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Research Article

# Self-Care Practices for Common Second Trimester Minor Discomfort: Educational Program

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## Abstract

**Background:** Minor discomforts, while not life-threatening, can impact a mother's comfort and well-being, and neglecting them may result in serious issues. Often, these discomforts can be alleviated through self-care measures or healthy practices.

**Aim:** The current study was conducted to evaluate the effect of an educational program on pregnant women's self-care practices for common second-trimester minor discomfort.

**Subjects and Methods:** Design: A quasi-experimental design was used.

**Sample and Settings:** A convenient sample of 358 pregnant women was used at outpatient clinics at Beba Hospital, affiliated with the Ministry of Health, Beni-Suef Governorate. Tools: Three data collection tools were used to carry out the current study: Tool 1: Self-reported practices regarding heart burn questionnaire sheet; Tool 2: Self-reported practices regarding leucorrhea questionnaire sheet; Tool 3: Self-reported practices regarding leg cramps questionnaire sheet.

**Results:** It reveals that after the intervention, the percentage of pregnant women who always kept the head of the bed raised increased from 22.9% to 68.2%. Similarly, those who frequently evacuated the bladder and took medication as prescribed rose from 24.6% to 67.3%. Furthermore, the practice of elevating lower extremities to reduce leg cramps improved from 9.2% to 70.9% posttest.

**Conclusion:** A statistically significant improvement during the posttest among the studied pregnant women's behaviors regarding heartburn, leucorrhea, and leg cramps compared with the pretest after program implementation.

**Recommendations:** Work along with public health groups to launch nationwide awareness campaigns that inform expectant mothers about common discomforts in the second trimester and provide information on safer pregnancy self-care techniques.

**Kew Words:** self-care practices; second trimester; minor discomfort; educational program

## Introduction

Pregnancy is the time during which one or more offspring develops (gestates) inside a woman's uterus (womb). Pregnancy may end in a live birth, a miscarriage, an induced abortion, or a stillbirth. Childbirth typically occurs around 40 weeks from the start of the last menstrual period (LMP), a span known as the gestational age [1]. In the second trimester, the fetus grows sufficiently in size so that good anatomic detail can be visualized during ultrasonography. At the beginning of the second trimester, the abdominal organs have attained their adult position: the liver, stomach, and kidney can be identified. The large bowel is better seen in the third trimester. By the beginning of the third trimester, the fetus can survive if born premature. The fetus reaches a major developmental landmark, like 2.5 kg of weight, at 35 weeks of gestation [2].

During pregnancy, the physiological changes in the gastrointestinal tract include gastric motility being most affected and high levels of hormones. When it occurs, the hormone arrives at high levels, especially progesterone, which causes smooth muscle relaxation. In addition, rising progesterone levels relax the lower esophageal sphincter, promoting reflux into the gastro-esophagus and ultimately heartburn [3-4]. During pregnancy the sleeping

process can be disturbed by visits to the toilet, heartburn, a kick from the baby, or just a general feeling of discomfort when lying down. Heartburn is quite common during pregnancy and can be triggered by hormonal changes as well as the growing baby pressing on the stomach. Heartburn is a burning feeling in the chest, accompanied by a bitter taste of fluid in the mouth [5]. Vaginal discharge affects nearly all women during pregnancy. If the discharge smells unpleasant, causes soreness or itching, or is discolored, the woman may have a vaginal infection. The most common infection is thrush. It is important to see the doctor for treatment**.** Hemorrhoids are swollen veins around the rectum and anus (back passage) that may itch, ache, or feel sore. Piles may bleed a little and can make it very uncomfortable to go to the toilet. It can be triggered by constipation or pressure from the baby's head, or both [6].

