

## Research Article

# Utilization of Self-Care Brochure for Relieving Mother's Minor Discomforts during Pregnancy

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### Abstract

The aim of this study was to investigate the utilization of self-care brochure for relieving mother's minor discomforts during pregnancy.

**Methods:** An interventional quasi-experimental research design was carried out at Antenatal Clinic of Mansoura University Hospital-Mansoura City on 90 primigravida women at  $\leq 34$  gestational weeks, who were selected by simple random sampling technique. They were free from any medical and obstetric problems, can read and write, and reported one or more of the associated pregnancy minor discomforts. They were divided into either control or intervention group 45 per each group. The intervention group: had received a self-care brochure beside the routine antenatal care. While the control group had received the routine antenatal care only. Mother's attitude regarding self-care was assessed utilizing Likert scale.

**Results:** Providing the pregnant mothers with a self-care brochure was associated with relieving most of the self-reported pregnancy discomforts among the study group compared to those of the control group as reported by women 3 weeks' post intervention.

**Conclusion:** The intervention group had agreed that the self-care guide is easy to be used and the majority of them reported that they will use it in the future pregnancy.

**Keyword:** Self-Care; Brochure; Minor Discomforts; Pregnancy

### Introduction

Pregnancy is defined as the state of carrying a developing embryo or foetus within the female body. Pregnancy lasts for about nine months. It is bringing joy to the mother and family. This can turn into a tragedy where the woman suffers a catastrophic [1,2] Pregnant women undergo profound anatomical and physiological changes so that they can cope with the increased physical and metabolic demands of their pregnancies. The cardiovascular, respiratory, haematological, renal, gastrointestinal and endocrine systems undergo important physiological alterations and adapta-

tions needed to allow the development of foetus and to prepare the mother and foetus for childbirth [3]. Most pregnant women complain some degree of minor discomforts. These discomforts are not serious in themselves, but their presence decrease the mother's feeling of comfort and wellbeing [4].

Pregnancy-related minor discomforts refer to symptoms that are associated with pregnancy-related changes such as discomforts are controlled by the pregnant woman's self-care [5]. The common pregnancy discomforts may be physiological (backache, leg cramps, oedema, constipation, fatigue, nausea and vomiting, sleep disturbance, heart burn, and increased urinary frequency), or psychosocial (anxiousness, mood swing and lack of family support

[2]. Self-care is defined by Orem (1991) as behaviour that exists in concrete life situations directed by persons to self or to the environment to regulate factors that affect their own development and functioning in the interests of life, health and well-being. Self-care practices are a key concept in the health promotion that involves decisions and actions that an individual can take to cope with a health problem or to improve his or her health. Self-care is an old concept and describes the actions of mature people who have developed an ability to look after themselves in their situations. These action capabilities include acquiring suitable knowledge, decision making and taking action for changes [8]. Self-care actions in pregnant women can be divided into two types: self-care behaviours for maintaining health and well-being, and self-care behaviours for the management of common or minor discomforts [9]. Every system of the body is affected by pregnancy. The mother needs knowledge to cope with the experience of pregnancy. She also needs knowledge when she presents with discomforting or worrying symptoms [10]. Providing information about physiology, prevention, and self-care of pregnancy discomforts can assist in relieving certain anxiety and fears related to the maternity care is healthy pregnancy with physically safe and emotionally satisfying outcome for mother, infant, and family. Consistent health supervision and surveillance are of importance in achieving this outcome. Helping the pregnant woman recognize the relation between her physical status and the plan for her care assists her in making decisions and encourages her to participate in her own care [12]. Today, nurse and midwives have an important role in health promotion. The midwife is posed to a unique function of identifying and providing huge standard of antenatal care that contributes to the maintenance of good health and minimize the severity of the disorder [13]. The role of maternal education is an important factor to encourage women to utilize maternal and child health services. Most women spend some time with health care professionals during pregnancy. Responsibility for women's self-care behaviours in pregnancy can be affected by health care professionals, family, friends, and their social network [9]. The maternity nurse is posed to a unique function of identifying and providing antenatal care that contributes to the maintenance of good health. Where it is evidenced that for those who have a poor knowledge regarding minor disorders during pregnancy it is to be estimated that most of the discomforts can be controlled through proper education [14]. Therefore, this prompted us to investigate the effect of utilization of self-care brochure on relieving mother's minor discomforts during pregnancy.

