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Effects Of Antenatal Nursing Interventions Based on World Health Organization Module on Fear of Childbirth, Psychological Well-Being and Pregnancy Outcomes in Primipara Women

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ABSTRACT

Fear of childbirth is a common problem and has a negative impact on the childbirth experience. This fear causes birth to take longer, and the mother suffers labor pain more intensely. This study aims to explore the effects of interventions on the World Health Organization module on fear of childbirth, psychological well-being and pregnancy outcomes in primipara women. The data were collected from 80 primipara women who received treatment at the obstetrics division in Pishin Teaching Hospital in Balochistan. The study utilized separate instruments to assess the impact of antenatal nursing treatments on delivery anxiety, psychological well-being, and pregnancy outcomes in primipara women. The differences in the scores were assessed between pre- and post-intervention through the Mann-Whitney U test. Results showed that those participants were mainly young women from rural locations and housewives. Moreover, women's fear of childbirth reduced significantly; 48.8% no longer feared pregnancy, and almost 73% had intense birth fears initially (p-value<0.001). After the intervention, 76.3% of women showed very good mental health levels. The results show that 65% of women delivered their babies at normal times, and 30% went through C-sections. The findings show that early pregnant women's support from nurses lowers pregnancy fears, keeps mothers mentally strong, and helps babies and moms recover well after birth. Our results show why healthcare providers should add these helpful programs to normal prenatal visits

Keywords: *Antenatal Nursing Interventions, fear of Childbirth, psychological well-being, pregnancy outcomes*

1. INTRODUCTION

Primipara women often feel significantly stressed and anxious because the process of labor and childbirth is associated with life changes (Bakhteh et al., 2024). Thus, primipara women are most likely to become stressed. This fear, which is often referred to as much as the fear of childbirth (FOC), affects the psychological well-being of a woman as well as her pregnancy and labor outcomes (Chen et al., 2024). The fact is that there is a great deal of literature concerning the relationship between the psychological states of a woman, including anxiety and fear during pregnancy, and maternal and fetal health (Hoseini et al., 2024). This may lead to a poor experience, including having to be on bed rest for longer periods, use of medical interventions, or preterm labor (Bakhteh et al., 2024). The World Health Organization (WHO) has continued to emphasize the importance of quality antenatal care, which includes the tested interventions aimed at improving the mother's psychological well-being and reducing her fear and anxiety about childbirth (Alizadeh-Dibazari et al., 2024). Antenatal nursing care, as recommended by WHO, entails organized care for pregnant women, particularly those who are primarily to deal with psychological challenges and bolster psychological well-being during the pregnancy period (Meaney et al., 2022).

Various factors, such as biological (labor and delivery processes, pain), psychological (painful injections during labor and suturing during childbirth), personal (loss of control during labor), and concerns for the baby (fears of damage to the baby or neonatal illness), influence pregnancy (Røseth 2013; Kananikandeh et al., 2022; Bakhteh et al., 2024). Women who are subjected to these stressors frequently express feelings of hopelessness and helplessness, as well as concerns regarding the possibility of inadequate emergency assistance. Fears of this nature can infiltrate the entire pregnancy experience, impede

the bonding process between mother and child, complicate labor, and contribute to postpartum melancholy (Peter et al., 2016). Additionally, fear during pregnancy is often exacerbated by insufficient social support and is closely associated with elevated levels of tension, anxiety, and depression (Kananikandeh et al., 2022). Several adverse outcomes have been linked to this dread, such as prolonged labor, a greater reliance on epidural anesthesia, obstetric complications, and a higher probability of requiring mental health support due to symptoms of traumatic stress. Primipara is not immune to these challenges despite their lack of prior childbirth experience. The absence of firsthand experience with labor can exacerbate fears, as anxiety in this demographic is frequently exacerbated by psychological and social factors (Alizadeh-Dibazari et al., 2024). It is essential to address these concerns, as unresolved FOC can have a detrimental impact on both maternal and neonatal outcomes.