Eighty percent of pregnant women will experience swelling in their ankles, feet, and fingers. There is extra fluid in the tissues of the body during pregnancy, and some of it collects in the legs, particularly at the end of the pregnancy. If pregnant women stand for long periods of time, especially in hot weather, this fluid can cause swelling in the ankles and feet [7]. Muscle cramps in the foot, leg, or thigh are very common during pregnancy, especially at night. It is not clear what causes cramps. It was once thought that it was due to a lack of calcium; however, studies have not proven this to be the case [8].

## Aim Of the Study

The current study was conducted to evaluate the effect of an educational program on pregnant women's self-care practices for common second-trimester minor discomfort.

## Research Hypothesis

Pregnant women's self-care practices to alleviate common second-trimester minor discomfort will be improved after implementation of the educational program.

## Subject And Method

### Research design:

Quasi-experimental research design (pre/post-test) was utilized to achieve the aim of the current study.

### Subjects and Settings:

A convenient sample of 358 pregnant women was used in the outpatient clinics at Beba Hospital, which is affiliated with the Beni-Suef Governorate's Ministry of Health.

### Tools of data collection:

**Tool 1: Self-reported practices regarding heart burn questionnaire sheet:**

The document outlines a self-reported practices questionnaire aimed at assessing behaviors to alleviate heartburn. It employs a three-point Likert scale for responses; Always (3), Sometimes (2), and Never (1) and categorizes respondents into good practices (scores ≥9), ), Average practices (scores 6-8), and poor practices (<6) based on their total scores according to the frequency of their reported behaviors.

**Tool 2: Self-reported practices regarding leucorrhea questionnaire sheet:**

The document describes a self-reported practices questionnaire developed to assess behaviors related to alleviating leucorrhea. It uses a three-point Likert scale for responses: Always (3), Sometimes (2), and Never (1), categorizing respondents into good, average, and poor practices based on their total scores, which range from 1 to 12. The scoring categories are: Good for scores ≥75% (≥9 points), Average for scores 50%-74% (6-8 points), and Poor for scores <50% (<6 points).

**Tool 3: Self-reported practices regarding leg cramps questionnaire sheet:**

It is a questionnaire designed to assess self-reported behaviors for alleviating fatigue, utilizing a three-point Likert scale (Always = 3, Sometimes = 2, Never = 1). Scores are categorized as Good (≥75% or ≥9 points), Average (50%-74% or 6-8 points), and Poor (<50% or <6 points).

***Supportive material:***

It was designed to improve women's practices for managing minor discomforts during the 2nd trimester, featuring a handout in simple Arabic with illustrations. The educational booklet covers common issues like heartburn, leucorrhea, and leg cramps, including their causes and self-management strategies.

### Fieldwork

The study on managing minor discomfort during pregnancy involved three phases: Assessment, Planning and Implementation, and Evaluation. In the Assessment phase, data were gathered through interviews and questionnaires with pregnant women. The Planning and Implementation phase entailed randomly selecting participants from Beba Hospital's outpatient clinic, who attended six 30-minute educational sessions in simple Arabic on topics such as heartburn and leg cramps. The Evaluation phase measured program effectiveness by comparing pretest and posttest scores concerning knowledge, attitudes, and practices in discomfort management.

### Ethical and Administrative Considerations:

The research ethics committee at Beni-Suef University's Faculty of Medicine approved the study. Pregnant women provided informed consent and could withdraw anytime. The dean of the Faculty of Nursing communicated with Beba Hospital's manager to officially authorize data collection.

## Statistical design:

Data analysis was conducted using descriptive statistics (means and standard deviations) with SPSS version 26. A p-value of $< 0.05$ indicated statistical significance, while $p < 0.001$ indicated high significance. The chi-square test was used to compare proportions for qualitative parameters.

## Results

**Table (1)** and **Figure (1)** present that there was a statistically significant improvement during the posttest among the studied pregnant women's behaviors regarding heartburn compared with the pretest and noticed that 22.9% of the studied pregnant women were always Keep the head of the bed raise during the pretest, which improved in the posttest to become 68.2%.

