched control group of 60 first-time mothers and demonstrated a statistically significant reduction in the lengths of both the first and second stages of labor. In China, Jenkins and Pritchard observed a reduction of 3 hours for primigravid women, decreasing from 9.3 hours to 6.4 hours, and a reduction of 1 hour for multigravid women, decreasing from 6.2 hours to 5.3 hours for active labor in a study involving 262 subjects and 600 controls. Additionally, pushing duration was statistically shorter for first-time mothers, decreasing from 50 minutes to 37 minutes [28].

A study was conducted to explore the perspectives of clients and unqualified allopathic practitioners regarding the management of delivery care in urban slums in Dhaka, Bangladesh. Data were collected from 463 women who had home births and/or attempted labor at home. Additionally, seven in-depth interviews were conducted with unqualified allopathic practitioners to understand their practices. Results showed that approximately one-third, or 32%, of the 463 women sought delivery care from unqualified allopathic practitioners. No significant associations were found between socio-demographic characteristics and seeking care from unqualified allopathic practitioners, except for the education level of women. Women with three or more pregnancies were more likely to receive care from unqualified allopathic practitioners, followed by women with two pregnancies. Among women who reported at least one delivery-related complication, 45.2% sought care from unqualified allopathic practitioners. In 149 cases where unqualified allopathic practitioners were involved in delivery care, 89.3% received medication to initiate or enhance labor, and only 6% (9 out of 149) were referred by unqualified allopathic practitioners to a health facility. The findings suggest a demand among slum women in Bangladesh for delivery-related care from unqualified allopathic practitioners during home births [29].

A retrospective descriptive study, based on prenatal medical records, compared the outcomes of childbirth between two groups within one obstetrician's caseload. The study included 50 women who chose antenatal hypnosis preparation and 51 who did not. Both groups were demographically similar. The control group, comprising women who did not opt for hypnosis preparation, was randomly selected to match the hypnosis group in terms of parity and delivery mode. The results indicated that prenatal hypnosis preparation led to a significant decrease in the use of sedatives, analgesia, and regional anesthesia during labor. The findings suggest the need for well-controlled studies to enable clinicians to consider hypnosis more frequently as a pain relief option for childbirth [30].

A study conducted at an antenatal training institution utilized self-hypnosis as a tool for providing relaxation, anxiolysis, and analgesia to women in labor over a period of 3 years. The effects of hypnotherapy were assessed by collecting data from women who underwent antenatal hypnosis in preparation for childbirth. Birth outcomes of these women were then compared with controls matched for parity and gestational age between August 2002 and August 2004. The study also compared the birth outcome data of hypnosis users with retrospectively collected data from women with similar parity

and gestational age delivering after 37 weeks' gestation in 2003. The findings align with meta-analyses indicating beneficial outcomes associated with hypnosis in childbirth. However, the study emphasizes the need for adequately powered, randomized trials to further explore the effects of hypnosis preparation for childbirth [31].

A study focused on the use of hypnotic relaxation as an adjunct to pharmacologic treatment for 39 women hospitalized due to premature contractions in pregnancy. The control group, consisting of 70 women, received medication alone. Treatment initiation occurred upon hospitalization and lasted, on average, for 3 hours. Additionally, patients were provided with cassettes containing hypnotic-relaxation exercises for daily practice. The findings indicate that the rate of pregnancy prolongation was significantly higher in the group that received hypnotic-relaxation alongside medication compared to the medication-alone group. Furthermore, the hypnotic-relaxation treatment demonstrated advantages in terms of infant weight [32].

In the United States, during the period from October 2005 to January 2008, the Hypnobirthing Institute received 1227 Parents' Birth Reports. Hypnobirthing labor interventions used fewer interventions during their labors than other mothers, and 72% used no pain medication. While hypnobirthing mothers chose obstetricians and certified nurse midwives equally, 79% of the respondents were attended by obstetricians. Hypnobirthing mothers reported a lower incidence of preterm births and low birth weight infants. All Hypnobirthing mothers were satisfied or highly satisfied with hypnobirthing [33].

A longitudinal prospective study was conducted in Gujarat, India on hypnosis in pregnancy with intrauterine growth restriction and oligohydramnios. Clinical hypnosis was employed in conjunction with conventional medical management for pregnancies, and the prenatal outcomes were compared with a control group that did not receive hypnosis. The group subjected to hypnosis exhibited a notably lower rate of preterm deliveries ( $p = .004$ ) and a reduced incidence of low-birth-weight babies ( $p = .009$ ). Additionally, there was a significant decrease in operative interventions, specifically a lower rate of cesarean sections ( $p = .008$ ), in the experimental group. Therefore, the use of clinical hypnosis as a beneficial supplement to medical management is recommended to mitigate neonatal morbidity and fetal loss [34].

In 2004 cesarean section rate climbed another 6% to an all-time high of 29.1%, with individual hospital's rates approaching a staggering 57%. These figures significantly surpass the World Health Organization's recommendation of a rate not exceeding 15%. It is evident that there is a necessity for increased awareness regarding the advantages of natural childbirth for both the mother and the baby, along with the potential risks associated with medically unnecessary interventions in the context of "managed" birth [35].

A comparative study conducted in South Australia from January 2006 to March 2007 aimed to explore potential differences in hypnotizability between pregnant and nonpregnant women. Participants underwent hypnotizability assessment using the Creative Imagination Scale (CIS) during the third trimester of pregnancy, and later, between 14 and 28 months postpartum and when not pregnant. Of the 37 participants who completed the study and gave birth, CIS scores showed an increase in hypnotizability during pregnancy (mean 23.5, SD 6.9) compared to non-pregnant states (mean 18.7, SD 6.6),  $p < 0.001$ . The mean effect size of 0.84 indicates that the change in hypnotizability was both statistically significant and clinically meaningful. These findings reinforce prior evidence suggesting that women exhibit increased hypnotizability during pregnancy compared to non-pregnant states. Moreover, hypnosis during pregnancy and childbirth has demonstrated benefits, including reduced usage of labor analgesia and other medical interventions [36].

A comparative study was conducted to evaluate the effectiveness of hypnosis in preventing postnatal depression during pregnancy, childbirth, and the postnatal period. The objective was to assess whether hypnosis, when compared with standard antenatal, intranatal, or postnatal care, could reduce the risk of developing postnatal depression. However, the review found only one study involving 63 women,

which did not include relevant outcomes, preventing meaningful data analysis for this review. Unfortunately, there is currently no evidence from randomized controlled trials to support the effectiveness of hypnosis in preventing postnatal depression during the perinatal period. The review emphasizes the need for further randomized controlled trials to thoroughly assess the use and impact of hypnosis during pregnancy, childbirth, and the postnatal period in preventing postnatal depression. It mentions that two ongoing trials may contribute additional information in the future [37].

