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“A Study To Assess The Effectiveness Of Educational Program On Knowledge Regarding Preparation For Natural Childbirth Among Primigravida Mothers At Selected Maternity Hospitals, With A View To Developing An Information Booklet In Jaipur, (Rajasthan).”

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ABSTRACT

The objective of this review was to evaluate the impact of educational program in enhancing natural childbirth readiness among primigravida mothers in selected maternity hospitals in Jaipur, Rajasthan. In the study, the emphasis given on assessing knowledge changes and creating informational material regarding maternal education on natural child birth by facilitate the comparison of results for the participants that were split into the experimental group and the control group and data collection tools employed in the groups as pre- and post-intervention questionnaires and findings of the responses.

The pervious findings suggested an increase in knowledge and confidence among the experimental group in comparison to the control group. Interviewees were well-informed about natural childbirth, appropriate analgesia techniques, and primary labour skills. It was also engaging in the reduction of anxiety and improving the level of self-efficacy of the mothers. To evaluating the different socio-demographic factors it was realized that the program had a

positive impact on primi-mothers, illiterate mothers, and those from poor background. The importance of this study is inherent in the prospects of changing maternity care practices by incorporating structured educational interventions into routine perinatal preparation. The results highlighted the delivery of more culturally appropriate, easy, and accessible educational interventions for all mothers. Such findings imply that there is a need for continuous improvement and application of such programs to improve maternal experiences to be healthier, empowered ones.

Keywords: Natural Childbirth Education, Primigravida mothers, Maternal Knowledge, Pain Management Technique.

INTRODUCTION

Natural childbirth is an important topic in childbirth and maternal and infant care, which focuses on the process of birth without undue interference. It is not only physically essential but also holds psychological as well as emotional importance for both the mother and the child. For improving the knowledge of primigravida mothers, faced with high-risk pregnancy, educational programs are essential.¹

These interventions are meant to educate and equip them with knowledge that would enhance a good birth process.

Aim of the Study

The purpose of this research is to assess the impact of an educational program on the knowledge of natural childbirth preparation among primigravida mothers in selected maternity hospitals in Jaipur, Rajasthan.

Objectives of the Study

The objectives of the Research are:-

1. To assess the knowledge regarding preparation for natural childbirth among primigravida mothers of both groups before the implementation of the educational Program.
2. To assess the knowledge regarding preparation for natural childbirth among primigravida mothers of the experimental group after the implementation of the educational Program.
3. To assess the knowledge regarding preparation for natural childbirth among primigravida mothers of a control group without the implementation of an educational Program.
4. To assess the impact of the educational Program on knowledge regarding natural childbirth among primigravida mothers of maternity hospital Jaipur.
5. To find out the association between pre-test knowledge score regarding preparation for natural childbirth among primigravida mothers of maternity hospitals with their selected socio-demographic variables.

Importance of Educational Programs in Natural Childbirth

Educational programs go a long way in shedding light on issues to do with natural childbirth and addressing some of the emotions it triggers. These programs have a three-fold purpose that is important in increasing the quality of childbirth in all aspects.²

Experiences gained from educational interventions enable healthcare professionals to understand the physiological and psychological aspects of labour that providing elaborate descriptions of the

initial, energetic, and transitory stages of labour. A variety of educational instructions of non-drug pain management approaches like the Lamaze technique, breathing, water birth etc. help to reduce pain during labour. Illustrating the benefits including prompt maternal recoveries, direct skin-to-skin contact, and lower risk of respiratory complications among babies ensures that many mothers embrace this technique.

