RESEARCH ARTICLE

PREVALENCE AND RISK FACTORS OF POSTPARTUM DEPRESSION AMONG WOMEN IN KINGDOME OF SAUDI ARABIA.

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Manuscript Info	*Abstract*

Background: Postpartum depression (PPD) is more frequent in women than thought otherwise (2). The intensity of feeling inability in suffering mothers is so high that some mothers with postpartum depression comment life as the death swamp, while non depressed mothers see their baby's birth as the happiest stage of their life.
Aim: The present study aims to study the risk factors of postpartum depression among mothers.
 Methods: Around 2090 Saudi women of postpartum period, were included and assessed using standardized questionnaire and predictive index of postnatal depression, to find out risk factors.
Results: The study found that the risk of developing postnatal depression was remarkably associated with the number of children which is increased with more than 5 children and positive family history as well. While no association between unplanned pregnancies and postpartum depression.
Conclusion: These risk factors can be ascertained during routine pregnancy care; therefore, it is important that antenatal healthcare providers and women themselves should educated about risk factors so that early identification of high risk women can be possible by closer follow-up.

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Introduction:-
Over the past four decades, many studies have emphasized the importance of mood disorders after childbirth (1). Postpartum depression (PPD) is more frequent in women than thought otherwise (2). The intensity of feeling inability in suffering mothers is so high that some mothers with postpartum depression comment life as the death swamp, while non depressed mothers see their baby's birth as the happiest stage of their life.[3] The disease manifests as sleep disorders, mood swings, changes in appetite, fear of injury, serious concerns about the baby, much sadness and crying, sense of doubt, difficulty in concentrating, lack of interest in daily activities, thoughts of death and suicide.[4,5] Feelings of hopelessness in severe cases of illness can threaten life and lead to suicide;[6] it is a factor that causes 20% of maternal deaths in the course after giving birth.[7] In addition, issues such as fear of harming the baby (36%), weak attachment to the baby (34%) and even, in extreme cases, child suicide attempts have been reported.[8] These symptoms have serious effects on family health Therefore, susceptible people need to be identified before delivery to receive proper care measures. However, the development of screening programs as well as designing evidence-based prevention programs requires principled collection of scientific documentations.

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Mothers at risk are seldom identified during pregnancy or at the time of delivery. This occurs especially in developing countries, where psychological issues are mostly ignored (9). It should be noted that up to 80% of cases do not seek medical attention and thus, are not diagnosed by the respective specialists. (10) Unfortunately, little attention has been paid to this condition in terms of identification, diagnosis, and treatment.

Methods:-

This is a cross sectional study held in Kingdom of Saudi Arabia to find out the risk factors of postpartum depression among mothers. All participants must be Saudi, have been married and have children. A total of 2090 subjects who met the inclusion criteria were selected by convenience sampling method. Participants were assessed by a standardized questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) program. Informed consent was addressed during this study for ethical consideration.

Results:-

Out of the target population, 2099 respondents were studied for their depression status and risk factors during their previous postnatal periods. About the characteristics of respondents our study found that, the age ranged from 20-49 years with mean age 23.84 years. All women were married at the time of interview. Majority of the women (94.2%) were living with their husbands. About two third of the respondents had planned pregnancies (62.8%), the majority had single parities and a few of them took special care. Regarding employment status, working women represent (58.9%) and not working represents (41.1%). In term of income, about (34.6%) of the women had monthly income more than 11000 riyals. Table 1. Education level of study group was estimated showing that most of participants were graduated **represent** (75.5 %). Fig 1. In respect to number of children of participants, the study reported that, those who have only one represents (23.1 %), the majority have between 2-4 children represents (48.9%). Fig 2. The study found that prevalence of postpartum depression was 9.5% through a structured clinical interview which included diagnostic criteria of depression. Past history of depression was present in (20%), and the family history of depression was present in only (7.3%). An increased risk of maternal depressive symptoms was remarkably associated with the number of children which is more with more than 5 children. (p value 0.001, p>0.05 by one-way ANOVA). Another variable found to be associated with the PPD's symptoms was whether they were first-time mothers. This indicates that new mothers and those have more than 5 children were more likely to experience PPD. Tables 2& 3. The family history is also a significant predictor, according to sig. value (p = 0.001, by Independent t-test). This indicated that those who have positive family history were more likely to suffer from PPD than those who haven't. Table 4. Unplanned Pregnancy with respect to postpartum depression our statistical finding reflecting that there is no association between unplanned pregnancies and postpartum depression. (p < 0.186.) Table 5 shows the results of independent t test**.**

