

## Effect of Educational Intervention on Improving Postpartum Minor Discomforts

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### Abstract

**Background:** Postpartum period is the most critical and life changing event which is filled with strong emotions, physical changes, changed relationships and adjustments into the mother role. The most common postpartum minor discomforts are perineal pain, breast engorgement and after pain **Aim:** to evaluate the effect of educational intervention on improving postpartum minor discomforts among women. **Design:** Quasi experimental (pre and posttest one group) design was used. **Sample:** A convenient samples of 150 subjects were selected according to certain criteria's **Setting:** postpartum unit at maternity hospital, Suez Canal University. **Tool:** Semi-structured interviewing sheet, maternal knowledge regarding postpartum minor discomforts and follow up tool. **Results:** Sixty-four point seven of participants mentioned that they weren't aware of expected minor discomforts during postpartum period before educational intervention was given compared to only 0.7 % of participants were not aware of the expected postpartum minor discomforts after the educational intervention .In addition, There was significant improvement in the mother's symptoms related to after pain, breast engorgement and perineal pain over the three-week assessment period .There were a statistically significant differences in the mothers' compliance levels as the follow-up period progressed ( $p= 0.000$ ).**Conclusion:** The educational intervention improved the women's knowledge and symptoms regarding postpartum discomforts. **Recommendations:** The Educational intervention package on postpartum discomforts should be provided at discharge with clear and comprehensive explanations, supplemented by illustrated pamphlets, particularly for those who are illiterate.

**Key words:** postpartum, minor discomforts, educational intervention

### 1. Introduction

The postpartum period is a critical stage in a mother's life, marked by significant changes that impact on her health and well-being. A new mother's knowledge and confidence in caring for herself and her newborn, especially after leaving the hospital, are highly valued. During her

hospital stay, the mother's self-assurance may be enhanced by the guidance she receives from registered midwife, staff nurse, or physician regarding self-care and newborn care. However, inadequate healthcare support for new mothers may force them to rely on informal networks, such as friends and family, for their postnatal

care education. Therefore, during the postpartum stage, the woman requires specialized education and guidance on postpartum care and managing minor discomforts (Abd Allah, et al 2023).

Postpartum women may experience minor discomforts as their body systems adapt to the changes following childbirth. The most common postpartum minor discomforts include afterpains, breast engorgement and perineal pain. Providing prompt and efficient care to address these problems during and after birth can make a significant difference in the woman's postpartum adaptation and recovery (Sayed, et al 2022).

One of the most common postpartum minor discomforts are intermittent, spasmodic pains felt in the lower abdomen that occur for a variable period of 2 to 4 days after delivery. These after pains can be managed through measures such as emptying the bladder, comfort and cleansing procedures, or by repositioning the woman to lie prone with a small pillow or rolled towel placed under the middle of her abdomen (Elsebeiy, 2019).

Another worrying issue is perineal pain, a frequent symptom experienced by women that

can arise right after childbirth and may continue into the postnatal period. The severity of this pain is heightened in those who have undergone an episiotomy during vaginal delivery. Factors can exacerbate the pain such as mobility, sitting, caring for the baby, and breastfeeding that make self-care more challenging. Recommended treatments include using ice packs, applying topical anesthetics as necessary, taking sitz baths two to three times a day, and performing Kegel exercises. (Choudhari, et al 2022)

Furthermore, breast engorgement is a common physiological condition that typically occurs between days three and five after childbirth. It is marked by a sudden increase in milk production, along with lymphatic and vascular congestion and interstitial edema. Approximately 85% of women experience this condition. While some may only notice mild swelling and tenderness, others may experience more significant soreness, with their breasts becoming firm and the skin stretching tight and shiny. If left untreated, engorgement can hinder successful breastfeeding and lead to a decrease in maternal milk supply. Current treatment recommendations include using ice packs,

wearing a supportive bra, and performing breast massage. (Adams, et al 2023).

However, the previous postpartum minor discomforts are common; many women have inadequate knowledge related. Therefore, it is important for women to have adequate knowledge about them. This knowledge empowers them to take appropriate self-care measures during this time. With the right information, women can more easily identify signs of potential complications at an early stage. This allows them to seek timely and appropriate medical advice. Also, acquiring this knowledge can help prevent and effectively manage complications that may arise from minor postpartum disorders (Elsebeiy 2020)

Moreover, nurses play a pivotal role in the postpartum period, not only by conducting postpartum assessments, but also by providing extensive education to women before they are discharged from the hospital. This teaching is tailored to women's biopsychosocial needs. In addition, this educational role, nurses also provide anticipatory guidance and counseling to support women during the postpartum transition. Therefore, the aim of this study is to

evaluate the effect of educational intervention on improving postpartum minor discomforts among women ( Abd Elrhman , et al 2022) .