**Table (2)** and **Figure (2)** show that there was a statistically significant improvement during the posttest among the studied pregnant women's behaviors regarding Leucorrhea compared with the pretest, and it was noticed that 24.6% of the studied pregnant women were always frequently

evacuating the bladder during the day and taking medication as doctors ordered, which improved the posttest to become 67.3%.

**Table (3)** and **Figure (3)** show that there was a statistically significant improvement during the posttest among the studied pregnant women's behaviors regarding leg cramps compared with the pretest. It was noticed that 9.2% of the studied pregnant women were always elevate lower extremities reduces the occurrence of leg cramps, which improved the posttest to become 70.9%.

| Heartburn | Pretest | | | | | | Posttest | | | | | | $X^2$ (p value) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Always | | Sometimes | | Never | | Always | | Sometimes | | Never | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | |
| Intake of small frequent meals | 41 | 11.5 | 68 | 19.0 | 249 | 69.6 | 151 | 42.2 | 111 | 31.0 | 96 | 26.8 | 20.848 (0.000**) |
| Avoid fried, spicy, or rich (fatty) foods | 79 | 22.1 | 85 | 23.7 | 194 | 54.2 | 147 | 41.1 | 125 | 34.9 | 86 | 24.0 | 19.153 (0.001**) |
| Keep the head of the bed raise | 82 | **22.9** | 70 | 19.6 | 206 | 57.5 | 244 | **68.2** | 79 | 22.1 | 35 | 9.8 | 17.609 (0.001**) |

**Table 1:** Percentage of the studied pregnant women's Practices regarding heartburn (n=358).


**Figure 2:** Studied pregnant women's total practices regarding self-care practices to alleviate heart burn

| Leucorrhea | Pretest | | | | | | Posttest | | | | | | X2 (p value) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Always | | Sometimes | | Never | | Always | | Sometimes | | Never | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | |
| Rinse perennial area from front to back to reduce discharge | 47 | 13.1 | 79 | 22.1 | 232 | 64.8 | 188 | 52.5 | 94 | 26.3 | 76 | 21.2 | 19.429 (0.000**) |
| Keep perennial area clean and dry | 53 | 14.8 | 69 | 19.3 | 236 | 65.9 | 159 | 44.4 | 90 | 25.1 | 109 | 30.4 | 24.476 (0.000**) |
| Taking medication as doctors order | 88 | **24.6** | 36 | 10.1 | 234 | 65.4 | 241 | **67.3** | 64 | 17.9 | 53 | 14.8 | 18.427 (0.002**) |

* Statistically significant at p≤0.05 ** High statistically significant at p≤0.01

**Table 2:** Percentage of the studied pregnant women's Practices regarding leucorrhea (n=358).


**Figure 2:** Studied pregnant women's total practices regarding self-care practices to alleviate Leucorrhea

| Leg Cramp | Pretest | | | | | | Posttest | | | | | | X2 (p value) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Always | | Sometimes | | Never | | Always | | Sometimes | | Never | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | |
| Perform leg exercises | 28 | 7.8 | 73 | 20.4 | 257 | 71.8 | 206 | 57.5 | 87 | 24.3 | 65 | 18.2 | 12.312 (0.015*) |
| Elevating lower extremities reduces leg cramps occurrence | 33 | **9.2** | 70 | 19.6 | 255 | 71.2 | 254 | **70.9** | 61 | 17.0 | 43 | 12.0 | 11.620 (0.020*) |
| Taking medication as doctors order | 44 | 12.3 | 48 | 13.4 | 266 | 74.3 | 261 | 72.9 | 52 | 14.5 | 45 | 12.6 | 11.940 (0.018*) |

* Statistically significant at p≤0.05 ** High statistically significant at p≤0.01