A study conducted in Australia aimed to investigate the effects of complementary and alternative therapies on pain management during labor and their impact on maternal and perinatal morbidity. The study included published and unpublished randomized controlled trials that compared complementary and alternative therapies with either placebo, no treatment, or pharmacological methods of pain management during labor. The inclusion criteria considered women in their first or second stage of spontaneous or induced labor, whether primiparous or multiparous. The review encompassed 14 trials, reporting data from 1537 women who utilized various modalities of pain management, and the meta-analysis included 1448 women. 3 trials involved acupuncture ( $n = 496$ ), 1 audio-analgesia ( $n = 24$ ), 2 trials acupressure ( $n = 172$ ), 1 aromatherapy ( $n = 22$ ), 5 trials hypnosis ( $n = 729$ ), 1 trial of massage ( $n = 60$ ), and relaxation ( $n = 34$ ). Trials involving acupuncture indicated a reduced need for pain relief (relative risk (RR) 0.70, 95% confidence interval (CI) 0.49 to 1.00, one trial with 288 women). Women who received self-hypnosis training had decreased requirements for pharmacological analgesia (RR 0.53, 95% CI 0.36 to 0.79, five trials with 749 women), including epidural analgesia (RR 0.30, 95% CI 0.22 to 0.40), and expressed higher satisfaction with their pain management during labor compared to control groups (RR 2.33, 95% CI 1.15 to 4.71, one trial). No significant differences were observed for women using aromatherapy or audio analgesia. The conclusion drawn was that acupuncture and hypnosis may offer benefits in pain management during labor, and the study recommended further scientific exploration of other complementary therapies [38].

A research study was undertaken on early childhood caries (ECC) and feeding practices with the aim of determining the prevalence and severity of ECC and its correlation with feeding practices in Syria. The study involved 400 children aged 3 to 5 years. Findings revealed that caries were present in 70% of the children, with an average value of  $4.25 \pm 4.2$  per child. The mean values increased from  $2.4 \pm 3.2$  at age 3 to  $5.6 \pm 4.9$  at age 5 ( $4.1 \pm 6.3$  and  $12.8 \pm 12.0$ , respectively). Children who were bottle-fed exhibited a mean of  $5.33 \pm 4.6$ , while predominantly breastfed children had a lower mean of  $3.27 \pm 3.5$ . ECC was observed in 48% of the children, and 24% displayed a severe degree with carious defects and open caries lesions. The study concluded that, aside from a high prevalence of caries and ECC in preschool children, bottle feeding was associated with even higher caries rates in Syria [39].

A research investigation focused on the feeding and dietary practices of children with nursing caries in Saudi Arabia, particularly in Riyadh. The study aimed to examine the feeding and dietary habits of 74 nursing caries children, consisting of 34 (45.9%) males and 40 (54.1%) females, with an average age of 55.0 (SD 20.0) months. The mothers of these children provided responses to the questionnaire. About 230 of the children (65.0%) were breast-fed before sleep and a similar percentage (60.8%) was breast-fed during sleep. More than two-thirds (68.9%) were bottle-fed with liquids such as fresh fruit juices (51.4%), packed juices (43.2%) and soft drinks (81.1%). The mean age of starting to drink in a cup was 25.1 (SD 10.4) months. The most popular (71.6%) drinks in a cup were fruit juices. More than two-thirds (71.6%) of the children were taking soft drinks directly from a container and, about two-thirds (60.0%) of the children started drinking directly from a container at or before the age of 24 months. Almost all the children (93.2%) were taking sweets; about half (45.9%) of them taking sweets twice or more daily. The findings suggested that the children under study exhibited feeding and dietary traits, including breastfeeding before/during sleep, bottle-feeding at night or during naps, elevated intake of fruit juices/soft drinks from a container, and a high frequency of consuming sweets [40].

A study aimed to evaluate the effectiveness of a structured teaching program for schoolteachers on children's oral hygiene in selected rural primary schools in Mangalore. The results indicated that

teachers initially had moderate knowledge about oral hygiene (mean %=55.46%), and the implemented teaching program resulted in a significant improvement in their knowledge. The study concluded that the structured teaching program proved to be an effective strategy for enhancing the knowledge of schoolteachers [41].

A study in India aimed to assess the effectiveness of a structured teaching program on the knowledge of pneumonia prevention among 60 mothers with under-five children experiencing acute respiratory tract infection in selected hospitals in Bangalore. The research utilized a one-group pre-test and post-test design. The findings indicated that the mean post-test knowledge score of 32.22% was significantly higher than the mean pre-test knowledge score of 18.03%, reflecting an overall difference in the mean score of 14.18%. The study concluded that encouraging mothers to participate in teaching sessions or programs during their visits is crucial, as it enhances their receptiveness to improve their knowledge levels [42].

A research study was conducted on effectiveness of structured teaching program on temporary family planning method among primigravida mothers attending antenatal clinic in Jayanagar General Hospital, Bangalore and the findings indicated that in experimental group the mean post-test knowledge score was 61.13%. This indicated that the planned teaching program is significantly effective in increasing the knowledge among mothers [43].

A research study was conducted on effectiveness of structured teaching program on early detection of selected malignancies of females among girls in a high school of Bangalore South. From the findings it is clear that the mean post-test knowledge score was of 77.7% of experimental group that was significantly higher than that of post-test knowledge scores of 37.8% that indicated that the planned teaching program was significantly effective in increasing the knowledge among mothers [44].

A comparative study was conducted on hypnosis for reduction of pain and complications of labor in New York and reported in *Journal of Consulting and Clinical Psychology* 1990. One in 22 patients in the hypnosis group remained in the hospital longer than 2 days after delivery, compared with 8 of 20 patients who did not learn self-hypnosis. No patients in the hypnosis group required surgical intervention, in contrast to 60% of those in the non-hypnosis group. The study concluded that incorporating hypnosis into the preparation of pregnant women for labor and delivery diminishes the likelihood of complications, reduces the necessity for medical intervention, and fosters a safer and more comfortable delivery experience for both mother and child. Hence the study recommended that hypnosis may reduce pain and complications of labor [45].

A study conducted in Australia and published in the *British Journal of Anaesthesia* in 2004 aimed to reduce the requirement for pharmacological analgesia during pregnancy and labor. The controlled trial sought to demonstrate the substantial impact of hypnosis on women in pregnancy and labor. The sample consisted of 1059 cases, with 80% utilizing hospital services for hypnobirthing. The study concluded that hypnosis eliminates the necessity for drugs to expedite labor. Hence the study recommended that this positive technique helps the rise in natural births.

## **METHODOLOGY**

*Thinking well is wise; planning well is wiser, doing well is best of all.*

—Oscar Wilde

The research methodology outlines the systematic approach used to acquire accurate and dependable data for investigative purposes. Research methodology encompasses the entire process from identifying the problem to the final interpretation and conclusion, ensuring the scientific and valid execution of the research work.

This section provides a detailed account of the methodology, including the research approach, design, setting, criteria for sample selection, sampling technique, tool development and description, pilot study,

data collection, plan for data analysis, and the protection of human subjects. The primary objective of the current study is to assess the efficacy of a structured teaching program on the knowledge of hypnobirthing among final year GNM students in selected nursing schools in Vijayapur.

### Research Approach

The chosen research approach guides the researcher in determining the data to be gathered and the appropriate analysis methods. It also provides potential conclusions that can be drawn from the collected data. Given the nature of the selected research problem and the objectives to be achieved, an evaluative research approach was deemed suitable for the current study.

### Research Design

Research design pertains to the arrangement of a scientific inquiry (Figure 2). A pre-experimental design, specifically the one-group pre-test and post-test design, was employed for this study. In this investigation, the pre-test knowledge is denoted as  $O_1$ , and the post-test knowledge is represented as  $O_2$ . The intervention ( $X$ ) variable administered for group was structured teaching program regarding hypnobirthing. The symbolic representation of the design is shown in Table 1.

### Key

- $O_1$ : Pre-test knowledge score before administering structured teaching program.
- $X$ : Intervention variable (structured teaching program).
- $O_2$ : Post-test knowledge score after 7 days of administering structured teaching program.

