Prenatal Screening for Risk Factors of Depression during Pregnancy

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Abstract

Back ground Depression is one of the most common complications in pregnancy. Prenatal depression not only affect women but also her fetus. So several professional organizations now recommend routine screening for antenatal depression. The **aim**: of this study is to assess prenatal screening for risk factors of depression during pregnancy. **Research Design:** the researcher used descriptive study design. **Setting:** This study was conducted at the antenatal clinic at Ain Shams University Maternity Hospital. **Sample size:** 500 pregnant women .**Tool**s :two tools were used in this study 1- structured interviewing questionnaire sheet 2- Edinburgh prenatal depression scale **Result:** The results of the present study presented that 38.8%of the studied women has possible depression with associated the following risk factors (70.2%) of studied women not receive support with live stress, (53.6%) unplanned for the current pregnancy, 39.3% economic problems, 29.8% relation with others and marital problems during current pregnancy with (40.4%) **Conclusion**: the study concluded that one third of the studied women have possible depression and the main risk factors for possible antenatal depression are the pregnant women who did not receive support for life stressors (more than two third of them) also about fifth of them their risk factors for developing prenatal depression was maternal problems during current pregnancy. **Recommendation:** Each pregnant woman should be screened for prenatal depression before childbirth and the hospital management should introduce screening for depression as part of routine antenatal assessments

Key words: Prenatal, Depression, screening

Introduction

During pregnancy many changes occurred to the women physiological, psychological and hormonal changes as prenatal Depression is one of the most common complications in pregnancy. Pregnant women with depression can produce a high level of stress hormones such as cortisol that can subsequently affect fetal growth and brain development. Several prenatal depression is a depressive episode that begins in pregnancy. Depression can influence the health of the mother and the fetus ***(Ongeri et al., 2016)***.

Prenatal depression is associated with unhealthy behaviours including poor self-care, poor nutrition, increased use of tobacco and alcohol, lower prenatal care-seeking, and poorer maternal-fetal bonding ***(Parlakian and Kinsner, 2019)***.

Also, women with depression during pregnancy are at extra risk of postpartum depression, which may be a risk factor for the health and well-being of both mothers and infants ***(Ohara et al., 2017)***.

Prenatal depression not only affect women but also her fetus. Negative outcomes for infants in mothers with prenatal depression may also include preterm delivery, lower birth weight, cognitive, emotional, social, neural functioning, or developmental delay ***(Smorti et al., 2019).***

Prenatal depression can have serious implications for all family members. Relationship conflicts decreased ability to care for other children and loss of employment are examples. Antenatal depression can be caused by many factors often it is associated with the fear and stress of the pregnancy. Depression results from a complex interaction of biological, psychological, cultural, economic, and social

factors. People who have gone through adverse life events are more likely to develop depression ***(Glover, 2015).***

The nurse has an important role for caring women in prenatal period so the nurse should give awareness to parents on the Consequences of psychological disturbance on mother and infant, which can be long-term and life-threatening and may lead to severe psychological or physical problems if early appropriate treatment is not received. In addition the nurse should assess risk factors that can lead to prenatal depression to prevent complications for the mother and her fetus ***(Hockenberry & Wilson, 2018)***.

Nursing interventions can include education about self-care activities such as maintaining a healthy diet, improvement of physical activity, increased rest, development of a support network, and maintaining realistic parenting expectations ***(Connell et al., 2017).***

Significance of the Study

Professional Organizations now recommend routine screening for antenatal depression ***(National Perinatal Association, 2019)***.

The study of antenatal depression among Egyptian pregnant women's results indicated that pregnant women who expressed simultaneous prenatal depressive manifestations accounted for 10.4% ***(Mohamed et al., 2017).***

In addition, the prevalence of prenatal depression has averaged 20% in teen pregnant women ***(Field, 2017).*** and 10-25% in adult pregnant women .

Prenatal depression is estimated to be 10-15% in developed countries and 19-25% in economically poorer countries ***(Thompson & Ajayi, 2016).***

So this research is important in the early detection of depression to prevent or decrease the occurrence of many complications during pregnancy and postnatal depression

So investigations and screening of risk factors that lead to depression is essential step in early detection and management.

AIM OF THE STUDY

The aim of this study is to assess prenatal screening for risk factors of depression during pregnancy.

Research Question:

What are the risk factors that put the pregnant women at susceptibility of developing prenatal depression?

