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RESEARCH ARTICLE

Influence of psychosocial problems on healthy lifestyle among pregnant women

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ABSTRACT
Background: Maternal mental health is a major public health concern around the world due to its dual impact on the Fetus /newborn and the mother.
Objective(s): The aim of this study is to detect the influence of psychosocial problems on healthy lifestyle among pregnant women.
Methodology: This study a descriptive study (quantitative design) was done to assess the objective of study among pregnant women in Baghdad city included 150 pregnant women who attended the hospital. The data was obtained using the designed questionnaire after the validity and reliability were estimated by (12) experts, as well as using the structured interview technique with the individuals who were individually interviewed.
Results: The results indicated psychosocial problems including (depression and anxiety) can affected pregnant women in different ages, residency, education, occupation, especially depression increased according to husband's occupation, previous stillbirth, while anxiety increased with increasing number of gravidae, number of parities. Both anxiety and depression increased with increasing number of lived children. psychosocial problems including (depression, anxiety, and social problem) increased with number of previous abortions. the parity between each gravida is important to reduce psychosocial problems during pregnancy.
Conclusion: The study concluded that the psychosocial problems during pregnancy could impact the lifestyle and behaviour of mother.

Keywords: Psychosocial problems, Depression, Anxiety, Life style

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INTRODUCTION

Psychological problems as anxiety, which is related to, but not limited to, placental hormones, which are thought to be stress triggers. These hormone levels rise exponentially as pregnancy continues, which may explain trimester-dependent alterations in pregnant women's mental health, However, the favorable influence of physical exercise on mental health (i.e., anxiety management and depression treatment) and the advantages of being physically active during pregnancy are well-documented (Hashim *et al.*, 2021). Depression is the most common mental health problem during pregnancy, with symptoms including a, feelings of worthlessness, depressed mood, loss of appetite, low self-esteem, poor concentration. loss of interest, irritability, and fatigue (Bedaso *et al.*, 2021).

Women may experience a variety of psychological changes during pregnancy, such as developing the motivation to change their lifestyle habits grammes or knowledge gaps, such as nutrition habits to prevent toxoplasmosis so treatment in these cases is important that designed to raise health literacy and promote lifestyle changes that will benefit mother and baby not only during childbirth, but throughout their lives (Zinsser *et al.*, 2020). Since healthy lifestyle reduces the risk of pregnancy issues and promotes the health of both mother and child, so the study aimed to identifying the relationship between psychological problems on healthy life style among pregnant women

METHOD

Study design and setting

A descriptive study (quantitative design) was carried out to assess the objective of study among pregnant women in Baghdad city. The research was carried out at Baghdad Medical City's Home-Nursing Private Hospital in Baghdad's Al-Rasafa sector. created to efficiently expand women's knowledge about enhancing and treating psychological status based on life style. The responses for adjustment were made in response to the criticisms and recommendations of the experts

Sample collected

The study sample includes a non-probability (Purposive Sample) of (150) pregnant women who attended the hospital. The data was obtained using the designed questionnaire after the validity and reliability were estimated by (12) experts, as well as using the structured interview technique with the individuals who were individually interviewed. The data collection process was carried out from January 16th, 2022 to March 1st, 2022. Each subject takes between 15 and 25 minutes to complete the interview.

Study instrument

A questionnaire was developed based on a survey of related literatures, past studies, and the utilization of information gleaned from prior assessments, and it was used prior to the deployment of the instructional program. The questionnaire was designed specifically for the investigation. The Instruments were divided into three parts.

Part I: Patients demography

A demographic data sheet includes (7) variables, including residency, age, degree of education, residency, occupation, husband's occupation, and monthly income, as well as reproductive health characteristics (gravidity, parity, abortion, lived child, still birth and interval between pregnancies)

Part II: psychological problems

The measure, which consisted of (three) components, was designed to examine the psychological influence.

1. Anxiety was comprised of (12) element**s.**
2. Depression was comprised of (12) components.
3. Social problem was comprised of (16) items

Part III: life style

The measure, which consisted of (16) components, was designed to examine the life style (Physical Activity, Smoking and Dietary Quality).