### Variables Under Study

The following variables were used for this study.

- *Independent variable*: Structured teaching program.
- *Dependent variable*: Knowledge of students regarding hypnobirthing.
- *Extraneous variables*: Personal characteristics of final-year GNM students which include age, religion, type of family, family monthly income, occupation, and source of information.

### Setting of the Study

The investigator selected GNM nursing school at Vijayapur to conduct the study with adequate availability of the participants and feasibility. The nursing schools selected were the School of Nursing, District Hospital and Smt. Sushiladevi Nagur Nursing School at Vijayapur.

### Population

In the present study, population consists of final-year GNM students.

### Sample

The sample refers to the individuals chosen from the population to partake in the research study. In this particular study, the sample comprised 60 final-year GNM students located in Vijayapur.

### Sampling Technique

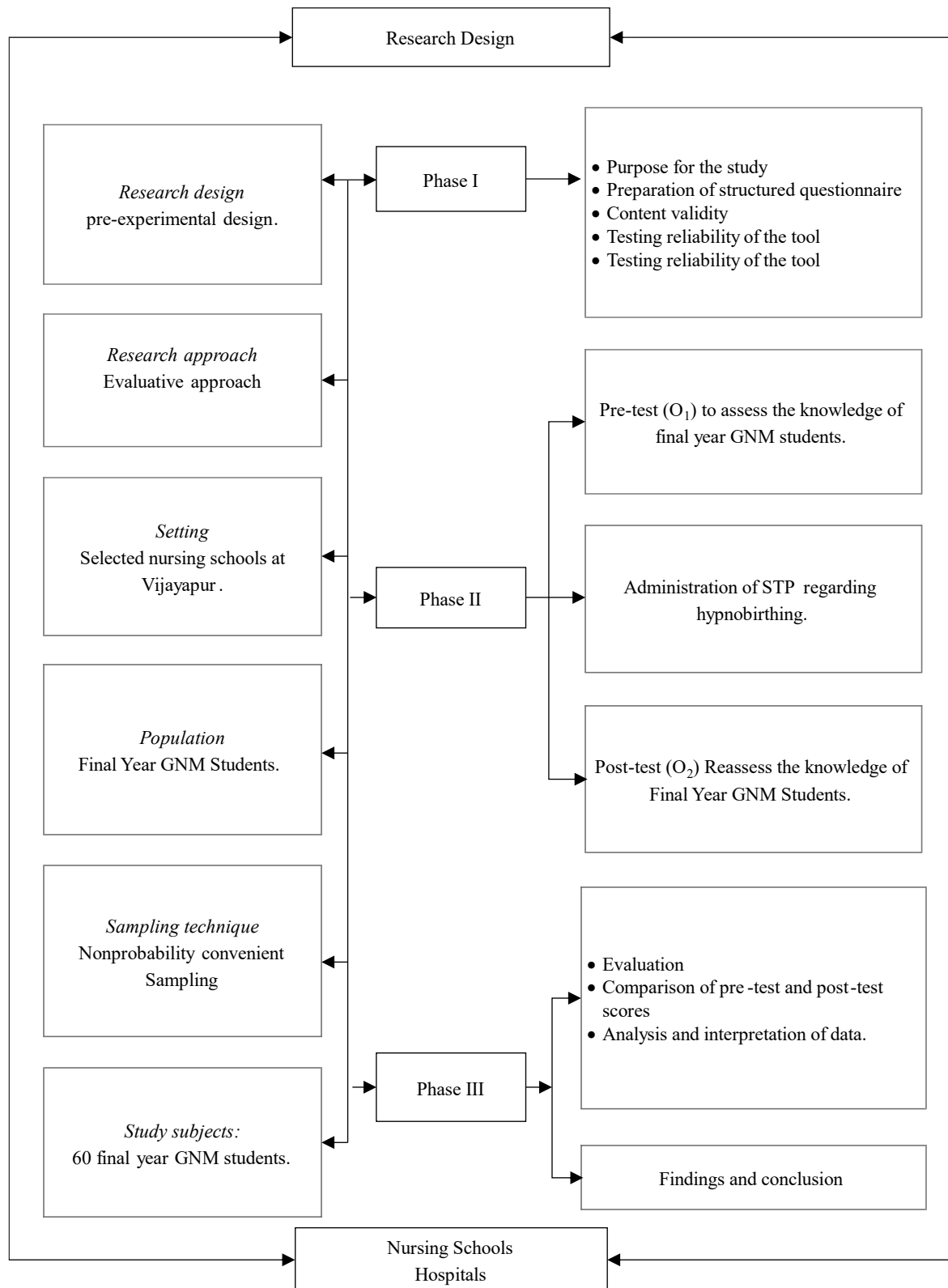
The sampling technique involves the method of choosing a segment of the population to represent the entire population. In this research, a non-probability convenient sampling technique was employed.

### Criteria For Sample Selection

The sampling frame structured by the researcher included the following criteria.

### Inclusion Criteria

- Students of selected nursing schools at Vijayapur.
- Students who are interested in the study.
- Students who are available during the time of study.



**Figure 2.** Schematic representation of research design.

**Table 1.** Symbolic representation of pre-experimental design.

| One group | Day 1                      | Day 1            | After 7 days                |
|-----------|----------------------------|------------------|-----------------------------|
|           | Pre-test (O <sub>1</sub> ) | Intervention (X) | Post-test (O <sub>2</sub> ) |

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**Exclusion Criteria**

- Students who are not available during the study.
- Students who are not interested in the study.
- Students who are not willing to participate.

**Development and Description of the Tool**

The process of data collection involves acquiring the necessary information to address the research problem. Tools refer to the methods or instruments utilized by the researcher for data collection. In this study, a self-administered knowledge questionnaire was employed to gather data. The questionnaire was developed through a comprehensive review of literature and consultations with experts to assess the knowledge of final-year GNM students. The data were collected using the self-administered knowledge questionnaire. The tool used in the present study consisted of three parts:

- *Part I:* Socio-demographic data
- *Part II:* Self-administered knowledge questionnaire
- *Part III:* Structured teaching program

**Part I: Socio-demographic Data**

Part I contains 7 items for obtaining information regarding age, religion, marital status, income of family, type of family, area of residence, and main source of information.

**Part II: Self-administered Knowledge Questionnaire**

The self-administered knowledge questionnaire regarding hypnobirthing consists of 30 multiple choice questions. Each question has 3 incorrect responses and 1 correct answer. Score 1 was given for each correct response in a single question and score 0 was given for wrong answer.

The resulting scores were ranked as follows:

1. Adequate knowledge  $\leq 50\%$
2. Moderately adequate knowledge  $50\% - 75\%$
3. Inadequate knowledge  $\geq 75\%$

**Part III: Structured Teaching Program**

The investigator formulated the structured teaching program (STP) by conducting a literature review and seeking input from experts. The STP provides fundamental information on instructional methods. An instructional system that is personalized for each individual learner, considering their specific needs and capabilities.

- Providing initial background information about the group.
- Assessing the current knowledge of the sample through a questionnaire, which serves as the foundation for developing the content of the STP.
- Preparing the outline of the content. The contents of the STP include topics on awareness regarding hypnobirthing. Which includes introduction, meaning and definition, founder, development, benefits, advantages, and disadvantages of hypnobirthing.
- STP assessment.
- The evaluation of the STP involves content validation, which is determined through consultation with experts in the fields of medicine and nursing.