### **Significant of the study**

Based on research conducted in Egypt found that less than two-thirds (64.7%) of women were not aware of the expected minor discomforts that can occur during the postpartum period. Additionally, many women did not consider their complaints important enough to report them. However, the significant magnitude of the reported problems highlights the need for serious consideration of the care provided to women during this important and potentially crucial phase of their lives ( Elsebeiy, 2020).

In addition, another study was conducted at the El Suez Canal University Hospital over a two-year period, there were improper or inadequate instructions provided to mothers on how to manage minor discomforts during the postpartum period before they were discharged from the hospital (Osman, et al. (2021), This lack of proper guidance led to the postpartum women experiencing issues that could potentially affect their health status, interfere with their family relationships, and

impact their ability to care for their newborn baby.

In conclusion, there are limited published studies especially in Egypt about the importance of health education in improving the management of postpartum minor discomforts, and the indirect impact on enhancing the subject's quality of life. Accordingly, this proposed study aims to contribute to the knowledge base by investigating the effect of educational intervention on the most common problems faced by women during the postpartum period. This will help address the gap in research around this crucial phase of a woman's life.

#### **Operational Definition:**

**The minor discomforts addressed in this study during the postpartum period** include after pains, breast engorgement, and pain from episiotomy.

#### **Aim of the study**

- The aim of this study is to evaluate the effect of educational intervention on improving postpartum minor discomforts (after pains, breast engorgement, and pain from episiotomy)-among women.

#### **Thorough the following objectives:**

- Assess women's knowledge related to after pains, breast engorgement, and pain from episiotomy before and after the educational intervention
- Measure the effect of an educational intervention on the improvement after pains, breast engorgement, and pain from episiotomy

#### **Research Hypothesis**

- Women who will receive educational intervention about postpartum minor discomforts will have improvement in knowledge of postpartum minor discomforts
- Women who will receive educational intervention about postpartum minor discomforts will have improvement about postpartum minor discomforts symptoms.

## **2. Subjects and Methods**

**Design:** A quasi experimental (pre and posttest one group) design was adopted in this study to achieve the stated aim. This type of experimental design is typically characterized as non-randomized and involves pre- and post-intervention assessments aimed at evaluating the effectiveness of specific

interventions

**Sample:** A convenient sample of 150 women was selected according to the following inclusion criteria; full term pregnancy, vaginal deliveries with episiotomy, absence of any medical and obstetrics complications and able to read and write. **Exclusion criteria:** Teenage pregnancy, cesarean section delivery, and postpartum complication.

The following formula for the sample size was used (**Wassertheil-Smoller 2004**):

$$n = (Z_{\alpha/2} + Z_{\beta})^2 * 2 * \sigma^2 / d^2$$

where n=sample size,  $Z_{\alpha/2}$  is the critical value of the normal distribution at  $\alpha/2$  (e.g. for a confidence level of 95%,  $\alpha$  is 0.05 and the critical value is 1.96),  $Z_{\beta}$  is the critical value of the normal distribution at  $\beta$  (e.g. for a power of 80%,  $\beta$  is 0.2 and the critical value is 0.84),  $\sigma^2$  is the population variance (=90), and d is the difference would like to detect (=4).

Sample size (n) = 150 subjects.

**Setting:** The study was conducted at the postnatal unit affiliated to Obstetrics and

Gynecology ward at Suez Canal University hospital at Ismailia city.

**Tools of data collection:**

Three tools were used by the research investigators to obtain the necessary data as the following:

1. **Sociodemographic data questionnaire :** This tool included two parts:

a) **Demographic characteristics of postpartum women:** it included age, occupation ,residence, educational level and income.

b) **Obstetric history:** It involved: date of last menstrual period (LMP), number of Gravida, number of parity , number of abortion and number of living children .

2. **Maternal knowledge regarding minor discomforts questionnaire (pre/ post):** It was developed by the researchers to determine level of women knowledge regarding minor discomfort during early postpartum period. It includes questions that assess (after-pains, breast engorgement and episiotomy). To evaluate the women's pre and post knowledge.