Statistical analysis

The data was analysed using descriptive statistics (percentages, frequencies, Relative Sufficiency and standard deviation and arithmetic mean) and statistical inferential (t test, Fisher test, chi square) In order to find the differences between the experimental group and the control group.The computed coefficients were used to generate the adjusted and non-adjusted regression models, which were then given with the corresponding 95 percent confidence intervals. A p-value of 0.05 was regarded as significant

RESULTS

Participant Characteristics

Characteristics of pregnant women are presented in Table 1. the mean age was 27.6 years , 16>7% reported not educated, 6>7% from rulral, 74% house wife and 18% reported insufficient monthly income, table (1). While reproductive information including Gravidity, Parity,abortion, lived children, number of lived children and number of still birth in table (2), while assessment of Psychosocial Problems, depression level, Anxiety Levels, Social Problems Levels among Pregnant Women as sever, mild or

moderate in table (3, 4, 5 and 6 respectively), while assessment of life style as poor, fair or good in table (7).

Table (8) indicates that social problems has significant influence of lifestyle among pregnant women as reported with significant difference at p-value= .011 while psychological problems related to depression and anxiety show no influence on lifestyle.

this study indicated there were no significant relationship among depression, anxiety, social problems and lifestyle with regard to age, residency, level pf education and occupational status of pregnant women at P > 0.5., but indicated a significant relationship between depression and husband's occupation at p-value= .032 while no significant relationship has been reported among anxiety, social problems and lifestyle with regard to husbands' occupation among pregnant women (table 9). There was a significant relationship between lifestyle and monthly income at p-value= .038, but there is no significant relationship among depression, anxiety, and social problems, table (10).

This study has been shown there were a high significance relationship between anxiety with number of parity and number of gravida at p-value= .001 while no significant relationship has been reported among depression, social problems and lifestyle, table (11, 12 respectively). There were a significant relationship between depression and lived children at p-value= .0049 and high significant relationship between anxiety and number of lived children at p-value= .001, table (13). There was significant relationship between depression and stillbirth at p-value= .013 while no significant relationship has been reported among anxiety, social problems and lifestyle, table (14). There was significant relationships among anxiety and social problems with regard to number of abortion at p-value= .027 and .030, table (15). There were significant relationships among depression and social problems with regard to interval between pregnancies at p-value= .006 and .031, table (16).

Table 1. Demographic characteristics related to participants.

List	Characteristics		f	%
1	**Age**	≤ 19 year	20	13.3
	(M±SD=27.64±7.309)	20 – 29 year	78	52
		30 – 39 year	41	27.3
		40 ≤ year	11	7.3
		Total	***150***	***100***
2	**Level of education**	Doesn't read & write	25	16.7
		Primary school	50	33.3
		Secondary school	60	40
		Diploma	9	6
		Bachelor	6	4
		Total	***150***	***100***
3	**Residency**	Urban	26	17.3
		Rural	10	6.7
		Suburban	114	76
		Total	***150***	***100***
4	**Occupation**	Housewife	112	74.7
		Employee	30	20
		Free work	8	5.3
		Total	***150***	***100***
5	**Husband's occupation**	Private work	82	54.6

		Employee	31	20.7
		Free work	37	24.7
		Total	***150***	***100***
6	**Monthly income**	Insufficient	27	18
		Barely sufficient	86	57.3
		Sufficient	37	24.7
		Total	***150***	***100***

Table (2): Distribution of Sample according to their Reproductive Health Characteristics

List	Characteristics		f	%
1	**Gravidity**	1 - 2	57	38
		3 - 4	66	44
		5 - 6	23	15.3
		7 ≤	4	2.7
		Total	***150***	***100***
2	**Parity**	None	1	.7
		1 - 2	65	43.3
		3 - 4	61	40.7
		5 - 6	19	12.6
		7 ≤	4	2.7
		Total	***150***	***100***
3	**Abortion**	None	104	69.3
		1 - 2	18	12
		3 - 4	28	18.7
		Total	***150***	***100***
4	**Lived child**	None	37	24.7
		1 - 2	51	34
		3 - 4	44	29.3
		5 - 6	17	11.3
		7 ≤	1	.7
		Total	***150***	***100***
5	**Stillbirth**	None	124	82.7
		1 - 2	17	11.3
		3 - 4	9	6
		Total	***150***	***100***
6	**Interval between pregnancies**	None	47	31.3
		1 - 6 months	5	3.3
		7 - 12 months	31	20.7
		13 ≤ months	67	44.7
		Total	***150***	***100***

Table (3): Overall Assessment of Psychosocial Problems among Pregnant Women

Problems	f	%	M	SD	Assess.
Mild	6	4	23.35	5.094	Moderate
Moderate	109	72.7			
Severe	35	23.3			
Total	***150***	***100***			

f: Frequency, %: Percentage, Assess.: Assessment, M: Mean for total score, SD: Standard Deviation for total score, Mild: 0 – 13.33, Moderate: 13.34 – 26.67, Severe: 26.68 – 40