These programs emphasize practical skills to help mothers to organize their labour, pain and anxiety training, focused breathing delivers oxygen to the brain and muscles for relaxation. Educational methods such as progressive muscle relaxation, guided imagery, and mindfulness to reduce stress and improve labour pain coping abilities for mothers. This preparedness gives mothers more control over their circumstances, reducing the anxiety of the unknown during labour. The same research indicated that 71% of experimental group individuals had excellent intra-partum behavior compliance compared to 7% of control group members.³

Preparing for delivery is emotional process. Education, rehearsals, and simulated childbirths boost moms' confidence.⁴

Counseling of groups for pregnant women help them to feel less alone by sharing their anxieties and expectations. The primigravida mothers often feel anxious throughout pregnancy and childbirth due to uncertainty.⁵

These issues should be addressed by strategic interventions in customized education programs. These instructional components help women to understand their childbearing options and achieve a natural delivery. These integrated programs prepare women physically and psychologically for delivery. Positive birth outcomes, lower postnatal depression, and better mother-baby relationships are linked. Similar results were also detected in the study in AIIMS Jodhpur where the experimental group had 88% excellent maternal outcome, unlike the control group with 57% excellent maternal outcome.⁶

Main body

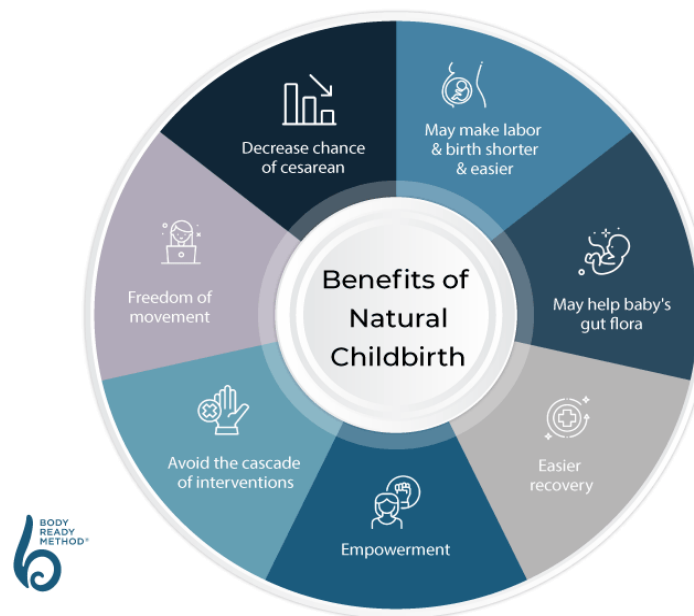
Natural Childbirth Education(NCE) program prepares women with a number of techniques that would enable them to go through the labour and delivery process with the least medical assistance possible.⁶

This literature review evaluates the literature worth on such educational programs and highlights the research gaps and factors associated with the effect of childbirth education.

Effectiveness of Natural Childbirth Education

Evidenced-based information has revealed positive effects of NCE program on maternal and neonatal health which is why it is crucial to include in prenatal services.⁷ These programs usually concentrate on a range of methods aimed at preparing females for a normal birth process and skills that support the woman throughout the labour process without the use of invasive technologies. The benefits of natural child birth are:-

- Decrease chance of caesarean section
- Easier recovery



Core Elements of Natural Childbirth Education

NCE programs include a broad spectrum of techniques:

- **Breathing Exercises:** These are intended to aid women to deal with pain and stress during labour. In turn, deep, controlled breaths help oxygen-rich air to reach the necessary muscles and the baby, thus helping the woman to stay as energetic as possible and reporting less pain than in reality.⁸
- **Relaxation Techniques:** The techniques like guided imagery, progressive muscle relaxation techniques, and meditation techniques are added to help women to reduce their physical tension and anxiety which in turn can help in making labour easier and may also help in shortening the duration of labour.⁹
- **Lamaze Method:** - Dr. Lamaze created a technical method that focused on the requirement for a caring and loving environment with presence of companion. It is the creation of an environment of tranquility in the labour room and the submersion of newborns in a bath of warm water, so he is called as the precursor of water birth.¹⁰
- **Non-pharmacological Pain Management:** This incorporates shiatsu, rubbing, massage, aroma therapy, water therapy, and birthing balls etc. techniques to minimize pain during the process without medicating.¹⁰

Impact on Birth Outcomes

The impacts of these educative processes can be noticed in terms of improved frequency of normal deliveries, reduced incidence of epidural analgesia, and elective LSCSs. NCE program enables natural childbirth to a large extent while at the same time minimizing the likelihood of such an intervention thus ensuring faster healing for the new mother.¹¹

Psychological and Emotional Benefits

Research shows that childbirth education programs make women feel more in control and comfortable during labour. Educated mothers are happier with their delivery experiences when they participate more in program.¹²

In addition to the physical benefits of these programs, increased control and knowledge over the birthing process reduces psychological and emotional concerns, improving post-partum mental health.