Economic, cultural, and healthcare system restrictions limit the experiences of primipara women to great difficulties during pregnancy and childbirth in developing countries. These elements commonly exacerbate psychological stress, FOC, and negative mother and newborn outcomes (Munkhondya et al., 2020). The great fear of childbirth experienced by primipara women in underdeveloped countries has been clearly attributed to a lack of childbirth education, limited prenatal counseling and cultural misunderstandings about labor and delivery procedures (O'Connell et al., 2017). For instance, The global estimated prevalence of FOC is 14% (Nilsson et al., 2018) and 5-16% of pregnant women have severe FOC (O'Connell et al., 2017). The prevalence of FOC in India is 17.7% (Ryding et al., 2007). The differences in the results can be attributed to the time of evaluation, place of study, the mode of capturing the fear of childbirth, and cultural differences (Mbuagbaw et al., 2015). Primipara women living in low-income communities are also less likely to get the appropriate prenatal care, and only 50–60% of them turn up for the four appointments recommended by the World Health Organization (Musarandega et al., 2021). This disparity in treatment loses chances to treat psychological well-being, pregnancy problems, and anxiety.

In Sub-Saharan Africa, where the ratio of maternal deaths is high and accounts for 56% of global maternal deaths, primipara women experience a greater burden of obstructed as well as extended labor, the rise of cesarean deliveries and increased rate of maternal deaths (Elsharkawy et al., 2024). Also, both traumatic birth experiences, as well as anxiety and insufficient postnatal care, increase the risk of postpartum depression in primipara women. Preterm deliveries and low birth weight (LBW) are also more common in developing countries and have also been associated with fear and anxiety during pregnancy (Naseem et al., 2020). While these women may lack access to professional treatment, they are further discouraged from seeking professional treatment by sociocultural hurdles such as stigma surrounding medical intervention and pressure from society to have natural deliveries (Panezai et al., 2017). Poverty, inadequate infrastructure, and lack of mobility contribute to increased insecurity about childbirth and, therefore, delay or prevent access to vital mother healthcare services (Anwar et al., 2023).

In Pakistan’s rural areas, more than 40% of women deliver their babies at home, which increases the risk of Maternal and Neonatal complications (Rashid et al., 2020). The prevalence of preterm births and low birth weight is high in Pakistan, and they are also related to fear and anxiety during pregnancy (Aziz et al., 2020). Also, cultural beliefs like natural childbirth do not allow women to go for surgeries like cesarean or even epidural anesthesia, even if they are required for medical reasons. A study revealed that 65.4% of first-time mothers in Pakistan suffered from moderate to severe FOC; they are usually concerned about the well-being of their baby, complications during delivery and childbirth, and pain during labor (Khalid et al., 2023). This fear is compounded by cultural norms that deny women reasonable access to skilled health care; for instance, traditional birth attendants (dais) are still common in rural areas (Naseem et al., 2020). Another important issue is a lack of adequate prenatal care (Biaggi et al., 2016). This is because many of the women do not receive adequate preparation from antenatal counseling, which is a key factor that increases their anxiety (Din et al., 2016). Primipara women are especially vulnerable to anxiety and stress, and this is linked with poor maternal sequelae such as prolonged labor, increased likelihood of cesarean delivery and postpartum depression (Demšar et al., 2018). Drawing on primipara women in Pakistan, this paper discusses the systemic healthcare challenges that affect their experience of pregnancy and childbirth. The following are considered the main causes of FOC in these women: restricted access to quality antenatal care, lack of information about the process of birth, and cultural perception that restricts the discussion of health-related information.

In Pakistan, where the mental and emotional health of primipara women is frequently neglected, childbirth anxiety remains an unresolved and understudied problem in maternal health. Primipara women are especially at risk for negative mental health outcomes since there are no organized prenatal nursing interventions that address delivery anxiety. A higher probability of elective cesarean sections, high stress, anxiety, and psychological distress among mothers, and other negative effects for both the mother and the baby have been linked to the widespread fear of giving birth. There are a few prevalence studies out there; however, they failed to discuss the emotional and psychological components or offer evidence-based remedies. The goals of the study are to maximize pregnancy outcomes, decrease the frequency of fear of childbirth, and increase psychological well-being through the implementation of antenatal nursing treatments. Recommendations based on the findings can guide healthcare practices, influence policy measures, and help construct prenatal care models that put the patient first. This research couldn't come at a better moment for Pakistan's mothers and their babies, what with the increasing number of elective cesarean sections and the increasing emphasis on mental health in maternity care.

