Pattern of husband support for pregnant women in Saudi Arabia

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Abstract: Background: Husband support helps decreasing overload on the wife during and after pregnancy leading to decrease maternal morbidity. Husband support was significantly related to depressive symptom reduction and better general health. Methods: This is a comparative cross-sectional descriptive study conducted in Department of Obstetrics and Gynecology, Faculty of Medicine, Umm Al-Qura University, Makkah, Saudi Arabia involving 699 Saudi Arabian women during the period between June, 2020 and January, 2021. Data was collected through an online questionnaire formulated to survey saudi women due to covid 19 pandemics measures. The internal consistancy of the questionnaire with Cronbach's alpha was 0.769. Results: More than 80% of participants had positive pattern of husband support. Prevalence of postpartum depression among participants was 40.2%. Husband support showed significant association with postpartum depression (p<0.001) with higher prevalence of postpartum depression among those with low husband support (50% VS 33%). After doing logistic regression analysis for the significant independent predictors of postpartum depression, husband support (P<0.001 and AOR 0.501), COVID 19 preventive measures commitment (P=0.022 and AOR 0.617), and residence (P=0.018 and OR = 0.326) remained significant. Conclusion: Prevalence of postpartum depression among participants was high. Husband support is a very important factor that needs increasing awareness of women and their husbands of its importance aiming to decrease prevalence of postpartum depression and other psychiatric disorders. Health education campaigns and interventions are needed for this purpose. Further research is needed to assess independent risk factors for developing postpartum depression in depth.

Keywords: Postpartum depression, Husband support, COVID 19, Maternal morbidity.

1. Introduction:

Maternal health is a very important factor affecting human resources and socio-economic development in any country. Maternal health morbidity is more serious in developing countries generally and in Asia and Africa specifically as maternal mortality is nearly 100 times more than in developed countries (Barzelatto & United Nations Population Fund., 2003) . In Saudi Arabia and other Islamic countries , having children is very important for family stability and help marital satisfaction (Al-Homaidan, 2011) . Many physical and psychiatric problems arise due to pregnancy which have adverse effect on pregnancy outcome (UNICEF, 2001). Maternal health care services focus on medical and obstetric problems with no focus on psychiatric problems (Chaaya et al., 2002) .

Postpartum depression is one of the most common types of depression among women as it occurs in 10-20% of mothers (Teissedre & Chabrol, 2004). A study done in Saudi in 2017 found that the prevalence of postpartum depression was high(Almutairi et al., 2017). Furthermore, postpartum depression was found to be 38.5% in a recent study done in Riyadh, Saudi with significant association between it and un supporting spouse (Nasr et al., 2020). If postpartum depression was not treated, it increases the risk of suicide or infanticide (Hewitt et al., 2009). Postpartum depression is referred to as "the thief that steals motherhood"(Beck, 1999) because it lowers mothers' enjoyment with her infant.

According to WHO, physical work load during pregnancy should be reduced and no night work should be done especially in the last 5 months to help protection of the mother ' health ((WHO) & Others, 2000) . Therefore, husband support helps decreasing overload on the wife during and after pregnancy leading to decrease maternal morbidity. In addition, husband support was significantly related to decrease depressive symptoms and better general health (Misri et al., 2000). Negative social pressure on husbands helping their wives in household chores is a direct predictor for decrease husband participation in household chores. For increasing husband support , we

need to encourage gender equality (Horstman et al., 2004). So, we aim to measure the awareness of women in Saudi regarding the effect of husband support on pregnancy outcome and to assess the pattern of husband support for pregnant females and its association with postpartum depression in Saudi as there is a gap in knowledge as no studies done in Saudi to assess it.as no studies done in Saudi to assess it. So, if women realised the importance of husband support, we hope that their attitude may change.

2. Methodology:

This study is comparative cross sectional descriptive study . It was done in Department of Obstetrics and Gynecology, Faculty of Medicine, Umm Al-Qura University, Makkah, Saudi Arabia, including 699 saudi arabian women during the period between June, 2020 and January, 2021.