Several studies have shown that NCE program promotes mothers self-efficacy, which improves postnatal behaviour like nursing. Women who complete such programs are more likely to

breastfeed exclusively and longer. They are more confident in nursing than uninformed mothers, making it simpler for them.¹³

• Long-term Effects

Although, various studies provide decent evidence in proving the effectiveness of NCE program in the short term but there is a lack of researches focusing on the long-term impacts. Another study may examine how early childhood education affects mothers well-being years after delivery, including postpartum depression, anxiety, and parental satisfaction. The long-term effects of NCE program has child development on cognitive and emotional development owing to early maternal input via nursing are yet unique and might be studied with additional study.¹⁴

Area of Impact	Current Research	Gaps in Research
Maternal Health	Short-term benefits well-documented	Lack of longitudinal studies on long-term health
Mental Health	Immediate reduction in anxiety and stress	Impact on postpartum depression and long-term anxiety unexplored
Parental Satisfaction	Increased satisfaction during childbirth	Long-term parental satisfaction not assessed
Child Development	Positive effects on immediate neonatal outcomes	Cognitive and emotional development over time
Early Maternal Bonding	Enhanced bonding through breastfeeding	Long-term impact on maternal-child relationship

Gaps in Current Research

It can therefore be concluded that, while there is a body of evidence supporting the effectiveness of natural childbirth education, there are still a number of limitations to what is currently known. There is little long-term research on the effects of childbirth education on mothers and their children. Studies on cross-cultural and individual birthing education treatments based on cultural, economic, and other variations are limited.¹⁵

Additionally, the programs are only applicable to hospitals and other delivery places like homes or birthing centers. To assess NCE program efficacy and value, further broad investigations of its effects in varied situations are needed.

• Socio-Demographic Factors Influencing Childbirth Education Outcomes

Socio-demographic factors are thus defining the possibility and efficiency of the NCE program. Some of these variables include age, education, economic status, and culture since they are fundamental in dictating how involved and how much these mothers stand to benefit from childbirth education.¹⁶

According to the MMR, which is about 445 per 100,000 live births in Rajasthan, socio-demographic issues are more obvious here. Primi mothers are younger than multigravida mothers and having experience and more concerns relating to childbirth than primi mothers.¹⁷

To effectively prepare young mothers, it is crucial to design educational programs that accommodate the issues that young mothers face as well as their manner of learning. On the other hand, women with higher education levels are more inclined to seek and access childbirth education on their own. They are also likely to assume a more proactive approach in the management of their labour and delivery since they are likely to have better knowledge of the childbirth process as well as available choices.

This paper identifies that the indigenous women in Rajasthan face very limited access to quality

childbirth education due to their low socioeconomic status. Since 60% of the area in the state is desert raised with sharp temperatures and infrequent people habitation. Many women from low-income families have poor knowledge and less freedom to make proper choices for their childbearing. Inadequate finances and lack of transport are added barriers to accessing education programs. This is not surprising, considering that the poverty level is currently at 20.1%, especially in southern Rajasthan, there is a tendency for the more developed areas to have relatively higher health literacy compared with the less developed areas which determines the quality of education they are likely to acquire.¹⁸

Another factor that has a role to play is cultural differences. In Rajasthan, it was noted that more than 90% of the population is Hindu; as such, traditional birth culture may play a role in their acceptance of NCE program activities. Meeting these problems needs active recruiting and assistance to ensure birthing education is accessible to everyone. Developing programs in the local language or involving local leaders may boost community participation and programs effectiveness.¹⁹