2. METHODOLOGY

2.1 Study settings and sampling

A quasi-experimental design was used to evaluate the impact of antenatal nursing interventions on fear of childbirth, psychological health and pregnancy outcomes among primipara women. The study was carried out from February 2024 to October 2024 at the Obstetric Outpatient Department of a Teaching Hospital in Pishin, Balochistan.

2.1 Sample and Sampling Technique

In this study, the researcher adopted the purposive sampling technique of nonprobability sampling, which involved the selection of participants in the study in view of specific characteristics that are useful in the study. Therefore, the goal of the study was to identify primipara women only in the specified age group and in the Balochistan region. Consequently, the current study adopted purposive sampling to enable the selection of women who met the criteria for the study. In this way, the researchers were able to identify the sample that would be most appropriate for the research respondents. Participants were selected based on the following inclusion criteria:

2.1.1 Inclusion criteria

The study participants were selected based on the following inclusion criteria to make sure that the participants were relevant to the study. The participants included only first-time mothers (primipara women) because they are a special population who have no prior experience in child delivery and are most likely to experience fear and anxiety regarding the birth process. The participants recruited for the study were also restricted to being residents of Balochistan to capture the regional and cultural factors of maternal health in the province. The participants' age was restricted to 18-40 years, which is the most childbearing age to exclude teenagers or mothers at older ages with specific problems or conditions. It was important that the participants were either English or Urdu speaking to be able to comprehend and respond to the research tools and the intervention materials. In order to adhere to ethical considerations and obtain only the participants' informed consent, only women who agreed to participate in the study freely were included in the analysis.

2.1.2 Exclusion criteria

Patients with severe mental illness were not included because they might pose a challenge to the effective uptake of the interventions and the research instruments. Also, women with high-risk pregnancies, for example, those with hypertension, diabetes or other chronic diseases, were excluded. This was done in order to limit the study to women with normal-risk pregnancies and to avoid influences that could arise from medical complications on fear of childbirth, psychological health and pregnancy outcomes.

2.3 Research Instruments

The sample was assessed using three instruments to measure antenatal nursing intervention effects on Fear of childbirth, psychological status of primipara women and pregnancy outcomes. The tool I: Possible scores on the Fear of Childbirth Scale range from 16 to 80, of which 16 indicate no fear, and 80 indicate extreme fear; the 16-item tool has a five-point Likert scale with items assessing the explicitly stated fear connected to childbirth. These groups are based on the proposed groups of Maaly Ebrahim et al., (2018): no fear up to 16, mild fear 17-32, moderate fear 33-48, high fear 49-64, extreme fear 65-80. Tool II: Apart from demographic information, participants completed the Psychological Well-being scale, comprising 29 items usually rated from 1 that shows a slight agreement of the item with the scale title, 2 moderate to 3 strong agreements; hence, the scores ranged from 29 to 87. He divided psychological well-being into mild (Total < 29), moderate (Total 30-58), and high (Total 59-87) according to the scores explained in the tool of (Saqib et al., 2019). Tool III: Pregnancy Outcomes is information concerning labor: the length of gestation, use of analgesia, type of labor, indication for cesarean section, and maternal diseases, as well as assessment of the newborn via the Apgar score, which is a measurement of the newborn's health based on five observable attributes within the first minutes after birth (heart rate, respiratory effort, reflex irritability, muscle tone and color. The total score on these signs ratings then tells you each of these signs rated to see how new the baby appears to be, from 0 to 10. A perfectly healthy newborn gets a score of 10, or the best possible score; a score of 0 indicates no signs of the syndrome. The one-minute score is taken five seconds after the newborn, and the overall health is categorized based on the score: Good is between 7 and 10, moderate is between 4 and 6, and very poor is between 0 and 3.

2.4 Validity and reality of the tools

A pilot study was conducted, and 50 participants were recruited to check the validity and reliability of the tools. The scales were checked through the Content Validity Index (CVI) to ensure their validity. The CVI of the Fear of Childbirth Scale of 0.812 was demonstrated to be acceptable content validity. At the same time, the CVI of the Psychological Wellbeing Scale at 0.862 was shown to be strong content validity. The CVI of 0.823 on the Pregnancy Outcome Scale indicated adequate content validity. Cronbach's Alpha was used for reliability. Cronbach's Alpha of 0.729 on the Fear of Childbirth Scale indicated that the internal consistency of this scale is acceptable (Massey Jr 1951). In contrast, Cronbach's Alpha of 0.906 on the Psychological Wellbeing scale implies strong internal consistency of this scale. These results indicate that the tools in

this study are also valid, reliable, and appropriate.

