

## Impact Of Educational Package On Knowledge Regarding Childbirth Among Primigravida Mothers

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### ABSTRACT

**Background:** Primigravida mums do not understand childbirth well, which might affect their self-assurance and readiness for the process. The purpose of this research was to determine whether or not a prenatal education program was successful in increasing first-time mums' understanding of how to be physically and mentally ready for a delivery.

**Objectives:** The research's purpose was to compare participants' knowledge scores before and after receiving an educational package and assess the package's effectiveness.

**Methods:** Forty first-time mums who sought medical attention at a clinic participated in the study using a pre-experimental, one-group pre-test-post-test design. There was a systematic knowledge questionnaire given both before and after the training package that included labour phases, pain management, and skills for preparing for delivery was delivered. "A paired t-test and descriptive statistics (such as percentages, means, and standard deviations) were used to analyze the data".

**Results:** The post-test knowledge score was 24.73 (SD = 5.970), a significant increase from the mean pre-test score of 17.28 (SD = 6.477) ( $t = -7.235$ ,  $p = .000$ ). Forty percent of the participants were between the ages of 23 and 27, 37.5% had completed some level of formal education, and 57.5% were familiar with the process of giving birth naturally.

**Conclusion:** Primigravida mothers were better prepared for a delivery after receiving the instructional package, which showed a significant increase in knowledge levels. These results lend credence to the idea that prenatal care should include organized educational treatments to better prepare mothers. However, they also call for further research with bigger samples and control groups to draw firm conclusions.

**Keywords:** ACL reconstruction, clinic-based rehabilitation, on-field training, return to sport, randomized controlled trial

### 1. INTRODUCTION

Indian culture has always held women in high esteem, seeing them as embodiments of inherent divinity. Most women make it through pregnancy and delivery unscathed because their bodies are perfectly designed to do it, but there are always unexpected twists and turns along the way that might put mum and baby at risk. The majority of pregnant women in underdeveloped nations do not have the proper education or training before becoming pregnant, which increases the likelihood that they will have an unpleasant birthing experience.

Being pregnant is a perfectly natural physiological state. During pregnancy, a woman's body goes through many changes so that she can support her growing baby and get ready to give birth. There are three crucial times for pregnant women: the prenatal, natal, and postnatal periods and each of these times increases their demands in its unique manner [1]. Assisting the expecting mother, her husband, and their family in achieving the most essential objective of every pregnancy—a healthy newborn—is a crucial duty for nurses [2]. A woman's life is lost during pregnancy or labor every minute. International Conference on Population and Development (ICPD) and Millennium Development Goals (MDGs) report that "complications related to pregnancy and childbirth are among the leading causes of mortality for women of reproductive age in many parts of the developing world, killing approximately half a million women each year, 99 percent of whom are in developing countries"[3]. "The maternal mortality ratio, defined as the number of women who die during pregnancy and delivery per 100,000 live births, has dropped considerably, putting Egypt on the cusp of fulfilling MDG 5 objectives [4]."

Preparation for the delivery and awareness of potential complications should be central tenets of antenatal care (ANC). Both prenatal and postnatal disorders may be deadly. Thus, this method is crucial for decreasing them [5]. "Pregnant women and their families benefit greatly from regular ANC visits for many reasons, including improved nutritional condition and health, better detection of gestational risks, psychological and counseling support, and more chances of safe

labor with the help of trained birth attendants, all of which contribute to a decrease in maternal and fetal deaths [6]." For first-time mums, the most horrifying experience is the agony of giving birth. Birth is a more terrifying prospect for primiparous women than for multiparous ones. Many factors contribute to this, including low self-esteem, dread of excruciating pain, negative birth tales, lack of mental and physical preparedness, lack of self-control, anxiety over perineal laceration, unclear instructions from the delivery team, and fear of death.

## 2. OBJECTIVE OF STUDY

To assess the level of knowledge regarding childbirth among primigravida mothers at selected hospitals.

To administer an educational package on childbirth.

To assess the impact of the educational package by post test knowledge score among primigravida mothers.