SUBJECTS AND METHODS

A- Research design:

A descriptive study was used in this study Descriptive research aims to accurately and systematically describe a population situation or phenomenon. It can answer what, where, when and how questions, but not why questions. A descriptive research design can use a wide variety of research methods to investigate one or more variables ***(Cho & Lee, 2014)***.

B- Setting:

This study was conducted at the antenatal clinic at Ain Shams University Maternity Hospital.as it is a university hospital and receive a large number of pregnant women

C- Sample type:

Purposive sample A purposive sample, also referred to as a judgmental or expert sample, is a type of purposive sample nonprobability sample. The main objective of a purposive sample is to produce a sample that can be logically assumed to be representative of the population. ... In nonprobability sampling, the population may not be well defined ***(Stehman et al., 2018).***

E-Sample size:

500 pregnant women according to formula with inclusion criteria. Sample size was calculated using Open Epi, version 3, open-

source calculator, and based on a study carried out by ***Atiya (2016).***

$$n = \frac{n \times p\,(1-p)}{\{N-1 \times (d2 \div z2)\} + p\,(1-p)}$$

p= 0.5
n= Total population (667)
Z= Z value
D= Standard error
N= Sample size

Inclusion Criteria:

The pregnant women chosen in the study group should be:

1- The pregnant women at any period of pregnancy.

2- Free from any current history of psychiatric health problems

Tools of Data Collection:

Two tools were used in this study**.**

Tool I:

I. **A Structured Interviewing Questionnaire Sheet** designed by the researcher after reviewing the related current and previous literature (***Mohamed et al., 2017).*** It composed of five parts:

Part I. To assess the general characteristics of the studied sample include age, education level, occupation, and place of residence.

Part II. To assess the current Obstetrical histories of the study sample.

- The current Obstetrical history such as gestational age and any medical problems during current pregnancy. And any maternal and fetal complications during current pregnancy.

Part III. To assess People respondent consulted when they were sad and treatment.

Part IV. To assess family history of psychological problems such as the presence of psychiatric disease of any member in the family.

Part V. To assess risk factors which can leading to prenatal depression such as the presence of marital problems, family problems, work problems, and health related problems.

- Tool II:

I. **Edinburgh prenatal Depression Scale*:*** The EPDS is a questionnaire that is used to screen for depression during pregnancy and postpartum. It has been translated into 58 languages and used worldwide ***(Khanlari et al., 2016).*** The EPDS was originally developed by ***Cox et al. (1987)*** and contains 10 items with four response options each rated 0–3. Thus the range is 0–30 points, where higher scores indicate more depressive symptoms. This 10-question self-rating scale has been proven to be an efficient and effective way of identifying patients at risk for "perinatal" depression. While this test was specifically designed for women who are pregnant or have just had a baby, it has also been shown to be an effective measure for general depression in the larger population.

The scoring system: each item was scored on a four-point scale (0-3). The total score is **0-30** scores of less than 8 will indicate depression not likely, scores 9-11 will indicate depression possible, scores 12-13will indicate to the fairly high possibility of depression, and scores greater than 13 will consider as having depression.

II. Operational Design

The operational design included the preparatory phase, pilot study, validity, and fieldwork.

A. Preparatory Phase

This phase included reviewing local and international related literature about the various aspects of the research problem. This helped the researcher to be acquainted with the magnitude of the problem and guided to prepare the required data collection tools.

B. Pilot Study

This was carried out on 10% (50) of women for testing the applicability of the items of the data collection tools and time-consuming for each tool then appropriate modifications were done. The pilot study were excluded from the study sample.

Content Validity and Reliability

Content validity: It ascertained by a panel of three experts in maternity and gynaecological nursing specialty that reviewed the tools for clarity, relevance, comprehensiveness, applicability, and according to their opinion, some modifications considered.

Content reliability: The reliability of the tools was assessed by measuring their internal consistency by Cronbach's Alpha coefficient (0.86).

C. Fieldwork:

The data were collected after obtaining the official approval for data collection within about three months from first March 2019 to the end of May 2019. The researcher attended the previously mentioned setting three days per week from 9 a.m. to 2 p.m. At the beginning of the interview, the researcher introduced herself to the women explained to the participants the aim of the study, and then the oral consent of the women was obtained. The researcher interviewed each woman individually to fill Arabic questionnaire sheets by the studied women. And Edinburgh scale the average time taken for filling two tools was about 15-20 minutes.