2.5 Data Collection

The data collection process for the study was organized into three phases: intervention, pre- and post-assessment. Recruitment of participants meeting the criteria was done in the pre-intervention phase after informed consent had been obtained. Demographic, fear of childbirth, and psychological well-being data were gathered through structured questionnaires, while there were observations of the morning OPD shifts. The intervention phase consisted of 16 weeks with four sessions of 60 minutes per week. The lectures, role-playing and group discussion methods were supported by a comprehensive booklet, A Guideline for Primigravid Mothers Who Have Fear of Childbirth. The booklet had pictures, words, and advice about pregnancy, labor, and relaxation techniques. The booklet was introduced in the first session (18–21 weeks gestation) and included topics in prenatal preparation and stress management. In the second session (22–25 weeks gestation), these women were counseled and participated in relaxation techniques designed to cope with childbirth fear. The third session (26–29 weeks) focused on practicing these techniques and introducing participants to the labor room environment. The fourth session (30–33 weeks gestation) consisted of a review of prior knowledge, handling of challenges, practice of exercises and relaxation techniques leading to delivery and postpartum information. The post-assessment measurement included re-evaluation of participants at 37 weeks gestation using the same questionnaires as in the preassessment phase to determine if fear of childbirth and psychological well-being changed. Birth fear was monitored after birth to investigate the relationship between childbirth fear and related problems such as longer labor, cesarean section rates and newborn health. However, the implementation of this intervention did so in a phased approach, which allowed for a complete evaluation of the extent of the intervention's impact.

2.6 Data Analysis

Frequency, percentages and summary of demographic characteristics of the participants were analyzed and presented here to provide a clear overview of how the key demographic variables are distributed among the study population. For the study, the data analysis was run using the Statistical Package for Social Sciences (SPSS), version 24.0. A normality test was used to determine whether or not the data followed a normal distribution. The Kolmogorov-Smirnov test revealed that the data did not come from a normal distribution, as all p-values were less than 0.05. Thus, we found that the data were skewed or not normally distributed, which did not allow us to perform parametric tests on the data (McKnight and Najab 2010). Instead, nonparametric tests that do not appeal to normal distribution assumptions were relied upon. In particular, the Mann-Whitney U test (Ashraf et al., 2024) was conducted to compare pre-and post-intervention data in order to analyze interventions' effectiveness by finding significant differences between the two data sets.

3. RESULTS AND DISCUSSION

3.1 Demographic Characteristics of participants

For the study, it was found that the majority of the participants were young; the majority, 70%, were between 18–22 years (Table 1). A large majority of the 78.8% of the participants lived in rural areas. Participants had low levels of educational attainment: 58.8% had basic literacy, and 33.8% had completed secondary education. Participants were housewives (72.5%), laborers (17.5%), and only formally employed (10%). According to participants' husbands' educational status, 55 percent were literate, 17.5 percent had secondary education, and 27.5 percent had higher education. Regarding husband's education, 53.8 percent of husbands were engaged in farming, 26.3 percent were laborers, and 20 percent were employed. About 67.5 percent of households had sufficient income, while 32.5 percent had financial insufficiency. These results demonstrate sociodemographic disparities and obstacles encountered by primipara women in Balochistan, a province with the worst development of any other region in Pakistan (Ashraf et al., 2024). Rural participants are predominant, indicating the absence of healthcare, education, and economic opportunities in these regions (Panezai et al., 2017). Formal education deficiencies that may limit women's empowerment and decision-making autonomy are reflected in low levels of educational attainment for both participants and husbands (Mullany et al., 2005). The majority of women are housewives, indicating low female accessibility to economic participation and a continuing dependence on males, particularly from agricultural incomes (Maqsood et al., 2024). The data imply a set of targeted interventions to better maternal and child health outcomes, primarily through improving education and health literacy in women. Investments in rural education infrastructure, women's vocational training and family planning resources could close the gender and development gap in the region.

