

Comparison of Depression and Anxiety between Housewife and Employed Pregnant Women

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Abstract

This study aimed to compare depression and anxiety during prenatal period between housewife and employed women, and to assess the relationship between depression and anxiety during pregnancy. Descriptive correlational cross sectional research design was used. A convenient sample of 324 pregnant women was recruited for the current study. Data was collected using a questionnaire survey that consisted of 3 parts: First part was socio-demographic data sheet developed by the researchers. Second part was Beck's Depression Inventory (BDI) which was used to assess the levels of depression as perceived by the pregnant women; third part of the questionnaire survey was Beck anxiety inventory (BAI) which was utilized to assess the levels of anxiety among the study by the pregnant women. Results revealed a statistically significant difference between the mean total depression and anxiety score of housewife and employed pregnant women were employed women reported higher levels of depression and anxiety, additionally, a statistically significant positive relationship between total depression score and total anxiety score for the whole sample was confirmed. There is a need to effectively implement the three levels of prevention to reduce the expected negative consequences of depression and anxiety on the pregnant women and subsequently her newborn and her family in general.

Keywords: depression, anxiety, housewife, employed, pregnant women

Background

With the current increased financial burden and eminent cost of living in the Egyptian community nowadays most Egyptian women have dual roles as household keeper and an employee, this combination of housework and career work puts them at higher risk for stress that might in turn predispose them to anxiety and depression. Egyptian women have made important contributions to the Egyptian revolution and continue to play a considerable role in the country's transition period (World Economic Forum, 2012). According to the World Bank 2017 statistics, the female-to-male employment ratio was 0.3, as female labor force participation was 24% compared to 76% for male (World Bank, 2017). As reported by the (WHO, 2017) pregnancy refers to the nine months or so for which a woman carries a developing embryo and fetus in her womb and is for most women a time of great happiness and fulfillment while for some women pregnancy can be a catastrophic experience based on many factors including but not limited to the woman's physical and mental health status, financial position, availability and adequacy of support, single status, unwanted pregnancy, domestic violence, smoking and past history of anxiety and depression, most of those factors were found to be associated with increased risk for depressive symptoms during pregnancy (Lancaster et al. 2010).

During pregnancy, physical and emotional changes take place in women to prepare them for the coming role as a mother. The nine months of gestation are enough for the woman to accept her pregnancy, to acquire an attachment

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to the unborn child, and to get ready to give birth (Neifert, 2000; Nirmal, Thijs, Bethel, Bhal, 2006). Pregnancy is known to be stressful because it demands that the woman meet both physiological and psychosocial changes (Hodgkinson, Smith & Wittkowski, 2014).

Mild anxiety is a common human life experience that every human need to motivate him/her to achieve everyday life tasks, however, pathological anxiety negatively impacts all aspects of human life. Depression is a mood disorder that affects how the individual thinks and feels, and interferes with activities of daily living. Hence, anxiety and depression disorders during pregnancy can negatively affect the maternal and neonatal outcomes (National Institute of Mental Health, 2017).

Anxiety and depression are common psychological disorders experienced by adults worldwide including pregnant women. Approximately 10% of pregnant women and 13% of new mothers globally experienced some forms of mental disorders, mainly depression and anxiety. These incidences of psychological breakdowns are higher in developing countries with 15.6% and 19.8% during pregnancy and after delivery respectively (World Health Organization, 2017). Antenatal anxiety and depression have been linked to a variety of adverse maternal and fetal outcome. Prenatal anxiety and preterm birth are significantly associated (Rose, Pana & Premji, 2016). Findings of the study by Garipey, Lundsberg, Miller, Stanwood & Yonkers (2016) revealed high incidences of low birth weight and prolonged hospital stays among mothers and neonates who had mothers with manifestations of anxiety and depression. Additionally, pregnant women with symptoms and signs of anxiety and depression preferred to deliver in the hospital with an increase in healthcare services use including non-scheduled antenatal care visits and cesarean deliveries (Bitew, Hanlon, Kebede, Medhin & Fekadu, 2016). Women who, early in pregnancy, showed symptoms of severe depression were more than twice more likely to give birth preterm than women who did not show those symptoms at that time (Li, Liu, & Odouli, 2009).