Table 1:-Respondents' characteristics

Variable	Categories	Frequency	%
Age	Below 20 Years	68	3.3
	From 20 to 30 years	709	33.9
	From 31 to 40	812	38.9
	From 41 to 50	501	24.0
Marital status	Married	1969	94.2
	Divorced	69	3.3
	Widow	52	2.5
Employment status	Working	1231	58.9
	Not working	859	41.1
Income	Below 11000	1137	54.4
	11000	232	11.1
	Above 11000	721	34.5
Pregnancy Plan	No	778	37.2
	Yes	1312	62.8
Twins	No	1960	93.8
	Yes	130	6.2
Special Care	No	1913	91.5
	Yes	177	8.5

Figure 1:-Education level of the participants
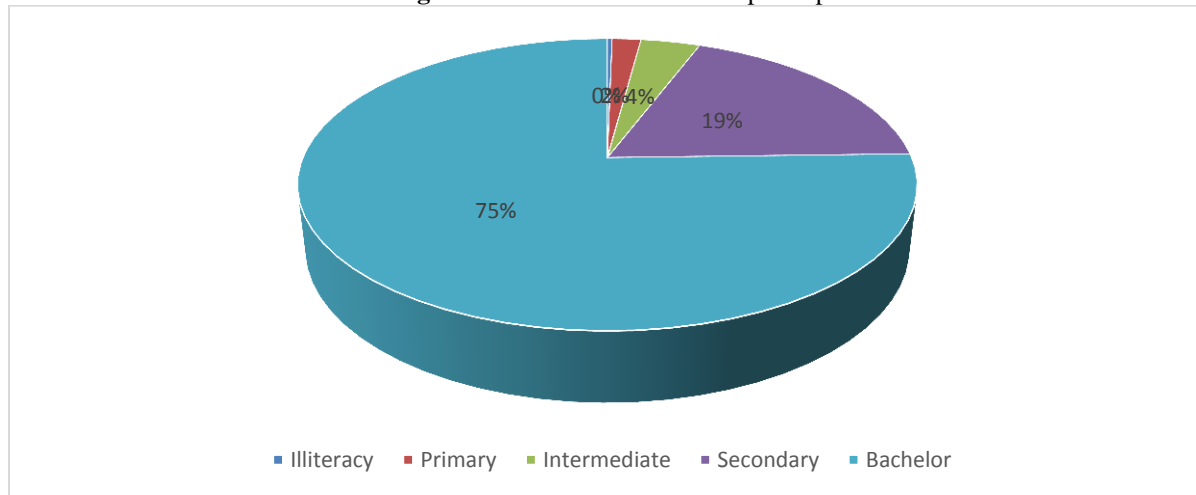
Figure 2:-Number of Children of Participants
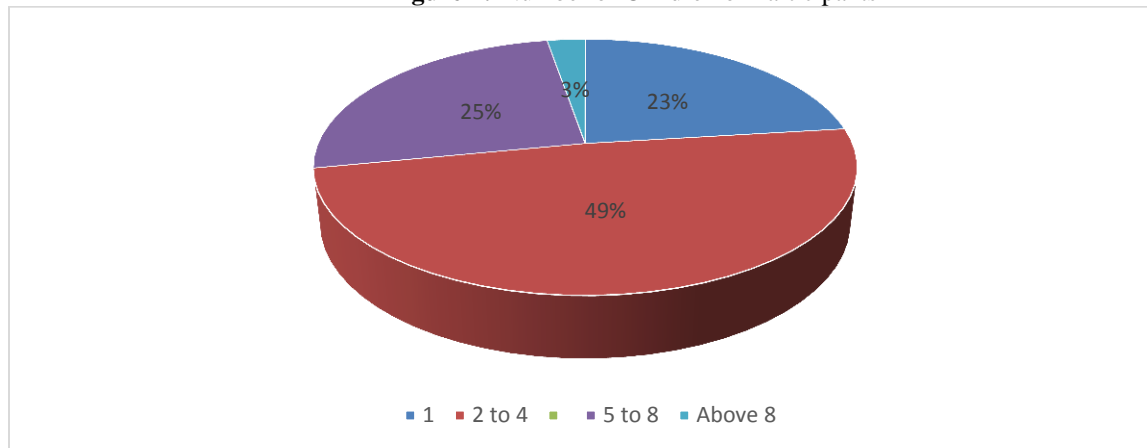
Association between Number of Children and Postpartum Depression