**Preparation of the Blueprint**

A blueprint is created outlining the construction of a structured knowledge questionnaire, which serves as the foundation for developing items. It illustrates the arrangement of items based on content areas. The structured knowledge questionnaire comprises three domains:

- Understanding
- Comprehension
- Application



## **Testing of the Tools**

### ***Validity***

Validity is a multifaceted concept that primarily focuses on the robustness of the study's evidence, indicating whether the findings are compelling, convincing, and firmly established. To validate the tool, the instrument, along with the objectives, operational definitions, blueprint, and scoring key, was presented to ten experts. These experts, comprising seven nurse educators, one statistician, one sociologist, and one gynecologist, provided feedback to establish content validity. Suggestions were incorporated, resulting in the creation of a final valid tool.

### ***Pilot Study***

The pilot study serves as a preliminary, smaller-scale version or a trial run of the main study, conducted in a different population but with similar characteristics. Prior permission was obtained from the relevant authorities, and the investigator ensured clarity on the topic while assuring confidentiality. Data was collected from five participants to assess the feasibility of the study before initiating the main research. On the same day, the STP was provided after administering the pre-test, and on the seventh day, the post-test was conducted using the same tool. The tool and STP were determined to be reliable, feasible, and practical. Descriptive and inferential statistics were employed for data analysis.

### ***Reliability of the Tool***

The tool's reliability was determined through the split-half method. Administered to five subjects, the reliability of the split-half test was calculated using the Karl Pearson correlation coefficient formula, and the significance of the correlation was assessed using the probable error. The overall test's reliability coefficient was then estimated using Spearman's Brown Prophecy formula, resulting in a reliability of  $r = 0.86$ . Hence, the tool was deemed reliable.

## **Data Collection Process**

The research took place in the nursing schools affiliated with the District Hospital and Smt. Sushiladevi Nagur Nursing School in Vijayapur. The data collection period spanned 4 weeks, during which permission from relevant authorities was secured. Utilizing a non-probability convenient sampling technique, an average of 5 to 6 participants were selected daily. Following each pre-test, the STP was administered. Six days later, a post-test was conducted using the same questionnaire to assess the effectiveness of the STP.

## **Plan for Data Analysis**

The data analysis involved both descriptive and inferential statistics based on the study's objectives and hypotheses. The investigator created a master data sheet to facilitate data comparison. The knowledge levels of final year GNM students before and after the implementation of the STP were assessed using range, frequency, mean, and standard deviation. The statistical significance of the program's effectiveness was then analyzed using the paired 't' test. Additionally, the chi-square test was employed to determine any association between selected demographic variables and post-test scores. The findings were presented in tables and diagrams.

## **Protection of Human Rights**

The undertaken study was executed following the endorsement of the College's Dissertation Committee. Permission was granted from the appropriate authority, and written consent was acquired from each participant prior to data collection. Participants were assured of the confidentiality of their information.

## **Summary**

This article has covered aspects such as the research approach, research design, settings, population, sample and sampling technique, criteria for sample selection, development and description of the tool, pilot study, data collection procedure, plan for data analysis, and protection of human rights.

## RESULTS

Analysis involves categorizing, ordering, manipulating, and summarizing the data to address research questions. This section focuses on the outcomes derived from the data gathered from a sample of 60 final-year GNM students in relation to hypnobirthing. It systematically presents the analyzed data and provides an interpretation of the findings. The information collected was systematically organized, tabulated, analyzed, and interpreted utilizing descriptive and inferential statistics. The results were structured and displayed in two sections using tables and figures. The particulars of each segment are outlined below to align with the study's objectives.

### Objectives of the Study

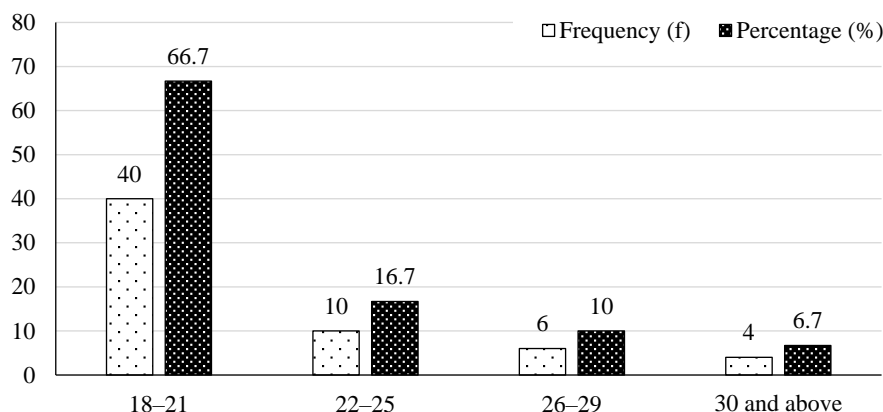
1. To gauge the extent of understanding concerning hypnobirthing among final-year GNM students in designated nursing schools at Vijayapur.
2. To appraise the effectiveness of the structured teaching program on hypnobirthing among the students.
3. To determine the correlation between the pre-test knowledge scores of students and certain socio-demographic variables.

### Hypothesis

- *H1*: A substantial disparity is expected to exist in knowledge scores before and after the test concerning specific socio-demographic variables.
- *H2*: A noteworthy correlation is anticipated between knowledge scores and chosen socio-demographic variables.

Figure 3 reveals that 40 (66.7%) of respondents were between the age group 18 to 21 years, 10 (16.7%) of them were between the age group 21 to 25 years, 6 (10.0%) of them were between the age group 26 to 29 years, and only 4 (6.7%) of them were more than or equal to 30 years old (Table 2).

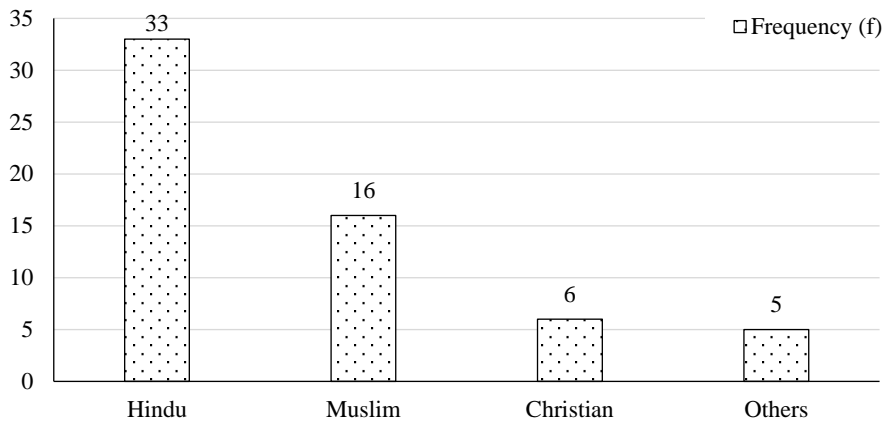
Figure 4 shows that majority of the respondents, 33 (55.0%), were Hindu, 16 (26.7%) were Muslim, 6 (10.0%) were Christians, and only 5 (8.3%) respondents belonged to other religion or caste (Table 3).