III. Administrative Design

Approval obtained through on issued letter from the Dean of Faculty of Nursing, Ain Shams University to directors of the previously mentioned settings.

Ethical Consideration:

The research approval was obtained from the faculty ethical committee before starting the study. Verbal approval was obtained from the women before inclusion in the study; a clear and simple explanation given according to their level of understanding, physical, and mental readiness. They secured that all the gathered data as confidential and used for research purposes only. The women informed that they are allowed to choose to participate or not in the study and they have the right to withdraw from the study at any time and confirmed with women that their withdrawal will not affecting service that they receive from the hospital.

IV. Statistical Design

The data obtained were synthesized, analysed, and presented in the form of tables and figures using the Statistical Package for Social Sciences version 22.0 (SPSS). Qualitative variables are presented in the form of frequencies and percentages; quantitative variables are presented in the form mean and SD. Test of significance used to find out associations between study variables. Chi-square (x^2) test of significance was used to compare proportions between two qualitative parameters. The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value considered as significant as the following:

- P-value <0.05 considered significant
- P-value <0.001 considered as highly significant
- P value >0.05 considered insignificant.

RESULTS:

Table (1) shows that, 45% of the studied women their age ranged between 25 to 30 years old and slightly more than one-third of the studied women (33.6%) had primary education. As regards family monthly income the above table illustrates that, two thirds (66.4%) of the studied women had not enough family income. Also more than one-third of the studied women (37.4%) had small family. And less than one-third of the studied women (30.4%) their husbands not working,

Table (2) illustrates that 66% are pregnant in non desired baby sex .60.8% of the

studied women their duration of the current pregnancy in third trimester ranged between 28 to 40 weeks, (53.6%) unplanned for the current pregnancy. Concerning the maternal problems during current pregnancy about 2 fifth of the studied women. (34.8%) suffering from anemia.

Table (3) shows that (82.1%) of the studied women has history of psychological stress. Near to two-third of the studied women (85.6%) exposed to psychological stress during current pregnancy. Concerning support for the psychological stress during pregnancy (21.7%) of the studied women did not received support. less than one third of the studied women received support for their psychological stress (40.4) of the studied women have marital problems as the source of stress.

Table (4) displays that; (50%, 44.8% and 46%) of the studied women rare have been able to laugh and see the funny side of things, anxious or worried for no good reason & the thought of harming has occurred respectively.

Table (5) illustrates that, there were highly statistically significant relations between the family income, husband presence , marital status , type of family, , living in family home occupation and husband occupation of studied women and their level of depression respectively (p-value <0. 01). Meanwhile, it shows that, there were insignificant relations between the age, education, of studied women and their level of depression (p-value > 0.05).

Table (6) illustrates that, there is no statistical significant relation between the duration of the current pregnancy of studied women and their level of depression (p-value >0.05). Meanwhile, it shows that, there is statistical significant relations between the desired baby sex, number of pregnancy, also there were highly significant relations between the planned pregnancy, maternal problems during current pregnancy and their level of prenatal depression (P-value < 0.01).

Table (7) illustrates that, there were highly statistically significant relations between past history of psychological stress, exposed to life stress during current pregnancy and received support for the psychological stress of studied women and their level of depression respectively (p-value <0.01).

Table (1): Distribution of Studied Women According To Their General Characteristics (n=500)

General characteristics	(n=500)	
	No.	%
Age (years)		
<25 years	63	12.6
25 to 30 years	225	**45.0**
>30 years	212	42.4
Mean± SD	27.8±5.2	
Education		
Illiterate	148	29.6
Primary	168	**33.6**
Secondary	145	29
University	39	7.8
Family income		
Enough	168	33.6
Not enough	332	**66.4**
presence of the husband		
Travel	144	28.8
Present	356	**71.2**
Marital statues		
Married	392	**78.4**
Divorced	108	21.6
Type of family		
Nuclear family	315	**63.0**
Extended	185	37.0
Family size		
Small	187	37.4
Average	214	**42.8**
Large	99	19.8
Living in family home		
No	371	**74.2**
Yes	129	25.8
Women occupation		
House wife	236	47.2
Working	264	**52.8**
Husband Occupation		
Working	348	**69.6**
Not working	152	30.4

Table (2): Distribution of Studied Women According To Their Current Pregnancy History (n=500)

