

Stressors and Social Support among Pregnant Women

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Abstract: Pregnancy has many physical, psychological and emotional stressors but with the presence of social support, it can be alleviated.

Aim: The present study aimed to assess stressors and social support among pregnant women.

Subject and Method: The study followed a descriptive design on 180 pregnant women who were chosen randomly.

Setting: The study was conducted at Antenatal Clinics in the Obstetrics and Gynecology Center at Mansoura City, Egypt from the start of September 2015 to the end of March 2016.

Data collection tools: Three tools of data collection were used including; A structured Interviewing Questionnaire Schedule, A-Z Stress Scale, and Social Support Questionnaire (SSQ6).

Results: The study revealed that majority of the pregnant women stressors were (93.9%, 90.0% & 77.8 %) concerned to increase in the prices of everyday goods, feeling unwell during pregnancy, and household responsibilities. Most pregnant women were supported by their mother in all common stressful events. **Recommendations:** The study recommended implementation of further researches investigating the association between stress during pregnancy and labour outcomes.

Key words: Pregnancy, Stress, Social support.

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I. Introduction

Pregnancy is the most pleasurable period for women although all stressful physical and psychological changes and demands women passing through⁽¹⁾. Pregnancy stress defined as the imbalance that a pregnant woman feels when she cannot cope with pregnancy changes and demands, which is expressed both behaviorally and physiologically⁽²⁾. Stress during pregnancy has serious adverse outcomes on the mother, the fetus, newborn, children and even adolescents⁽³⁾. A large body of empirical evidence suggests that stress during pregnancy leads to alterations in both fetal and maternal mental and psychological health⁽⁴⁻⁶⁾. Stressors during pregnancy may vary from unwilling of current pregnancy, household and childrearing responsibilities, numerous social issues in the environment such as forced moving from home and be homelessness, adverse life events such as death or chronic illness of a close friend or a family member, socioeconomic concerns such as losing a job, husband concerns and worries, sexual relation, pregnancy-related concerns such as physiological and psychological changes during pregnancy and the current pregnancy outcome were also identified as important stressors^(7,8).

With all stressful pregnancy concerns and challenges, providing social support for pregnant woman is a key component to achieve healthy pregnancy outcomes and to handle psychological challenges and to adapt to the new circumstances^(9,10). Social support is considered as one important demand to keep pregnancy mental balance and adaptation⁽¹¹⁾. Social support can play a buffering role by providing resources, support and strength during pregnancy. The association between social support and pregnancy outcomes is complex, interrelated concepts corresponding to the psychological and biological responses to stressors and life-events⁽¹²⁻¹⁵⁾. Social support can be provided by close persons such as husband, parents, sister, brother, relatives, or friends who can be termed as the function of social network^(16,17). Social support is a multidimensional and dynamic concept, allowing for the interaction between individuals and their social networks, to face new challenges, to fulfill social needs, to complete the current personal resources to pass through a critical period of life which is pregnancy safely without any adverse impacts⁽¹⁸⁾. Social support has three dimensions; emotional dimension, which means to talk about concerns with a close person, instrumental dimension, which means to receive material resources and assistance to cope with challenges such as assistance in house hold and providing economic help, then lastly, informational dimension, which means providing guidance and advices from the supported person⁽¹⁹⁾.

1.1 Significance of the study

Increasingly, a strong evidence points to many negative consequences of stress on the optimal health of pregnant women during pregnancy and postpartum period and also affects the optimal physical, mental and psychological development of the fetus^(20,21). Pregnant women who experience stress during pregnancy are at risk for preterm births and giving birth to low birth-weight infants⁽²²⁾. Also stress during pregnancy can lead to psychological consequences such as anxiety and depression during pregnancy and postpartum period which mean increase the liability for physical and psychological illness^(23,24). It is widely recognized that sustained stressors must be consistent with social support that alter the effects of stressors on psychological functioning of pregnant women to cope effectively with stress. Within this context, this study had attempted to assess stressors and social support that may decrease such stressors and improve the psychological well-being of women during pregnancy and puerperium, as well as improve pregnancy outcomes and prevent harmful consequences.

II. Subject And Method

2.1 Aim of this study: The present study aimed to assess stressors and social support among pregnant women.

2.2 Study Question: What are stressors and social support among pregnant women?

2.3 Study design: The study followed a descriptive design.

2.4 Study setting and participants: The study conducted at Antenatal Clinics in the Obstetrics and Gynecology Center at Mansoura City on 180 pregnant women who were chosen randomly.

