

# A STUDY TO FIND OUT THE OCCURRENCE OF MINOR AILMENTS IN THIRD TRIMESTER OF PREGNANCY AMONG PRIMIGRAVIDA WOMEN WITH A VIEW TO DEVELOP AND VALIDATE AN INFORMATION BOOKLET ON MANAGEMENT OF MINOR AILMENTS IN A SELECTED HOSPITAL, WEST BENGAL.

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**Abstract-** A study was conducted to find out the occurrence of minor ailments in third trimester of pregnancy among primigravida women with a view to develop and validate an information booklet on management of minor ailments in a selected hospital, West Bengal. The objectives of the study were to identify the occurrence of minor ailments in third trimester of pregnancy in terms of heartburn, lower leg edema, constipation, backache, leg cramps, dyspnoea and insomnia among primigravida women and to prepare and validate the information booklet on management of minor ailments. The conceptual frame work of the study was based on system model. The study was conducted at N.R.S.M.C.H Kolkata. The population of the study was consisted of primigravida women in third trimester of pregnancy with a sample sized 100.

Data were collected by using semi-structured interview schedule and physical assessment proforma. The data collection was completed during 2.1.2012 to 21.1.2012. Data obtained were analyzed and interpreted by using descriptive statistics. Most commonly occurring minor ailments were backache (67%), heartburn (65%), insomnia (45%), leg cramp (42%), lower leg oedema (33%), dyspnoea (32%) and constipation (26%). The findings of the study revealed that information booklet was well validated by experts and also well accepted by the mothers. The findings of the study have implications on nursing practice, education, administration and research. A similar study can be replicated in a larger scale for future research.

**Keyword:** Minor ailments, Primigravida, Third trimester, Information Booklet.

## INTRODUCTION

### Background of the study

Pregnancy is the beginning of a new life. It starts with conception and continues through the foetus development and finally ends at birth. It is not an illness.

Pregnancy is a creative process, which results into the continuation of the species. Furthermore, pregnancy has a positive influence on the female organism, both physically and psychologically.

During pregnancy fundamental changes occur in a woman's body that make physical discomforts almost unavoidable. It is an established fact that there is no psychometrically acceptable tool available to assess accurately maternal physical discomfort (Jackson et al. 1996)<sup>[1]</sup>.

A minor disorder may escalate and could become a serious complication of pregnancy. The role of the midwife is to be always alert to any developing complication and refer appropriately. She should also provide practical advice, education to minimize the problem. Forde (1992) reported a Norwegian study of 65 pregnant women which examined the incidence and significance of minor ailments during pregnancy. The author of the abstract noted that pregnant women's ailments might cause anxiety and reduced the quality of life<sup>[2]</sup>. Studies by Meier et al. (2002) showed the significance of minor ailments during pregnancy<sup>[3]</sup>.

Pregnancy, for good reason, was considered by many a fragile time of a woman's life. Health care providers used special precautionary measures to ensure the health of the growing foetus and the mother. For that reason, they were often hesitant to address the symptoms of low back pain, which were widespread and often debilitating. If unaddressed, those symptoms could persist during pregnancy and affect the lifestyle and health of the patient postpartum. It was therefore vital that health care providers and patients understood the underlying issues of low back pain, including appropriate prevention and treatment options (Darryl et al. 2007) <sup>[4]</sup>.

It is important to prevent the onset of back pain/discomfort in pregnancy, as well as to prevent worsening of existing back pain/discomfort in pregnancy. Women need to be free from pain and fatigue, so that they can cope with the profound psychological changes of pregnancy leading to their personal development and evolving maternal identity (Bibring et al., 1961.,<sup>[5]</sup> Rubin, 1975.,<sup>[6]</sup> Rubin, 1976<sup>[7]</sup> and Zajicek, 1981<sup>[8]</sup>).

Although symptoms such as heartburn are common and generally perceived to be benign, they can still have a major impact on the quality of life for pregnant women and can be linked to more serious conditions. What may be termed as minor complications can make a pregnancy much more uncomfortable and are also associated with higher treatment costs (Rebecca, 2009) <sup>[9]</sup>.

Insomnia research studies concentrate on the various causes of insomnia, its effect on the mind and body, and works to discover new ways to treat or cure this disorder. Researchers also specifically study several different types of insomnia, as each type affects individuals differently and may need to be treated differently. A few of the most common types of insomnia research include studying its impact on women during pregnancy, as well as studying transient insomnia, chronic insomnia, primary insomnia and secondary insomnia (Laura M, 2003) <sup>[10]</sup>.

During pregnancy, it is not uncommon for hormonal and physical changes in a woman's body to prevent her from getting a good night's rest. While these changes are often expected and are not cause for deep concern, some women do develop insomnia during pregnancy. Insomnia research into this type has found that it most commonly occurs in the third trimester of pregnancy and may be due to an increase in the number of nightly bathroom visits likely caused by increased pressure on the bladder (Jaqueline et al. 2003) <sup>[11]</sup>.