## 3. LITERATURE REVIEW

Anxieties and doubts caused by a lack of information about giving birth may affect the expectant mother's health and the success of the labor process, even though most pregnant women have normal deliveries without medical intervention. Reproductive health education is well-known to improve pregnant women's awareness and readiness for labor, but less is known about pregnant women's understanding of typical labor [7]. The world's caesarean section (CS) rate has risen steadily over the years, from around 7% in 1990 to 21% now, much beyond the 10%-15% WHO considers to be an appropriate rate. The incidence of nonmedically recommended caesarean sections and the so-called "caesarian on maternal request" is fast growing, indicating that not all caesarean sections are performed for medical reasons. It is anticipated that these patterns would persist throughout the present decade, with both unmet demands and usage coexisting, with a predicted worldwide rate of 29% by 2030 [8]. To make sure the educational initiatives aren't simply lip service and really have a positive impact, it's crucial to look at these consequences. This research is thus intended to assess how well primigravidas' knowledge of normal labor has been enhanced via educational intervention. Worldwide, the rate of cesarean sections has risen substantially within the last 30 years. Earth within the last few decades. Since 21.1% of women give birth by CS globally, the World Health Organization (WHO) has reported the optimal C/S rate [9]. According to CAPMAS, Egypt's Central Agency for Publication Mobilization and Statistics, the percentage of births that required a caesarean section rose from 52% in 2014 to 72% in 2021. From 2014 to 2021, the percentage of C-section deliveries in rural regions rose from 70.6% to 84%, according to the agency's findings [10].

In their research titled "Effectiveness of Childbirth Education on Primigravida Women's Knowledge about Childbirth Preparation," Rashed et al. [11] found that after the intervention, women's knowledge levels became much higher. These results are in line with those of Madhavanprabhakaran et al. [12], who looked at the "Effectiveness of childbirth education on nulliparous women's knowledge of childbirth preparation, pregnancy anxiety, and pregnancy outcomes" and discovered that such a program improved the nulliparous women's understanding of how to get ready for give birth.

## 4. METHODOLOGY

### Research Design

The study adopted a pre-experimental, one-group pre-test-post-test design to evaluate the impact of an educational package on primigravida mothers' knowledge regarding childbirth. This design involves assessing the baseline knowledge (pre-test), administering the intervention (educational package), and then evaluating the knowledge again (post-test) to measure the intervention's effectiveness.

### Sample Size

The sample size was 40 primigravida mothers, determined based on feasibility, resource availability, and statistical considerations for detecting significant differences in knowledge scores.

### Sample and Sampling Technique

The study included a sample of 40 primigravida mothers, as indicated in the provided data. A purposive sampling technique was used to select participants who met the inclusion criteria.

### The inclusion criteria :

Primigravida mothers (first-time pregnant women).

Willingness to participate in the study.

Ability to understand and respond to the educational package and questionnaire (in the language used for the study).

**Exclusion criteria:-**

mothers with complications or those unable to participate due to health or logistical reasons.

**Data Collection Tools**

A **structured knowledge questionnaire** was developed to assess the knowledge of primigravida mothers regarding childbirth. The questionnaire included:

**Section 1: Demographic and Background Characteristics** - Questions on age, educational status, duration of marriage, family income, weight, family type, occupation, religion, and previous knowledge about childbirth (including sources of knowledge).

**Section 2: Knowledge Assessment** - Questions covering key aspects of childbirth, such as labor processes, pain management techniques, breathing exercises, and other relevant topics that consist of 25 items.

**The questionnaire was administered twice:**

**Pre-test:** Before the educational package to establish baseline knowledge.

**Post-test:** After the educational package to assess knowledge improvement.

**Intervention**

The intervention consisted of an educational package designed to enhance knowledge about childbirth. The package included:

**Content:** Information on the stages of labor, childbirth techniques, pain management strategies (e.g., breathing and relaxation techniques), and preparation strategies.

**Delivery Method:** The educational package was delivered through structured teaching sessions, which included lectures, demonstrations, visual aids (e.g., videos, charts), and handouts.

**Duration and Frequency:** The intervention was likely conducted over a single session or multiple sessions, with sufficient time to cover all topics and allow for participant interaction (e.g., question-and-answer sessions).

**Data Collection Procedure**

**Ethical Considerations:** The study was approved by the relevant institutional ethics committee. All participants provided informed consent, ensuring voluntary participation and confidentiality of data.