2.5 Sampling: The sample of pregnant women calculated according to the following formula⁽²⁵⁾.

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

Where $Z_{\alpha/2}$ (the value of the normal distribution which cuts off an upper tail probability of $\alpha/2$) equal 1.96, Z_{β} (the value of the normal distribution which cuts off an upper tail probability of β) equal 0.84, σ (the presumed standard deviation of the outcome) equal 10.2 and Δ (the difference sought between the means) equal 3.

Sample size: The study included a simple random sample of 180 pregnant women.

2.6 Tools of data collection: Three tools were used for data collection

Tool (1): A structured Interviewing Questionnaire Schedule It was developed by the researcher and constituted of two parts:

Part A: General characteristics of the pregnant women which include age, education, husband education, marital condition, employment status, husband occupation, residence, and family income.

Part B: Medical, surgical, obstetric and family history of the pregnant women.

Tool (2): A-Z Stress Scale

It was adopted from Kazi, *et al.*, 2009⁽⁷⁾ and translated into Arabic to measure stressors of pregnant women. It contains 30 items. The items consisted of daily life event stressors, family-related stressors, socioeconomic and environmental stressors and pregnancy-related stressors. So it is a comprehensive scale based on the literature.

Tool (3): Social Support Questionnaire (SSQ6)

It was adapted from Sarason *et al.*, 1987⁽²³⁾ and translated into Arabic to identify social support persons during pregnancy and measure level of pregnant woman satisfaction with this support. (SSQ6) is a self-report questionnaire consisting of 6 items (questions). Each question has two parts; the first part about list of all persons who were accessible for support and the second part; how satisfied the pregnant women were with the available support for that specific situation by four point Likert scale.

Content validity of the study tools: Content validity of the study tools was determined after reviewing the literature. The content of data collection tools were validated by a jury of 3 experts in the field of woman's health and midwifery nursing and according to their recommendations, the modifications had been done and the final form was used for data collection (i.e. changing in the ordering and sequences of some sentences and changing the number of point of Likert scale from six point Likert scale to four point Likert scale on the second part of Social Support Questionnaire (SSQ6).

2.7 Field work

- The study field work starts actually from the start of September 2015 to the end of March 2016. It was carried out through two stages; preparatory and operating stages.
- Preparatory stage included three phases; administrative phase, reviewing literature and developing tools phase and pilot phases.
- Operating stage included three phases; data collection, data analysis and ethical considerations phases.

2.8 Preparatory stage

I. Administrative phase

- An official permission was obtained from research ethics committee of the Nursing Faculty, Mansoura University after clarifying the aim of the study.
- An official permission was obtained from Faculty of Nursing, Mansoura University to the director of obstetrics and gynecology center in Mansoura city.

II. Reviewing literature and developing tools phases

- The researcher reviewed the national and international literature on theoretical knowledge regarding stress and social support during pregnancy.
- The review collected was a guide for developing the tools for data collection.

III. Pilot Study

It conducted for three days per week on 10% (18 pregnant women) of the total sample before the start of data collection to evaluate the validity and applicability of data collection tools as well as estimating the time needed for completing the tools according to the statistical analysis of pilot results, the time required for completing the tools was 15 minutes.

2.9 Operating stage

I. Data collection phase

- Data were collected from Antenatal Clinic in the Obstetrics and Gynecology Center in Mansoura city. The researcher attended the previously mentioned setting three days weekly from 9 Am to 1 Pm until the calculated sample size was obtained.
- The researcher introduced herself to the pregnant women, a full explanation of the aim and method of the study were done to obtain their acceptance and cooperation as well as their informal consent and the researcher assured confidentiality of the collected data.
- The researcher interviewed each pregnant woman individually for about 15 minutes to collect data regarding their general characteristics, obstetrical, family and medical history by using structured interviewing questionnaire.
- The researcher assessed pregnant women stressors by using A-Z stress scale by asking the pregnant women about the stress items and after obtaining their answer and check on the scale.
- The researcher assessed pregnant women social support by using Social Support Questionnaire (SSQ6) and asked the pregnant women about the social support persons and also asked about the level of satisfaction with this support and after obtaining their answer check on the questionnaire. The time needed to fill in A-Z stress scale and (SSQ6) questionnaire was about 15 minutes.