Current pregnancy	(n=500)	
	No.	%
Desired baby Sex		
Yes	71	14.2
No	330	66.0
Unknown	99	19.8
No. of pregnancy		
First pregnancy	200	40.0
Second pregnancy	116	23.2
Third pregnancy	130	**26**
More than three	54	**10.8**
Duration of the current pregnancy		
First trimester	65	13.0
Second trimester	131	26.2
Third trimester	304	60.8
Planned pregnancy		
Yes	232	46.4
No	268	53.6
Maternal problems during current pregnancy		
Yes	210	41.9
No	290	58.1
***If yes , type of maternal problems (n= 210)**		
Anemia	68	**32.4**
Urinary tract infection	43	**20.5**
Preeclampsia	49	23.3
Bleeding	47	22.4
Fetal problems	26	12.4
Hyper emesis gravidrum	18	8.6

***All items are not mutual**

Table (3): Distribution of the studied women according to their risk factors for prenatal depression (no=500)

Risk factors for prenatal depression	(n=500)	
	No	%
Past history of psychological stress		
Yes	410	**82.1**
No	90	17.9
Exposed to life stress stress during current pregnancy		
Yes	428	85.6
No	72	14.4
***If yes Source of stress (n= 428)**		
Work related to problems	13	6.7
Marital problems	173	**40.4**
Relations with others	56	29.8
Economic problems	168	**39.3**
Health status	23	7.4
Exposed to violence	34	10.9
Husband's occupation	58	13.5
Lack of social support	40	9.3
Change appearance due to pregnancy changes	51	11.9
Received support for the psychological stress(n=428)		
Yes	93	21.7
No	335	**78.3**

***Some items are not mutual**

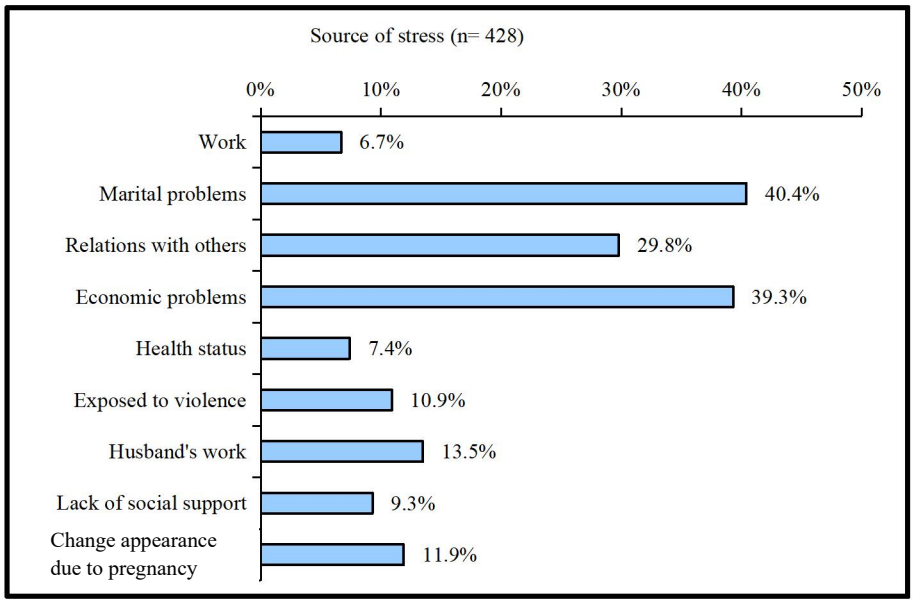

Figure (1): Distribution of the studied women according to their sources of stress (no=500)

Table (4): Distribution of the studied women regarding their level of prenatal depression (n=500)

Variables	Never		Rare		Sometimes		Always	
	No.	%	No.	%	No.	%	No.	%
Have been able to laugh and see the funny side of things.	156	31.2	250	**50**	70	14	24	4.8
Have looked forward with enjoyment to things	155	31	125	25	125	25	95	19
Have blamed myself unnecessarily when things went wrong	195	39	200	40	70	14	35	7
Have been anxious or worried for no good reason	123	24.6	224	**44.8**	103	20.6	50	10
Have felt scared or panicky for no very good reason	184	36.8	184	36.8	81	16.2	51	10.2
Have been getting things on the priority	123	24.6	150	30	122	24.4	105	21
Have difficulty sleeping	150	30	170	34	95	19	85	17
Have felt sad or miserable	200	40	210	42	53	10.6	37	7.4
Have been so unhappy that have been crying	135	27	200	40	103	20.6	62	12.4
The thought of harming has occurred	175	35	230	**46**	35	7	60	12