## Research hypothesis

Utilization of self-care brochure was expected to relief mother's minor discomforts during pregnancy.

## Subjects and Method

**Study Design:** An interventional quasi-experimental design was utilized.

**Study Setting:** The study was conducted at the Antenatal Clinic of Mansoura University Hospital in Mansoura City.

**Subjects:** A simple random sample of 90 pregnant women was used to recruit the participants based on the inclusion criteria. The eligible 90 pregnant women were equally divided into two groups: Intervention group (n=45): received a self-care brochure beside the routine antenatal care while the control group (n=45): had received the routine antenatal care only.

## Tools of Data Collection

Three tools were used for data collection.

### Tool1: Interviewing questionnaire Sheet

Designed by the researcher and was in Arabic form and consisted of multiple choice questions as well as close and open-ended questions. It entails two parts as the following:

**Part 1:** Designed to assess the participant's general characteristics such as name, age, education, occupation, residence, telephone number, and gestational age.

**Part 2:** Concerned with the pregnant mothers' knowledge, the associated pregnancy complaints and their source of knowledge.

### Tool2: Minor discomforts self-care Checklist

It was developed by the researcher to assess presence of minor discomforts during pregnancy. This tool was filled in pre-intervention at the first interview with the pregnant mother, one week after the first interview and three weeks later for the both groups. It was filled in by a telephone conversation or during the subsequent Antenatal Clinic visits.

### Tool 3: Attitude Likert Scale

It was designed by the researcher and consisted of 12 statements to assess pregnant mother's attitude regarding self-care brochure. It was three points.

Likert scale as agree, uncertain, and disagree. Attitude Likert scale was filled once at end of the 3rd week after the first interview for the intervention group.

## Ethical Considerations

- Ethical approval was obtained from the Research Ethics Committee of the Faculty of Nursing, Mansoura University.

- Official permissions were obtained from the head of the Obstetrics and Gynecology department and the Director of Mansoura University Hospital.
- The aim of the study was explained to the studied groups and informed consents were obtained.
- Ethical issues were considered in dealing with the obtained information.
- Women had the right to withdraw from the study at any time, and their data were confidential.
- Tool of data collection didn't touch religious, culture or ethical issues among mothers and mother's dignity considered.
- At the end of the session's each mother obtained self-care brochure which was written in a simple Arabic language and provided by illustrated pictures.
- At the end of last session mothers were interviewed to assess their gained knowledge regarding the self-care guideline.
- Also, observational check list to assess mother's self-care practices one week and three weeks' post intervention.
- Three weeks' post intervention mother's attitude regarding self-care brochure was assessed utilizing Likert scale.
- The researcher provided each participant telephone number to consult the researcher about any new discomforts that may arise during pregnancy.

## Pilot Study

After preparing the tools, a pilot study was conducted on 10 pregnant mothers (5 per each group). The results of the pilot indicated that the statements of the questionnaire were clear and relevant, and few words and items were modified. The pilot sample excluded from the study based on the modifications that done.

## Field Work

- Firstly, the control group was interviewed then according to data analysis the deficit of knowledge was categorized regarding minor discomforts.
- Secondly the researcher designed brochure about self-care for minor discomforts to overcome the minor discomforts. This brochure was implemented through five sessions. Each session concluded five to six pregnant mothers. Duration of each session was half an hour. At the end of each session, five minutes were devoted to permit participants to ask questions to clarify the session contents.
- Methods of teaching were lectures, group discussion, brain storming and role playing. Media of teaching were laptop, posters and flip chart.