Culture affects birthing expectations, attitudes, and values, as well as pain alleviation, privacy, and technology usage. Cultural variations may affect how much women learn and use delivery procedures.²⁰

Language may also hinder accessibility, particularly for individuals who must attend English-only sessions. Healthcare professionals should offer culturally sensitive treatment and multilingual materials for improved participation in programs. Thus, programs that address cultural sensitivities, language difficulties, and socioeconomic gaps are more likely to succeed. Multicultural teaching materials and translators or instructors who speak the learners' second language boost NCE's program effect.²¹

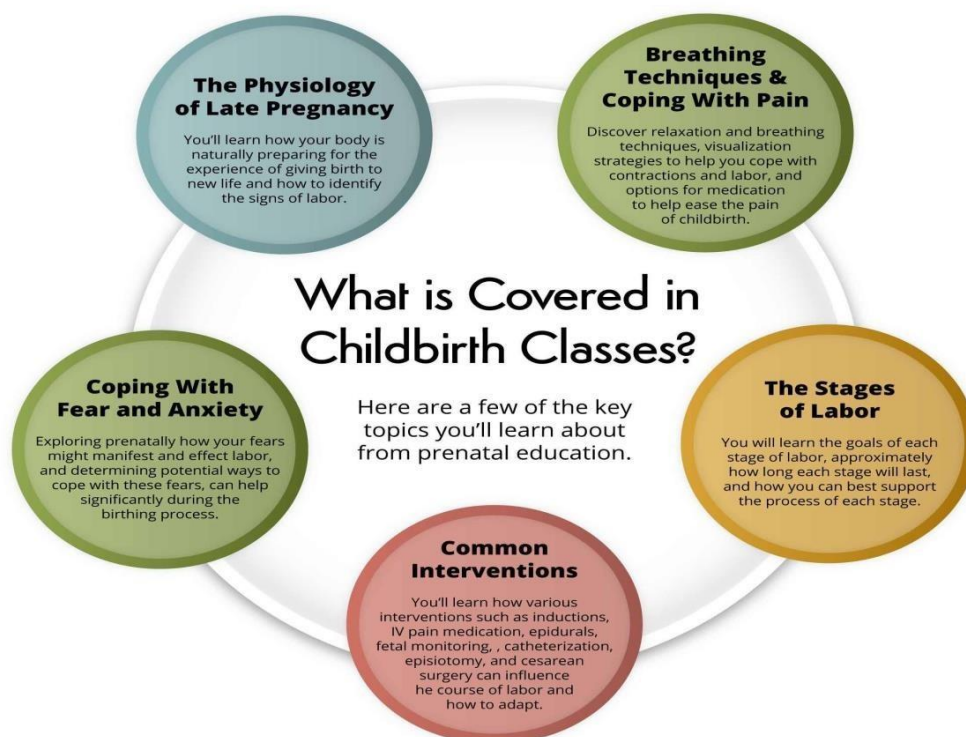
Understanding these socio-demographic aspects may help to create more inclusive childbirth education programs so all women can learn successfully. Better mother and new-born health with happy delivery experiences across cultures come from this method.

Methodology

Design of the Educational Program

This educational program used for this study was planned systematically, to cover nursing and medical knowledge for the primigravida mothers with an emphasis on natural childbirth. As a way of passing information, the program was divided into various engaging sessions with each session focusing on aspects of natural childbirth. The sessions included:

1. **Introduction to Natural Childbirth and physiology of late pregnancy:** An overview of the late physiological changes, stages of labour, the purpose of natural birth, and commonly voiced issues and beliefs.
2. **Breathing technique and Pain Management Techniques:** Specific guidance on the management of pregnancy-related pain without the use of drugs involves exercises such as breathing techniques, relaxation procedures, and birthing balls.
3. **Stages of Labour and Delivery Preparation:** Special knowledge of stages of labour and their management, position, mobility, and support of the birth partner.
4. **Postpartum Care and common interventions:** Tips on postpartum care, when to start breastfeeding and tips on how to successfully achieve the same. some common intervention related to minor element of puerperium.