Table 1. Demographic characteristics of participants (n: 80)

Demographic characteristics	Frequency	Percent
Age		
18-22 Years	56	**70%**

Demographic characteristics	Frequency	Percent
23-34 Years	20	25%
35-40 Years	4	5%
Residence		
Rural	63	**78.8%**
Urban	17	21.3%
Level of education:		
Read and write	47	**58.8%**
Secondary education	27	33.8%
Higher education	6	7.5%
Occupation		
House wife	58	**72.5%**
Worker	14	17.5%
Employer	8	10%
Level of husband education		
Read and write	44	**55%**
Secondary education	14	17.5%
Higher education	22	27.5%
Husband's Occupation		
Farmer	43	**53.8%**
Worker	21	26.3%
Employer	16	20%
Income:		
Sufficient	54	**67.5%**
Insufficient	26	32.5%

3.2 Fear of Childbirth

The results reveal that participants experienced a decrease in the level of fear about childbirth during the study and after the intervention. Regarding the fear level before the intervention, only 17.5% of the participants had moderate fear at all, while 72.5% of the participants had high fear (Table 2). After the intervention, 48.8% of the respondents said they had no fear at all, and 43.8% had mild fear. Although these findings depict the effectiveness of the intervention, they also point out the dearth of reasonable maternal healthcare in low-resource settings such as Balochistan, where culture, education and healthcare may increase childbirth fear (Phunyammalee et al., 2019). Other issues concerning the long-term effectiveness of the intervention and its generalizability for use with other cultures warrant further elaboration. The mental health of women must be incorporated into their routine maternal services, staff and clinicians must be educated about women's psychological needs, and culturally appropriate informational prenatal classes must be established.

Table 2. Fear of childbirth among primipara women

Levels of score		Pre-intervention	Post-intervention
		n (%)	n (%)
No fear	≤ 16scores	0(0%)	39(48.8%)
Mild fear	17-32 scores	0(0%)	35(43.8%)
Moderate fear	33- 48 scores	14(17.5) %	6(7.5%)
High fear	49-64 scores	58(72.5%)	0(0%)
Extreme fear	65-80 scores	8(10%)	0(0%)

3.3 Psychological well-being score

Results presented in Table 3 show an enhanced level of participants' psychological health after the intervention process. Participants' well-being was assessed before the intervention, where 67.5% of participants had mild well-being, and 32.5% had moderate well-being. These findings reveal that there were actually depressive, anxiety and post-traumatic stress disorder symptoms prior to the intervention, which may have stemmed from various psychosocial factors (Wang et al., 2023), including low socioeconomic status and cultural stigma along with lack of access to healthcare in Balochistan (Naseem et al., 2020). After the intervention, there was a significant increase to 76.3% for high psychological well-being and 18.8% for moderate well-being. These findings demonstrate the extent of a marked change as a result of the tested intervention for stress reduction and well-being. The majority of participants from the intervention enjoyed higher levels of well-being. However, a few nonetheless remained in dysfunctional states, indicating that individualized models might be required to meet everyone's needs. Furthermore, it is often not clear that these improvements are permanent, thus calling for managers to assess the impacts as a way of confirming that the outcomes are long-lasting (Kirkbride et al., 2024).

Table 3. Psychological well-being of primiparous women

Score levels		Pre-intervention	Post-intervention
		n (%)	n (%)
Mild	≤ 29 scores	54(67.5%)	4(55%)
Moderate	30-58 scores	26(32.5%)	15(18.8%)
High	59-87scores	0(0%)	61(76.3%)

3.4 Comparison of pre-intervention and post-intervention scores

The results of the Mann-Whitney U test show the statistical significance of the intervention concerning the change in the FOC and the psychological well-being in the groups of participants. Mann-Whitney U test is applied since the data is non-parametric and, therefore, does not have the normal distribution guaranteeing the validity and reliability of the results (McKnight and Najab 2010). This mean rank, therefore, depicts a reduced FOC level of fear from 119.98 to 41.03 and an increased mean rank of positive psychological well-being from 45.83 to 115.18. The score means rank differences are significant (p-value=0.000) before and after the intervention. Nevertheless, there is optimism in those outcomes for the degree that could offer services in Balochistan, a less-resourced area for maternal mental health support (Panezai et al., 2017). To this end, using similar interventions for FOC and the psychological aspects, the current study confirms the importance of incorporating such services into maternal health care.