Study instrument:

Data was collected through an online questionnaire which was formulated to survey saudi women online due to covid 19 pandemics measures. The questionnaire was formed of 3 parts. The first section assessed demographic data. The second section assessed obstetric , medical and surgical history, while the third section assessed husband support of saudi womenduring pre-natal , natal and postnatal period. The questionnaire was validated for the content by five expertees from gyncology and obestateric. The reliability of the questionnaire was estimated by alpha cronbach test to determine the internal consistancy of the questionnaire with Cronbach's alpha was 0.769 and after removing question "did you become ill due to lack of support from your husband?", it increased to 0.816.

Statistical analysis :

Statistical analysis was done by using SPSS (statistical package for social science) version 22. Qualitative data was expressed as numbers and percentages and was compared using Chi-square test. Quantitative data was expressed as mean and standard deviation. Husband support pattern questions with yes as 2 points and no as 1 point were summed making a score of total 42 points. The mean score was 32. Participants with scores higher than 32 were considered as high support group, while those with scores less than 32 were considered as poor support group. Logistic regression analysis was done to assess independent factors for postpartum depression. Statistical significance was considered when P value was less than 0.05.

3. Results

Out of 699 women, 408 were less than 35 years old. 389 had family income more than 10000 Riyal Saudi. 604 were nonsmoker. 503 had university education. 670 had urban residence. 390 were housewives. 248 have been married for 5-10 years. 354 had two to three siblings. 584 committed with COVID 19 preventive measures. 471 women's husbands were more than or equal 35 years old. 668 women's husbands were not travelling abroad. 413 women's husbands had university students. 261 women's husbands had been working administrative works. 510 women's husbands committed with COVID 19 preventive measures (Table 3).

607 women were not pregnant. 425 got pregnant before 2 to 4 times. 409 did not have history of abortion before. 304 had 1 to 2 normal labors. 413 did not have CS history. 587 did not have history of medical diseases, while 30 women had thyroid dysfunction (Table 4).

About 85% knew that poor mental health may lead to complications during childbirth and negatively affect development of fetus. 86% agreed on necessity of husband accompanying during doctor visit to monitor pregnancy. 98% agreed that husband support makes pregnancy less stressful. 89% had their first visit to a doctor before 12th week. 49% had equal or more than 9 visits to a doctor to monitor pregnancy. 85% were satisfied with their deliveries (Table 1).

Antenatal, natal and postnatal husband support pattern was shown in details in table 2. More than 80% had positive pattern of husband support. Only 60% of husbands shared in housework, while only 71% of husbands helped to buy the baby supplies. Only 51% of husbands helped to change to healthier lifestyle. 39% became ill due to lack of support from their husbands.

Prevalence of postpartum depression among participants was 40.2% (Figure 1). after association of postpartum depression with demographic characteristics, smoking, educational level, residence, siblings, patients' COVID 19 preventive measures commitment and husband COVID 19 preventive measures commitment showed significant relationship (P=0..9, 0.037, 0.029, 0.032, 0.008 and 0.037 respectively. Postpartum depression was higher among smokers, previous smokers in comparison to non-smoker (50% and 61% VS 38%), postgraduate (49%), urban VS ruler (41% VS 21%), those having 2 to 3 siblings (44%), those who did not commit to COVID 19 preventive measures (51% VS 38%) and those whose husbands did not commit to COVID 19 preventive measures compare with those committed (47% VS 38%) (Table 3). Obstetric and medical history did not show any significant association with postpartum depression (Table 4).

Husband support showed significant association with postpartum depression (p<0.001) with higher prevalence of postpartum depression among those with poor husband support (50% VS 33%) (Table 5).

Table1: knowledge and attitude about importance of husband support among participants (n=699)

		N	%
Do you know that poor mental health and body health may lead to complications during childbirth?	Yes	618	88%
	No	31	4%
	I do not know	50	7%
Did you know that poor mental health may negatively affect the development of the fetus?	Yes	585	84%
	No	57	8%
	I do not know	57	8%
Do you agree on the necessity of husband accompanying during the visit to the doctor to monitor the pregnancy?	Totally agree	395	57%
	Agree	204	29%
	Neutral	74	11%
	Disagree	20	3%
	Totally disagree	6	1%
Do you agree that husband support makes pregnancy less stressful?	Totally agree	557	80%
	Agree	129	18%
	Neutral	10	1%
	Disagree	3	0%
When was your first visit to a doctor during pregnancy?	Before week 12	624	89%
	After week 12	75	11%
Average number of viits to a doctor to monitor pregnancy?	<5 times	67	10%
	6-8 times	289	41%
	>=9 times	343	49%
How satisfied were you with the delivery?	Totally satisfied	371	53%
	Satisfied	224	32%
	Neutral	64	9%
	Disagree	25	4%
	Totally disagree	15	2%

Note: all variables were expressed as numbers and percent.

