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Paternal Postpartum Depression: An Inaudible Cry

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Abstract:

Background: Researchers now days are focusing on the impact of the postpartum period in fathers but limited research is done on this topic in India. This study aimed to find out the relationship of depressive symptoms in fathers during the postpartum period with that of personality trait and perceived stress of father.

Basic Procedure: The total target sample of the study was 392 Indian fathers with infants less than 6 months of age. A purposive sampling method was used to collect the data. Fathers were screened for paternal postpartum depressive symptoms using the Edinburgh Postnatal Depression Scale. Personality traits and perceived stress of fathers with positive EPDS scores (N=109) were further assessed using questionnaires.

Main Finding: Perceived stress was found highly correlated with postpartum depressive symptoms. Through Pearson correlation, personality traits like agreeableness and neuroticism were found positively correlated while openness to experience had a negative correlation with depressive symptoms in fathers during the postpartum period.

Conclusion: These findings concentrate on the relationship of particular personality traits with that of depressive symptoms in fathers during the postpartum period. Results indicate that perceived stress and personality do impart a significant role in aggravating depressive symptoms during the postnatal period. Thus, assessment of male personality traits in the peripartum period itself could help the health professionals to screen the fathers who are prone to postpartum depression.

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1. Introduction:

Childbirth is considered a joyful event which is generally celebrated across all over the world. Parenthood is the major transitional phase in the lives of both men and women.They prepare themselves for parenting by adapting numerous biological, psychological and sociocultural changes (Figueredo&Conde, 2011). While adopting for these non evitable changes in their life, parents tend to suffer from various mood

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disorders like post natal blues, post natal depression and post natal psychosis(Condon, 2004).Post natal depression is the most occurring form of post natal mood disorder and it is found to occur both in male and female (Condon, 2004). In DSM V, post natal depression is classified as depression with peripartum onset.

Studies in India have mostly focused on mothers during post partum period. On the contrary, the role of fathers and the mood disturbances faced by male during post natal period are highly ignored. Mathhey, Barnett, Ungerer and Waters (2000) explained that similar to motherhood, fatherhood too is a social construct as it comes up with change in social and family network of father. Salian & Shah (2017) stated through their study on Indian parents that due to the inclusion of baby in their life, parents are compelled to change their priorities and eventually had to keep their needs on the back foot.

In the Meta analysis administered by Paulson and Bazemore(2010), the estimated rate of prevalence of depression in new fathers was found to range from 1.2% to 25.5%. Nishimura et al.(2015) concluded that post child birth the rate of prevalence in Japanfor paternal depression was detected as 13.6%.Quevedo et al. (2011) found out the prevalence rate of risk for suicides in dads during post natal period were recorded to be 4.8%, which is not less.

Upadhyay et al. (2017) in their systematic study stated that as per the reports of World Health Organization, the global prevalence of Post partum depression is estimated 22% in Indian mothers, which is quite high.In India, the prevalence rate of post partum depression in fathers is yet to be known.As described by various studiespost partum depression in fathers is found to be strongly associated to post partum depression in their spouses(Goodman, 2004; Nishimura etal., 2015; Skari etal., 2002; Leckman etal., 2004).Keeping in view the said association, it can be concluded that post partum depression is a concern for Indian fathers too.In addition to the maternal depression, formulating elements of depressive symptoms in fathers are prenatal depression/ anxiety, having other children (Ramchandani et.al., 2008), relational matters with female parent, postpartum depression in mothers (Paulson, 2010), changes in structure of family, deprivation in sexual affinity (Condon et al., 2004), previous traumatic experiences and history of depression (Miller et al., 2017).Maternal post partum depression and paternal post partumdepression have more or less similar formulating elements(Teixeira et al., 2009). The article published in Times of India on March 9, 2019 highlighted few important points regarding post partum depression symptoms in fathers. It stated that lack of awareness on the topic, adhering to gender expectations, repression of feelings, experience of neglect are few risk factors that led to depression in post partum period.

In the present study, one of the objectives is to assess the relationship of personality traits with that of post partum depressive symptoms in new fathers. Personality traits can be defined as the relatively stable factors which contribute as influential element in an individual's way of perceiving emotions, thoughts, and feelings which further affect the behavior. (Carducci, 2009 as cited in Banerjee, 2015)

Phillip et al. (2007) in their study explained that personality of fathers suffering from distress was found to be more neurotic and they used more immature defenses to handle the issues. Further in comparison with non distressed fathers, the quality of intimate relationship was found to be poorer in distressed fathers. It is apparent from the review of literature that post partum depression in fathers is strongly correlated with paternal perceived stress.Mao etal.(2011) analyzed through their study on couples that perceived stress and social support was found to be correlated significantly with post natal depressionin both mothers and fathers.Kamalifard et al.(2014) assessed that the relationship of postpartum depression in fathers had a significant positive correlation with perceived stress of father whereaswith the components of perceived social support bears a significant negative correlation with post partum depression in fathers.The study administered by Gao et al. (2009) on 130 primiparous couples detected the relationship of post partum depression with perceived stress as positively significant (r= 0.58) while with the perceived social support it was found to be inversely correlated (r=-0.58).