**Figure 3.** Frequency and percentage distribution of students according to age.

**Table 2.** Frequency and percentage distribution of respondents according to age.

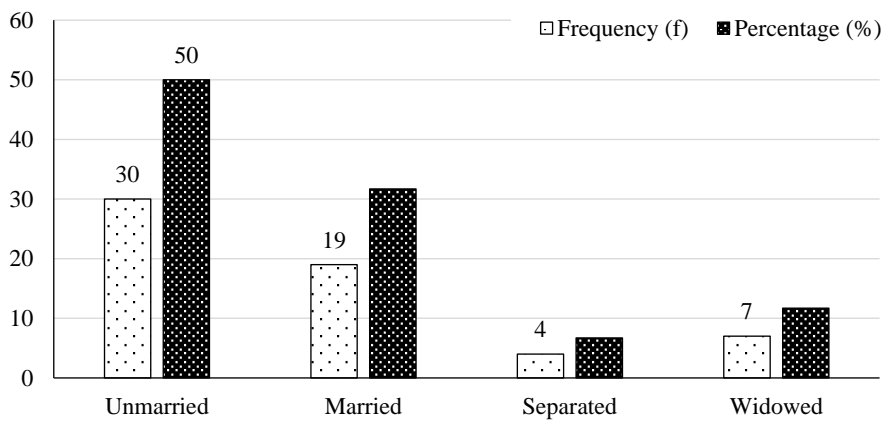
| S.N. | Age in years | Frequency (f) | Percentage (%) |
|------|--------------|---------------|----------------|
| 1    | 18-21        | 40            | 66.7           |
| 2    | 22-25        | 10            | 16.7           |
| 3    | 26-29        | 6             | 10.0           |
| 4    | ≥30          | 4             | 6.7            |
|      | Total        | 60            | 100.0          |



**Figure 4.** Frequency distribution of respondents according to religion.

**Table 3.** Frequency and percentage distribution of respondents according to religion.

| S.N. | Religion  | Frequency (f) | Percentage (%) |
|------|-----------|---------------|----------------|
| 1    | Hindu     | 33            | 55.0           |
| 2    | Muslim    | 16            | 26.7           |
| 3    | Christian | 6             | 10.0           |
| 4    | Others    | 5             | 8.3            |
|      | Total     | 60            | 100.0          |

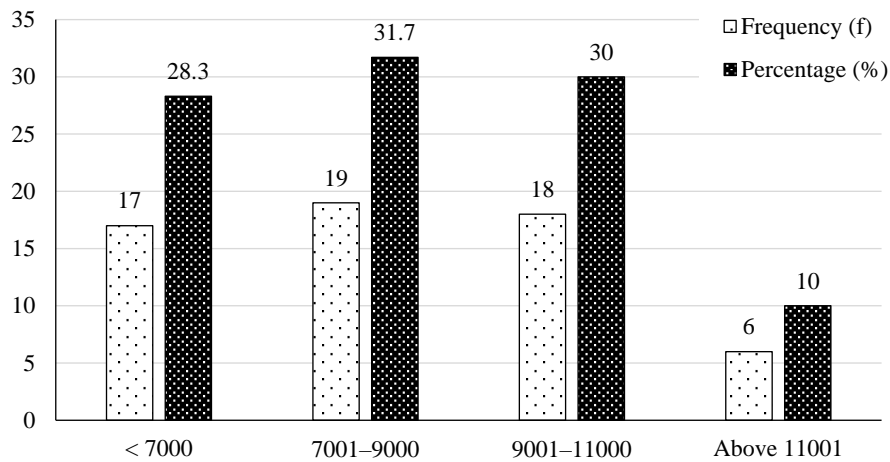


**Figure 5.** Frequency and percentage distribution of students according to marital status.

**Table 4.** Frequency and percentage distribution of respondents according to marital status.

| S.N. | Marital status | Frequency (f) | Percentage (%) |
|------|----------------|---------------|----------------|
| 1    | Unmarried      | 30            | 50.0           |
| 2    | Married        | 19            | 31.7           |
| 3    | Separated      | 4             | 6.7            |
| 4    | Widowed        | 7             | 11.7           |
|      | Total          | 60            | 100.0          |

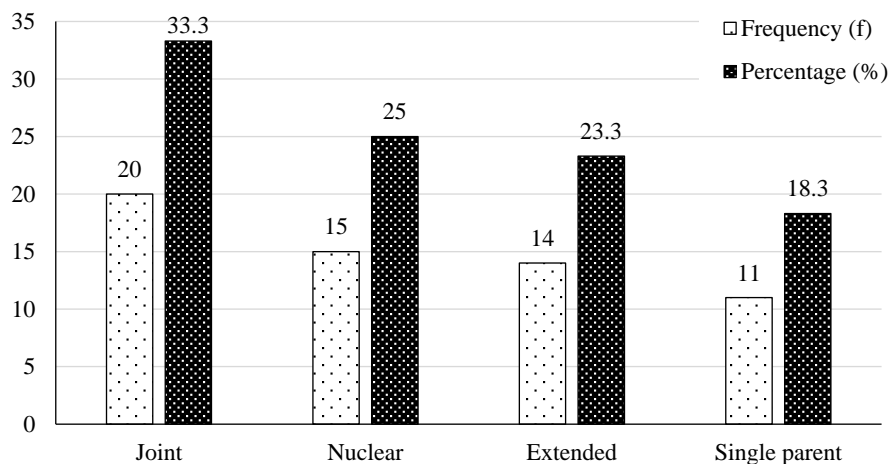
Data presented in Figure 5 shows that 30 (50.0%) of the respondents were unmarried, 19 (31.7%) of the respondents were married, 4 (6.7%) of the respondents were separated or divorced, and 7 (11.7%) of the respondents were widowed (Table 4).



**Figure 6.** Frequency and percentage distribution of students according to income of family.

**Table 5.** Frequency and percentage distribution of respondents according to income of family.

| S.N. | Income of family per month (INR) | Frequency (f) | Percentage (%) |
|------|----------------------------------|---------------|----------------|
| 1    | Below 7000                       | 17            | 28.3           |
| 2    | 7001-9000                        | 19            | 31.7           |
| 3    | 9001-11000                       | 18            | 30.0           |
| 4    | ≥11001                           | 6             | 10.0           |
|      | Total                            | 60            | 100.0          |



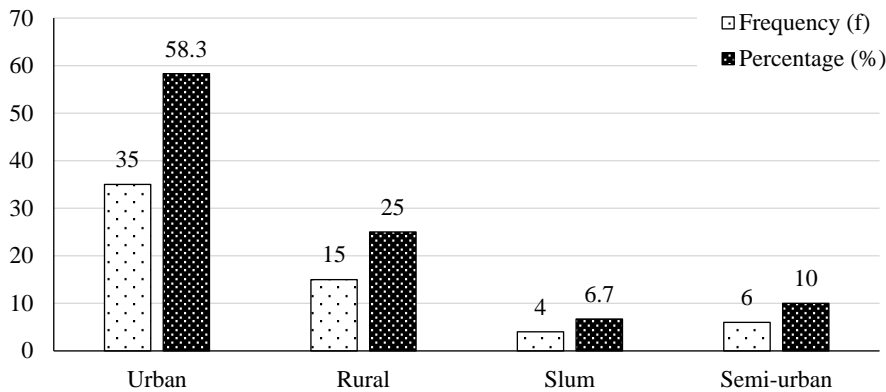
**Figure 7.** Frequency and percentage distribution of respondents according to type of family.

From the data presented in Figure 6, it is clear that 17 (28.3%) of the respondents had family income less than INR 7000 per month, 19 (31.7%) of the respondents had family income between INR 7000 and 9000, 18 (30.0%) of the respondents had income INR 9000-11001, and only 6 (10.0%) of the respondents had income more than INR 11001 (Table 5).