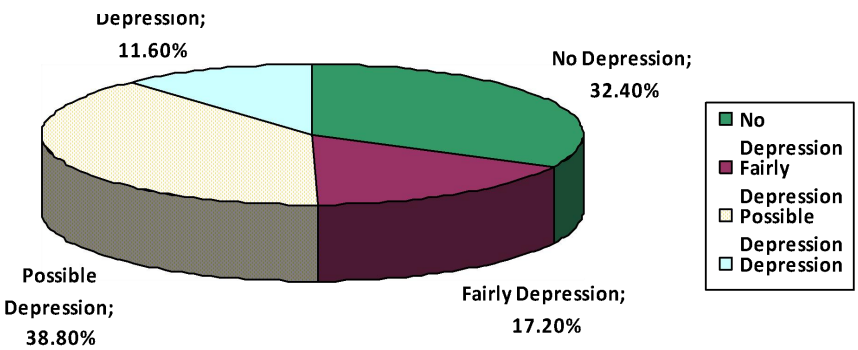

Figure (2): level of depression between studied women

Table (5): Relation between general characteristics of studied women and their level of prenatal depression (n=500)

Variables	Level of Depression								X2	P
	No depression (n=162)		Possible depression (n=194)		Fairly depression (n=86)		Depression (n=58)			
	No.	%	No.	%	No.	%	No.	%		
Age (years)										
<25 years	13	8.0	29	14.9	17	19.8	4	6.9	10.6	0.10
25 to 30 years	78	48.2	85	43.8	37	43.0	25	43.1		
>30 years	71	43.8	80	41.2	32	37.2	29	50.0		
Education										
Illiterate	45	27.8	66	34.0	17	19.8	20	34.5	12.6	0.18
Primary	56	34.6	66	34.0	26	30.2	20	34.5		
Secondary	49	30.2	49	25.3	35	40.7	12	20.7		
University	12	7.4	13	6.7	8	9.3	6	10.3		
Family income										
Enough	96	59.3	57	29.4	9	10.5	6	10.3	84.0	****0.0001**
Not enough	66	40.7	137	70.6	77	89.5	52	89.7		
Husband presence										
Travel	32	19.8	44	22.7	36	41.9	32	55.2	36.83	****0.0001**
Present	130	80.2	150	77.3	50	58.1	26	44.8		
Marital status										
Married	140	86.4	164	84.5	50	58.1	28	48.3	42.05	****0.0001**
Divorced	22	13.6	30	15.5	36	41.9	20	34.5		
Type of family										
Nuclear family	118	72.8	128	66.0	47	54.7	22	37.9	24.65	****0.001**
Extended	44	27.2	66	34.0	39	45.3	36	62.1		
Family size										
Small	63	38.9	82	42.3	24	27.9	18	31.0	13.06	***0.04**
Average	67	41.4	83	42.8	35	40.7	29	50.0		
Large	32	19.8	29	14.9	27	31.4	11	19.0		
Living in family home										
No	123	75.9	162	83.5	65	75.6	21	36.2	52.84	****0.0001**
Yes	39	24.1	32	16.5	21	24.4	37	63.8		
Women occupation										
Working	107	66.0	103	53.1	35	40.7	19	32.8	25.82	****0.001**
Housewife	55	34.0	91	46.9	51	59.3	39	67.2		
Husband Occupation										
Working	70	43.2	172	88.7	65	75.6	41	70.7	88.19	****0.0001**
Not working	92	56.8	22	11.3	21	24.4	17	29.3		

(**) Highly statistical significant at p<0.01 (*) Statistical significant at p<0.05

Table (6): Relation between current pregnancy of studied women and their level of depression (n=500)