## Statistical analysis

After data were collected, it coded, organized, categorized, and then transferred into especially designed formats. The statistical analysis of data was done by using SPSS program (statistical package for social science) version 20.0. The data description of the data was done in form of mean and standard deviation for quantitative data (duration of pregnancy), frequency and proportion for qualitative data. Analysis of the data was performed to test statistical significant difference between variables for both groups (intervention and control). For disease duration (mean and standard deviation) independent t-Test was used to compare between the two groups. For qualitative data (frequency and proportion), Chi-square test was used. Statistical significant difference was considered at  $P < 0.05$ , and highly significant difference at  $P < 0.001$ .

## Result

Table 1 The frequency distribution of general characteristics among the intervention and control groups. Data revealed no statistically significant differences observed among the studied groups related to age, education level, occupation and residence ( $P > 0.05$ ).

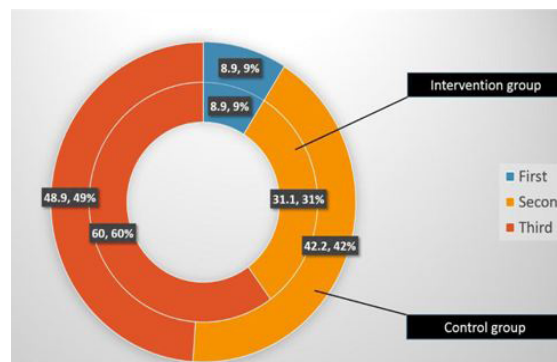
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Variables	Intervention group		Control group			
	N (45)	%	N (45)	%	X <sup>2</sup>	P
Age (mean ±SD)	23 ±3.5		24.5 ±5.4		1.533*	0.129
Educational level					2.443	0.295
Primary	0	0	2	4.4		
Secondary	25	55.6	21	46.7		
University	20	44.4	22	48.9		
Occupation						
Housewife	29	64.4	27	60	0.189	0.664
Working	16	35.6	18	40		
Residence						
Rural	36	80	39	86.7	0.72	0.396
Urban	9	20	6	13.6		

\*Independent Student’s t test

**Table 1:** Frequency distribution of general characteristics among the intervention and control groups 11.

**Figure 1:** Illustrates frequency distribution of the pregnancy trimesters among the intervention and the control group. Data revealed that, the highly-distributed gestation trimester is the third with 60.60% of women in the intervention group and 48.9% of women in the control group were in the third trimester of pregnancy.



**Figure 1:** The distribution of pregnancy trimester in the intervention and control group.

**Table 2:** The frequency distribution of the associated pregnancy minor discomforts among the intervention and the control group before the intervention. The differences observed among the both groups were not statistically significant at the baseline (p>0.05).

Minor discomforts	Intervention		Control		Chi square test	
	(n=45)		(n=45)		X <sup>2</sup>	P
	n	%	N	%		
Nausea and vomiting	33	73.3	32	71.1	0.055	0.814
Frequent urination	30	66.7	30	66.7	0	1
Fatigue, fainting	33	73.3	28	62.2	1.272	0.259
Breast heaviness	28	62.2	31	68.9	0.443	0.506
Heartburn	34	75.6	26	57.8	3.2	0.074
Leucorrhoea	33	73.3	35	77.8	0.241	0.624
Ptyalize	13	28.9	10	22.2	0.526	0.468
Low back pain	37	82.2	33	73.3	1.029	0.1
Constipation	20	44.4	13	28.9	2.344	0.126
Sleep disturbance	32	71.1	30	66.7	0.207	0.649
Oedema	18	40	14	31.1	0.776	0.378
Muscle spasm	34	75.6	33	37.3	0.058	0.809
Piles	10	22.2	9	20	0.067	0.796
Dyspnoea	28	62.2	22	48.9	1.62	0.203
Varicose veins	9	20	12	26.7	0.559	0.455

Numbers and percentages in the above table are not exclusive.