Simon (2009) explained that nocturnal leg cramps, like restless legs syndrome, rarely have any serious consequences. However, they can be extremely painful and long lasting. In some cases, severe and persistent symptoms can cause chronic insomnia and considerable mental distress <sup>[12]</sup>.

Roger (2011) noted that although mild foot and ankle swelling during pregnancy is normal, extreme swelling during pregnancy can be a red flag. Severe or sudden swelling could be a sign of a serious condition called preeclampsia. Other signs and symptoms of preeclampsia include severe headaches, blurred vision and rapid weight gain. Swelling in only one leg especially if it's accompanied by pain or tenderness in the calf or thigh could indicate a blood clot or other underlying condition. Both conditions warrant prompt evaluation and treatment <sup>[13]</sup>.

Dyspnoea is a common symptom during pregnancy, 60 to 70% of women experience it to a varying degree. The low pCO<sub>2</sub> and the elevation of the diaphragm contribute to this sense of dyspnoea. Maternal hyperventilation is probably due to the action of progesterone on the respiratory centre. It is a protective measure to prevent exposure of the foetus to excessive levels of CO<sub>2</sub> <sup>[14]</sup>.

Khan et al. (2010) pointed out that constipation in pregnancy was a common problem and was included in minor ailments <sup>[15]</sup>. American Pregnancy Association estimated that approximately 50 percent of pregnant women experience constipation at some point. A pregnant woman's growing belly could put additional pressure on intestines, which might result in the difficult passage of waste. The APA explained that hormonal changes that occurred during pregnancy might also contribute to constipation. Careful monitoring of the diet as well as regular physical activity could help to relieve constipation during pregnancy (Erica, 2009) <sup>[16]</sup>.

## Objectives

- To identify the occurrence of minor ailments in third trimester of pregnancy in terms of heartburn, lower leg edema, constipation, backache, leg cramps, dyspnoea and insomnia among primigravida women.
- To prepare and validate the information booklet on management of minor ailments.

**Material and Methods:**

Descriptive survey research design was adopted to accomplish the objectives of the present study. Non –probability convenience sampling procedure was adopted for selecting primigravida women in third trimester of pregnancy as sample for the present study. For the purpose of collecting data on minor ailments, pretesting questionnaires was used on 100 primigravida women. Out of these 100 women, 30 were selected randomly for their opinion regarding the acceptability of information booklet.

**Results**

Table 1 Frequency and percentage distribution of primigravida women by age, education and occupation

n = 100

Sample characteristic	Frequency	Percentage
<b>Age group</b>		
15-18yrs.	20	20
19- 22yrs.	51	51
23- 26 yrs.	24	24
27-30 yrs.	05	5
<b>Education</b>		
Primary	58	58
Secondary	24	24
Higher Secondary	10	10
Graduate and above	08	8
graduate		
<b>Occupation</b>		
House wife	94	94
Service	06	6

The data presented in table 1 showed that half of the primigravida women (51%) belonged to age group of 19-22 years. The maximum numbers of the primigravida women (58%) had studied up to primary level of education. Most of the primigravida women (94%) were house wives and only 6% mothers were service holders.

Table 2 Frequency and percentage distribution of sample by religion, family income per month and place of residence

n = 100

Sample characteristic	Frequency	Percentage
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<b>Religion</b>		
Hindu	85	85
Muslim	15	15
<b>Family income per month</b>		
Rs. 2000-4000/-	49	49
Rs. 4001- 6000/-	24	24
Rs. 6001- 8000/-	13	13
Rs. 8001- 10000/-	06	6
>Rs.10000/-	08	8
<b>Residence</b>		
Rural	45	45
Urban	55	55

The data presented in the table 2 indicated that maximum numbers (85%) of primigravida women belonged to Hindu community.

The data also revealed that maximum numbers (49%) of primigravida women belonged to monthly income group of Rs. 2000-4000/- and 55% of primigravida women came from urban area.

n = 100

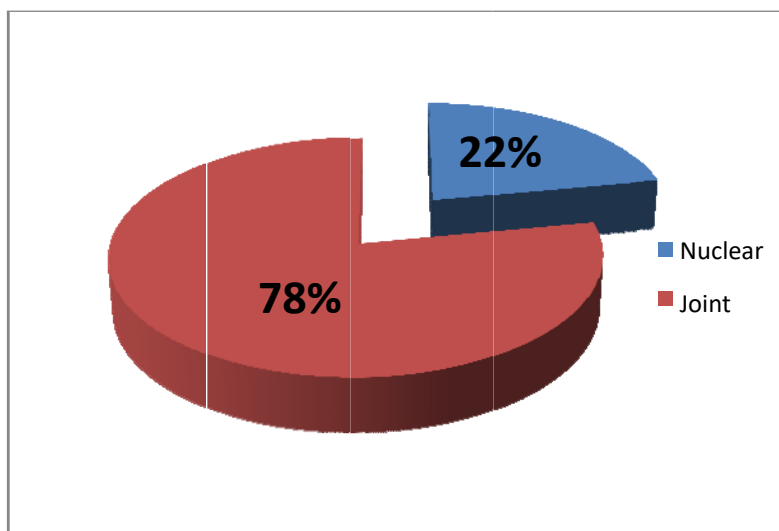


Figure 1: Pie diagram showing the distribution of primigravida women by types of family