**scoring system:** for knowledge, scores were determined according to the literature. Points were assigned based on how each question is judged on a score of (0) for the wrong answer or don't know, (score 1) for correct but incomplete answer and a score of (2) for a correct and complete answer. The overall knowledge score was rated as follows: knowledge was deemed inadequate if the percent score was below 50% and deemed adequate if the percent score was above 50% (Shahin, Mohamed & Hosni, 2018).

### **3. Post partum minor discomfort follow up**

**questionnaire:** This tool is adopted from (Fahmy, 2004). This tool is divided into three parts. The first part included questions about the benefits of educational intervention. The second part includes questions to assess symptoms of postpartum minor discomforts including after pain , perineal pain and breast engorgement ).The scoring system for assessing symptoms improvement used a 3-point scale: a score of 3 indicated improved discomfort, a score of 2 meant the discomfort was not detected, and a score of 1 indicated the discomfort had worsened. The third part includes women's compliance to instructions given in accurate and

correct way .The researcher followed up with each mother weekly over a 3-week postpartum period through phone call

### **Validity and Reliability**

Unstandardized tools were reviewed by three experts in maternity nursing to assess their content validity, clarity of language, and overall appropriateness. Modifications were made based on the experts' feedback prior to obtaining approval from the ethics committee.

### **Ethical Consideration**

The ethical approval was obtained from the Research and Ethics Committee at the Faculty of Nursing, Suez Canal University. Moreover, official permission to conduct the proposed study was obtained from the hospital administrators in the selected setting for data collection. At the initial interview, each potential participant was informed about the purpose, the procedure, and the benefits of the study, and the cover letter explaining the research study was read to them. Each participant woman was assured that participation in this study is voluntary, and they had the right to withdraw from the study at any time without affecting the health care services that they received.

## **Procedure**

The study was conducted through the following phase; Preparation Interviewing & assessment, implementation, and evaluation

**1.Preparation phase:** During this phase, official permission was obtained from the ethics committee at the Faculty of Nursing at Suez Canal University. Also, it included reviewing the recent literature to construct and prepare the tools for data collection. Women who fit the inclusion criteria and were accepted to be included in this study were recruited for the study.

## **2.Interviewing phase &Assessment phase:**

The timing of data collection started from 9.00 am until 1.00 pm at any time throughout the week, as it was done based on the availability of inclusion criteria. The researcher introduced herself to the study participants and explained the purpose and nature of the study to obtain informed written consent as well as to gain their cooperation. The researcher interviewed each study participant in postpartum unit explaining the purpose of the study and written informed consent was signed. Face to face interview was conducted for postpartum women and was asked in Arabic language and the answers were recorded. Assessment of women's knowledge

regarding minor discomforts during postpartum period using maternal knowledge regarding minor discomfort tool ( **pretest** ).

## **Implementation phase:**

In this phase, session and effective contact approaching were achieved to postpartum women. The program contain one session was given in form of a teaching class and group discussion through pre-designed brochure. Session was conducted 2 hours later after women's delivery. Duration of session about 30 minutes, conducted in a comfortable and quiet inpatient ward. Taking into consideration; using simple Arabic language to suit the level of post-partum women's education, a free copy of the Arabic brochure was given to each participant woman about most common minor discomfort, causes and nursing management to reduce postpartum minor discomforts symptoms to guide her as a home reference. After the implementation phase, the research investigator used the maternal knowledge regarding minor discomfort tool (**Posttest**) to assess women's knowledge about minor discomforts during the postpartum period. Session for post test was conducted 15 to 20 minutes later before discharge for each woman to insure that the women capable to apply the program.

### **Evaluation phase:**

Evaluating the benefits of educational intervention, improving postpartum minor discomforts symptoms in addition to women's compliance to instructions given in accurate and correct way using post-partum minor discomfort follow up tool. Postpartum minor discomfort follow-up was conducted weekly for three consecutive weeks following discharge, using phone calls after the educational intervention. If these discomfort symptoms present or not and if present relieved or not, or not be detected, compliance of the women for given data and reasons behind in-compliance

### **Statistical Analysis**

Data management involved coding and entering responses into the Statistical Package for the Social Sciences (SPSS), version 21, for analysis. The researcher meticulously reviewed all data to avoid discrepancies and checked for coding and entry errors. Frequency and percentage were used to describe numerical data, while the mean and standard deviation were calculated to evaluate differences in normally distributed numeric data. The Wilcoxon and Friedman tests were employed

for analysis, and the non-parametric contingency coefficient test was used to identify differences in categorical data. A p-value of less than 0.05 was deemed significant, while a p-value of less than 0.001 was considered highly significant