**Pre-test:** The structured knowledge questionnaire was administered to the 40 primigravida mothers to assess their baseline knowledge.

**Intervention:** The educational package was delivered to all participants in a group setting or individually, depending on the study's logistical arrangements.

**Post-test:** The same knowledge questionnaire was administered after the intervention to measure changes in knowledge levels.

**Data Management:** Responses were collected, coded, and stored securely to maintain confidentiality.

## 5. RESULTS

**Analysis and interpretation of data:**

The collected data were analyzed in terms of both descriptive and inferential statistics.

**Table 1: Section 1: Analysis of sample characteristics**      **N=40**

1	Age of primi gravida mother		
		Frequency	Percentage
A	18 yrs-22yrs	13	32.5
B	23 yrs-27 yrs	16	40
C	28 yrs -32 yrs	6	15
D	33yrs and above	5	12.5

		40	100
2	Educational Status of primi gravida mother		
		Frequency	Percentage
A	Less than Primary	9	22.5
B	Primary to graduate	15	37.5
C	Postgraduate	10	25
D	Ph.D.	6	15
		40	100
3	Duration of marriage of primi gravida mother		
		Frequency	Percentage
A	Less than 1 year	20	50
B	1-2 years	9	22.5
C	3 -4 years	6	15
D	more than 4years	5	12.5
		40	100
4	Income per month of family		
		Frequency	Percentage
A	below 10,000	11	27.5
B	Rs. 10,001-20,000	15	37.5
C	Rs. 20,001-30,000	13	32.5
D	Above Rs. 30,001	01	2.5
		40	100
5	Weight of mother in kg		
		Frequency	Percentage
A	Less than 50 kg	12	7.5
B	51-60 kg	21	50
C	61-70 kg	3	32.5
D	71 and more	4	10
		40	100
6	Family type		
		Frequency	Percentage
A	Joint family	23	57.5
B	Nuclear family	17	42.5
		40	100

7	Occupation of primi gravida mother		
		Frequency	Percentage
A	Government job	3	30
B	Homemaker	20	52.5
C	Private job	13	7.5
D	Self-employed	4	10
		40	100
8	Religion		
		Frequency	Percentage
A	Sikh	7	17.5
B	Muslim	14	35
C	Hindu	17	42.5
D	Christian	2	5
		40	100
9	Previous knowledge about childbirth		
		Frequency	Percentage
	Yes	23	57.5
	No	17	42.5
		40	100.0
	If yes, then the source of knowledge regarding the birthing process among primigravida mothers		
		Frequency	Percentage
A	Mass media	8	34.8
B	Health Professional	6	26.1
C	family members	7	30.4
D	Others	2	8.7
		23	100

Hence, it was concluded that out of 40 respondents, 40% were in the age group 23-27 years, 32.5 % were in the age group of 18 - 22 years, 15% were in the age group of 28-32 years, and only 12.5 % respondents were in the age of 33 years and above. According to education, 37.5% were in primary-graduate, 22.5 % were up to Primary, 25% were postgraduate, and 15% were Ph.D. According to Duration of Marriage, 50 were in less than 1 year, 22.5% were 1-2 years, 15% were 3-4 years, and 12.5% were Ph.D. According to total Monthly Family Income (Rupees), less than half, 37.5% of respondents, had income between Rs.10,001- 20,000, 32.5% of respondents between Rs. 20,001-30,000, and 27.5% had >Rs. 10,000, and 2.5% of respondents were having above 30,001. According to the weight of the mother in kilogram, 50% of respondents were in 51-60 kg, 32.5% were in 61-70 kg, 10% were in 71 and more, and 7.5% were in less than 50 kg. According to the type of family, more than half, 57.5%, live in a joint family, and 42.5 are in a nuclear family. According to the type of family, more than half, 57.5%, live in a joint family, and 42.5 are in a nuclear family. According to occupation, more than half, 52.5% of respondents were homemakers, 30% were in private jobs, 7.5% were in government jobs, and 10 % were self-employed. According to religion, 42.5% of respondents were Hindus, 35% were Muslim, 17.5% were Sikhs, and 5% belonged to other

religions. According to religion. 42.5% of respondents were Hindus, 35% were Muslim, 17.5% were Sikhs, and 5% belonged to other religions.