**Table 2:** Frequency distribution of the associated pregnancy minor discomforts among the intervention and the control group before the intervention.

Table 3, shows the frequency distribution of the associated pregnancy minor discomforts among the intervention and the control group after three weeks of the enrolment. Interestingly to find no self reported minor discomforts above or equal to the half of the intervention group after the 3rd week of the enrolment. On the other hand it is obvious that around three quarters (73.3%) of the control group experienced leucorrhoea. Additionally more than half of the control group experienced nausea & vomiting, urinary frequency, fatigue, breast heaviness, heartburn, low back pain, sleep disturbances and muscle spasm (68.9%, 60%, 60%, 66.7%, 57.8%, 64.4%, 66.7% and 68.9 respectively). The differences observed among the both groups were not statistically significant for the heartburn, piles and varicose veins ( $p < 0.05$ ), highly significant for the self-reported oedema ( $p < 0.001$ ) and insignificant for the other self-reported discomforts ( $p > 0.05$ ).

Minor discomforts	Intervention		Control		Chi square test	
	(n=45)		(n=45)		X <sup>2</sup>	P
	n	%	N	%		
Nausea and vomiting	16	35.6	31	68.9	10.02	0.002
Frequent urination	13	28.9	27	60	8.82	0.003
Fatigue, fainting	14	31.1	27	60	7.571	0.006
Breast heaviness	18	40	30	66.7	6.429	0.011
Heartburn	19	42.2	26	57.8	2.176	0.14
Leucorrhoea	19	42.2	33	73.3	8.927	0.003
Ptyalism	1	2.2	10	22.2	8.389	0.004
Low back pain	17	37.8	29	64.4	6.403	0.011
Constipation	2	4.4	12	26.6	4.865	0.027

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Sleep disturbance	19	42.2	30	66.7	8.459	0.004
Edema	2	4.4	14	31.1	10.946	<0.001
Muscle spasm	21	46.7	31	68.9	4.555	0.033
Piles	7	15.6	9	20	0.304	0.581
Dyspnea	9	20	22	48.9	8.316	0.004
Varicose veins	7	15.6	12	26.7	1.668	0.197

**Table 3:** The frequency distribution of the associated pregnancy minor discomforts among the intervention and the control group after three weeks of the enrolment

Table 4 shows the pregnant mother's attitudes towards the self-care brochure. This table shows that (100%) of the pregnant mothers had agreed that the minor discomforts are normal changes during pregnancy, (75.6%) reported that neglecting the minor discomforts will adversely affect the condition, (57.8%) suggested that pregnant mothers should not use any medication without consultation. (100%) found that self-care is important for pregnant mothers, (62.2%) had agreed that the minor discomfort's self-care brochure helps to relieve the minor discomforts through pregnancy, (100%) agreed that self-care brochures are easy to use and (86.7%) will use it in the future pregnancy.

Items	Agree		Not agree		Uncertain	
	n	%	n	%	N	%
Minor discomforts are normal changes during pregnancy	45	100	-	-	-	-
Neglecting the minor discomforts will carry a risk to the pregnancy	34	75.6	3	6.7	8	17.8
Pregnant women should not use any medication to treat minor discomforts without consultation.	26	57.8	11	24.4	8	17.8
Self-care is of critical importance for the pregnant mother	45	100	-	-	-	-
Self-care brochures help for relieving the minor discomforts of pregnancy	28	62.2	2	4.4	15	33.3
Minor discomforts not relieved by utilizing the self-care brochure	-	-	21	46.7	24	53.3
Self-care did not adversely affect the condition	36	80	-	-	9	20
Self-care is safe during pregnancy	41	91.1	-	-	4	8.9
Self-care is associated with a decrease in pregnancy problems	38	84.4	-	-	7	15.6
Self-care is not expensive	41	91.1	2	4.4	2	4.4
Self-care brochures are easy to use	45	100	-	-	-	-
I will use the self-care brochure in the future pregnancy	39	86.7	-	-	6	13.3

**Table 4:** The pregnant mother's attitudes towards the self-care brochure.



## Discussion

The current study aimed to investigate the utilization of self-care brochure for relieving mother's minor discomforts during pregnancy. This aim was achieved by the present study finding.