The figure no. 1 indicated that majority of the primigravida women (78%) came from joint family and rests (22%) of the mothers were from nuclear family.

n = 100

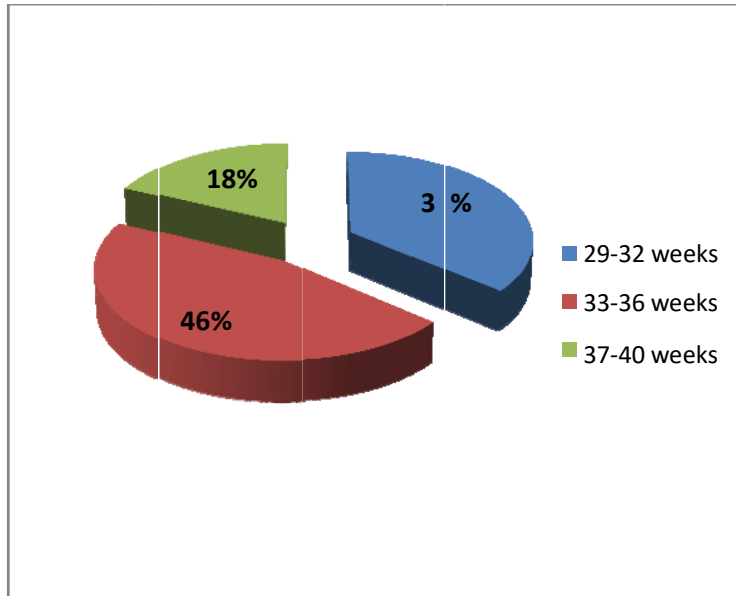


Figure 2: Pie diagram showing the distribution of primigravida women in third trimester of pregnancy by gestational age in week

Figure no. 2 indicated that maximum numbers (46%) of the women were in the

period of 33-36 weeks of pregnancy.

n = 100

Note: one respondent has more than one minor ailment

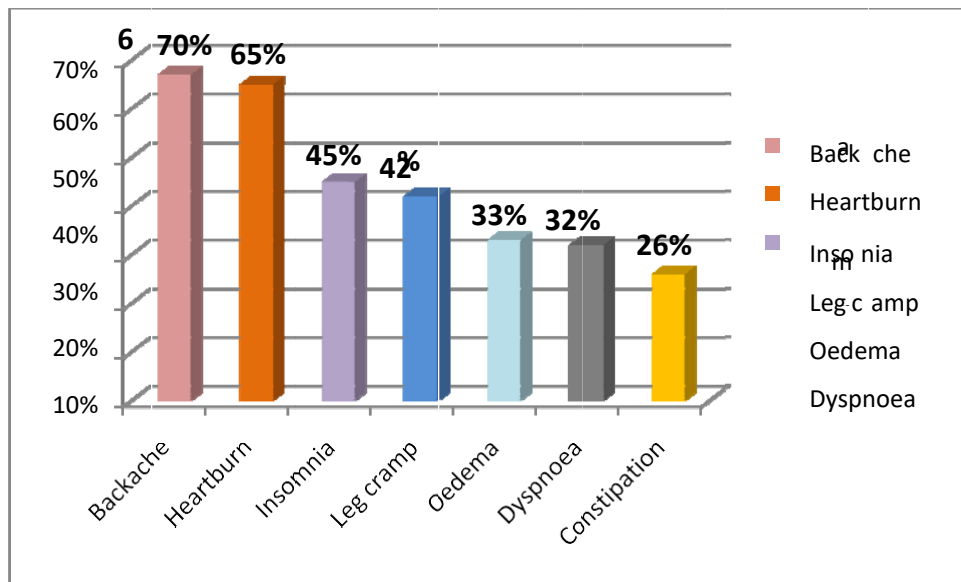


Figure 3: Bar diagram showing distribution of primigravida women according to occurrence of minor ailments.

Figure no. 3 showed that maximum numbers (67%) of the primigravida women

were suffering from backache and only 26% primigravida women

were suffering from constipation.