Table (4): Assessment of Depression Levels among Pregnant Women

Depression	f	%	M	SD	Assess.
Mild	19	12.7	7.10	2.167	Moderate
Moderate	95	63.3			
Severe	36	24			
Total	***150***	***100***			

f: Frequency, %: Percentage, Assess.: Assessment, M: Mean for total score, SD: Standard Deviation for total score, Mild: 0 – 4, Moderate: 4.1 – 8, Severe: 8.1 – 12

Table (5): Assessment of Anxiety Levels among Pregnant Women

Anxiety	f	%	M	SD	Assess.
Mild	13	8.7	6.76	1.809	Moderate
Moderate	118	78.7			
Severe	19	12.7			
Total	***150***	***100***			

f: Frequency, %: Percentage, Assess.: Assessment, M: Mean for total score, SD: Standard Deviation for total score, Mild: 0 – 4, Moderate: 4.1 – 8, Severe: 8.1 – 12

Table (6): Assessment of Social Problems Levels among Pregnant Women

Social problems	f	%	M	SD	Assess.
Low	12	8	9.43	2.646	Moderate
Moderate	90	60			
High	48	32			
Total	***150***	***100***			

f: Frequency, %: Percentage, Assess.: Assessment, M: Mean for total score, SD: Standard Deviation for total score, Low: 0 – 5.33, Moderate: 5.34 – 10.67, High: 10.68 – 16

Table (7): Assessment of Lifestyle Level among Pregnant Women

Lifestyle	f	%	M	SD	Assess.
Poor	10	6.7	35.03	6.667	Fair
Fair	138	92			
Good	2	1.3			
Total	***150***	***100***			

f: Frequency, %: Percentage, Assess.: Assessment, M: Mean for total score, SD: Standard Deviation for total score, Poor: 0 – 24, Fair: 24.1 – 48, Good: 48.1 – 72

Table (8): Simple Linear Regression for Psychosocial Problems among Pregnant Women with regard to Lifestyle (N=150)

Lifestyle	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Problems	B	Std. Error	Beta		
Depression	.280	.270	.091	1.037	.301
Anxiety	-.385	.343	-.105	-1.124	.263
Social	.582	.224	.231	2.592	**.011**

a. Dependent Variables: Lifestyle

Table (9): Correlation among Psychosocial Problems and Lifestyle with regard to Pregnant Women Husband's Occupation (N=150)

Occupation Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.175	.032	**S**
Anxiety	.144	.078	N.S
Social problems	.095	.246	N.S
Lifestyle	.050	.545	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (10): Correlation among Psychosocial Problems and Lifestyle with regard to Pregnant Women Income (N=150)

Income Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.071	.388	N.S
Anxiety	.040	.626	N.S
Social problems	.031	.703	N.S
Lifestyle	.169	.038	**S**

H.S: High significant, S: Significant, N.S.: Not significant

Table (11): Correlation among Psychosocial Problems and Lifestyle with regard to Pregnant Women Gravida (N=150)

Gravida Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.047	.566	N.S
Anxiety	.299	.001	**H.S**
Social problems	.034	.680	N.S
Lifestyle	.042	.609	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (12): Correlation among Psychosocial Problems and Lifestyle with regard to Pregnant Women Parity (N=150)

Parity Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.002	.985	N.S
Anxiety	.347	.001	**H.S**
Social problems	.055	.501	N.S
Lifestyle	.106	.195	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (13): Correlation among Psychosocial Problems and Lifestyle with regard to Lived Children among Pregnant Women (N=150)

Lived children Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.161	.049	**S**
Anxiety	.282	.001	**H.S**

Social problems	.066	.421	N.S
Lifestyle	.025	.761	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (14): Correlation among Psychosocial Problems and Lifestyle with regard to Stillbirth among Pregnant Women (N=150)

Stillbirth Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.202	.013	**S**
Anxiety	.027	.740	N.S
Social problems	.016	.842	N.S
Lifestyle	.072	.383	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (15): Correlation among Psychosocial Problems and Lifestyle with regard to Number of Abortion among Pregnant Women (N=150)

Abortion Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.013	.879	N.S
Anxiety	.180	.027	**S**
Social problems	.177	.030	**S**
Lifestyle	.048	.561	N.S

H.S: High significant, S: Significant, N.S.: Not significant

Table (16): Correlation among Psychosocial Problems and Lifestyle with regard to Pregnancy Interval among Pregnant Women (N=150)

Interval Variables	Spearman Correlation	P-value (2-tailed)	Significance
Depression	.224	.006	**S**
Anxiety	.116	.158	N.S
Social problems	.176	.031	**S**
Lifestyle	.063	.440	N.S

H.S: High significant, S: Significant, N.S.: Not significant

DISCUSSION

In this study, different ratios for the ageing of pregnant women were relied upon to determine through these ratios in any age group are applied good nutrition and a good lifestyle for pregnant women.