### **3.Results**

The ages of the study participants ranged from 20 to 45 years, with an average age of  $25.78 \pm 4.233$  years. About 55% were between 20 and 25 years old, while only 4% were in the 35-45 age group. Regarding education, 46% of the participants can't read and write, and 9% had attained higher education. Additionally, 45% of the participants resided in urban areas. The age at marriage varied from 20 to 35 years, with an average of  $21.16 \pm 4.148$  years. The majority (88%) got married between 20 and 25 years, while 14% married between 30 and 35 years. In relation to occupation, 98% of the participants were housewives. Regarding family income, 86% reported insufficient, and over half 67% lived in a family-owned home rather than a private one. Lastly, 34% had health insurance. Regarding previous obstetrical profile, 47.3% of the study sample were in the third trimester, 30.5% of them had



more than para 3, 50 % had gravida 3-5 times, 17.8% reported more than one abortion and the mean number of living children was  $1.80 \pm 1.33$ .

**Table 1** reveals that 64.7% of the study participants had inadequate knowledge of minor discomforts during the postpartum period prior to the educational intervention. In contrast, only a small 0.7% had inadequate knowledge about these discomforts after the educational intervention session.

**Table (2)** indicates that 49.3% of the study participants didn't know how to manage it compared to slightly 50.7% of them used different ways of managements, these managements were carried out in the form of three blocks as following:

The first one was related to type of fluid received, as 37.3% of the study participants received only warm fluid as anise and peppermint only during the pretest. After health teaching session the posttest reported that 53.4% used warm fluid, 26.6% forbidden used of caffeine or tea & 13.4% forbidden drinking of cold fluids.

Second way of management is related to

abdominal management, as reported by only 0.6% of the mothers during the pretest perform massage of the abdomen, compared to 73.4% of the mothers who reported using of these methods during the post-test.

Third way of managements related to other intervention, as only 18% of the study participants received analgesic. After educational intervention the posttest reported that 50% of them used to evacuate the bladder, 45% forbidden eating certain types of food such as broccoli and scallions & 40% used early ambulation.

Regarding management of episiotomy pain, 90.7% of the study participants didn't know how to manage episiotomy pain compared to 9.3% of them who were using different ways of management. These managements were carried out in the frame of two blocks as following:

The first one was related to non-pharmacological pain relief, as 90% of the study participants used sitting in warm water & betadine, 8% deliberating of the wound by urination and 4% put honey on the wound during the pretest. After health teaching session; the posttest reported that 58% were using running warm water & betadine, 46.7%

used cold compress directly after delivery, 40% cinnamon application, 38.7% honey application & 33.3% used running warm water & lavender oil as reported by the mothers.

The second way of management was related to pharmacological pain relief as analgesics which reported by only 25.3% of the mothers during the pretest compared to 6.6% during the post-test. Results reflecting a significant difference between the pre & posttest level of mothers' knowledge (Wilks test -10.056 &  $p=0.000$ ) (**Table,3**).

**Table (4)** shows that 64.6% of the study participants didn't know how to manage breast engorgement compared to 35.4% of them used different ways of managements; these managements were carried out in the frame of three blocks as following:

The first one was related to compresses, as 6.6% of the study participants used warm compresses only during the pretest. After educational intervention the posttest reported that 46.7% of them used cold compresses after lactation, 26.7% of them used warm compresses & 23.4% of them used frozen cabbage leaves between feedings as reported by the mothers.

The second way of managements related to

breast massage, as only 6.6% of the study participants used massage by brush during the pretest, compared to 46.7% of them who reported using breast massage by hand during the post-test.

The third way of managements related to other interventions, as 16.7% of the study participants received analgesic & 7.3% of them used suctioning during the pretest. After educational intervention, the posttest reported that 40% of the mothers had proper breastfeeding techniques, 33.4% of them had frequent/adequate breastfeeding and 26% wear supportive bra as reported by the mothers. All the previous results were reflecting statistically significant differences between the pre & posttest level of mother's knowledge (Wilks test -9.983 &  $p=0.000$ ).

**Table (5)** reveals that there was a significant increase of study participants benefits following the educational intervention sessions conducted over three consecutive weeks with 98.6% of mothers reporting improvements throughout the assessment period.

**Table (6)** shows a significant improvement in the mother's symptoms related to after pain over the three-week assessment period, following the

educational intervention. In the first week, 13.1% of mothers demonstrated improved symptoms, which increased to 54.5 % in the second week and reached 77.9% by the third week. The results indicated a statistically significant effect of the educational intervention on the mother's symptoms regarding after pain management, which continued to improve over the course of the follow-up period ( $p= 0.000$ ).