Table 3 Frequency and percentage distribution of the primigravida women according to occurrence of minor ailments with duration and rank of minor ailments in third trimester of pregnancy n= 100

Rank order	Minor ailments	occurrence		Duration in weeks			
		fr	percentage	≤1	2	3	≥4
1	Backache	67	67	18	17	01	31
2	Heartburn	65	65	23	15	0	27
3	Insomnia	45	45	14	11	01	19
4	Leg cramp	42	42	06	13	0	23
5	Leg edema	33	33	10	13	02	08
6	Dyspnoea	32	32	10	05	0	17
7	Constipation	26	26	04	07	01	14

Note: one respondent has more than one minor ailment

The data presented in table 3 showed that among 7 categories of minor ailments in third trimester of pregnancy, backache was the most frequently occurring one.

The data also indicated that most of the primigravida women (8 to 31) were suffering from minor ailments for  $\geq 4$  weeks.

Table-4 Frequency and percentage distribution of primigravida women according to number of minor ailments (selected minor ailments under study)

n= 100

Primigravida women in third trimester of pregnancy	Frequency	Percentage
Having no minor ailments.	3	3
Having one minor ailments.	13	13
Having two minor ailments.	24	24
Having three minor ailments.	17	17
Having more than three minor ailments.	43	43

The data presented in the table- 4 indicated that most (43%) of the primigravida women under the present study had experienced more than three minor ailments in third trimester of pregnancy.

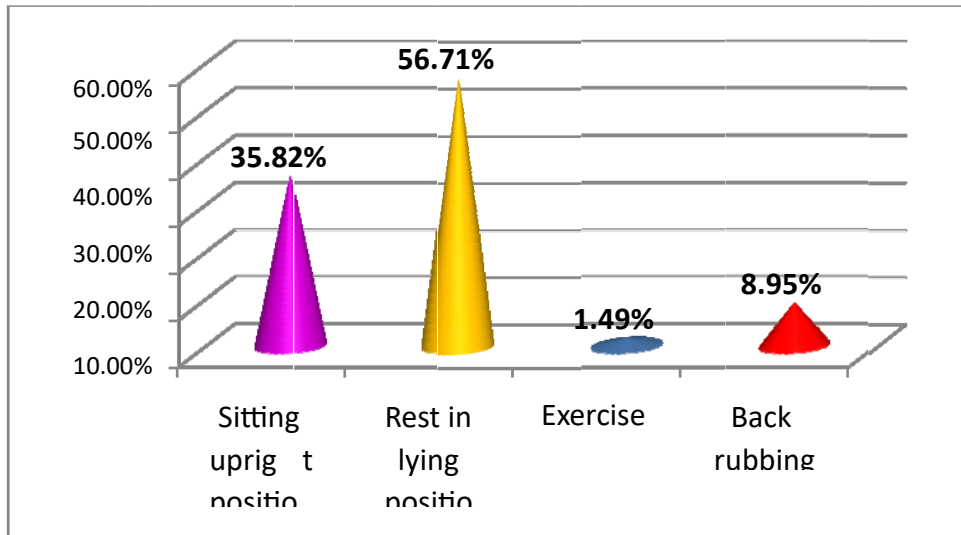
Table 5 frequency of methods used by primigravida women for reducing minor ailments

Minor ailments	frequency of methods used for reducing minor ailments				
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Backache	Lying position Medicine	Sitting upright Water	Back rubbing Less spicy food	Exercise ----	Heartburn
Insomnia	No measures	Reading story	Listening music	Taking hot milk before sleep	
Leg cramp position	Taking rest Rest in lying	Avoid long walking Rest with pillow under leg	Medicine ----	Calcium reach diet	Leg edema
Dyspnoea position	Rest in upright	Avoid overdoing things	-----	----	
Constipation of water	More amount	Laxative	Roughage containing food	-----	

The data presented in table 5 showed that most frequently used methods for reducing minor ailments were rest in lying position for backache and oedema, medicine for

heartburn, rest for leg cramp, rest in upright position for dyspnoea and taking more amount of water for constipation. The data also revealed that no measures were used for reducing insomnia by the primigravida women. (The data were also given in graph for each minor ailment).