While some studies have looked at prevalence and risk factors for anxiety and depressive symptoms during pregnancy (Bennett et al. 2004, Lancaster et al. 2010, Witt et al. 2010), and only couple of studies (Adhikari, 2012, Gurudatt, 2014 and Fatima & Parvez, 2016) focused on anxiety and depression between employed and housewife women. Fall et al. (2013) studied major depressive symptoms among pregnant women by employment status. No studies found to examine the association between employment status and development of anxiety and depression during pregnancy in the Arab culture therefore; the aim of this study was to examine the association between employment status and development of anxiety and depression among Egyptian pregnant women.

Aim of the study

The study was designed to test the following aims:

- Assess the relationship between depression and anxiety during pregnancy.
- Compare depression and anxiety during prenatal period between housewife and employed women.

Methodology

Research Design

Descriptive correlational cross sectional research design was utilized to compare depression and anxiety between non-employed and employed pregnant women and to assess the relationship between depression and anxiety among pregnant women.

Setting

The study was conducted at obstetrics and gynecology outpatient clinic of one of the Delta University Hospitals in Egypt. One of the University Hospital's primary roles is medical and nursing student's education. It provides free and paid services for patients with or without health insurance. The researcher interviewed the subjects while they were in the waiting areas waiting for their routine antenatal care.

Ethical Considerations

The researchers obtained the participants' informed consent after explaining the purpose of the study. The subjects were insured that all collected data will be considered highly confidential and no part of this study will divulge

the identities of the participants or their families. Privacy and confidentiality were completely protected; no identifiers or personal information were collected or stored including participant's name.

Sample

Using the convenience sampling technique, a convenient sample of 324 pregnant women were recruited for the current study. The inclusion criteria included pregnant women in their third trimester, low risk case, singleton pregnancy and free from any chronic disease “diabetic, hypertension, heart disease.... etc. The exclusion criteria included women with history of any mental health problem and high risk pregnancy such as “placenta previa, preeclampsia etc.”, and pregnant with multiple pregnancy.

Data Collection Methods and Instruments Used

Data was collected using a questionnaire survey that consisted of 3 parts: First part was socio-demographic data sheet developed by the researchers and included variable as: age, education, occupation. Second part was Beck's Depression Inventory (BDI) which was used to assess the levels of depression as perceived by the pregnant women included in the study, it is a self-reported tool that encompasses 21 items with evaluation from 0 – 3 for each item that is used to quantify the severity of depression in adults, the highest possible total score for the inventory is sixty-three. The BDI categorizes depression as scores between 1-10 are considered normal mood, scores between 11-16 reflect mild mood disturbance, scores between 17-20 indicate borderline clinical depression, scores between 21-30 reveal moderate depression, scores between 31-40 indicate severe depression and scores over 40 reflect extreme depression. BDI is one of the gold standard tools to assess depression and was utilized in many previous researches to measure depression severity among different populations (Thombs, Bass, Ford, Stewart, Tsilidis, Patel, Fauerbach, Bush and Ziegelstein, 2006 and Kühner, Bürger, Keller and Hautzinger, 2007). BDI's validity was estimated in many previous researches and ranged between 0.73 and 0.96 (Wang and Gorenstein, 2012). Third part of the questionnaire survey was Beck anxiety inventory (BAI) which was utilized to assess the levels of anxiety among the study subjects. BAI is a self-report measure that consists of 21 items (Beak, Epstein, Brown & Steer, 1988), it is a Likert type scale ranging from 0 not at all to 3 severe, the total score is calculated by summing the participants' responses to the 21 items resulting in a possible total score range between 0 – 63.

The score of 0 – 21 indicating low levels of anxiety, score of 22 – 35 reflecting moderate levels of anxiety and score of 36 and above represent potentially concerning levels of anxiety. Internal consistency for the BAI was calculated as Cronbach's $\alpha = 0.92$, test – retest reliability (1 week) = 0.75. (Beak, Epstein, Brown & Steer, 1988).

Data Management and Analysis Plan

Data was coded for entry and analysis using SPSS statistical software package version 20. Data was presented using descriptive statistics in the form of frequencies and percentages. Interval and ratio variables were presented in the form of means and standard deviations. Independent t test was used to compare the depression and anxiety scores between housewife and employed pregnant women. Person r was used to test the correlation between interval and ratio variables. The significance level was chosen as ($p < 0.05$).