Each class was organized in a way that involved the participants to use symbols, write, discuss, watch and ask questions in order to have mastery of what was being taught.

Selection of Primigravida mothers

Appropriate selection of participants was necessary to ensure valid and reliable participation and to meet the objectives of the study. These Primigravida mothers were selected from maternity hospitals in Jaipur, Rajasthan. The selection criteria included:

1. **First-Time Pregnancy:** This was done to eliminate any chance of confounding. For example having women with different levels of pregnancy experience in the study.
2. **Gestational Age:** The participants had to be in the third trimester of pregnancy, between the 28th and 40th week, as this stage is considered optimal for preparing for childbirth.
3. **Willingness to Participate:** This was done in order to maintain the ethical guidelines of the study and only participants who provided their own consent were used.

The records of the hospital were then reviewed to identify potential mothers who may be interested in the study. Convenient sampling was also used where healthcare practitioners in maternity facilities identified eligible women, described the study and sought their permission to participate.²² It also made sure that participants were sufficiently informed about the study and gave their consent.

Data Collection Methods

The data collection for this study was aimed at measuring the outcome of educational programs conducted on primigravida mothers about natural childbirth at selected maternity hospitals in Jaipur, Rajasthan. Data was gathered in two phases: Knowledge gains were assessed by using a structured questionnaire that was administered prior to the intervention and again afterward.

1. **Pre-Intervention Assessment:** Firstly, there was the completion of the knowledge assessment questionnaire that enabled evaluation of the participants' knowledge on natural childbirth. The questions established in the questionnaire were relevant to the focus of childbirth preparation. This questionnaire was quite useful not only in assessing prior knowledge, but to

also assess specific educational gaps in order to change the subsequent program.²³

2. **Post-Intervention Assessment:** As to the results of the educational program, the same questionnaire was completed again in order to compare the changes in the participants' knowledge level. This method was very significant in establishing the impact of the educational intervention. In ensuring that the assessments were done at different points to evaluate the impact of the program, the study adopted methodological consistency in the assessment scores collected at the two points in time.²⁴

The two assessments were administered in hospital setting to ensure that any possible interference with the assessment was eliminated. Other demographic data, including age, education and income, were also obtained for the analysis of the relationship with the results of the test educational program²⁵.

This approach makes it easier to determine how some social and economic factors can affect the learning achievement in health education.

Findings and discussion

Pre- and Post-Implementation Assessments

The assessment taken prior to the implementation showed that there was very limited awareness about natural childbirth among the primigravida mothers. Majority of the participants had poor knowledge of labour stages, pain control measures, and actions required after delivery.

When comparing the knowledge of participants in the experimental group before and after the educational program was administered, a large positive change was noted. The approach indicates that participants had a better overall understanding of the childbirth process and related physiological changes, labour pain, pharmacological and non-pharmacological methods of dealing with pain, and overall labour process skills. This marked improvement suggests that the educational program ensured the participants were better placed to practice natural childbirth.

Interpretation of Results in the Context of Existing Literature

To assess the outcomes of the educational program that has been developed to improve knowledge regarding natural childbirth among primigravida mothers comparison should be made of the program with other similar interventions described in the journals. This is helpful in placing the results into a broader perspective, and then using the research literature to assess the effectiveness of the program in question.