Figure 7 depicts that 20 (33.3%) of the respondents belonged to joint family. 15 (25.0%) of the respondents belonged to nuclear family, 14 (23.3%) of the respondents belonged to extended family, and only 11 (18.3%) belonged to single-parent families (Table 6).

**Table 6.** Frequency and percentage distribution of respondents according to type of family.

| S.N. | Type of family | Frequency (f) | Percentage (%) |
|------|----------------|---------------|----------------|
| 1    | Joint          | 20            | 33.3           |
| 2    | Nuclear        | 15            | 25.0           |
| 3    | Extended       | 14            | 23.3           |
| 4    | Single parent  | 11            | 18.3           |
|      | Total          | 60            | 100.0          |



**Figure 8.** Frequency and percentage distribution of respondents according to area of residence.

**Table 7.** Frequency and percentage distribution of respondents according to area of residence.

| S.N. | Area of residence | Frequency (f) | Percentage (%) |
|------|-------------------|---------------|----------------|
| 1    | Urban             | 35            | 58.3           |
| 2    | Rural             | 15            | 25.0           |
| 3    | Slum              | 4             | 6.7            |
| 4    | Semi-urban        | 6             | 10.0           |
|      | Total             | 60            | 100.0          |

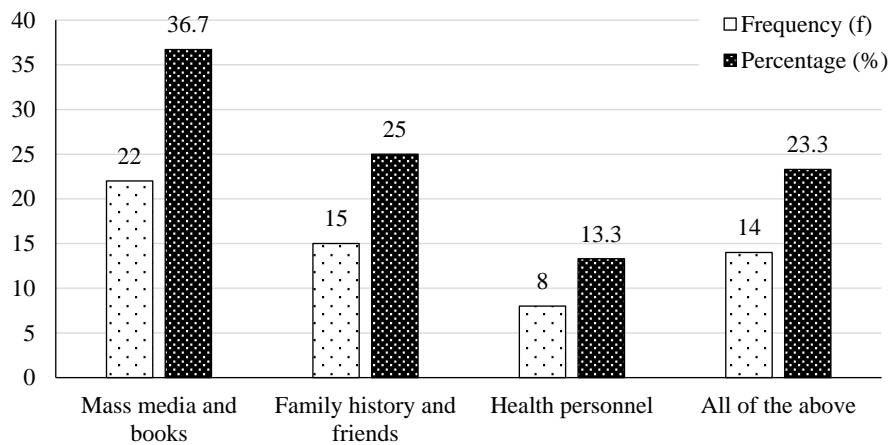
Figure 8 illustrates that out of 60 respondents, 35 (58.3%) were from urban areas, 15 (25%) were from rural areas, 4 (6.7%) were from slums, and 6 (10.0%) were from semi-urban areas (Table 7). Out of 60 respondents, 22 (36.7%) had information regarding hynobirthing from mass media and books, 15 (25.0%) had information from family history and friends, 8 (13.3%) had information from health personnel, and 14 (23.3%) of them had information from all these mentioned sources (Table 8 and Figure 9).

Figure 10 discloses that minimum and maximum knowledge score of respondents whose knowledge is inadequate was 6 and 15, respectively, and their median score was 10. Whereas among respondents whose knowledge is moderately adequate minimum and maximum knowledge score was found to be 16 and 17, respectively, and their median score was 16. Among respondents whose knowledge is adequate minimum and maximum knowledge score was found to be 19 and 26, respectively, and their median score was 25 (Table 9).

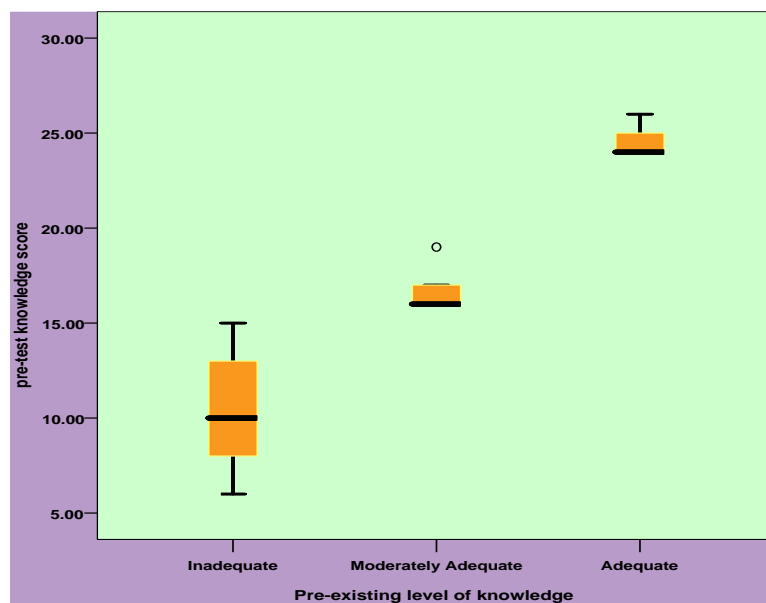
From a pool of 60 respondents, the pre-test results reveal that 45 (75.0%) individuals exhibited insufficient knowledge, 12 (20.0%) respondents demonstrated moderately adequate knowledge, and 3 (5.0%) respondents possessed satisfactory knowledge regarding hynobirthing. In post-test score, 4 (6.7%) respondents had inadequate knowledge, 26 (43.3%) had moderately adequate knowledge, and 30 (50.0%) respondents had adequate knowledge regarding hynobirthing (Table 10 and Figure 11).

**Table 8.** Frequency and percentage distribution of respondents according to source of information.

| S.N. | Source of information      | Frequency (f) | Percentage (%) |
|------|----------------------------|---------------|----------------|
| 1    | Mass media and books       | 22            | 36.7           |
| 2    | Family history and friends | 15            | 25.0           |
| 3    | Health personnel           | 8             | 13.3           |
| 4    | All of the above           | 14            | 23.3           |
|      | Total                      | 1             | 1.7            |



**Figure 9.** Frequency and percentage distribution of respondents according to source of information.



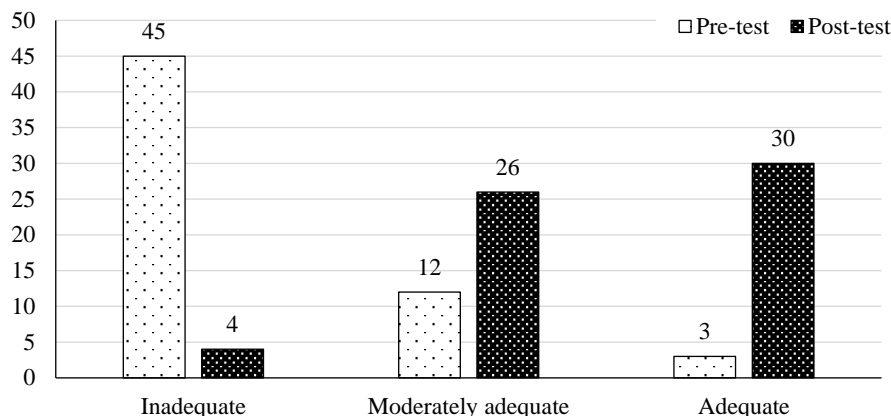
**Figure 10.** Box plot showing pre-existing knowledge of respondents.