Table 2: Antenatal, natal and postnatal husband support pattern among participants (n=699)

	Yes		No	
	N	%	N	%
Antenatal husband support				
Was your husband present when you knew about your pregnancy?	578	83%	121	17%
Was your husband happy when he knew about your pregnancy?	651	93%	48	7%
Does providing your husband with your needs make you feel emotionally safe?	666	95%	33	5%
Did you become ill due to lack of support from your husband?	271	39%	428	61%
Does your husband provide all your financial needs as he can?	611	87%	88	13%
Did your husband encourage you to visit the doctor for follow up at the appropriate time?	564	81%	135	19%
Did your husband accompany you on visits to the doctor for follow-up?	545	78%	154	22%
Was your husband sharing in housework?	420	60%	279	40%
Was your husband helping you to buy the baby supplies?	498	71%	201	29%
Was your husband helping you to change your lifestyle to a healthy one?	358	51%	341	49%
Natal and postnatal husband support				
Did your husband participate in choosing delivery mode with you?	312	45%	387	55%
Was your husband present during the delivery?	542	78%	157	22%
Did your husband provide the expenses necessary for the delivery?	623	89%	76	11%
Was your husband helping you to take care of the baby until you slept a little?	373	53%	326	47%
Did your husband change the nappy for the baby when you were busy?	240	34%	459	66%
Did your husband feed the baby when you were busy?	428	61%	271	39%
Was your husband helping to carry the baby when he cried?	545	78%	154	22%
Was your husband helping you with the baby shower?	276	39%	423	61%
Did you get postpartum depression?	281	40%	418	60%

Note: all variables were expressed as numbers and percent.

After doing logistic regression analysis between postpartum depression and the significant independent variables from bivariate analysis, husband support (P<0.001 and OR 0.501 (which means it is a protective factor)), COVID 19 preventive measures commitment (P=0.022 and OR 0.617 (which means it is a protective factor)) and residence (P=0.018 and OR = 0.326) remained significant (Table 6).
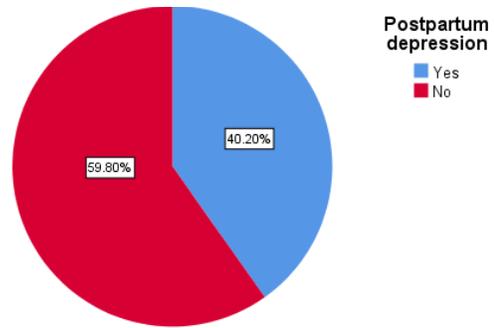

Figure 1: prevalence of postpartum depression among participants

Table 3: postpartum depression association with demographic characteristics of participants (n=699)