**Table (7)** demonstrates a significant improvement in the mothers' symptoms related to episiotomy pain over the three-week assessment period, following the educational intervention. In the first week, 51.7% of study participants exhibited improved symptoms, which increased to 59.3% in the second week and reached 75.9% by the third week. The results indicate a statistically significant effect of the educational intervention program on the their symptoms regarding episiotomy pain which continued to improve over the course of the follow-up period ( $p= 0.000$ )

**Table (8)** demonstrated that there was a significant improvement of mother's symptoms related to breast engorgement after conducting the educational intervention during three consecutive

weeks of assessment as reported by 13.1% in the first week, 28.2% in the second week and 74.5 % in the third week. Results reported a significant effect of educational intervention on mothers' symptoms regarding breast engorgement given with the progress of time follow up ( $p= 0.000$ ).

The data presented in Table (9) demonstrates a notable increase in study participants' adherence to the provided educational intervention over the course of the three-week assessment period. In the first week, 61.4% of mothers were compliant, which rose to 69.0% in the second week and reached 80.0% by the third week. The results indicate a statistically significant difference in the mothers' compliance levels as the follow-up period progressed ( $p= 0.000$ ).

#### **4. Discussion**

The postpartum period is a critical stage in a mother's life, marked by significant changes that impact on her health and well-being. (**Abd Allah, et al 2023**). Postpartum women may experience minor discomforts as their body systems adapt to the changes following childbirth. The most common postpartum minor discomforts include after pains, breast

engorgement and perineal pain. Providing prompt and efficient care to address these problems during and after birth can make a significant difference in the woman's postpartum adaptation and recovery (**Sayed, et al 2022**).

The current study aimed to evaluate the effect of educational intervention on improving postpartum minor discomforts (after pains, breast engorgement, and pain from episiotomy) among women. Interpretation and discussion of results obtained from the current study were presented in two main sections: Section I: related to progress of maternal knowledge regarding postpartum minor discomforts, Section II: related to improvement of postpartum minor discomforts

**In relation to after pain**, the present study found that when assessing knowledge related to afterpain and its management, less than half (49.3%) of the mothers did not know how to manage it, compared to more than half (50.7%) who used different ways to manage it. Specifically, 37.3% of the mothers received only warm fluids like anise, 0.6% used abdominal management, and 18%

received analgesics. The findings align with a previous study by **Adam (2015)** that assessed mothers' knowledge regarding postpartum self-care. That study revealed inadequate knowledge among the mothers regarding afterpain management strategies like early ambulation and exercises during the postpartum period, which are important for reducing postpartum complications. In addition, **Sayed, et al (2022)** reported that primipara mothers' knowledge on self-care of after pain during the postpartum period was not adequate and represent 48.50% and the knowledge level was found more among the mothers who received health information from health personnel .The variability in maternal knowledge regarding after pain during the early postpartum period may be attributed to differences in sample size, geographic distribution, socioeconomic status, and behavioral factors among the studied populations.

Regarding episiotomy pain, the current study found that most participants (90.7%) were unaware of effective management techniques, while only a small percentage (9.3%) used various management methods. Specifically,

90% reported sitting in warm water and using Betadine, 8% cleansed the wound during urination, 4% applied honey to the wound, and 25.3% took analgesics. This aligns with findings by **Zayed and Alkalash (2022)**, who studied 321 reproductive-age mothers and found that 95% lacked knowledge on managing episiotomy pain, though most had a positive attitude toward postpartum care. In contrast, a study by **Lalitha (2016)** involving 50 postnatal mothers showed a mean knowledge level of 58% in episiotomy wound care during the postpartum period

In addition to Breast engorgement was identified as a common minor discomfort in the present study. Results showed that less than two-thirds (64.6%) of participants lacked knowledge about managing breast engorgement, while slightly more than one-third (35.4%) employed various management methods: 6.6% used warm compresses, 6.6% massaged with a brush, 16.7% took analgesics, and 7.3% used suctioning. Similarly, a study by **Tiwari et al. (2018)** conducted at Charusat on 60 postnatal mothers found that most participants had inadequate knowledge regarding postnatal breast problems and their management, with only 30% demonstrating adequate knowledge.