**Table 9.** Pre-existing knowledge of respondents according to level of knowledge.

| Level of knowledge  | n  | Min | Max | Lower quartile | Median | Upper quartile |
|---------------------|----|-----|-----|----------------|--------|----------------|
| Inadequate          | 45 | 06  | 15  | 7.5            | 0      | 13             |
| Moderately adequate | 12 | 16  | 17  | 16             | 16     | 17             |
| Adequate            | 03 | 19  | 26  | 20.25          | 24     | 25             |

**Table 10.** Pre-test and post-test knowledge scores of respondents.

| Level of knowledge  | Scores  | Students        |                   |                  |                   |
|---------------------|---------|-----------------|-------------------|------------------|-------------------|
|                     |         | Pre-test<br>(f) | Percentage<br>(%) | Post-test<br>(f) | Percentage<br>(%) |
| Inadequate          | ≤50%    | 45              | 75.0              | 04               | 6.7               |
| Moderately adequate | 50%–75% | 12              | 20.0              | 26               | 43.3              |
| Adequate            | ≥75%    | 03              | 5.0               | 30               | 50.0              |
| Total               |         | 60              | 100               | 60               | 100               |



**Figure 11.** Pre-test and post-test knowledge scores of respondents.

**Table 11.** Mean, standard deviation, and standard error of pre-test and post-test knowledge scores.

| Knowledge |           | Mean    | N<br>(total no. of<br>sample) | Standard<br>deviation<br>(SD) | SD error of<br>mean | p-values<br>(t-value) |
|-----------|-----------|---------|-------------------------------|-------------------------------|---------------------|-----------------------|
| Pair      | Pre-test  | 12.0345 | 60                            | 4.72                          | 0.6197              | <0.0001<br>(-13.199)  |
|           | Post-test | 23.600  | 60                            | 4.36                          | 0.5631              |                       |

The data presented in Table 11 shows that the respondents' knowledge score was high in the post-tests than in the pre-tests. Mean pre-test score was 12.03 with standard deviation of 4.72 and mean post-test score was 23.6 with standard deviation of 4.36, which is significant as *p*-value was less than 0.0001. Sufficient evidence exists to support the effectiveness of the teaching program in augmenting the knowledge of respondents regarding hypnobirthing.

Table 12 indicates that there were no connections observed between pre-test knowledge scores and certain socio-demographic variables like marital status, family type, family income, and source of information. However, a notable correlation was found between pre-test knowledge scores and age, religion, and area of residence at a significance level of 0.05.

**Table 12.** Association between pre-test knowledge of respondents with selected socio-demographic variables.

| Socio-demographic variables | Score level |    | $\chi^2$ | Df | P-value | Result |
|-----------------------------|-------------|----|----------|----|---------|--------|
|                             | ≤ M         | >M |          |    |         |        |
| <i>1. Age (in years)</i>    |             |    |          |    |         |        |
| 18–21                       | 22          | 18 | 8.66     | 3  | 0.03    | S*     |
| 22–25                       | 03          | 07 |          |    |         |        |
| 26–29                       | 05          | 01 |          |    |         |        |
| ≥30                         | 00          | 04 |          |    |         |        |

|                                 |    |    |       |   |       |    |
|---------------------------------|----|----|-------|---|-------|----|
| <i>2. Religion</i>              |    |    |       |   |       |    |
| Hindu                           | 20 | 13 | 8.15  | 3 | 0.04  | S* |
| Muslim                          | 06 | 10 |       |   |       |    |
| Christian                       | 04 | 02 |       |   |       |    |
| Others                          | 00 | 05 |       |   |       |    |
| <i>3. Marital status</i>        |    |    |       |   |       |    |
| Unmarried                       | 15 | 15 | 3.602 | 3 | 0.308 | NS |
| Married                         | 12 | 07 |       |   |       |    |
| Separated                       | 01 | 03 |       |   |       |    |
| Widowed                         | 02 | 05 |       |   |       |    |
| <i>4. Income of family</i>      |    |    |       |   |       |    |
| <7000                           | 08 | 09 | 0.33  | 3 | 0.95  | NS |
| 70001–9000                      | 09 | 10 |       |   |       |    |
| 9001–11000                      | 10 | 08 |       |   |       |    |
| ≥11001                          | 03 | 03 |       |   |       |    |
| <i>5. Type of family</i>        |    |    |       |   |       |    |
| Joint                           | 11 | 09 | 1.08  | 3 | 0.78  | NS |
| Nuclear                         | 08 | 07 |       |   |       |    |
| Extended                        | 07 | 07 |       |   |       |    |
| Single parent                   | 04 | 07 |       |   |       |    |
| <i>6. Area of residence</i>     |    |    |       |   |       |    |
| Urban                           | 16 | 19 | 1.32  | 3 | 0.72  | S* |
| Rural                           | 08 | 07 |       |   |       |    |
| Slum                            | 03 | 01 |       |   |       |    |
| Semi-urban                      | 03 | 03 |       |   |       |    |
| <i>7. Source of information</i> |    |    |       |   |       |    |
| Mass media and books            | 13 | 09 | 3.11  | 3 | 0.539 | NS |
| Family history and friends      | 06 | 09 |       |   |       |    |
| Health personnel                | 05 | 03 |       |   |       |    |
| All of the above                | 06 | 08 |       |   |       |    |

NS, not significant; S, significant.

## DISCUSSION

This section focuses on presenting and discussing the outcomes of the current study. The study's findings are deliberated in relation to the previously stated objectives and are substantiated by referencing results from other studies. Simply reporting findings is insufficient to convey their importance; therefore, the interpretation given by researchers to the results assumes a crucial and justified role in the report. The discussion section is dedicated to a reflective and perceptive analysis of the findings, ultimately leading to a discourse on their clinical and theoretical relevance. The discussion of the study with appropriate literature review, statistical analysis and findings of the study based on objectives of the study. The aim of the present study was to evaluate the existing knowledge regarding hypnobirthing among final-year GNM students. A total of 60 final-year GNM students were selected for the study by using non probability convenient sampling method.

### Objectives

1. To gauge the extent of understanding regarding hypnobirthing among final-year GNM students in designated nursing schools in Vijayapur.
2. To assess the effectiveness of the structured teaching program on hypnobirthing among final-year GNM students.



3. To examine the correlation between post-test knowledge scores of students and selected socio-demographic variables.

### **Research Hypotheses**

*H1:* A notable disparity is anticipated in the knowledge scores of final-year GNM students between pre-test and post-test.

*H2:* A significant correlation is expected between the pre-test knowledge scores and their chosen socio-demographic variables.

### **Findings of the Study**

The findings of the study were as follows:

- *Section I:* Frequency and percentage distribution of final-year GNM students according to socio-demographic variables.
- *Section II:* Analysis of pre-test and post-test knowledge scores of final-year GNM students regarding hypnobirthing.
- *Section III:* Effectiveness of structured teaching on hypnobirthing among final-year GNM students.
- *Section IV:* Association between pre-test level of knowledge of final year GNM students with selected socio-demographic variables.