II. Data Analysis phase

Data were sorted, organized, coded and transferred into especially designed formats to be suitable for computer entry process. The statistical analysis was done by using SPSS (Statistical Package for Social Sciences) version 22. Qualitative data were described using frequencies and percentage. Association between categorical variables was tested using Chi-square test (χ^2). Continuous variables were presented as Mean \pm SD (standard deviation). The threshold of significance is fixed at 5% level (p-value).

III. Ethical considerations

- An ethical approval was obtained from the Research Ethics Committee of the Faculty of Nursing at Mansoura University to conduct the study.
- An official permission was taken from the head of Obstetrics and Gynecology Center to obtain the official permission to conduct the study after explaining the aim of the study.

- Prior to the study, an informed consent were obtained from each pregnant women enrolled in to the study after clarification of the purpose of the study.
- The researcher emphasized that participation is voluntary and each participant has the right to withdraw from the study at any time.

III. Results

Table 1. Presents that almost two thirds of the pregnant women (65%) aged from 20 to29 years with mean 27.6 ±5.9, more than half of the pregnant women (53.9%, 62.2%) respectively were from rural residence and were working women. while, slightly less than half of the pregnant women and their husbands (49.4%, 47.2%) respectively had completed secondary school education and university education. In relation to family income, more than half of the pregnant women (61.7%) stated that their income was enough.

Table 2. Displays that three quarters of the pregnant women (75%) were multigravida, almost half of the pregnant women (48.3%) were multipara, while (12.8%, 5.6%) respectively of the pregnant women had previous abortion and had previous still birth baby.

Table 3. Shows that the majority of the pregnant women stressors were (93.9%, 90.0%, 77.8 % &76.7%) concerned to increase in the prices of everyday goods, feeling unwell during pregnancy, house hold responsibilities and husband worries.

Table 4. Illustrates that most pregnant women were supported by their mothers.

Table 5. Represents that all pregnant women were satisfied for the social support provided by their support person.

Table 6. Reveals that the mean for stressors count was significantly increased for pregnant women at the age of 20-29 years (p= 0.005), for pregnant women from urban residence (P = 0.018), for women and husband with university education (P= 0.009, P= 0.011 respectively), for working women (P= 0.028), for women who reported not having enough family income (P =0.020).

Table 7. Shows that parity was significantly correlated with the mean of stress count (P= 0.010) while, there were no significant correlation between other obstetric history and the mean of stress count.

Table8. Illustrates that there were statistically significant differences between the total satisfaction support score for pregnant women from rural residence with basic and secondary education (P= 0.012 & P= 0.011 respectively) and that there were highly statistically significant differences between the total satisfaction support score for pregnant women who reported that their family income can save and for pregnant women whose their husbands had basic education (P= 0.001).

Table9. Demonstrates that there were statistical significant association between obstetric history and total satisfaction for primy gravid women and those who had previous stillbirth baby (P= 0.28).

Figure 1.Shows that the total satisfaction score was inversely correlated with the mean of stress (r= 0.171& P= 0.021).

Table (1) Frequency distribution of the general characteristics data for the pregnant women (n = 180)		
Personal and Demographic data	No.	%
Age		
<20	10	5.6
20-29	117	65.0
30-39	51	28.3
=>40	2	1.1
Mean ±SD	27.6 ±5.9	
Residence		
Rural	97	53.9
Urban	83	46.1
Educational level		
Basic	11	6.1
Secondary	89	49.4
University	80	44.4
Occupational status		
House Wife	68	37.8
Working	112	62.2
Husband level of education		
Basic	26	14.4
Secondary	69	38.3
University	85	47.2
Family income		
Not enough	50	27.8
Enough	111	61.7
Can save	19	10.6

Table (2) Frequency distribution of the obstetric history for pregnant women (n = 180)		
Obstetric history	No.	%
Gravid		
Primigravida	45	25
Multigravida	135	75
Para		
Nullipara	39	21.7
Primipara	54	30
Multipara	87	48.3
Previous abortion	23	12.8
Previous stillbirth	10	5.6