Results

The study aims were to compare depression and anxiety during prenatal period between housewife and employed women, and to assess the relationship between depression and anxiety during pregnancy. Descriptive correlational cross sectional research design was used. A convenient sample of 324 pregnant women were recruited for the current study. Data was collected using a questionnaire survey that consisted of 3 parts: First part was socio-demographic data sheet developed by the researchers. Second part was Beck's Depression Inventory (BDI) which was used to assess the levels of depression as perceived by the pregnant women, third part of the questionnaire survey was Beck anxiety inventory (BAI) which was utilized to assess the levels of anxiety among the study by the pregnant women.

Table 1: Comparison of Demographic Characteristics between Housewife and Employed Pregnant Women (N= 324)

Variable	Housewives N=183		Employed N = 141		P
	Number	Percent	Number	Percent	
Age					
>20	1	0.5	1	0.7	0.468
20 - >25	23	12.6%	16	11.3	
25->30	63	34.4%	51	36.2	
30->35	51	27.9	49	34.8	
35- >40	45	24.6	24	17.0	
Marital Status					
Married	181	98.9	136	96.5	0.245
Divorced	2	1.1	5	3.5	
Education					
Illiterate	13	7.1	1	0.7	0.000
Read and write	19	10.4	2	1.4	
Elementary School	4	2.2	5	3.5	
High School	119	60.5	22	15.6	
University	28	15.3	111	78.7	

Table one shows that there was no statistically significant difference between employed and none employed pregnant women regarding age and marital status ($p = 0.468$ and $P = 0.245$ respectively). However, there was statistically significant difference between employed and none employed pregnant regarding education.

About one third of both housewife and employed pregnant women had their age ranged between 25 and 30 years old (34.4% and 36.2% respectively). Only 1.1% of the housewife pregnant women were divorce compared to 3.5% of the employed pregnant women. About three quarters (78.7%) of the employed pregnant women finished their university education compared to only 15.3 percent of the non-employed pregnant women.

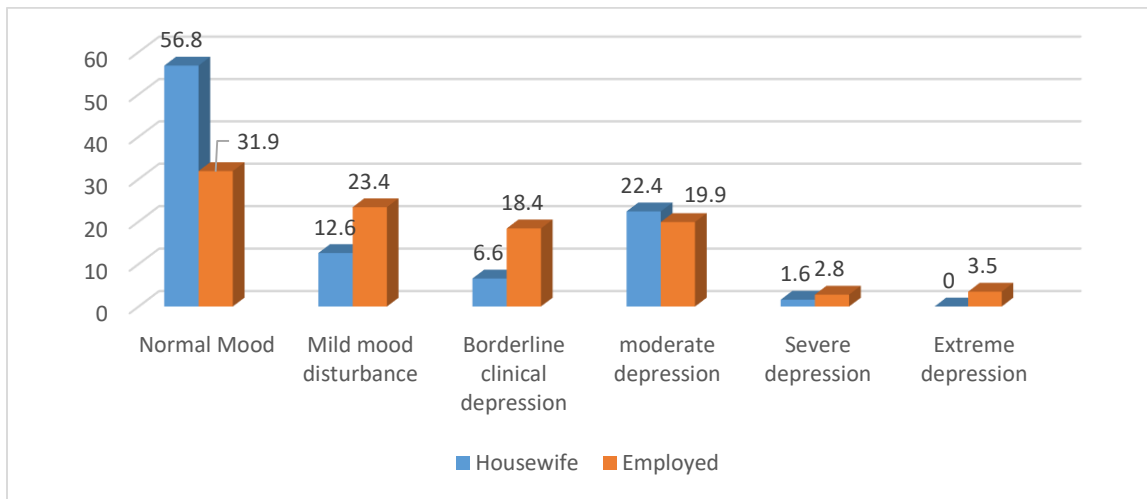
Table 2 shows that there was statistically significant difference between the mean scores of housewife and employed pregnant women in 10 items of Beck's Depression Inventory. The items are: Numbness or tingling, Wobbliness in legs, Unable to relax, feeling of choking, Shaky/unsteady, Difficulty of breathing, Fear of dying, Indigestion, Faint/Lightheaded and Face flushed. However, was no statistical significant difference between the mean scores of housewife and employed pregnant women in the rest items of Beck's Depression Inventory.