Variables	Level of Depression								X2	P
	No depression (n=162)		Possible depression (n=194)		Fairly depression (n=86)		Depression (n=58)			
	No.	%	No.	%	No.	%	No.	%		
Desired Baby Sex										
Yes	32	19.8	21	10.8	10	11.6	8	13.8	13.73	***0.03**
No	91	56.2	143	73.7	56	65.1	40	69.0		
Unknown sex	39	24.1	30	15.5	20	23.3	10	17.2		
Number of pregnancy										
First pregnancy	73	45.1	84	43.3	20	23.3	23	39.7	18.7	***0.03**
Second pregnancy	39	24.1	38	19.6	23	26.7	16	27.6		
Third pregnancy	37	22.8	53	27.3	30	34.9	10	17.2		
More than three	13	8.0	19	9.8	13	15.1	9	15.5		
Duration of the current pregnancy										
First trimester	23	14.2	17	8.8	17	19.8	8	13.8	11.1	0.09
Second trimester	47	29.0	57	29.4	15	17.4	12	20.7		
Third trimester	92	56.8	120	61.89	54	62.8	38	65.5		
Planned pregnancy										
Yes	122	75.3	102	52.6	5	5.8	3	5.2	154.1	****0.0001**
No	40	24.7	92	47.4	81	94.2	55	94.8		
Maternal problems during current pregnancy										
Yes	11	6.8	82	42.3	70	81.4	47	81.0	173.5	****0.0001**
No	151	93.2	112	57.7	16	18.6	11	19.0		

(**) Highly statistical significant at p<0.01 (*) Statistical significant at p<0.05

Table (7): Relation between risk factors that can lead to prenatal depression of studied women and their level of depression (n=500)

Variables	Total Level of prenatal Depression								X2	P
	No depression (n=162)		Possible depression (n=194)		Fairly depression (n=86)		Depression (n=58)			
	No.	%	No.	%	No.	%	No.	%		
Past history of psychological stress										
Yes	132	81.5	172	88.7	66	76.7	40	69.0	14.45	****0.003**
No	30	18.5	22	11.3	20	23.3	18	31.0		
Exposed to life stress during current pregnancy										
Yes	129	79.6	170	87.6	77	89.5	52	89.7	27.32	****0.0001**
No	33	20.4	24	12.4	9	10.5	6	10.3		
Received support for the psychological stress										
Yes	51	31.5	33	17.0	6	7.0	3	5.2	32.65	****0.0001**
No	111	68.5	161	83.0	80	93.0	55	94.8		

(**) Highly statistical significant at p<0.01

DISCUSSION

Pregnancy is a particularly vulnerable time when psychological distress can have negative consequences for both mother and baby. Since women tend to report higher symptoms of anxiety and depression. Prenatal depression symptoms typically affect between 10 and 25% of pregnant individuals. Elevated symptoms of depression and anxiety are associated with increased risk of preterm birth, postpartum depression, and behavioural difficulties in children ***(Mingli et al., 2020).***

Concerning general characteristics of the studied women, the present study revealed that, slightly less than half of the studied women their age ranged between 25 to 30 years and slightly more than one-quarter of the studied

women one third had primary education. This result was in agreement with the result of ***Okechukwu Thompson and IkeOluwapo Ajayi, (2016)***, who studied the prevalence of antenatal depression and associated risk factors among pregnant women attending antenatal clinics in Abeokuta North Local Government Area, Nigeria found that, the mean age of the women was 27.3 ± 5.3 years. A similar study with the result of ***Eslam and Abdel Aziz, (2017),*** who studied the anxiety and depression among pregnant women in the Gaza Strip found that, half of the studied women were between 25 and 35 years old.

Concerning the current pregnancy, the present study revealed that, more than half of the studied women have wanted or unwanted pregnancy, Tow-fifth of the studied women the current pregnancy considered the first pregnancy, almost two-thirds of them this pregnancy considered the first pregnancy and more than half of them unplanned for the current pregnancy. This result was in disagreement with the result of ***Okechukwu Thompson and IkeOluwapo Ajayi (2016),*** who found that, the mean gestational age of pregnancy at the time of the interview was 6.3 ± 2.2 months and one-quarter of the women did not plan for pregnancy.

Concerning the maternal problems during current pregnancy about two-fifth of the studied women less than half of them have problems during the current pregnancy, and one-third of them suffering from anemia, while the majority of the studied women the pregnancy impact on their work. This result was in agreement with the result of ***Qutaiba et al., (2020),*** who study the antenatal depression, prevalence, suicidal idea, and associated factors, mentioned that, the metabolic abnormality was observed by anaemia and gestational diabetic shown to have a direct effect on depressive behaviour among pregnant women

Regarding the risk factors for prenatal depression, the present study revealed that, the majority of the studied women had a past history of psychological stress. About two-fifth of the studied women their marital problems and economic problems considered as the main source of stress and more than three-quarters of them were did not receive support for the psychological stress. Presence of economic problems as a source of stress may be due to that two third of the studied women have not enough income also about one third of them their husband not working This result was supported with the result of ***El-Behadli et al., (2015),*** who studied maternal depression, stress and feeding style, noted that family financial resources has important role to effect on prenatal depression.