The current study concentrates on Psychosocial variables because its represents the most important types of problems experienced by pregnant women. Hormones in pregnancy affect the pregnancy's psychological state, performing many mood swings, with the couple at this stage facing fears of responsibility and new role. These changes occur during different stages of pregnancy and are normal in comparison with the significant change in life resulting from pregnancy.

The result of current study agree with several studies, Woods et al., 2010, showed that The majority of participants reported antenatal psychosocial stress (78% low-moderate, 6% high), Antenatal psychosocial stress was widespread in a cohort of culturally and economically varied pregnant women attending a university-based prenatal clinic, with slightly higher mean levels earlier in pregnancy. Depression, panic disorder, drug usage, domestic violence, and having more than two medical comorbidities were all linked to high levels of prenatal psychosocial stress

(Woods et al.,2010). Also changes in nutrition, sleep, fitness, substance usage, tobacco use, and/or utilization of prenatal care are all examples of behavioural responses to stress. Neuroendocrine and immunological responses are possible physiologic responses to psychological stress (Hobel and Culhane,2003). The different demography of the sample regarding to Age Groups in order to know the determination in which age group psychological problems increase and which age group prefers to apply lifestyle. The result of current study agree with Nakazibwe, that showed in his thesis age did not have influence on pregnant woman's involvement in physical exercise (Nakazibwe, 2016). The no significance in residency, education, may be due to small size of sample, or due to less variation in Socio-demographic Characteristics espial in residency character and education level. Women's education with their husbands was more successful than women's education alone. This study also found that education had a positive impact on sadness and anxiety (Sanaati et al., 2017). As higher education has also been shown to protect against the development of prenatal depression; so, the high education in this thesis may indicate why the incidence of depression is lower than what is observed in the general population (Jahan et al., 2021).

As no significant differences between psychosocial problems and lifestyle with regard to women and husband's occupation of pregnant women, except there is significant relationship between depression and husband's occupation, while there were significant differences between lifestyle and monthly, but there is no significant relationship among depression, anxiety, and social problems. This result may be because the income of pregnant women helps in make fair lifestyle, fair lifestyle necessary to decrease pregnancy complications. there are high significant differences between anxiety and number of gravida and parity while no significant differences have been reported among depression, social problems and lifestyle.

Hou et al., revealed that having babies at home can reduce maternal women's stress levels, with no difference between having one baby and having two babies (Hou et al.,2018). The first reason is that first-time moms were extremely concerned about their newborns' safety and well-being, and were well aware that they were responsible for another life after delivery. Pregnant women who did not have a baby at home, on the other hand, were concerned about the new baby's care after birth because they lacked confidence in themselves as new mothers to care for their child. In fact, prior to becoming a mother, most women have very few opportunities to interact with kids and learn from others. Finally, having a child at home may improve the family's happiness.

One of the most important techniques for ensuring a healthy pregnancy is antenatal care. Despite their poverty, most women in the current study received irregular prenatal care, and the main reason for this positive development is the proximity of a public sector hospital that provides free health services.

there is correlation between depression and stillbirth at p-value= .013. While between anxiety, social problems and lifestyle there is no relationship. This result occurs because mothers, who have suffered from the loss of their fetus, especially during their first pregnancy, will suffer from depression as well as affecting some health aspects. The most important of these are: severe anxiety about the loss of the next pregnancy, especially when it occurs with an approaching period of first pregnancy and severe self-blame for not being able to keep the pregnancy, but not necessarily because of the mother's neglect. Keramat et al., found the existence of problems in past pregnancies (for whatever reason) was linked to stress during the present pregnancy, according to this study (Keramat et al.,2021).

This is true also for number of previous abortions, the loss of baby during pregnancy leads to fear, stress and anxiety that abortion will occur again in the next pregnancy. It is crucial to evaluate women's behaviours that may relate to the experience of depressed symptoms while looking into the predictive nature of a large number of pregnancies on depression. Klutsey and Ankomah (2014) showed that women with second pregnancies had an increased chance of induced abortions, while women with more than two pregnancies had approximately a 6-fold rate of induced abortions, in a research in Ghana's Volta area (Klutsey & Ankomah, 2014). Other study agrees with current results, Silva et al., found the presence of complications in previous pregnancies and the history of abortion/risk of preterm birth were also shown to be risk factors for anxiety during the prenatal period (Silva et al.,2017).