n = 67



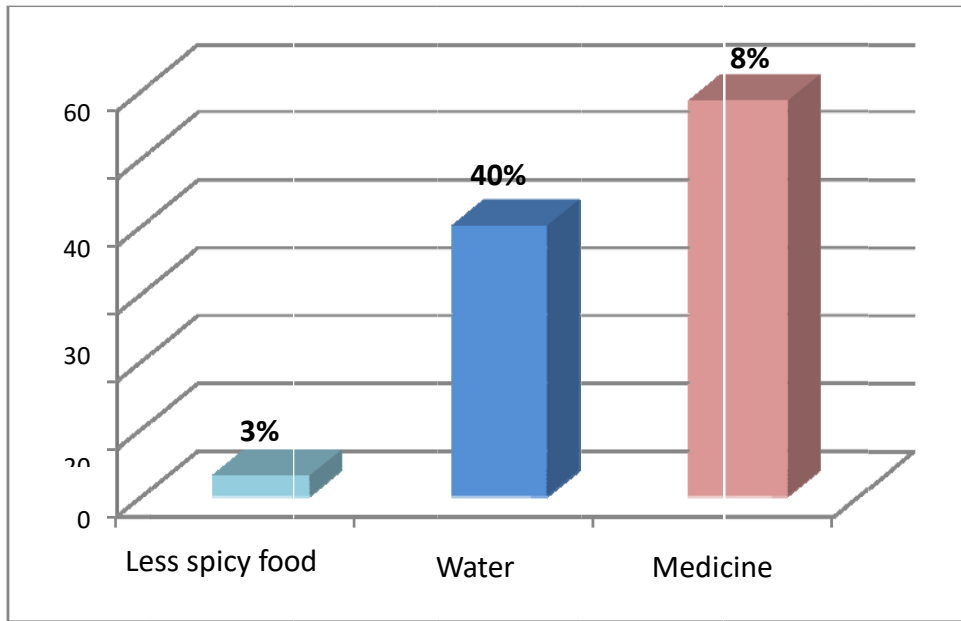
Note: one respondent had taken more than one measure

Figure 4: Cone diagram showing percentage distribution of primigravida women in third trimester of pregnancy according to measures used for reducing backache

Cone diagram depicted that majority (56.71%) of primigravida women in the present study took rest in lying position, 35.82% of primigravida women seat upright position, 8.95% rubbed back and only 1.49% were doing exercise to reduce the backache.

n = 65

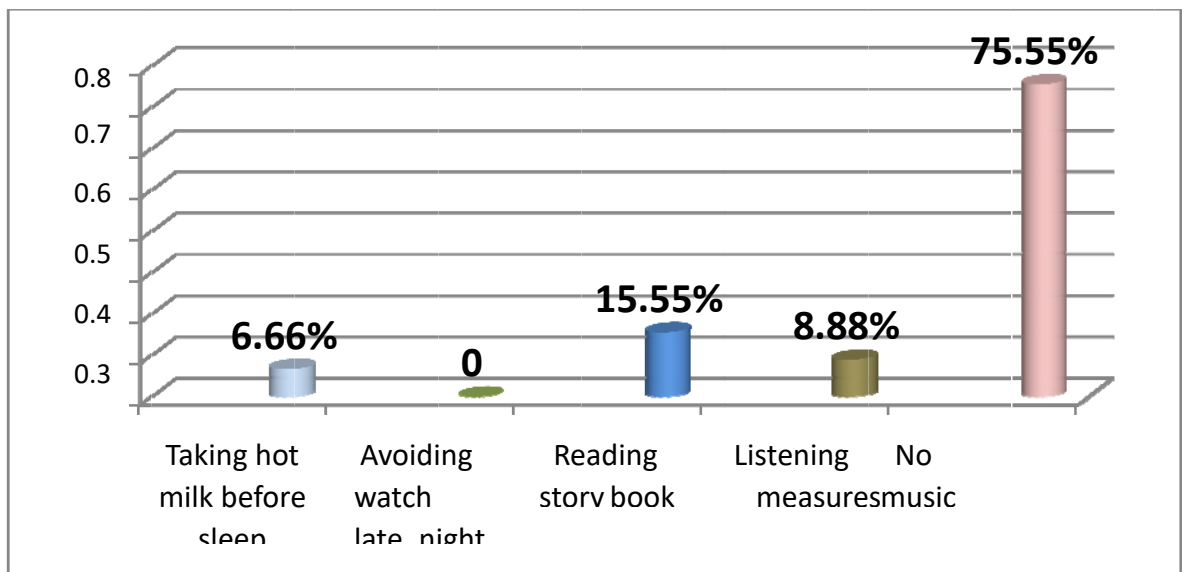




Note: one respondent had taken more than one measure

Figure 5: Bar diagram showing distribution of primigravida women by methods of reducing heartburn

The figure no. 5 indicated that the majority (58%) of the primigravida women took medicine as per doctor’s advice, 40% of the primigravida women drunk water and 3% primigravida women took less spicy food to re duce the heartburn.  
n = 45