**Mandour (2015)** found that knowledge about breast issues was insufficient among the entire study sample of 90 primiparous women. A significant portion of these women lacked basic knowledge about breast engorgement, as well as experience in proper breast engorgement care, breastfeeding techniques, feeding duration, and the recommended number of daily feedings. Similarly, **El-Hady et al. (2021)**, in a study of 100 postnatal mothers, reported that about half (52%) had an average understanding of breast engorgement management, in comparison to 64.6% in the current study. Differences in maternal knowledge regarding minor discomforts during the early postpartum period may stem from variations in sample size, geographic location, and socioeconomic and behavioral factors among populations studied.

The results of this study indicated that after the educational intervention, more than 75% of mothers experienced relief from after-pains, while 4.8% reported an increase in symptoms. This aligns with the research conducted by **Ahmed (2022)** titled "Effect of Fundal Massage Technique and Alternative Leg Lifting Exercise on After Pain Severity and Uterine Involution Among Multipara Women," which demonstrated

that nursing care strategies, including fundal massage and leg-raising exercises, effectively reduced after-pain severity in postnatal mothers. **Brodribb et al. (2020)**, in their study titled "The Effect of Face-to-Face Health Professional Contact with Postpartum Women Within the First Four Weeks Following Hospital Discharge on Maternal and Infant Health Outcomes," found that home visit interventions aimed at educating, supporting, and counseling recently postpartum women were effective in addressing minor discomforts, especially after-pains and constipation..

Regarding to episiotomy pain: The finding of the present study indicated that after three weeks of educational intervention sessions, over 75% of the mothers reported an improvement in their episiotomy pain, while only 17.2% noted a worsening of their condition. This is consistent with the results of **Zaki et al. (2020)**, who conducted a study titled "Effect of Perineal Self-Care Instructions on Episiotomy Pain and Healing Among Postpartum Women." In their study involving a convenience sample of 80 participants, the results showed a highly significant difference between pre-test and post-test scores (p-value = 0.000), demonstrating

the effectiveness of Perineal Self-Care Instructions on managing episiotomy pain and promoting healing. Additionally, the present study aligns with the findings of **Mohamed et al. (2023)**, who evaluated the impact of self-care guidelines on women's awareness regarding postpartum perineal wound care among 70 postpartum women at El-Minia General Hospital. Their results indicated that the instructional guidelines significantly reduced perineal pain levels at 4, 24, and 48 hours, as well as seven days postpartum, when comparing the two groups. There were notable differences in pain levels related to walking, sitting, and urination at 24 and 48 hours, as well as at seven days postpartum.

In addition to breast engorgement: The findings of the present study indicated that after the educational intervention sessions, three-quarters of the mothers reported an improvement in breast engorgement, while only 1.4% noted a worsening of their condition. This result aligns with the work of **Cheng et al. (2023)**, who found that the teach-back method effectively enhanced postnatal mothers' knowledge about breast engorgement, demonstrating a significant difference between pretest and posttest

knowledge ( $p < 0.05$ ). Similarly, **KiratRai and ArkierupaiaShadap (2022)** reported a significant increase in knowledge scores following a planned teaching program, concluding that such programs effectively improved primigravida mothers' understanding of breast engorgement. The variability in maternal improvement regarding certain minor discomforts during the early postpartum period may be attributed to differences in sample size, geographic distribution, socioeconomic status, and behavioral factors among the studied populations.

## **5. Conclusion**

Educational intervention had a significant role in improving knowledge to varying degrees. There was a substantial increase in benefits following the educational intervention sessions conducted over three consecutive weeks of assessment. Educational intervention program was

effective in helping recently delivered subjects manage common postpartum issues such as after pain, breast engorgement and episiotomy

## **6. Recommendations**

1. It is recommended to enhance maternal awareness of managing physiological changes and minor discomforts during the natal, antenatal, and postnatal periods before discharge to help control these discomforts.
2. A health education package on postpartum discomforts should be provided at discharge, containing clear, simplified, and comprehensive explanations of methods for reducing minor discomforts, supplemented with illustrated pamphlets, particularly for those who are illiterate.
3. Integrate of health education about postpartum minor discomforts as apart of standard care practices provided by health care members.