El Sarkawy et al. (2021) conducted a study, and it was found that a broad-spectrum intervention program improved the understanding of safe motherhood practices among pregnant women. The active learning components of the lesson, as well as the setting that promoted group cohesion and camaraderie, are also consistent with the findings of Shehata Ibrahim et al. (2023), who emphasize the effectiveness of kinetic approaches and social support in enhancing breastfeeding self-confidence among mothers.²⁶

Kalabarathi and Abhishiya (2021) that aimed to evaluate the level of anxiety regarding labor among primigravida mothers and describes psychological preparation as one of the components of childbirth training. To decrease in anxiety and the increase in confidence as noted in our study imply the need to attend to both educative and emotional aspects similar to the study by Shehata Ibrahim et al. (2023), where outcomes related to self-efficacy can be predicated on educative aspects and the emotional support provided by breastfeeding.²⁷

El Sarkawy et al. (2021) employed this method convincingly as they used a pre-test and post- test approach to track the evolution of the pregnant women's knowledge and perception regarding safe motherhood practices. They also explain that such assessments can reveal a wide range of effects of the intervention in terms of knowledge gain and loss that it can help to identify where more resources may be needed for mothers to learn more.²⁸

The intervention plan, based on the liberal application of visual and audio aids, role plays, and brainstorming, was effective in enhancing participants' comprehension of labor processes and pain management strategies (Sharma Rahul, 2020).²⁹

Due to the use of pre and post-test, the researchers are in a position to assess better the learning gains that were influenced by the intervention. It not only corroborates the educational strategy employed, but also ensures the constant adaptation of the subject material according to empirical test results (Dr. Rahul Sharma). It guarantees that learning initiatives are sensitive to the needs of the learners and are changed in consideration with quantitative and qualitative feedback from assessments.³⁰

Effectiveness of the Educational Program

There is supporting evidence that the proposed educational program is effective based on the existing enhanced knowledge levels within the experimental group compared to the control group. The active and encompassing structure of the program, as demonstrated through the use of visual and audio presentations, practical exercises, and small group brainstorming and analysis, played a critical role in improving participants knowledge and proficiency.³¹

The cross-sectional study of Chauhan et al., conducted at All India Institute of Medical Sciences Jodhpur also supported that there was a significant improvement in the knowledge score of the primigravida mothers, with the mean score raised from 5.73 in a control group to 15.48 in the experimental group.³²

The participants showed a good understanding not only of the physiological and psychological processes related to labour but also of labour pain relief measures and labour management strategies. This knowledge base not only equipped them for the physical processes of childbirth but also for the psychological aspect of gaining power (Dr. Rahul Sharma, 2022). This in combination with lower level of anxiety reported by the participants proves that in addition to learning informative content, the program offers psychological support as well.³³

Paolini, (2015), in their study mentioned that the efficacy of an educational program is assessed in accordance with the level of accomplishment of the planned learning objectives and credibility on students' competencies (Paolini, 2015). Several aspects are considered to assessing this effectiveness; these are curriculum, instructor's strategies, assessment, and students' interest and satisfaction.³⁴

According to Darling-Hammond, (2009), before progressing, a well-structured curriculum that meets the educational standards and the students' needs is inevitable. They should state the intended learning outcomes, cover the content that learners need to know and organize learning experiences for acquiring new knowledge (Darling-Hammond, 2009).³⁵

The efficacy of an educational program is assessed in accordance with the level of accomplishment of the planned learning objectives and credibility on mothers' competencies. Several aspects are considered to assessing this effectiveness; these are curriculum, instructor's strategies, assessment, and students' interest and satisfaction. In addition, it should be also noted that the program's effectiveness can be supported by such key approaches as the continuous improvement processes. Another method of keeping the program current is by conducting a continual review and modification of the curriculum and integration of new teaching strategies and embracing the professional development of the educators.

CONCLUSION

This research emphasizes the role of structured educational programs that should help prepare primigravida mothers for normal birth. Consequently, study results reveal that programs of this nature increase the mothers' knowledge, confidence and preparedness level, which enhances neonatal results and relieves stress. This way, multimedia together with practical activities and peer discussions within the program are made to offer necessary training and encouragement. These outcomes point to the need for including educational procedures along with standard prenatal care processes to increase the level of preparedness among expectant women of any background. Such integration may improve maternal and neonatal health, increase satisfaction during childbirth, and reduce the application of medical procedures. Thus, the future researches should use the longitudinal research design to examine the long-term effects of childbirth education on mother and

infant.

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