This result was in agreement with the result of ***Gemeay et al., (2015),*** who found that less than half of pregnant women in Riyadh, Saudi Arabia had a past history of psychological stress. This disagree with ***Fekadu et al., (2020).*** who studied the prevalence and determinants of common perinatal mental disorders in women in low- and middle income countries, mentioned that, depression in pregnancy is prevalent in high- as in low-income countries.

This finding was similar to the study conducted by ***Qutaiba et al., (2020),*** who reported that, more than twenty percent of pregnant women have experiences of depressive disease as described by Edinburg as a screening tool for antenatal depression.

Concerning relations between general characteristics of the studied women and their level of depression of studied women There was no association between the age of the pregnancy and antenatal depression this result agree with ***Qutaiba et al. (2020),*** who reported that there were no associations between age and prenatal depression

Also the current study revealed that, there were highly statistically significant relations between the family income, husband presence, marital status, type of family, living in family home occupation and husband occupation of studied women and their level of depression respectively. Also there was statistical significant relation between family size and their level of depression. These findings are consistent with ***Eslam and Abdel Aziz, (2017)***, who found that, there were significant associations between maternal family size which was significantly associated with prenatal depression. These findings are

consistent with ***(Sheeba et al., 2019)*** who found there were significant associations between low socioeconomic state, absence of husband with prenatal depression. This is contrary with ***Sheeba et al. (2019)*** who mentioned that there is no significant association between socio-economic status, and the risk of prenatal depression. Also other socio-demographic factors such as age, husband's education, and occupation did not predict the occurrence of prenatal depression.

Concerning relations between current pregnancy history of the studied women and their level of depression, there were statistical significant relations between the desired baby sex, number of pregnancies, also there were highly statistical significant relations between unplanned pregnancy, maternal problems during current pregnancy and their level of depression respectively. These findings are consistent with ***Sheeba et al. (2019)*** who found there were significant associations between pregnant with a female child and unwanted pregnancy and prenatal depression. This result agree with ***Qutaiba et al. (2020),*** who reported that, unplanned pregnancy, having a coexisting medical condition, and past history of caesarean section so there was significantly associated between antenatal depression.

Also, there were no associations between gravidity and antenatal depression, parity and antenatal depression, and abortions and antenatal depression.

Regarding the relation between risk factors that can lead to prenatal depression of studied women and their level of depression, the current study revealed that, there were highly statistically significant relations between past history of psychological stress, exposure to life stress during current pregnancy and received support for the psychological stress of studied women and their level of depression respectively. This result was in agreement with the result of ***Farahat,*** **Abdel Aziz, Thabet,** ***(2015)***, who reported that, the history of previous psychiatric problems scored severe depression.

This might be due to the fact that having complication by itself minimize their satisfaction to their life and this will impact their psychosocial wellbeing which is one of the possible causes of prenatal depression.

Limitations

The Edinburgh Postnatal Depression Scale (EPDS) is a screening tool and not a diagnostic tool. Any score equal to or above 12 is only suggestive of depression. So, to confirm any case of depression, referral to a psychiatric team should be done.

Nursing implication:

The high prevalence of antenatal depression in this study is an important health concern; hence, health education and awareness campaigns should be embarked on to enlighten the women about how to identify antenatal depression symptoms and the dangers of not getting it treated early. Edinburgh Postnatal Depression Scale (EPDS) screening should be introduced as part of antenatal care assessment in both private and public health facilities to help identify women with antenatal depression or at risk of developing it, and an invite should be sent to psychiatric team for management.

CONCLUSION

The study concluded that 38.8% of the studied women has possible depression and risk factors that can leading to prenatal depression are marital problems with 40.4%, economic problems with 39.3% and relation with others with 29.8%.

RECOMMENDATION

Based upon the results of the current study revealed the following recommendations suggested:

- Each pregnant woman should be screened for prenatal depression before childbirth.

- Government and hospital management should introduce screening for depression as part of routine antenatal assessments in both public and private health facilities.

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