Here in the study,anotherobjectiveis to further explore the relationship of perceived stress with

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depressive symptoms in new fathers; and also to analyze the relationship of perceived stress in new fathers with their personality traits.

The effects of paternal post partum depression could be crucial. Postpartum depression in fathers may lead to long term psychological changes in the behavior of child. Ramchandani et al. (2008)advocated through his study that compare to child of fathers with no depression, children of depressed fathers tend to develop psychiatric disorders, hyperactivity, conduct problems, peer problems as well as social difficulties.

Studies are flooded with information on maternal post partum depression whereas the fathers aspect is somewhat neglected. A few studiesare carried out on Indian fathers during post partum period for assessing their psychological health.
The interest of study in present research is to detect depressive symptoms in new fathers.Through the study attempt was made to find out the personalitytraitsresponsible for precipitating paternal post partum depressive symptoms and aggravating perceived stress in new fathers.

2. Materials and Methods

2.1 Sample and Procedure

The contribution of new fathers was taken only when they were incorporating the mentioned inclusion criteria i.e(1)Biological father of less than 32 weekand greater than 4 week old infant (2) Living with the biological mother of the child (3) Full term delivery of child (4)Knowledge of English language (5)Both parents above higher secondary education (6) should be living in Urban area.Along with this, the fathers were also supposed to exclude from the conditions like 1) Personal or family history of psychiatric illness in mother (2) Personal or family history of psychiatric illness in the biological mother of child (3) Birth deformity in child (4) Family below lower middle socio economic status (5) Single father.Using the chain referral method, new dads were contacted as per the contact details provided by key informants and taken prior appointment to handover the questionnaire. The Max Plus Hospital, Panipat and the Saket Hospital, Jaipur provided the seating spaceand it helped to contact the new fathers. Around 450 fathers were contacted. Only 392got ready to revert back with the filled questionnaire. Although surety of confidentiality was given to all the subjects but concern of leaking private information was making them conscious. After screening through the questionnaire of EPDS, a total of 109 fathers found showing depressive symptoms. Only the fathers screened with post partum depressive symptoms were taken for the further study of investigating their personality and the stress perceived by them through the standard questionnaire.

2.2 Measurement

The tool used for screening fathers with post partum depressive symptoms is Edinburgh Postpartum Depression Scale (Cox etal., 1987). Although the questionnaire was originally designed for mothers but the same has been validated for fathers too. (Mathhey et. al, 2001)Edinburgh Postpartum Depression Scale is a likert type scale ranging from 0 to 3. There are total 10 statements in the EPDS scale with a maximum score of 30 and minimum score of 0. An outcome of 10 or more in Edinburgh Post natal Depression scale was selected to screen the fathers with depressive symptoms (Edmondson etal., 2010). As the aim was to find out the relationship of paternal post partum depression with perceived stress and personality, forms with scores less than 10 in EPDS were not included in the study.

Perceived stress in fathers was assessed using perceived stress scale designed by Sheldon Cohen. (Cohen, S., Kamarck, T., & Mermelstein, R., 1983). It is a likert type scale with the response score gamut from never to very often (0 to 4). It consists of 10 statements and a total highest score of 40 and lowest of 0 can be obtained on this scale. This scale was used to measure the extent by which the circumstances in life are perceived as stressful by father.The perceived stress scale also includes the direct questions examining the current level of experienced stress. Higher the score, higher would be the stress perceived by fathers.
Researchers have suggested five major dimensions of personality for measuring personality characteristics of an individual i.e Openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. (Yusuf, 2018). A scientifically useful structure to measure personality is usually five factor structure model. (Goldberg, 2008) Short version of BFI was used for assessing personality trait.

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(Rammstedt & John, 2007) This scale consists of total 10 statements with the direct and reverse scoring. The response varies from Strongly Disagree to strongly agree. It is a likert scale with the minimum and maximum score range of 2 and 10 respectively for assessing each individual factor. It measured 5 traits of personality i.e. Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism.

2.3 Statistical analyses

The obtained data was analyzed using the descriptive statistics. The relationship of post partum depressive symptoms and the stress perceived by father along with the personality traits was assessed incorporating Pearson product moment correlation method.