Table 2: Comparison of Prenatal Depression between Housewife and Employed Pregnant Women (N= 324)

Item	Housewives N=183		Employed N = 141		P
	Mean	SD	Mean	SD	
Numbness or tingling	0.52	0.66	0.77	0.90	0.000
Feeling hot	0.33	0.55	0.25	0.55	0.073
Wobbliness in legs	0.38	0.60	0.55	0.85	0.000
Unable to relax	0.34	0.57	0.41	0.67	0.036
Fear of worst happening	0.46	0.58	0.51	0.56	0.973
Dizzy or lightheaded	0.34	0.58	0.29	0.56	0.335
Heart pounding/racing	0.29	0.49	0.22	0.59	0.247
Unsteady	0.32	0.58	0.35	0.70	0.080
Terrified or afraid	0.52	0.76	0.65	0.80	0.393
Nervous	0.42	0.64	0.33	0.60	0.090
Feeling of choking	0.55	0.70	0.79	0.96	0.005
Hand trembling	0.48	0.71	0.52	0.75	0.367
Shaky/unsteady	0.50	0.71	0.79	0.98	0.000
Fear of losing control	0.46	0.66	0.92	2.62	0.059
Difficulty of breathing	0.46	0.63	0.79	0.94	0.000
Fear of dying	0.48	0.59	1.28	2.74	0.001
Scared	0.59	0.72	1.04	0.90	0.160
Indigestion	0.47	0.61	1.15	1.94	0.006
Faint/Lightheaded	0.54	0.77	1.01	1.15	0.000
Face flushed	0.66	0.86	1.21	1.06	0.003
Hot/cold sweats	0.64	0.91	1.16	0.98	0.623
Total	0.46	0.10	0.68	0.23	0.000

Figure 1 shows a statistically significant difference between the mean total depression score of housewife and employed pregnant women. More than half (56.8%) of the housewife pregnant women had normal mood while only 31.9 of the employed pregnant women had normal mood. Higher percentage of employed women had mild and border line depression 23.4 and 18.4 respectively compared to 12.6 and 6.6% of the housewife women.

Figure 1: Comparison of Prenatal Total Depression Score between Housewife and Employed Pregnant Women (N= 324)



Current study results revealed a statistically significant difference between the mean scores of housewife and employed pregnant women in 14 items of Beck’s Anxiety Inventory. The items are: Numbness or tingling, Unable to relax, Dizzy or lightheaded, Heart pounding/racing, Unsteady, Terrified or afraid, Nervous, Shaky/unsteady, Fear of dying, Scared, indigestion, Faint/Lightheaded, Face flushed and Hot/cold sweats. However, there was no statistical significant difference between the mean scores of housewife and employed pregnant women in the rest items of Beck’s Anxiety Inventory (table 3).

Table 3: Comparison of Prenatal Anxiety between Housewife and Employed Pregnant Women (N= 324)

Item	Non-employed N= 183		Employed N - 141		P
	Mean	SD	Mean	SD	
Numbness or tingling	0.41	1.20	0.82	0.69	0.000
Feeling hot	0.85	1.04	1.06	0.86	0.570
Wobbliness in legs	0.66	1.07	0.60	0.86	0.064
Unable to relax	0.81	1.12	1.01	0.87	0.000
Fear of worst happening	0.90	1.16	1.10	1.00	0.076
Dizzy or lightheaded	0.85	1.14	1.50	0.90	0.004
Heart pounding/racing	0.79	1.14	1.40	0.90	0.032
Unsteady	0.78	1.13	0.78	0.82	0.000
Terrified or afraid	0.86	1.16	0.84	0.85	0.000
Nervous	1.28	1.00	1.69	0.77	0.001
Feeling of choking	0.76	1.10	1.43	0.94	0.088
Hand trembling	0.63	1.08	1.44	0.94	0.508
Shaky/unsteady	0.62	1.04	1.23	1.00	0.044
Fear of losing control	0.62	1.05	1.28	0.96	0.524
Difficulty of breathing	1.04	1.21	1.54	1.06	0.143
Fear of dying	1.49	1.39	0.78	1.03	0.000
Scared	0.66	1.07	0.56	0.79	0.001
Indigestion	0.79	1.12	0.91	0.84	0.000
Faint/Lightheaded	0.52	1.03	1.21	0.98	0.008
Face flushed	0.67	1.08	1.52	1.22	0.000
Hot/cold sweats	0.74	1.10	1.74	1.25	0.001
Total	0.79	0.20	0.97	0.36	0.010

Figure 2 shows a statistically significant difference between the mean total anxiety score of housewife and employed pregnant women. More than three quarters (77.6%) of housewife pregnant women had low level of anxiety compared to only 37.6% of the employed pregnant women. Employed women had moderate level of anxiety three times more than housewife women 60.3% of housewife pregnant women to 19.1of employed pregnant women.