Table 3. Frequency distribution of stressors during pregnancy (n=180)		
Concern about	No.	%
gaining supremacy among in-laws	95	52.8
missing own parents	103	57.2
not having freedom to make decisions	98	54.4
household responsibilities	140	77.8
in-laws/guests visiting at odd times	115	63.9
rented home	13	7.2
access to husband's money	54	30.0
owing money	78	43.3
husband's unstable	65	36.1

husband's unemployment	14	7.8
insufficient money for buying the house	42	23.3
increases in the prices of everyday goods	169	93.9
husband's worries	138	76.7
husband's inattention	57	31.7
verbal abuse by husband	30	16.7
looking after the children	107	59.4
inaccessibility of health care	72	40.0
delay in household work due to pregnancy	130	72.2
feeling unwell during pregnancy	162	90.0
unwanted pregnancy	49	27.2
waking up late due to pregnancy	120	66.7
less socialization due to pregnancy	114	63.3
giving birth to a girl child	38	21.1
appearance of unborn baby	130	72.2
having a major fight with relatives	52	28.9
too many people living in the house	58	32.2
having a major fight with in-law	71	39.4
anyone's illness in the original family	47	26.1
children's illness	37	20.6
husband's major illness or injury	27	15.0
Count of stressors (mean ±SD)	13.5 ±3.3	

Table 4. Frequency distribution of the social support person for the pregnant women (n = 180)

Person who	Mother		Father		Sister		Brother		Husband		No support	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
can be relied on when need to help	135	75.0	18	10.0	2	1.1	1	0.6	17	9.4	7	3.9
can be relied on when pass distress	124	68.9	15	8.3	5	2.8	3	1.7	22	12.2	11	6.1
accepts woman in all conditions	107	59.4	9	5.0	1	0.6	0	0	20	11.1	43	23.9
can be relied on for one's sponsorship	121	67.2	19	10.6	3	1.7	1	0.6	23	12.8	13	7.2
can be relied on to feel better when trouble	115	63.9	15	8.3	8	4.4	2	1.1	27	15.0	13	7.2
can be relied on to console when being very upset	125	69.4	11	6.1	9	5.0	1	0.6	20	11.1	14	7.8

Table 5. Frequency distribution of the degree of satisfaction of the pregnant women for the social support (n = 180)

Pregnant women satisfaction for the social support person who:	Total satisfaction score		Strongly dissatisfied		Neutral		Satisfied		Strongly satisfied	
	Mean	±SD	No.	%	No.	%	No.	%	No.	%
can be relied when need to help	4.0	±0.8	7	3.9	18	10.0	108	60.0	47	26.1
be relied on when pass distress	4.1	±1.0	11	6.1	18	10.0	83	46.1	68	37.8
accepts woman in all conditions	3.5	±1.6	46	25.6	15	8.3	60	33.3	59	32.8
be relied on for one's sponsorship	4.1	±1.1	13	7.2	19	10.6	78	43.3	70	38.9
can be relied on to feel better when trouble	4.0	±1.1	13	7.2	26	14.4	78	43.3	63	35.0
can be relied on to console when being very upset	3.9	±1.1	14	7.8	31	17.2	85	47.2	50	27.8

Table 6. The association of general characteristics and the mean count of the stressors (n=180)

General characteristics	stressors count Mean ±SD	Student's t test T	P value
Age (years)			
<20	22.5 ±4.2		
20-29	24.5 ±4.7		
30-39	21.5 ±5.6		
≥40	23.5 ±4.9	4.427	0.005*
Residence			
rural	22.7 ±5.9		
urban	24.5 ±3.7	2.397	0.018*
Educational level			
Basic	19.0 ±6.7		
Secondary	23.8 ±4.6		
University	23.9 ±5.1	4.865	0.009*
Occupational status			
no work	22.5 ±5.0		
working	24.2 ±5.1	2.222	0.028*
Husband level of education			
Basic	21.0 ±7.3		
Secondary	23.4 ±4.5		
University	24.4 ±4.6	4.649	0.011*
Family income			
not enough	25.2 ±3.0		
enough	22.9 ±5.7		
can save	23.6 ±4.9	3.988	0.020*

*T value, Student's t test

* Statistical significance (P< 0.05)

**Highly statistical significance (P< 0.001)

Table (7) Association of obstetric history and the mean count of the stressors (n =180)

Obstetric history	Stressors count	ANOVA test / Student's t test
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	Mean ±SD	F / t	P value
Pregnancy			
Primi	13.2 ±3.1		
Multi	13.6 ±3.4	0.689	0.497
Parity			
Nulli	12.6 ±2.9		
Primi	13.3 ±3.1		
Multi	14.4 ±3.6	4.694	0.010*
Abortion			
No	13.6 ±3.4		
Yes	12.8 ±3.1	1.058	0.291
Stillbirth			
No	13.4 ±3.3		
Yes	13.5 ±3.8	0.027	0.979