3. Results

3.1. Representatives of the sample

Out of the total sample of 109new fathers around 29.36% of fathers were below or 30 years of age. Maximum of fathers ranged from 30 to 35.The age gap among couples was 3 years on an average. The average family income of participant's fathers was lying in the rangeof 63,182- 126,356(using kuppuswamy scale) and were born in India. In the total participants around 34.9% were experienced fathers whereas for the rest the fatherhood experience was totally unfamiliar. Around 61.5% of participants reported the experience of miscarriage in the previous pregnancy. All the participants were of urban area in India and include both the primiparous and experienced fathers. (Table 1)

Table 1: Representatives of Sample

Variables Total (n=109)%	
Age of father	
≤30 years	29.36%
>30 years	75.9%
Age of the baby (3-6 month)	65.18%
Age of the baby (1-3 month)	34.82%
Indian Origin (Yes)	
Level of Education	
≤Graduation	62.5%
>Graduation	37.5%
Primiparous fathers (Yes)	65.14%
Miscarriage Experience (Yes)	61.5%
Family Income	
≤ 60,000	32.11%
>60,000	67.9%
Delivery Type	
Cesarean Delivery	44.95%
Vaginal Delivery	55.05%
Family Type	
Nuclear Family	54.12%
Joint Family	45.9%

3.2. Factors incorporated to the symptoms of Paternal Postpartum depression

According to the analyses of the psychological variables depicted in Table 2, among all personality traits,the mean of agreeableness was found to be highest whereas neuroticism was found to be lowest.The standard deviation was reported highest in the score of neuroticism among all measured traits of personality.On further analyzing using Pearson product moment correlation method, the perceived stress was found be positively correlated withthe symptoms of paternal post partum depression (Table 3). While analyzing the personality traits openness to experience('O') was found to be inversely correlated with the depressive symptoms of father during post partum period at a confidence level of 99% i.e if the personality trait of openness to experience is dominant, father would be less likely to experience depressive symptoms. (Table 3)In addition, the agreeableness and neuroticism were found to be positively incorporated with the post partum depressive symptoms in fathers, where neuroticism was significant at 99% level of confidence and the agreeableness was found to be significant at 95% level of confidence.(Table 3)

Further exploration of data revealed that Openness to experience trait of personality is negatively correlated to perceived stress too which states that if the said trait of personality in recessive in nature, the stress perceived by father would likely to be higher. Neuroticism was also seen effecting perceived stress of fathers positively. Conscientiousness and agreeableness in the personality was found to be associated with perceived stress at 95% level of confidence. (Table 3)

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Table 2: Descriptive Statistics: Postpartum Depression(PPD), Perceived Stress(PS), Personality Traits i.e Openness to experience(O), Conscientiousness(C), Extraversion(E), Agreeableness(A), Neuroticism(N)

Variable	N	Mean	SE Mean	Median	Minimum	Maximum	Standard Deviation
PPD	109	14.55	0.37	14	10	26	3.9
PS	109	20.23	0.48	19	11	36	5.0
O	109	5.97	0.19	6	2	10	2.0
C	109	6.35	0.17	6	2	10	1.79
E	109	6.44	0.20	7	2	10	2.1
A	109	7.06	0.15	7	2	10	1.58
N	109	5.28	0.20	5	2	10	2.05

Table 3: Pearson Correlations (alongwith p values) : Postpartum Depression(PPD), Perceived Stress(PS), Personality Traits i.e Openness to experience(O), Conscientiousness(C), Extraversion(E), Agreeableness(A), Neuroticism(N)

	PPD	PS	O	C	E	A
PS	0.517*	1				
O	-0.398*	-0.255*	1			
C	0.094	0.212**	-0.108	1		
E	0.046	0.080	-0.109	0.367*	1	
A	0.240**	0.232**	-0.178	0.085	0.112	1
N	0.381*	0.411*	-0.154	0.061	0.169	0.167

* significant at 0.01 p value
** significant at 0.05 p value

4. Discussion

The sum and substance of the research highlights that personality traits are significantly related with post partum depressive symptoms and perceived stress. While observing the screened fathers data, it was noticed that maximum percentage of fathers i.e 65.18% (table 1) experienced depressive symptoms between 3 to 6 months post partum. This validates the research conducted by Paulson (2010) which stated that experience of post partum depression is to the highest level in 3 month 6 month post delivery. Kamalifard et.al (2014) emphasized perceived stress as the key predictor of post partum depression.The study conducted also validates the significant positive relationship (r= 0.517, p= 0.000) between perceived stress and symptoms of post partum depression (Table 3). Higher the scores of perceived stress measured through Cohen Scale indicated higher depressive symptoms possessed by new fathers as described through the positive correlation of both variables. The study also targeted to analyze the association between personality traits and the depressive symptoms of fathers during post partum period. The relationship of depressive symptoms with high degree neuroticism and lower degree of extraversion was first described by Work et.al (1994) in their work on young population. (as cited in weber et.al., 2012)