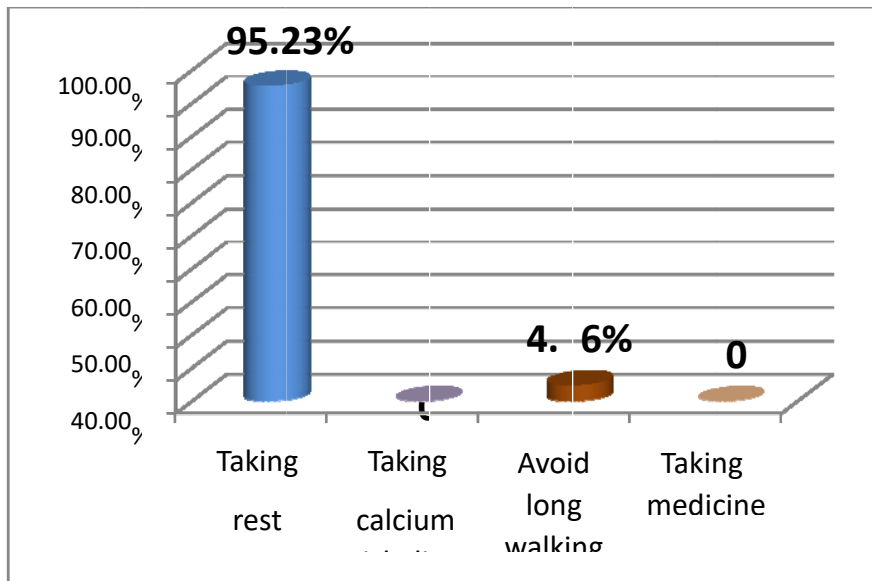
Note: one respondent had taken more than one measure

Figure 6: Bar diagram showing distribution of primigravida women for adopting methods of reducing insomnia

Figure 6 indicated that majority (75.55%) of primigravida women did not take any

measure to reduce insomnia. But 15.55% mothers participated in the present study were used to read story book as a method of inducing sleep.

n = 42



Note: one respondent had taken more than one measure

Figure 7: Bar diagram showing distribution of primigravida women by methods of reducing leg cramp.

Figure 7 depicted that majority (95.23%) of the primigravida women took rest and only 4.76% of the primigravida women in third trimester of pregnancy avoided long walking to reduce leg cramp.

n = 33

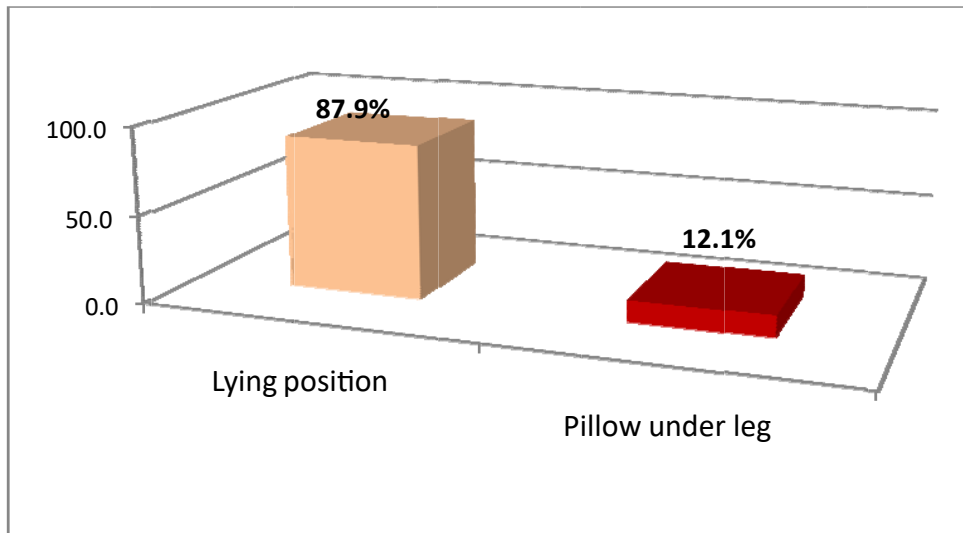


Figure 8: Bar diagram showing distribution of primigravida women by methods of reducing leg oedema

Figure 8 indicated that majority (87.9%) of primigravida women in third trimester of pregnancy took rest in lying position and 12.1% of the primigravida women took rest with pillow under leg to reduce leg oedema.  
 n = 32