Table 4. Results of post-intervention scores of FOC and psychological wellbeing

Score Label	Pre-intervention	Post-intervention	U-test	p-value
	Mean Ranks	Mean Ranks		
FOC	119.98	41.03	5.850	0.000***

wellbeing	45.83	115.18	4.822	0.000***

Note: ***=p-value<0.01

3.5 Pregnancy outcomes

3.5.1 Gestational age and use of analgesics

The findings on pregnancy outcome show that 65% of the participants delivered full-term, to which favorable neonatal outcomes are linked, and 16% preterm and 19% post-term births (Figure 1). However, pre-term deliveries are less common and, however, may necessitate close follow-up because of possible concomitant risks to the mother and the infant. The results draw attention to differences in gestational age that may be driven by factors for which more research could be conducted on effective targeted treatment plans. Only 10% of women reported the use of analgesics in the early phases of labor, indicating a desire for natural childbirth. Such a trend may be attributed to cultural beliefs, lack of access to pain relievers or individual preferences (Nguyen et al., 2024). However, the findings highlight the importance of having convenient approaches to addressing pain other than using drugs with a view to improving birth outcomes (Nori et al., 2023).

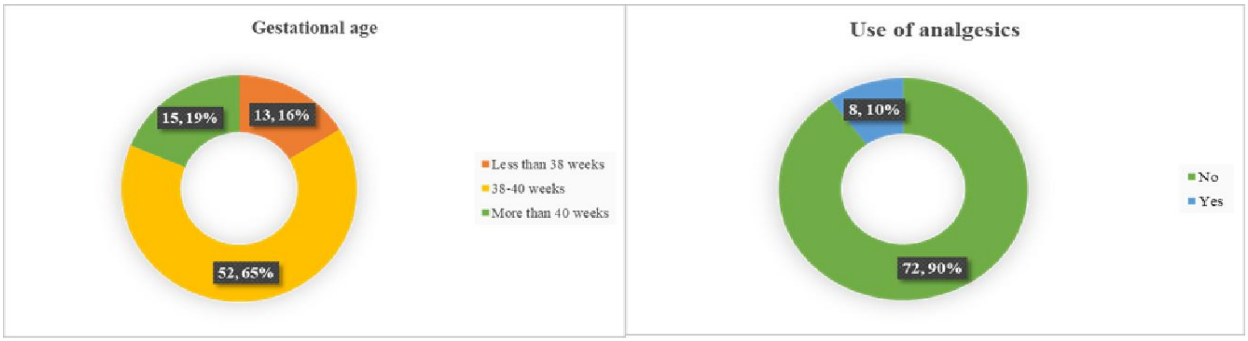

Figure 1. Gestational age and use of analgesics

3.5.2 Results for the type of labor

The data on the type of labor indicates that the majority of participants (70%) experienced a normal vaginal delivery (Figure 2), while 30% underwent a cesarean section (C-section). Among the women who had a C-section, only a small proportion (4 women) cited fear of childbirth as the reason for choosing this procedure. In comparison, the majority (20 women) had other medical or personal reasons for undergoing a C-section. It implies that when women receive the right support and information, their fears about giving birth matter less in deciding between surgical and natural delivery (Rublein and Muschalla 2022). A complete understanding of pregnancy care needs to look at both medical concerns, emotional needs, and social support available to each woman (Al-Mutawtah et al., 2023). Therefore, access to information, feeling comfortable, and having well-trained medical staff help women feel confident in choosing their birth method, reducing their fear. Having caring team members during childbirth can help reduce surgery needs while improving both the mother's and baby's health.

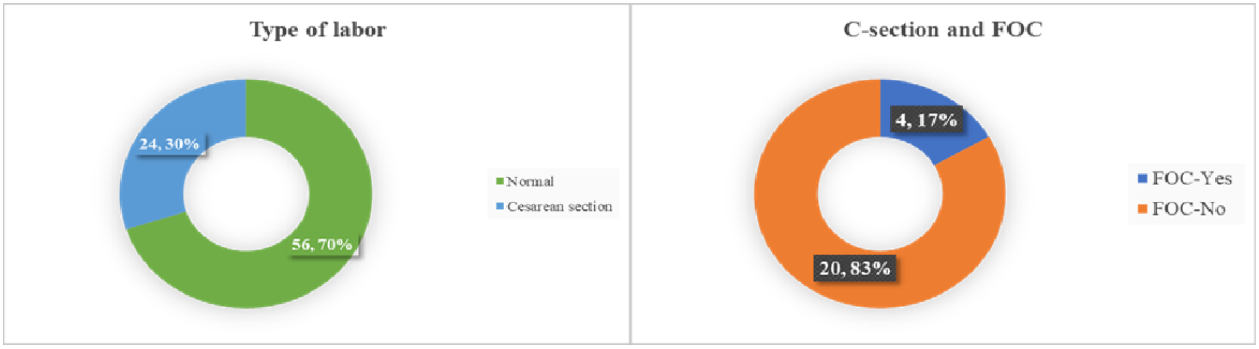

Figure 2. Type of labor & FOC

3.5.3 Results of Apgar score

The Apgar scale is a fast check doctors do right after birth to see how well a baby is doing and if it needs urgent care. It