Figure 2: Comparison of Prenatal Total Anxiety Score between Housewife and Employed Pregnant Women (N= 324)

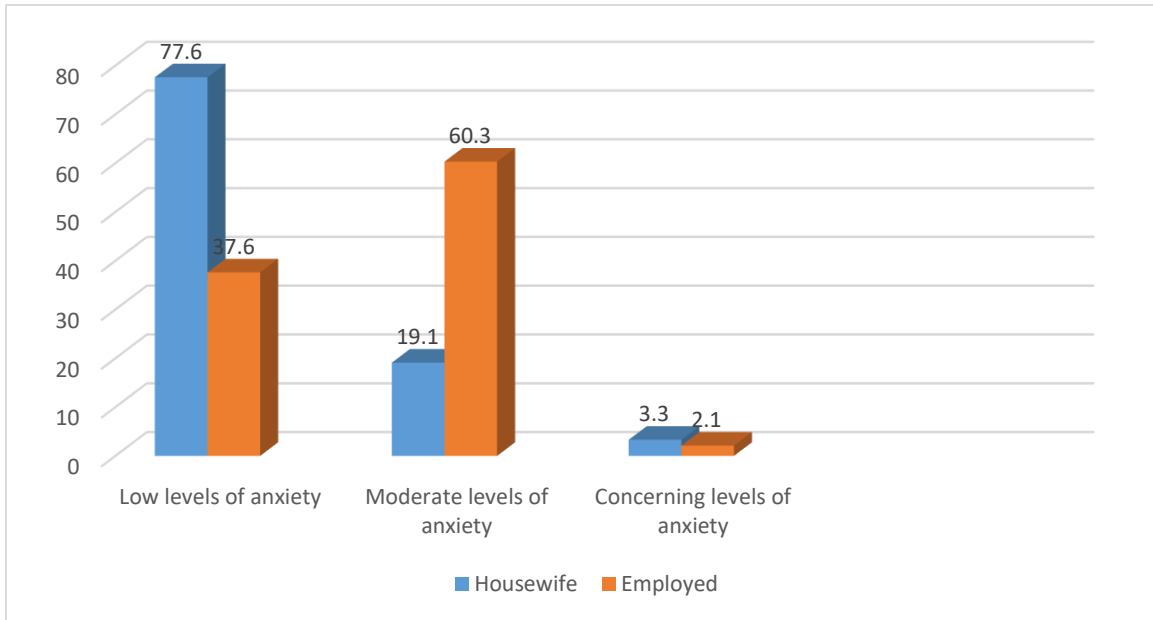
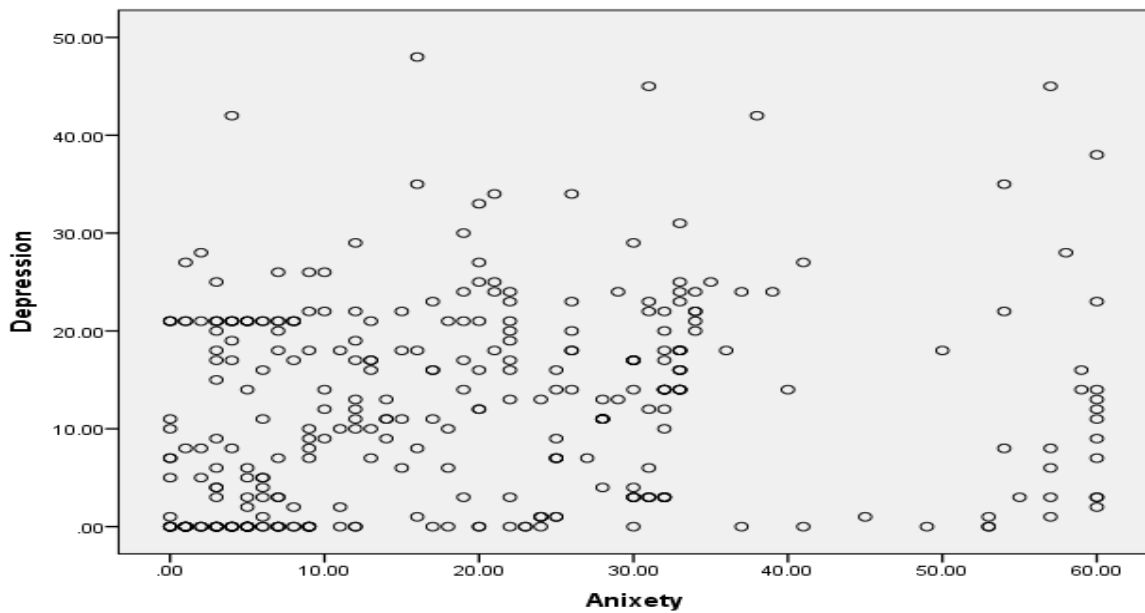