**Table (1) Mother’s knowledge related to postpartum minor discomforts (n150)**

| Mother knowledge Response | Pre test   |              | Post test  |              | Wilcoxon Test | P value |
|---------------------------|------------|--------------|------------|--------------|---------------|---------|
|                           | No.        | %            | No.        | %            |               |         |
| Adequate knowledge        | 53         | 35.3         | 149        | 99.3         | -9.798        | 0.000   |
| Inadequate knowledge      | 97         | 64.7         | 1          | 0.7          |               |         |
| <b>Total</b>              | <b>150</b> | <b>100.0</b> | <b>150</b> | <b>100.0</b> |               |         |

*The test Based on negative rank*

**Table 2 Mother's knowledge regarding management of after pain (n=150)**

| Methods   | Pretest |      | Posttest |      | Wilcoxon Test | P value |
|---|---------|------|----------|------|---------------|---------|
|   | No.     | %    | No.      | %    |               |         |
| <b>Lack of knowledge</b>  | 74      | 49.3 | 2        | 1.3  | -             | 9.614   |
| <b>Knowledge related to fluids received:</b>                      |         |      |          |      |               |         |
| • Warm fluids   | 56      | 37.3 | 80       | 53.4 |               |         |
| • Forbidden drinking of cold fluids                               | 0       | 0.0  | 20       | 13.4 |               |         |
| • Forbidden drinking of caffeine as coffee.                       | 0       | 0.0  | 40       | 26.6 |               |         |
| <b>Knowledge related to Abdominal management:</b>                 |         |      |          |      |               |         |
| • Warm compresses above the abdomen                               | 0       | 0.0  | 70       | 46.7 |               |         |
| • Massage of abdomen  | 1       | 0.6  | 40       | 26.7 |               |         |
| <b>Other Intervention:</b>  |         |      |          |      |               |         |
| • Neglection the pain   | 3       | 2.0  | 5        | 3.3  |               |         |
| • Analgesic   | 27      | 18.0 | 2        | 1.3  |               |         |
| • Early ambulation  | 0       | 0.0  | 40       | 26.7 |               |         |
| • Forbidden eating certain typed of food as (broccoli, scallions) | 0       | 0.0  | 45       | 30.0 |               |         |
| • Frequent evacuation of bladder                                  | 0       | 0.0  | 50       | 33.4 |               |         |

*N.B: The numbers are not independent of each other, and the test relies on negative ranks*



**Table 3 Mother’s knowledge regarding management of episiotomy pain (n=150)**

| Knowledge   | Pre test |      | Post test |      | Wilcoxon Test | P value |
|---|----------|------|-----------|------|---------------|---------|
|   | No.      | %    | No.       | %    |               |         |
| <b>Lack of knowledge</b>                            | 136      | 90.7 | 0         | 0.0  |               |         |
| <b>1-Non pharmacological pain relieve</b>           |          |      |           |      |               |         |
| • Cold compress directly after delivery             | 0        | 0.0  | 70        | 46.7 |               |         |
| • Running Warm water &Beta-dine                     | 0        | 0.0  | 87        | 58.0 | -10.056       | 0.000   |
| • Running warm water & lavender oil                 | 0        | 0.0  | 50        | 33.3 |               |         |
| • Sitting in warm water& beta dine                  | 135      | 90.0 | 0         | 0.0  |               |         |
| • Cinnamon application                              | 0        | 0.0  | 60        | 40.0 |               |         |
| • Application of Honey                              | 6        | 4.0  | 58        | 38.7 |               |         |
| • Deliberating of the wound by urination            | 12       | 8.0  | 0         | 0.0  |               |         |
| <b>2- pharmacological pain relieve (Analgesics)</b> | 38       | 25.3 | 10        | 6.6  |               |         |

*N. B: The numbers are not independent of each other, and the test relies on negative ranks*

**Table 4 Mother’s knowledge regarding management of breast engorgement (n=150)**

| Methods                                  | Pretest |      | Posttest |      | Wilcoxon Test | P value |
|--|---------|------|----------|------|---------------|---------|
|  | No.     | %    | No.      | %    |               |         |
| <b>Lack of knowledge</b>                 | 97      | 64.6 | 0        | 0.0  |               |         |
| <b>Compresses:</b>                       |         |      |          |      |               |         |
| • Warm compresses                        | 10      | 6.6  | 40       | 26.7 |               |         |
| • Cold compress after lactation          | 0       | 0.0  | 70       | 46.7 |               |         |
| • Frozen cabbage leaves_between feedings | 0       | 0.0  | 35       | 23.4 |               |         |
| <b>Breast massage with:</b>              |         |      |          |      |               |         |
| • Brush                                  | 10      | 6.6  | 0        | 0.0  | -9.983        | 0.000   |
| • Hand                                   | 5       | 3.3  | 70       | 46.7 |               |         |
| Suctioning                               | 11      | 7.3  | 15       | 10.0 |               |         |

|   |    |      |    |      |
|---|----|------|----|------|
| frequent / adequate breast feeding          | 9  | 6.0  | 50 | 33.4 |
| Wear supportive bra                         | 0  | 0.0  | 39 | 26.0 |
| Analgesics                                  | 25 | 16.7 | 0  | 0.0  |
| Proper breast feeding techniques (latching) | 0  | 0.0  | 60 | 40.0 |