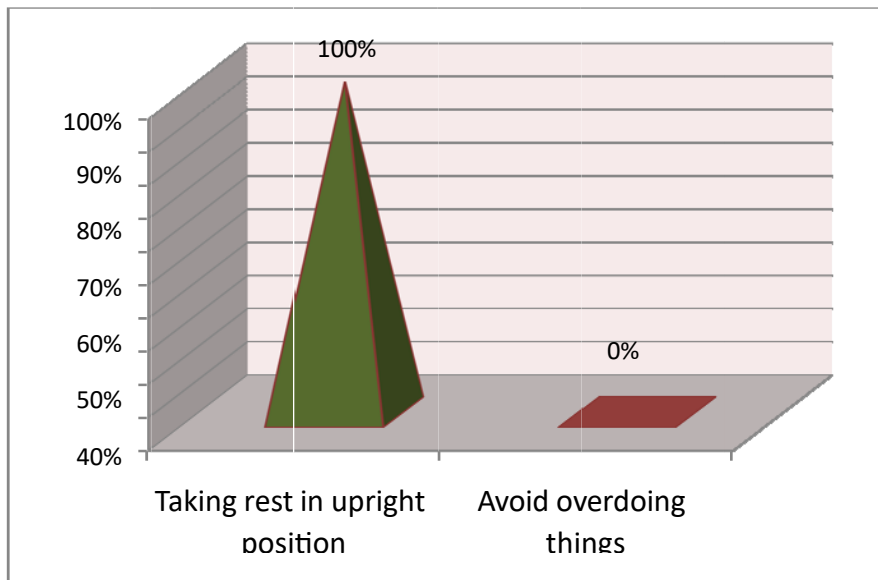
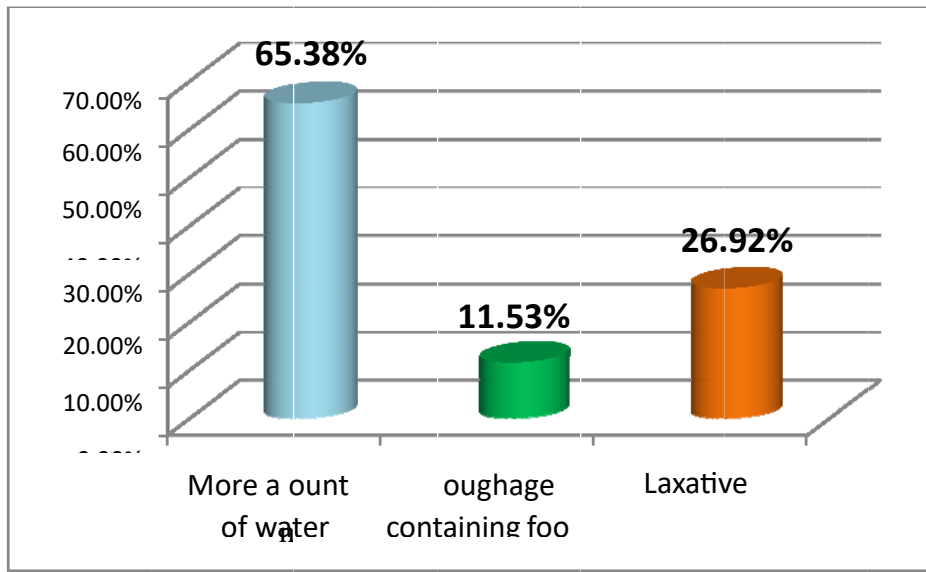


Figure 9: Bar diagram showing distribution of primigravida women by methods of reducing dyspnoea

Data presented in figure 9 revealed that 100% primigravida women took rest in

upright position to reduce dyspnoea.

n = 26



Note: one respondent had taken more than one measure

Figure 10: Bar diagram showing distribution of primigravida women by methods of reducing constipation

Data presented in figure 10 showed that majority (65.38%) of the primigravida women were taking more amount of water.

Table 6 Frequency and percentage distribution of primigravida women by physical assessment

n = 100

Physical findings	frequency	percentage
<b>Respiration</b>		
Normal	100	100
<b>Pulse</b>		
Normal	100	100
<b>Blood pressure</b>		
Sub-normal	37	37
<b>Pallor</b>		

Present	36	36
<b>Leg oedema present</b>		
Unilateral	10	10
Bilateral	04	04

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The data presented in table 6 indicated that respiration rate and pulse rate were normal in all the mothers of the present study. 37% primigravida women had low blood pressure, 36% primigravida women had pallor and 14% primigravida women had lower leg oedema which was evident during physical assessment.

#### Content validity of the Booklet

The informational booklet was given to nine experts for validation based on criteria checklist. The experts were requested to give their opinion and suggestions in the context of the criteria rating scale prepared by the investigator. There was 88.88% agreement on the content of the booklet; modification on the content was done as per suggestions. There was 77.77% agreement on the language of the booklet. 100% agreement was there on the organization, feasibility.

#### Preparation of Final Draft of the Booklet

The final draft of the booklet was prepared after incorporating the suggestions given by the experts. It was submitted to a language expert for editing and the final draft of the booklet was printed.

Table 7 Evaluation of content validity of information booklet regarding minor objectives.

- Content is relevant.
  - Content is adequate.
- 2.
- Organization:
- Logical sequence.
  - Continuity.
  - Integrating.
- 3.
- Language:
- Simple and understandable.
4.  Comprehensive at the level of subjects.
- Feasibility:
5.  Acceptability to the mothers.
- Suitable for community setting.
- Over all Organization Impression:
- Attractive
  - Relevant
  - Interesting

- Content reflect the

(88.88%)

9  
(100%)

7  
(77.77%)

9  
100%

9  
100%  
(11.1%)

2  
(22.2%)  
done

**Modification done**

The data presented in the table 7 showed that there was 100% agreement in organization, feasibility, and overall organization of the information booklet prepared for the primigravida women on minor ailments of pregnancy. The data also revealed that there was 88.88% agreement in the content area and 77.77% agreement in the language area. So, the information booklet was valid.