* t value, Student's t test

* Statistical significance (P< 0.05)

**Highly statistical significance (P< 0.001)

Table 8. Association of general characteristics and the total satisfaction with social support score

General characteristics	Total satisfaction with social support score		Student's t test	
	Mean ±SD	T	P value	
Age (years)				
<20	12.9 ±3.0			
20-29	13.7 ±3.3			
30-39	13.3 ±3.5			
≥40	8.5 ±0.7	1.752		0.158
Residence				
Rural	14.1 ±3.5			
Urban	12.8 ±3.1	2.549		0.012*
Educational level				
Basic	13.9 ±3.1			
Secondary	13.9 ±3.1			
University	12.9 ±3.6	2.229		0.011*
Occupational status				
no work	13.7 ±2.9			
working	13.4 ±3.6	0.591		0.555
Husband level of education				
Basic	15.2 ±3.5			
Secondary	14.1 ±3.1			
University	12.4 ±3.2	9.691		<0.001**
Family income				
not enough	11.9 ±3.1			
enough	13.8 ±3.2			
can save	15.3 ±3.4	9.312		<0.001**

* t value, Student's t test
 * Statistical significance (P< 0.05)
 **Highly statistical significance (P< 0.001)

Table (9) Association of obstetric history and the total satisfaction with social support score

obstetric history	Total satisfaction with social support score Mean ±SD	ANOVA test / Student's t test	
		F / t	p
Gravida			
Primi	24.8 ±3.8		
Multi	23.1 ±5.4	1.918	0.057*
Parity			
Nulli	23.7 ±3.5		
Primi	24.6 ±4.7		
Multi	22.8 ±5.8	2.176	0.116
Abortion			
No	23.8 ±5.1		
Yes	21.9 ±4.8	1.648	0.101
Stillbirth			
No	23.7 ±4.8		
Yes	20.1 ±8.3	2.218	0.028*

* t value, Student's t test
 * Statistical significance (P< 0.05)
 **Highly statistical significance (P< 0.001)

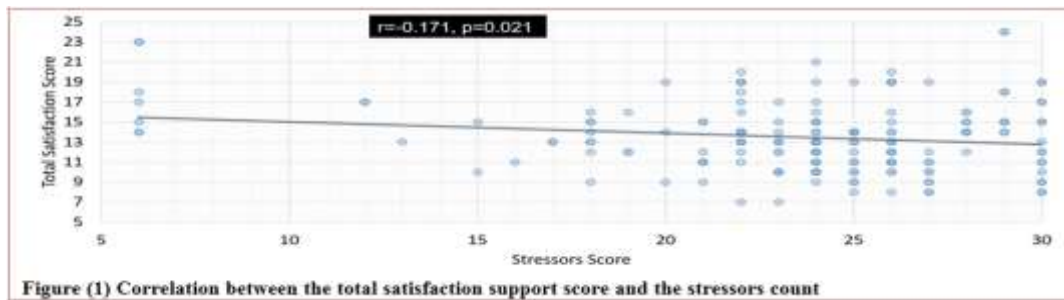


Figure (1) Correlation between the total satisfaction support score and the stressors count

IV. Discussion

The present study was implemented in attempt to assess stressors and social support among pregnant women. The findings of the present study answered the research question. Concerning the first part of the research question about stressors among pregnant women, the study revealed that the most stressors of the pregnant women were; increases in the prices of everyday goods, feeling unwell during pregnancy, and house hold responsibilities. These study findings are due to the consistent rise in the commodity price everywhere with limited income then the common minor discomforts that affect most pregnant women and the load of household and childrearing responsibilities which is an extra load for a pregnant woman.

The present study revealed association between general characteristics of the pregnant women and count of stressors for those aged from 20 years to 29 years, who were from urban residence, those with secondary and university education, those who were working, and women whose husbands had university education. In term of age and residence association to stress count during pregnancy, the present study revealed that the young age group of women aged from 20 years to 29 years and those who were from urban residence were more stressed than older women and those who were from rural areas. These study findings are due to women in this young age group are occupied with childrearing responsibilities especially for their young age and having young age kids than those older women with elder children. Also women from urban residence were more occupied with work overload in addition to their household and childrearing responsibilities to accommodate the rise of commodity prices today.

Parallel to these study findings, a descriptive study conducted by ⁽²⁴⁾ in four university-affiliated hospitals in southern Connecticut to assess the relationship between personal and romantic partner's experiences of stressful life events and depression during pregnancy among 296 couples founded that the most common stressful life events were among young age pregnant women who live in urban areas.