		Total (N=699)	Postpartum depression		No postpartum depression		P-value
			N	%	N	%	
age in years	Less than 35	408	169	41%	239	59%	0.436
	More than or equal 35	291	112	38%	179	62%	
Family income	1. less than 3000	32	14	44%	18	56%	0.344
	2. 3000 – 6000	103	47	46%	56	54%	
	3. 6000-10000	175	75	43%	100	57%	
	4. more than 10000	389	145	37%	244	63%	
Smoking	1. Yes	64	32	50%	32	50%	**0.009**
	2. No	604	230	38%	374	62%	
	3. previous smoker	31	19	61%	12	39%	
Educational level	secondary	73	35	48%	38	52%	**0.037**
	University	503	191	38%	312	62%	
	postgraduate	102	50	49%	52	51%	
	Others	21	5	24%	16	76%	
Residence	1. urban	670	275	41%	395	59%	**0.029**
	2. rural	29	6	21%	23	79%	
Occupation	Administrative works	97	46	47%	51	53%	0.394
	Housewife	390	145	37%	245	63%	
	Student	45	20	44%	25	56%	
	Physician	44	18	41%	26	59%	
	Teacher	68	26	38%	42	62%	
	Others	55	26	47%	29	53%	
Marriage duration	1. <5 years	137	66	48%	71	52%	0.102
	2. 5-10 years	248	99	40%	149	60%	
	3. 11-15 years	140	47	34%	93	66%	
	4. more than 15 years	174	69	40%	105	60%	
Siblings	Zero	23	4	17%	19	83%	**0.032**
	One	132	56	42%	76	58%	
	two to three	354	154	44%	200	56%	
	>= four	190	67	35%	123	65%	
COVID 19 preventive measures commitment	1. Yes	584	222	38%	362	62%	**0.008**
	2. No	115	59	51%	56	49%	
Husband travelling abroad	1. Yes	31	15	48%	16	52%	0.342
	2. No	668	266	40%	402	60%	
Husband educational level	Secondary	139	52	37%	87	63%	0.842
	University	413	169	41%	244	59%	
	postgraduate	117	49	42%	68	58%	
	Others	30	11	37%	19	63%	
Husband occupation	administrative works	261	104	40%	157	60%	0.093
	Engineer	118	56	47%	62	53%	
	Idle	25	12	48%	13	52%	
	Physician	39	8	21%	31	79%	
	Teacher	57	20	35%	37	65%	
	Military	49	0	0%	1	100%	
	Others	198	81	41%	117	59%	
Husband COVID 19 preventive measures commitment	1. Yes	510	193	38%	317	62%	**0.037**
	2. No	189	88	47%	101	53%	
husband age	Less than 35	228	94	41%	134	59%	0.700
	More than or equal 35	471	187	40%	284	60%	

Note: all variables were expressed as numbers and percent.

Table 4: postpartum depression association with obstetric and medical history of participants (n=699)

		Total (N=699)	Postpartum depression		No postpartum depression		P-value
			N	%	N	%	
Pregnant	1. Yes	92	32	35%	60	65%	0.255
	2. No	607	249	41%	358	59%	
Gravidity	0	16	3	19%	13	81%	0.102
	1	117	56	48%	61	52%	
	2-4	425	168	40%	257	60%	
	>=5	141	54	38%	87	62%	
Abortion history	0	409	175	43%	234	57%	0.242
	1 or 2	238	86	36%	152	64%	
	>=3	52	20	38%	32	62%	
Normal labor history	0	175	75	43%	100	57%	0.707
	1 or 2	304	120	39%	184	61%	
	>=3	220	86	39%	134	61%	
CS HISTORY	0	413	159	38%	254	62%	0.181
	1 or 2	230	103	45%	127	55%	
	>=3	56	19	34%	37	66%	
Medical history	Asthma	8	2	25%	6	75%	0.101
	Autoimmune	12	7	58%	5	42%	
	cardiovascular disease	13	7	54%	6	46%	
	DM	18	7	39%	11	61%	
	HTN	9	3	33%	6	67%	
	Thyroid	30	14	47%	16	53%	
	Others	22	15	68%	7	32%	
	No	587	226	39%	361	61%	

Note: all variables were expressed as numbers and percent., Chi- Square test was used
The test of significance was carried out at 0.05 level, Significant results are in bold

Table 5: postpartum depression association with husband support (n=699)

		Postpartum depression		No postpartum depression		
		N	%	N	%	
Husband support	poor support	147	50%	147	50%	<0.001
	high support	134	33%	271	67%	

Note: all variables were expressed as numbers and percent. Chi- Square test was used
The test of significance was carried out at 0.05 level, Significant results are in bold

Table 6: Logistic regression analysis between postpartum depression and independent variables

	B	P value	Exp(B)	95% CI for β	
				lower limit	lower limit
Husband support	-.692	<.001	.501	.366	.685
Siblings	.077	.380	1.080	.910	1.282
COVID 19 preventive measures commitment	-.483	.022	.617	.408	.933
Smoking	-.343	.204	.709	.418	1.205
Residence	-1.120	.018	.326	.129	.825

95% CI: confidence intervals, Variable inclusion with p < 0.05.