Table 8 frequency and percentage distribution of primigravida women regarding acceptability of information booklet

SL.NO

STATEMENTS

**TO A GREAT EXTENT**

TO SOME EXTENT n = 30

NOT AT ALL

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1.	I believe that I can learn through this information booklet.	100%	
2.	I find that the booklet gives information, which I wanted to learn.	100%	
3.	I find, the different aspects covered on minor ailments are useful.	100%	
4.	The illustration gives on the booklet are clear and motivating.	100%	
5.	The language used in information booklet is simple and clear.	96.66%	3.33%
6.	The booklet is interesting to read.	100%	
7.	The pictures used in information booklet are well illustrated.	100%	
8.	The booklet has given adequate knowledge about minor ailments in third trimester of pregnancy.	100%	
9.	The booklet is useful for self learning.	93.33%	6.66%
10.	Booklet is easy to carry.	100%	

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The data presented in the table 8 showed that information booklet on minor ailments in third trimester of pregnancy was well accepted by the mothers. All the mothers (100%) were agreed to a great extent that information booklet was helpful to learn about minor ailments in third trimester of pregnancy.

All the mothers (100%) were agreed to a great extent that information booklet was clear and motivating, interesting to read, well illustrated, gave adequate knowledge and easy to carry. Most of them (96.66%) were agreed to a great extent that information booklet was simple and clear. Most of the primigravida mothers (93.33%) participated in the present study were also agreed to a great extent that information booklet was useful for self learning.

#### Discussion in relation to other studies Backache

The present study findings indicated that 67% primigravida women were suffering from backache. This study finding was supported by a longitudinal, prospective, observational cohort study conducted by Kristiansson et.al (1996) <sup>[17]</sup>. In their study, 61% pregnant women reported backache. They concluded that back pain during pregnancy was a frequent clinical problem even during the early stages of pregnancy and increased in third trimester of pregnancy.

### Heartburn

The current study showed that 65% primigravida women were suffering from heartburn in third trimester of pregnancy. This finding was supported by a prospective study by Dall'Alba V, et al. in which 89 pregnant women (gestational age  $34 \pm 4$  weeks) attending a low-risk prenatal outpatient clinic were asked to provide information on the frequency they experienced heartburn and regurgitation. Results showed heartburn once a week or more often occurred in 63% pregnant women [18].

### Insomnia

According to the National Sleep Foundation's 1998 Women and Sleep poll, 78% of women reported more disturbed sleep during pregnancy than at other times. Many women also reported feeling extremely fatigued during pregnancy, especially during the first and third trimesters. The present study findings indicated that only 45% primigravida women in third trimester of pregnancy were suffering from insomnia.

The occurrence of insomnia in the present study was less and might probably be due to less sample size [19]

### Leg cramp

The current study showed that 42% primigravida women were suffering from leg cramp in third trimester of pregnancy. This finding was supported by a study of Tunc et al. (2007) on predisposing factors of restless leg syndrome in pregnancy. Muscle cramping during pregnancy was very common and had been reported in up to 50% of pregnant women. Typically, muscle cramping occurred in the latter stages of pregnancy (in the second and third trimesters), and mainly affected the lower leg (calf) muscles [20].

### Lower leg oedema

The current study showed that 33% primigravida women were suffering from leg oedema. But Robin Elise Weiss noted that swelling, or oedema, was a very common discomfort of pregnancy (75%) [21]

### Dyspnoea

The current study showed that 32% primigravida women were suffering from dyspnoea. This finding was supported by Bidad et al. (2010), where they conducted one study to estimate the prevalence of asthma among pregnant women with dyspnoea. In their study 38.8% of the participants were diagnosed as having asthma and in 36.4% of cases dyspnoea was categorized as physiologic [22].

### Constipation

The present study findings indicated that only 26% primigravida women were suffering from constipation. This finding was supported by a longitudinal study (2007) conducted by Bradley et al. to estimate constipation prevalence and risk factors in pregnancy. One hundred three women had been enrolled for the study. The constipation prevalence rate was 16% in third trimester. They reported the prevalence rates of constipation during pregnancy ranged from 9% to 39% [23].

### Conclusion

The present study revealed that maximum number of primigravida women in their third trimester of pregnancy had experienced one or more than one minor ailments.

Most (43%) of the primigravida women were suffering from more than three minor ailments in third trimester of pregnancy. Backache was the most frequently occurring minor ailment among the pregnant women of the present study followed by heart burn, insomnia and leg cramp. Edema, dyspnoea and constipation ranked fifth, sixth and seventh position respectively. Most of the primigravida women suffered from minor ailments for  $\geq 4$  weeks. Investigator developed and validated an information booklet to provide education regarding minor ailments in third trimester of pregnancy. All the mothers (100%) were agreed to a great extent that information booklet was clear and motivating, interesting to read, well-illustrated, gave adequate knowledge and easy to carry.

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