Concerning the association between stress count and family income, the present study revealed that women with low family income status were more stressed than others. This study finding is due to the fact that we considered as one of the developing countries whose income barely meets its needs. A cross-sectional correlative study conducted by⁽⁹⁾ in Iran aimed to investigate the association between the socioeconomic status and stress rate during pregnancy on 210 pregnant women supported this study finding and reported that the family income is one of the most significant socioeconomic elements that can affect the count of stress during pregnancy.

This study finding diversity to another comparative study conducted by⁽²⁴⁾ in Canadian on 8,542 pregnant women to explore and compare factors associated with perceived stress and stressful life events in pregnant women. They realized that pregnant women with high socioeconomic status can experience greater stress during pregnancy rather than those with lower socioeconomic status. Another contradicting descriptive study which conducted in Mexican as a one of the developed countries by ⁽²⁶⁾ who examined the associations of family income and general stressful life events, perceived stress, on 318 Mexican American women, they reported that family income was not significantly associated with stress count during pregnancy. This difference might be due to they consider the state of being high family income class, the pregnancy perceived stress and demands immediately rise up to suit their class demands.

In the light of pregnant women's education and occupation and their association to stress count during pregnancy, the present study observed a significant association between pregnant women's education and occupation and stress count during pregnancy. These findings can be justified by the fact that education raises the sense of awareness toward the maternal role and responsibility which act as a stressful conflict during pregnancy. For occupation, it considered another stress conflicts which engulfed women with work overload especially during pregnancy. Consistent with these study findings, a Quantitative study conducted by ⁽²⁷⁾ on 198 pregnant women in Northern California to examine socioeconomic status as a risk factor for depressive symptoms in late pregnancy and the early postpartum period asserted that pregnant women's education and working condition had significant association with maternal stress during pregnancy and appearance of depression symptoms early in postpartum period.

Additionally, the findings of the present study answered the second part of the research question concerning social support among pregnant women; the study revealed that most of the pregnant women were socially supported by their mothers. This study finding can justified by the fact that during pregnancy, when pregnant women receive special attention from their first-degree relatives especially their mothers, they would be satisfied with their attention as the mother is the best closer person to any human especially at a state of general weakness and demands which is pregnancy.

This study finding is not corresponding with those of an analytical, cross-sectional study that conducted by⁽¹⁾ in Iran on 114 pregnant women who referred to obstetrics and gynecology clinics of Shahid Ayatollah Motahari and Hafez hospitals affiliated to Shiraz University of Medical Sciences to determine the relationship between perceived social supports and some demographic characteristics in pregnant women. They asserted that majority of the pregnant women were supported by their husband. This contradiction can be related to that the majority of the pregnant women in this contradicting study were young and perceived social support as a subjective feeling of care and love from their lovely husband at the start of their lives.

The present study proved association between the total satisfaction of support and low level of education and middle family income. Contradict to this study findings a descriptive-analytic study was conducted on 358 women who delivered in the second half of 2014 in Fatemiyeh Hospital in Shahroud, North East of Iran revealed that there were significant positive association between the mother level of satisfaction of support and high level of education and family income ⁽¹³⁾, in disagreement with the present study finding, they proved that high level of education and high class of family income are associated with high level of satisfaction of social support during pregnancy. This contradiction is due to changing in the culture pattern between Egypt and Iran.

In addition, the present study revealed that women live in rural residence were more satisfied with the support than those from urban residence. This study finding is due to women from rural residence are more exposing to various support and help from their relatives, neighbors and friends as this is the nature of rural people to offer help and support and to appreciate the help by the supported person.

Parallel with this study finding a descriptive study conducted in Matlab, Bangladesh to explore the specific characteristics (type, content, and source) of women's perceived social support during pregnancy revealed that rural women were more exposed to support during pregnancy and were more satisfied about this support⁽¹⁴⁾.

V. Conclusion

Based on the present study findings, it is concluded that the most stressors of the pregnant women were; increase in the prices of everyday goods, feeling unwell during pregnancy, and house hold responsibilities. Furthermore, the study concluded that most pregnant women were supported by their mothers.

VI. Recommendations

The present study recommended the following:

1. Apply further researches to assess the level and factors of stress among pregnant women.
2. Apply further researches to investigate the association between stress during pregnancy and labour outcomes.

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