**Table 2: Section II: Evaluate the effectiveness of the educational package by comparing pre and post-test knowledge score**

Sr.	Paired Samples Statistics					Mean	Std. Deviation	t-test	df	Sig
	parameter	Mean	N	Std. Deviation	Std. Error Mean					
1	pre total	17.28	40	5.970	.944	-7.450	6.512	-7.235	39	.000
2	Post total	24.73	40	6.477	1.024					

Respondents' average score goes up in the follow-up assessment. Compared to the pre-test mean of 17.28, the post-test mean is 24.73. There is less fluctuation in the post-test results compared to the pre-test results. The standard deviation (SD) after the test was 5.970, and before it was 6.477. A very significant -7.235 was computed for the t-test. It is clear from the findings that the instructional package had a positive influence on primi gravida's understanding of how to prepare for a delivery.

## 6. DISCUSSION

Mothers and babies benefit from childbirth education courses in many ways, including better breastfeeding success, less anxiety during labor, less perceived pain, and less need for analgesics. Women and healthcare practitioners are able to communicate and connect better after participating in these programs [13]. This research lends credence to these relationships by showing how prenatal education boosts women's confidence in their ability to cope with labor pain and improves pregnancy outcomes generally. In order to improve the physiological and psychological aspects of delivery, our findings highlight the need to include organized childbirth education programs within maternal healthcare services. When comparing the two groups' levels of total birthing self-efficacy throughout the first and second phases of labor, the researchers discovered that the former had much higher levels. This was determined by comparing the two groups' means and standard deviations of total self-efficacy during labor. One possible explanation is that the primary purpose of the program—in this case, fostering self-efficacy during childbirth—requires familiarity with the stages and processes of typical labor. Sunay and Uçar [14] examined the effect of a birth plan and education on the mother's sense of self-efficacy during labor, and their findings were in line with ours. “After the intervention, the research found that the pregnant women in the study group had considerably higher levels of birth self-efficacy when comparing their mean scores”. İsbir et al. [15] found that women's ability to cope with pain and stress, as well as their general sense of self-efficacy throughout labor and delivery, were all enhanced by prenatal education. These results were consistent with those of the other studies. Education boosts women's self-esteem and confidence.

Primigravida mums' knowledge of how to prepare for a delivery was assessed effectively by the research. A paired t-test result ( $t = -7.235$ ,  $p = .000$ ) confirmed the results of a statistically significant increase in knowledge levels; the mean post-test score was 24.73, significantly higher than the pre-test score of 17.28. This proves that the instructional package was successful in improving the participants' knowledge of childbirth preparation, which encompasses subjects like breathing techniques, pain management, and labor phases. According to the demographic study, most of the 40 primigravida mums were between the ages of 23 and 27, had a primary-to-graduate education, lived in joint households, and had previous knowledge of delivery, mostly from family and the media, at 57.5%. There seems to be more consistency in knowledge levels after the intervention since the standard deviation of the post-test (5.970) is lower than the pre-test (6.477). In order to improve maternal confidence and outcomes, our findings highlight the need for organized educational interventions in equipping primigravida mums with the information necessary for a delivery. More research with bigger, more varied samples and control groups is needed to improve generalizability, nevertheless, because of the study's pre-experimental design and tiny sample size. In sum, the educational package was effective in filling up the gaps in first-time mothers' knowledge, which lends credence to the idea that it may be a useful component of prenatal care programs.

## 7. CONCLUSION

This study's results suggest that educational programs may improve first-time mothers' understanding of labor and delivery preparations. The post-intervention knowledge level of the women who participated in the study on birthing preparation was much higher than the pre-intervention level. Additionally, first-time mothers in the control group had just routine medical



treatment, but those in the research group who went to childbirth education classes had better results. Childbirth education programs have a significant impact on improving pregnancy outcomes and the rate of normal births; more research in other governorates and hospitals is needed to validate this. This lesson and its contents should be taught to all pregnant women by all healthcare providers. Educating women with the tools they need to feel more confident in their ability to cope with delivery is an important part of a nurse's job during childbirth preparation sessions. Nurses play an important role in empowering pregnant women and improving pregnancy outcomes by providing information, emotional support, and counsel based on research.

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