assesses five criteria: Physicians evaluate how well a newborn is doing by looking at five things: skin color, heart rate, muscle action, breathing pattern, and brain response to stimulation (Casey et al., 2001). Categorized into three categories (Table 5). After delivery, 83.8% of babies had good vital signs at the first-minute check. The medical team found that 13.8% of babies had mild symptoms needing regular observation. At 5-minute checks, 86.3% of babies showed normal responses, and the number of babies severely affected by depression declined to 1.3%.

Table 5. Apgar score

Score levels	Frequency	Percentage
Apgar scoring chart at 1-minute		
Sever Depressed case	2	2.5%
Moderate case	11	13.8%
Good baby	67	83.8%
Apgar scoring chart at 5-minute		
Sever Depressed case	1	1.3%
Moderate case	8	9.7%
Good baby	71	89.0%

The decrease in moderate cases (to 10%) shows that post-delivery care and recovery worked well. Though newborns had good recovery overall, we still have work to do: 13.8% had moderate depression, and 2.5% had severe depression at the first minute of life, which points to delivery problems that we must address. These outcomes are similar to findings from recent studies such as those of Razaz et al., (2019), who demonstrated that most newborns show rapid improvements in Apgar scores following the first minute due to the effects of initial care interventions. Moreover, the results show that early treatments work well, and need to make sure everyone, especially high-risk babies, gets great care throughout their pregnancy and birth to get the best results.

4. LIMITATIONS AND STRENGTHS OF THE STUDY

The study's effectiveness in predicting other delivery cases is restricted due to the selected group of new mothers from a specific background, and the results may not be generalized to a large population. The study could not incorporate the control group in the pre-post-study design; therefore, the researchers were unable to prove that educational interventions created actual improvements. The study's reliance on quantitative measuring tools did not reveal the full depth of experiences of primipara women. The study makes important contributions despite its limitations. Using the WHO module ensures a standardized approach, allowing for consistency in intervention delivery across various settings and making the findings more generalizable. Concentrating on primipara women helps target a population that may be at a higher risk of fear and anxiety regarding childbirth, enhancing the study's relevance and significance. Its findings help create better strategies for better pregnancy experiences and maternal mental wellness while supporting health providers and mothers. The research adds useful information to maternal care studies despite facing particular limitations.

5. CONCLUSION

The study findings indicate that the intervention is useful in alleviating their anxiety regarding childbirth and enhancing their psychological well-being. Initially, primipara women frequently experience feelings of anxiety and manage their mental health with moderate measures. The majority of women who participated reported that they were either not afraid or only slightly afraid as a result of the treatment, which reduced their fear of childbirth. The intervention demonstrated significant improvements in the mental health of women, with nearly all achieving satisfactory or excellent results. The study demonstrated that the novel approach yielded positive results by conducting statistical analysis. To promptly identify women who are experiencing anxiety or poor mental health, prenatal care should incorporate routine mental health assessments. This will enable physicians to provide them with the necessary assistance. In order to assist women in managing their emotions and maintaining their mental well-being, it is recommended that we incorporate psychological and social support, as well as awareness sessions, into the standard prenatal care. In an effort to enhance the care of pregnant women during their pregnancies, nurses should receive ongoing education and updated training on the management of their psychosocial requirements. Government officials should establish regulations to ensure that all pregnant women have simple access to mental health care services during pregnancy. Healthcare services must provide comprehensive mental health support to

each expectant woman during her routine prenatal appointments to reduce pregnancy stress and achieve better outcomes.

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Conflict of interest

The authors declared that, to the best of their knowledge, there are no conflicts of interest related to the publishing of the study.

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Statement on Data Availability

The data underlying the findings of this research are available upon request

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