Figure 3: Correlation between Total Depression Score and Total Anxiety Score for the Whole Sample (N=324)



r= 0.178

P = 0.001

Figure 3 shows that there is a statistically significant positive relationship between total depression score and total anxiety score for the whole sample ($r= 0.178$ and $P = 0.001$)

Discussion

Anxiety and depression during the antenatal period is a growing problem that endow to the increased burden of health risks to pregnant mothers and their babies. Moreover, pregnancy is deliberated to be a period of psychological change and challenge (Amiel Castro, Pinard Anderman, Glover, O'Connor, Ehlert, & Kammerer, 2017, Alqahtani, Al Khedair, Al-Jeheiman, Al-Turki, & Al Qahtani, 2018). This study aimed to compare depression and anxiety during prenatal period between 183 housewives and 141 employed Egyptian women, and to assess the relationship between depression and anxiety during pregnancy using a descriptive correlational cross sectional research design. The results of the current study revealed a statistically significant difference between the mean total depression and anxiety scores of housewife and employed pregnant women where employed women reported higher levels of depression and anxiety, this may be explained by the constraints of the multiple role duties of the employed pregnant woman as a mother, wife and worker that put more pressure on her compared to the non-employed pregnant women who have single role as a housewife which creates less stress and consequently make them less susceptible target to anxiety and depression. Another explanation of these findings may be that the used instruments in the current study were self-reported scales wherein there is a possibility that the difference in the level of education may have contributed to under or over reporting of anxiety and depressive symptoms (Rich-Edwards et al. 2006). These findings are consistent with the findings of the research study by (Adhikari, 2012) who confirmed higher levels of anxiety and depression among employed pregnant women compared to the non-pregnant women included in her study. An explanation of the congruency of the results of these studies might go back to the cultural similarities between the subjects included in the two studies as both from developing countries and male dominant culture in which even though the woman is employed, she still has full responsibilities towards herself and her family ending up with more responsibilities and burden compared to housewives.

Contrary to the findings of the current study, many research studies confirmed low levels of maternal anxiety and depression among employed pregnant women compared to housewife women and explained their findings by the assumption that employed women are usually more educated, may have a better sense of how to lead a healthy lifestyle and deal better with different life stressors, financially independent, have more opportunities for making friends, socialize and enjoying leisure time (Lancaster et al., 2010, Fall, Goulet & vezina, 2013, Gurudatt, 2014, Fatima & Parvez, 2016). Many epidemiological studies confirmed high comorbidity between anxiety and depression, thus suggesting a close connection between both of them where the presence of any of them increases the probability of the other one to occur (Fainman, 2004, Nicholas & Michelle, 2017).

In congruence with the findings of the study by Murtaja & Thabet (2017) who assessed the relationship between anxiety and depression among Palestinian pregnant women, current study results confirmed a statistically significant positive relationship between total depression score and total anxiety score for the Egyptian pregnant women included in the study.

Conclusions and Recommendations

The results of the current study revealed a statistically significant difference between the mean total depression and anxiety scores of housewife and employed pregnant women where employed women reported higher levels of depression and anxiety, additionally, a statistically significant positive relationship between total depression score and total anxiety score for the whole sample was confirmed. These findings emphasize the need for continuing the research into maternal depression and anxiety and its well evidenced multidimensional impact on the fetal outcomes, pregnant women herself, her family and the whole society. Routine screening for antenatal depression and anxiety should be highlighted as an essential part of the antenatal screening and care, additionally, there is a need to effectively implement the three levels of prevention to identify, refer and properly manage the risky pregnant women and thereafter reduce the expected negative consequences of depression and anxiety on the pregnant women and subsequently her newborn, her family and the society in general. Training of staff employed in the antenatal clinics for early detection of mental health problems including anxiety and depression in pregnant women is crucial.

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Conflict of Interests

The authors declare that they have no conflict of interests with any organization regarding the materials discussed in this manuscript.

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