The Psychosocial problems increase in state of little time between pregnancies, the pregnancy interval at least two years between pregnancies must be for a woman to regain her post-natal status in terms of her weight, hormones and changes during pregnancy. So, the best solution to reduce mental problems depending on the period between pregnancies is the planned pregnancy. Gebremedhin et al., demonstrated a summary of the most recent information on the impact of the interpregnancy interval on

pregnancy problems (Gebremedhin et al.,2018). The duration between birth and the start of the next pregnancy (interpregnancy interval (IPI)) has been associated to a higher risk of unfavorable outcomes in both infants and mothers (Shachar and Lyell,2012).

In this study the prevalence of depression due to several reasons such as low level of education, pregnant women not have enough social support from her husband or her family. Depression leads to a state of sadness and crying without reason and thinking very sadly about the direction of simplest things. That's why this condition needs to be addressed because it negatively affects the mother and the fetus. In local study in Erbil, Mishkin et al., 2021 showed in Iraq, the first time that pregnant women seeking maternal health services have been diagnosed with prenatal depression. The 179 participants, 86 (48%) reported depressive symptoms. In Erbil, Iraq, a significant number of women suffer from prenatal depression. Pregnant women between the ages of 25 and 29 had a lower risk of depression than younger women, in contrast to a meta-analysis in Ethiopia that showed that pregnant women between the ages of 20 and 29 were more likely to show signs of prenatal depression (Ayano et al.,2019). Probably due to the cultural and educational disparities between the two countries. Because the majority of pregnant women in this age group had previous work experience, they were less concerned about finding work after getting pregnant.

This result due to hormonal changes occurs through pregnancy especially if the pregnancy happens by twin, because the twin needs more responsibility. the pregnant woman suffers from anxiety about eating, drinking and thoughts about fetal health. The neurohormonal substances responsible for stress are also important for anxiety in human physiology, according to this study, which could explain the common comorbidity between stress and anxiety.

This study showed that 60% of pregnant women are having moderate level of social problems. This result explains, the presence of social problems due to multiple factors such as economic problems, absence of support, mental disorders. The result of current study agrees with Suzuki, and Eto, showed that Year after year, the number of pregnant women with socioeconomic issues grew (p 0.01) (Suzuki, and Eto,2020). The distribution of high-risk factors linked to social problems has stayed nearly unchanged. During the early stages of pregnancy, it is critical to identify the life environment and acceptance condition for pregnancy, as well as give support to fill in the gaps. Other study demonstrated by Yu et al., showed pregnant women having a moderate relationship with their mother-in-law were more than twice as likely as those with an excellent relationship to experience prenatal depression symptoms (Yu et al., 2020). Absence of social support was found to be a risk factor for depressive symptoms, and pregnant women had control over their depression. Social support function was a social determinant of mental health for pregnant women because it was an essential social resource. Positive social support helped people feel cared for, cherished, and appreciated, which could enhance and mental health of pregnant women (Thompson et al.,2017).

This study shows high awareness that fair lifestyle lead to make pregnancy period with less risk of pregnancy. Lifestyle must be balanced for pregnant women so you must follow a balanced health system and exercise the right sport for the period of pregnancy. Claesson et al., showed this assertion is also true for obese pregnant women who are physically active. A woman suffering from depression symptoms may struggle to find motivation to begin or sustain physical activity (Claesson et al.,2014)

Asignificant effect between social problems and lifestyle among pregnant women as reported while psychological problems related to depression and anxiety shows no effect on lifestyle. Omidvar et al., 2018, showed in all domains of healthy lifestyles in pregnant women, state anxiety and trait anxiety were the most unfavorable independent variables, according to the findings, Also depression symptoms were found to be negatively associated with nutrition, stress management, physical exercise, health responsibility, and self-actualization (Omidvar et al., 2018).

The current study shows positive correlation between social problem and lifestyle which this explains the absence of social support will cause decreasing of lifestyle of pregnant women. Faramarzi and Pasha, showed certain unfavorable social contacts may be harmful to one's health, most studies have stressed the benefits of social support. The largest negative predictor of stress during pregnancy was family support, followed by support from friends and neighbors and perception of support. Furthermore, using a variety of communication strategies, such as individual or group therapy, and providing the required training for pregnant women and those who care for them, particularly their husbands may be beneficial in prenatal care (Faramarzi and Pasha, 2015).

CONCLUSIONS

Psychosocial problems including (depression and anxiety) can affected pregnant women in different ages, residency, education, occupation,

and have negative imapact on the lifestyle of pregnant women. The preconception period should be targeted to optimize modifiable lifestyle behaviours.

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