4. Discussion

This study is a comparative cross-sectional study including 699 women in the childbearing period done in Saudi. The current study showed important findings that can be summarized by the following: prevalence of postpartum depression among participants was 40.2%. Husband support, COVID 19 preventive measures commitment, and residence were associated with postpartum depression.

A study done in Saudi in 2017 found that the prevalence of postpartum depression was high(Almutairi et al., 2017). Another recent study done in Riyadh, Saudi found prevalence of postpartum depression to be 38.5% with significant association between it and un supporting spouse (Nasr et al., 2020). This is similar to our findings which found its prevalence to be 40.2%.

Postpartum depression was higher among smokers and previous smokers than among non-smokers. This is the same finding as a previous study by Salimi et al which suggested association between smoking and postpartum depression as they found that women whose smoking was reduced or unchanged postpartum were more likely to develop postpartum depression than those who quit smoking. In addition, those who increased smoking postpartum were 80% more likely to develop postpartum depression(Salimi et al., 2015). Review of literature was done by Swanson et al. to find the association between smoking and postpartum depression. It found 11 articles that found association between smoking and postpartum depression(Swanson et al., 2017).

Women who had postgraduate education, had higher prevalence of postpartum depression. This is contrary to a study by Matsumura et al., (2019) that found that lower educational status was associated with postpartum depression. In the current study, after doing logistic regression, educational level became non-significant factor which is similar to a previous study that did not find a significant association between educational level nor family income and postpartum depression(Miyake et al., 2011).

Postpartum depression was higher among women living in urban areas than in rural areas. This is similar to a study by Vigod et al. which found higher prevalence of postpartum depression in urban areas than rural areas (Vigod et al., 2013).

Prevalence of postpartum depression was higher among those who did not commit to COVID 19 preventive measures than those who commit to COVID 19 preventive measures. Liang's study showed that commitment to precautionary measures for COVID 19 was significantly associated with high prevalence of postpartum depression (Liang et al., 2020).

In this current study showed significant higher prevalence of postpartum depression among those with poor husband support. The same finding was concluded in a study done in Saudi by Amr and Balaha found a significant positive association between postpartum psychiatric disorders among young females and poor husband support (Amr & Balaha, 2010), (Page & Wilhelm, 2008) & (Nasr et al., 2020). Other previous studies found a significant negative association between husband support and maternal parenting stress (LAWRENCE & CATLIN, 1982) & (SMITH & MARK, 1986). Also a significant positive association was found between husband support and his wife later satisfaction (SMITH & MARK, 1986).

A prospective cohort study of women attitude towards companion support (the mother or husband) during delivery by Al-Mandeel et al. was done in Saudi and concluded that most women did not prefer a companion during delivery. This may be due to absence of awareness of the importance of support during delivery or due to cultural believes (Al-Mandeel et al., 2013). On contrary, the current study found that around 78% of participants' husbands were present during delivery. A previous study by Zamberi Ahmad found that husband support has an effect on the success of women entrepreneurs in Saudi (Zamberi Ahmad, 2011). Thus, husband support is a very important factor that needs increasing awareness of women and their husbands of its importance aiming to decrease prevalence of postpartum depression and other psychiatric disorders.

Limitations of the study:
Collection of data was based on an online survey due to COVID 19 pandemic measures to avoid contact between participants and health care units. The study was cross-sectional which is less evident than case control or cohort studies.

Conclusion:

Prevalence of postpartum depression among our participants was 40.2% (it considered high percentage). Husband support, COVID 19 preventive measures commitment, and residence were associated with postpartum depression. husband support is a very important factor that needs increasing awareness of women and their husbands of its importance aiming to decrease prevalence of postpartum depression and other psychiatric disorders. Health education campaigns and interventions are needed for this purpose. Further research is needed such as case

control and cohort studies to assess independent risk factors for developing postpartum depression in depth.

Ethical considerations:

Consent was obtained from participants during questionnaire filling, with no potential risks to the participants. Ethical approval obtained from research ethics committee. Confidentiality was respected and data was not used for any other purpose.

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