*N.B: The numbers are not independent of each other, and the test relies on negative ranks*

**Table 5 Benefits of the Educational Intervention (n=145\*)**

| Benefit | 1 <sup>st</sup> week |            | 2 <sup>nd</sup> week |            | 3 <sup>rd</sup> week |            |
|---------|----------------------|------------|----------------------|------------|----------------------|------------|
|         | No.                  | %          | No.                  | %          | No.                  | %          |
| Yes     | 143                  | 98.6       | 143                  | 98.6       | 143                  | 98.6       |
| No      | 2                    | 1.4        | 2                    | 1.4        | 2                    | 1.4        |
| Total   | <b>145</b>           | <b>100</b> | <b>145</b>           | <b>100</b> | <b>145</b>           | <b>100</b> |

*\*Five missed data first week, second week, & third week*

**Table 6 Educational intervention effects on Mother’s symptoms improvement regarding after pain (n=145\*)**

| Knowledge      | 1 <sup>st</sup> week |              | 2 <sup>nd</sup> week |              | 3 <sup>rd</sup> week |              | Friedman test | P value |
|----------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|---------------|---------|
|                | No.                  | %            | No.                  | %            | No.                  | %            |               |         |
| Improve        | 19                   | 13.1         | 79                   | 54.5         | 113                  | 77.9         |               |         |
| Can not decide | 37                   | 25.5         | 59                   | 40.7         | 25                   | 17.3         |               |         |
| Get worse      | 89                   | 61.4         | 7                    | 4.8          | 7                    | 4.8          | 111.047       | 0.000   |
| <b>Total</b>   | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> |               |         |

*Data from five participants were missing in the first, second, and third weeks*

**Table 7 Educational intervention effects on mother’s symptoms improvement regarding episiotomy pain (n=145\*)**

| Responses       | 1 <sup>st</sup> week |              | 2 <sup>nd</sup> week |              | 3 <sup>rd</sup> week |              | Friedman P Test value |      |
|-----------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|-----------------------|------|
|                 | No.                  | %            | No.                  | %            | No.                  | %            |                       |      |
| Improve         | 75                   | 51.7         | 86                   | 59.3         | 110                  | 75.9         | 30.896                | .000 |
| Cant not decide | 37                   | 25.5         | 31                   | 21.4         | 10                   | 6.9          |                       |      |
| Get worse       | 33                   | 22.8         | 28                   | 19.3         | 25                   | 17.2         |                       |      |
| <b>Total</b>    | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> |                       |      |

*Data from five participants were missing in the first, second, and third weeks (drop out =5)*

**Table 8 Educational intervention effect on mother’s symptoms improvement regarding breast engorgement (n=145\*)**

| Responses       | 1 <sup>st</sup> week |              | 2 <sup>nd</sup> week |              | 3 <sup>rd</sup> week |              | Friedman test | P value |
|-----------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|---------------|---------|
|                 | No.                  | %            | No.                  | %            | No.                  | %            |               |         |
| Improve         | 19                   | 13.1         | 41                   | 28.2         | 108                  | 74.5         |               |         |
| Cant not decide | 96                   | 66.2         | 91                   | 62.8         | 35                   | 24.1         | 139.9         | 0.000   |
| Get worse       | 30                   | 20.7         | 13                   | 9.0          | 2                    | 1.4          |               |         |
| <b>Total</b>    | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> |               |         |

*Data from five participants were missing in the first, second, and third weeks*

**Table 9 Mother’s compliance to instructions given in accurate and correct way (n=145\*)**

| Responses    | 1 <sup>st</sup> week |              | 2 <sup>nd</sup> week |              | 3 <sup>rd</sup> week |              | P value |
|--------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|---------|
|              | No.                  | %            | No.                  | %            | No.                  | %            |         |
| Yes          | 89                   | 61.4         | 100                  | 69.0         | 116                  | 80.0         | 0.000   |
| No           | 56                   | 38.6         | 45                   | 31.0         | 29                   | 20.0         |         |
| <b>Total</b> | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> | <b>145</b>           | <b>100.0</b> |         |

*Data from five participants were missing in the first, second, and third weeks*

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