#### ***Section I: Frequency and Percentage Distribution of Final Year GNM Students According to Socio-Demographic Variables***

- Majority of final-year GNM students, were, 40 (66.7%), were in the age group 18 to 21 years, 10 (16.7%) were in the age group 21 to 25 years, 6 (10.0%) were in the age group 26 to 29 years, and only 4 (6.7%) were more than or equal to 30 years old.
- Majority of final-year GNM students, 33 (55.0%), were Hindu, 16 (26.7%) were Muslim, 6 (10.0%) were Christians, and only 5 (8.3%) respondents belong to other religions or caste.
- Majority of final-year GNM students, 30 (50.0%), were unmarried, 19 (31.7%) of the respondents were married, 4 (6.7%) of the respondents were separated or divorced, and 7 (11.7%) of the respondents were widowed.
- It is clear that 17 (28.3%) of the respondents had family income less than INR 7000 per month, 19 (31.7%) of the respondents had family income between INR 7000 and 9000, 18 (30.0%) of the respondents had income between INR 9000 and 11001, and only 6 (10.0%) of the respondents had income more than INR 11001.
- A total of 20 (33.3%) of the respondents belonged to joint family, 15 (25.0%) of the respondents belonged to nuclear family, 14 (23.3%) of the respondents belonged to extended family, and only 11 (18.3%) belonged to single-parent families.
- The results illustrate that, out of 60 respondents, 35 (58.3%) were from urban areas, 15 (25%) were from rural areas, 4 (6.7%) were from slum areas, and 6 (10.0%) were from semi-urban areas.

#### ***Section II: Analysis of Pre-test and Post-test Knowledge Scores of Final-Year GNM Students Regarding Hypnobirthing***

In the pre-test knowledge regarding hypnobirthing among final-year GNM students, out of 60 students, minimum and maximum knowledge score of respondents whose knowledge is inadequate was 6 and 15, respectively, and their median score was 10. Whereas among respondents whose knowledge is moderately adequate, minimum and maximum knowledge score was found to be 16 and 17, respectively, and their median score was 16. Among respondents whose knowledge is adequate, minimum and maximum knowledge score was found to be 19 and 26, respectively, and their median score was 25.

According to students' mean knowledge score in post-test, 4 (6.7%) respondents had inadequate knowledge, 26 (43.3%) had moderately adequate knowledge, and 30 (50.0%) respondents had adequate

knowledge regarding hypnobirthing. This suggests that the structured teaching program had a notable impact on enhancing the knowledge of the participants. In pre-test score, 45 (75.0%) had inadequate knowledge, 12 (20.0%) respondents had moderately adequate knowledge, and 3 (5.0%) respondents had adequate knowledge regarding hypnobirthing.

### ***Section III: Effectiveness of Structured Teaching on Hypnobirthing Among Final-Year GNM Students***

In the initial assessment, a predominant proportion, specifically 45 (75.0%), demonstrated insufficient knowledge in the pre-test scores. Additionally, 12 (20.0%) respondents exhibited moderately adequate knowledge, while 3 (5.0%) respondents showcased adequate knowledge regarding hypnobirthing. In post-test score, 4 (6.7%) respondents had inadequate knowledge, 26 (43.3%) had moderately adequate knowledge, and 30 (50.0%) respondents had adequate knowledge regarding hypnobirthing. Hence, we conclude that structured teaching program was effective.

### **Section IV: Association Between Pre-Test Level of Knowledge of Final-Year GNM Students with Post-Test Knowledge Score**

The study's results indicate no connections between pre-test knowledge scores and certain socio-demographic variables, including marital status, family type, family income, and information source. However, a noteworthy correlation was identified between pre-test knowledge scores and age, religion, and area of residence at a significance level of 0.05.

## **CONCLUSION**

This section deals with the conclusion, implication, recommendations, and limitations of the present study.

### **The Major Findings of the Study**

- Majority, that is, 40 (66.7%), respondents were in the age group 18 to 21 years.
- Majority, that is, 33 (55.0%), respondents were Hindu.
- Majority of the respondents, 30 (50.0%), were unmarried.
- Majority of the students, 17 (28.3%), had family income less than INR 7000 per month.
- Majority, 20 (33.3%), of the respondents belonged to joint family.
- Majority, 35 (58.3%), the respondents were from urban areas.
- Majority, 22 (36.7%), of the respondents had information regarding hypnobirthing from mass media and books.
- In the pre-test knowledge regarding hypnobirthing out of 60 students, 45 (75.0%) had inadequate knowledge, 12 (20.0%) respondents had moderately adequate knowledge, and 3 (5.0%) respondents had adequate knowledge regarding hypnobirthing.
- In the post-test knowledge regarding hypnobirthing among students, out of 60 students, 4 (6.7%) respondents had inadequate knowledge, 26 (43.3%) had moderately adequate knowledge, and 30 (50.0%) respondents had adequate knowledge regarding hypnobirthing.
- The findings of the study reveals that there were no associations between pre-tests knowledge scores with selected demographic variables such as marital status ( $\chi^2 = 3.602$ ), type of family ( $\chi^2 = 3$ ), source of information ( $\chi^2 = 3.11$ ), residence ( $\chi^2 = 3$ ), monthly income ( $\chi^2 = 0.33$ ). But there was significant association between pre-test knowledge score with age, religion, and area of residence at 0.05 level of significance.

### **Implications of the Study**

After analyzing the gathered information, the researcher got to know the facts about knowledge and preventive practices regarding hypnobirthing among final-year GNM students. Based on the outcomes of the study, the following suggestions are made to the various fields of nursing such as nursing practice, nursing education, nursing administration, and nursing research.

### **Nursing Practice**

- Today healthcare delivery system has changed from a care-oriented approach to promotion of health and prevention of illness-oriented approach. It focuses mainly on primary prevention, which is aimed at health promotion. Considering these factors, nursing personnel can contribute much toward hypnobirthing and benefits by creating awareness in the final-year GNM students of the nursing schools through structured teaching programs and through health education.
- Nurses should be equipped with adequate knowledge on benefits and advantages hypnobirthing so that they would be able to impart appropriate knowledge regarding hypnobirthing practices to others.

### **Nursing Education**

- As a nurse educator, there are abundant opportunities to educate the final-year GNM students regarding hypnobirthing. The nurse should periodically organize the special health education program on hypnobirthing and its practice.

### **Nursing Administration**

- The nursing administrator should take active part in developing protocols, making health policy, standing orders related to designing the health education programs for final-year GNM students regarding hypnobirthing and its practice.
- The nursing administrator can utilize the available resource personnel towards the health education of final-year GNM students regarding hypnobirthing and its practice.
- The nursing administrator should explore their potential and encourage innovative ideas in the preparation of appropriate teaching material. She should organize sufficient human resources, money, and material for disseminating information.

### **Nursing Research**

- This study helps nurse researchers to develop appropriate health education tools for educating patients regarding hypnobirthing, its management, and also its practice according to their demographic, socio-economic, cultural, and political characteristics.
- Nurses should come forward to take up unsolved questions in the field of hypnobirthing and its practice and to carry out studies and publish them for the benefit of final-year GNM students and public fraternity. The public and private agencies should also encourage research in this field through materials and funds.

### **Suggestions**

- Public awareness regarding hypnobirthing and its practice on health can be created through mass media such as newspapers, radio, magazines, and television.
- The awareness among healthcare providers regarding hypnobirthing and its practice and its effect on health can be created through structured teaching programs, seminars, and workshops.
- Continuing education of healthcare workers on knowledge practices and emphasizing correct practice.

### **Recommendations**

- A study can be replicated on large sample to generalize the findings.
- Comparative studies can be done in urban settings regarding hypnobirthing and its practice.
- A study can be done to evaluate the effectiveness of structured teaching program on knowledge regarding hypnobirthing and its practice.

### **Limitations**

- The study was limited to 60 final-year GNM students of selected nursing schools at Vijayapur.
- The study was limited to final-year GNM students.

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