The present study findings revealed that there were no significant differences among the intervention and control groups regarding incidence of minor discomforts during pregnancy at baseline, while after three weeks of introducing minor discomforts self-care brochure there were significant differences among the two groups for most of the self-reported minor discomforts. Accordingly, the study hypothesis is accepted.

The present study finding indicated that providing the pregnant mothers with a self-care brochure was significantly relieved the majority of the self-reported pregnancy discomforts among the study group compared to no improvement among control group as reported by women three weeks' post intervention. The present study finding was agreed with the finding of Kamal (2013) who concluded that the teaching program was highly effective in enhancing the knowledge of the enrolled expectant mothers on the management of the selected minor discomforts [15]. Similarly, Jacob (2012) concluded that the structured teaching program was effective in terms of reduction in anxiety and gain in knowledge regarding the self-management of the minor disorders among primigravida [16]. Additionally Abd El-Latif et al. (2006) concluded that although there was no significant difference among the control and the intervention group for the degree of oedema at baseline, however there was a significant difference between the two groups for the improvement of the pre-existing oedema toward the intervention group [17]. This agreed with the present study finding.

Another an experimental clinical trial that aimed at studying the effectiveness of self-care intervention using a non-pharmacological interventions specifically changing the dietary habits, avoiding obesity and positioning after meals and during sleep on relieving the gastro oesophageal reflux disease "GERD" during pregnancy among 221 pregnant mothers who were attended the outpatient antenatal clinic of Ain Shams Maternity University Hospital. This study results confirmed strong positive correlation between the pregnant women compliance to practices of GERD 12relieves measures & GERD symptoms relieve as more compliance lead to marked improvement in GERD symptoms during pregnancy [18]. It was observed from the present study finding that the majority of the pregnant mothers agreed that the self-reported minor discomforts of pregnancy are normal changes throughout the pregnancy period and neglecting such discomforts may adverse the state, also the pregnant mothers refused to use any medication to treat these discomforts. The majority of the mothers agreed that the self-care was important for the pregnant mothers. Slightly more than two thirds of the study group agreed that the

minor discomforts self-care brochure induced to relieve the minor discomforts during pregnancy, and all the mothers agreed that self-care brochure is easy to be used. Additionally, all mothers had intended to utilize self-care brochure for their future pregnancy.

In agreement with the present study finding Boonyaprapa (2010) The finding showed that more than eighty five percent revealed that they strongly agreed that self-care is important for both pregnant and breastfeeding women. Self-care practices are considered as important activities during pregnancy and breastfeeding to improve and maintain health and well-being including the relief of minor discomforts.

It was evident from the present study finding that, mothers agreed to utilize self-care brochure for their future pregnancy and they were satisfied with its contents to relieve their minor discomforts. This stressed the importance of utilization of self-care brochure to all maternity and MCH health centres because it was save, inexpensive and easy to be utilized by mothers.

## Conclusion

The findings of this study are reflecting that, the intervention group had agreed that the self-care brochure is easy to be used and the majority of them reported that they will utilize it in their future pregnancy.

## Recommendations

- Based on the findings of this study, the following recommendations are suggested:
- Integration of self-care guideline to all maternity and MCH health services to overcome minor discomforts during pregnancy.
- Self-care concept must be an integral part at our under or post graduate nursing curriculum.
- Dissemination of the present study finding to all maternity and MCH health services at Manouri city.
- Further study to investigate the reapplication of present study on different sitting and on larger sample size.

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