The study conducted by Yusuf (2018) on the medical students in their stressful period came out with the conclusion that personality traits such as openness to experience, conscientiousness, extraversion, and agreeableness had favorable impact whereas neuroticism had unfavorable impact on stress, anxiety and depression of the said students.The relationship between extraversion was found to be inversely related with that of depression at 0.05 level of significance.(Banerjee, 2015) Considering the similar traits of personality of big five inventory, even in this study it was analyzed that neuroticism(r=0.381, p value= 0.000) and agreeableness(r=0.240, p value=0.012) had positive correlation with depressive symptoms during post partum period.Whereas openness to experience(r= -0.398, p value= 0.000) was found inversely correlated with post partum depressive symptoms (Table 3).Contrary to the study conducted by Bielawska and Kossakowska (2006) which argued about the relationship of post natal depressive symptoms in new fathers be minimally related to neuroticism and to be more strongly related to the circumstantial factor, the present research reported the high impact of personality traits over the stress perceived by father and the post partum depressive symptoms in father. It was contrary to the study of Rhea Banerjee(2015), where was no significant relationship found between depression and openness and agreeableness. Whereas there was no significant relationship was found between post partum depressive symptoms and conscientiousness, which was similar to the result produced by Rhea Banerjee(2015).

Apart from this personality traits like openness to experience (r= -0.255, p= 0.008) and neuroticism (r= 0.411, p= 0.000) were also found correlated with perceived stress of father. Conscientiousness and agreeableness were also found positively correlated with perceived stress but at 95% level of significance unlike openness and neuroticism, which were significant at 99% level of confidence. (Table 3)

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To our knowledge this is the first time that personality traits of Indian Fathers are analyzed to find the relation with depressive symptoms they experience during postpartum period.

4.1. Strengths and Limitations

Research on the topic explored the personality traits of big five inventory to find out their individual effect on the perceived stress and depressive symptoms suffered by new fathers in post natal period. It also reconnoitered the relationship of stress perceived by father with post natal depressive symptoms of father. Fathers selected for the study were typically born and brought up in India and were all hailed in urban area. No father had any personal or family history of psychiatric illness and none of the child has any type of birth deformities.The participants taken for the study are the fathers of less than six months old infant. There was no information about the participants during the gestational period of their spouse. Also no follow up study carried out on the participant fathers to check out the duration of depressive symptoms.Participants selected for the study are amalgam of primiparous and experienced fathers. Later study could be focused primarily on the first time fathers to narrow down the results and implications. Althoughthe representation group of fathers was versatile in age, professionand academics, it still wasn't diversified for all socio economic status. Fathers with low socio economic status were exempted from the study because of the limitation of the knowledge of English language in that group.

4.2. Implications of the findings

The illustrations suggested by this study states about the specific traits of personality which are prone to post natal depressive symptoms and perceived stress of fathers. The study also correlated the trait of personality with perceived stress of father, which ultimately is highly correlated with paternal post natal depression.

As suggested by De Montigny etal. (2011) through their work on professional practices towards father that fathers are overlooked by health care professionals and are poorly prepared for father's needs. This study can help health professionals to deal with paternal post natal depression more effectively.Screening of mental health of expected fathers during peri partum period was suggested to make an obligatory custom to follow. (Field et al., 2006).If the proneness of depressive symptoms is known for personality trait in perinatal period, essential measures could be taken proactively.Research suggests that although the parents experience major transformation in their lives during the transitional phase of parenthood but the personality of individual remains relatively stable. (Galdiolo & Roskam, 2012). Keeping in consideration the point that relative stability of personality remains constant irrespective of the transformation to parenthood, the health professionals could help the would be fathers to measure their dominant personality trait and counsel them if needed. Also Rhea Banerjee (2015) concluded through her study that Openness & agreeableness were significantly related to intention to seek psychological help. Relating to this with the results of present study, measures could be taken to provide psychological aids to the prone personalities.

The rate of ubiquity of paternal post partum depressive symptoms in India is unknown in the present date.The present study could serve a purpose of highlighting the importance of fathers during later stages of accouchement. Eventscould be organized to abolish the taboo on paternal post natal depression in India.

5. Conclusion

This research indicates that paternal depressive symptomsare associated with particular personality traits such as neuroticism, openness to experience, and agreeableness.Besides depressive symptoms, stress perceived by fathers was also found to be associated with similar personality traits like Agreeableness, openness to experience and Neuroticism. Openness to experience and Neuroticism trait of personality were detected as profound factors commonly linked to perceived stress and post partum depressive mood symptoms.Also paternal depressive symptoms are highly correlated with Perceived stress. This research can help to understand the sensitivity of one of the most neglected topic i.epsychological health of fathers in India.

Boosting the psychological health of the father bestow the prosperousness of entire housespecifically mother and the child.

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