Table 2:-ANOVA results

Test	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	80.771	3	26.924	6.726	.001
Within Groups	8350.330	2086	4.003		

* p< 0.05.

Table 3:-Multiple comparison post hoc

(I) Number Of Delivery	(J) Number Of Delivery	Mean Difference (I-J)	Std. Error	Sig.	95% CI	
					LP	UP
1	2-4	.19439	.11055	.294	-.0899	.4786
1	5-8	.46682*	.12593	.001	.1430	.7906
1	Above 8	.88960*	.28247	.009	.1633	1.6158
2-4	5-8	.27243	.10710	.054	-.0029	.5478
2-4	Above 4	.69521	.27459	.055	-.0108	1.4012
5-8	Above 4	.20278	.18113	.0435	-.3000	1.1456

* p< 0.05.

Association between Genetic Factor and Postpartum Depression
Table 4:-independent t test results

Test	t	df	P value	Mean Difference	Std. Error Difference
Equal variances not assumed	-9.482	771.272	.001*	-.95825	.10106

* p< 0.05.

Association between Unplaned Pregnancy and Postpartum Depression
Table 5:-independent t test results

Test					Std. Error Difference
	t	df	P value	Mean Difference	
Equal variances not assumed	1.323	2088	.186	.12020	.09089

* p< 0.05.

Discussion:-

Out of the target population, 2099 respondents were studied for their depression status and risk factors during their previous postnatal periods. The present study revealed that the prevalence of Postpartum Depression was 9.5%. The rate was lower than the prevalence estimated by EPDS that included studies from Danang City, Vietnam which found the PPD prevalence was 19.3%. (11) With respect to unplanned Pregnancy and postpartum depression our statistical finding reflecting that there is no association between unplanned pregnancies and postpartum depression, while other research conducted in Pennsylvania found that there was association between them. (12) Regarding family history of depression, the study revealed that there was significant association between positive family history and post-natal depression which was the same as the study held in family of depression was present in only 7.3%. Higher rate of family history of depression was found in Australia. (13). Also the same finding reflected by the study conducted in United States. (14) In our study we found that an increased risk of maternal depressive symptoms was remarkably associated with the number of children which is more with more than 5 children and also among women being mothers for the first time and that is differ than a study finding held in Isfahan   which found there was no association between the number of deliveries and PPD or high parity and PPD. (15)

Conclusion:-

This study found factors like multigravida, women for first time being mothers and positive family history of postpartum depression, were significant predictors for postpartum depression. All of these potential risk factors can be ascertained during routine pregnancy care; therefore, it is important that antenatal healthcare providers and women themselves should educated about these risk factors so that early identification of high risk women and closer follow-up can be possible.

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