**Table 3:** Percentage of the studied pregnant women's Practices regarding leg cramp (n=358).


**Figure 3:** Studied pregnant women's total practices regarding self-care practices to alleviate leg cramps

## Discussion

Although minor discomforts are not life-threatening, nevertheless their presence detracts from the mother's feeling of comfort and well-being, and their negligence may lead to serious problems. In many instances, they can be managed by self-care measures or healthful practices one can do [3-4]. SO, the current study aims to evaluate the effect of an educational program on pregnant women's self-care practices for common second-trimester minor discomfort. Related to the behavior of the studied pregnant women regarding self-reported practices to alleviate minor discomfort. The current study demonstrated that there was statistically significant improvement in the behaviors of the studied pregnant women during the posttest phase concerning self-reported practices to alleviate minor discomforts such as heartburn. Notably, more than one quarter of the participants reported regular water intake and adherence to prescribed medications during the pretest, which improved to more than half in the posttest. This enhancement suggests the positive impact of health education on promoting healthy practices among pregnant women. This finding was also supported by El-Sarkawy (2020), who investigated "Effectiveness of Self-instructional Module on Knowledge and Remedial Practices Regarding Selected Minor Ailments Among Primigravida" and clarified that there was a significant improvement in pregnant women's behavioral practices post-intervention, particularly regarding heartburn [9]. This emphasizes the importance of antenatal educational programs in enhancing self-care behaviors to manage minor pregnancy-related discomforts effectively.

These findings are consistent with the results of Ahmed and Ali (2021), who reported that educational programs significantly improved pregnant women's knowledge and practices regarding the management of minor discomforts such as Leucorrhea [10]. Similarly, a study by El-Masry et al. (2020) found that structured antenatal health education led to better recognition and self-management of common pregnancy symptoms, including Leucorrhea [11]. These results reinforce the importance of antenatal education in empowering women to manage physiological changes during pregnancy effectively.

Regarding the studied pregnant women's behavior related to leg cramps, the current study revealed a statistically significant improvement during the posttest compared to the pretest. Specifically, the percentage of women who consistently adopted healthy behaviors such as taking a warm bath daily and avoiding bending while lifting objects increased from approximately one quarter at pretest to more than half at posttest. This highlights the positive impact of the educational intervention on promoting adaptive self-care behaviors for managing common musculoskeletal and circulatory discomforts during pregnancy. These findings are supported by the study of Ahmed and Ahmed (2021), who investigated "Utilization of nursing guidelines and videos assisted teaching for alleviation of minor ailments among primigravida mothers" and found that the percentage of women who consistently adopted healthy behaviors such as taking a warm bath daily and avoiding bending while lifting objects increased from approximately more than one-third at pretest to less than three-quarters at posttest. Structured antenatal health education significantly enhanced pregnant women's practices in leg cramps. Their results showed increased adherence to recommended preventive behaviors, including warm baths, proper body mechanics, and dietary modifications [12].

The results of the current study declare the women's self-care practices regarding common second trimester minor discomforts were improved after the implementation of the program sessions. This improvement could be attributed to the attending of the program sessions and the lecture and positive reinforcement or the long-term retention of knowledge, as well as a wide variety of educational methods used [13-27]. Additionally, the distributed Arabic booklets also played a crucial role in attaining and retaining knowledge. Booklets are best used when they are brief, written in plain language, and full of good pictures and when they are used to back up other forms of education. This is in accordance with Edgar Dale's or the NTL's Pyramid of Learning as cited by Masters, as the pyramid illustrated that individuals can retain 10.0% of what they read and 20.0% of what they see and hear (audiovisual). The same author added that one can retain 50.0% of what he learned by a discussion [28-41].

## Conclusion

A statistically significant improvement during the posttest among the studied pregnant women's behaviors regarding heartburn, leucorrhea, and leg cramps compared with the pretest after program implementation.

## Recommendation

Work along with public health groups to launch nationwide awareness campaigns that inform expectant mothers about common discomforts in the second trimester and provide information on safer pregnancy self-care techniques.

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