

Research Paper

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

Anaswara P.S.¹, Alan Joseph^{2*}

ABSTRACT

This research aimed to understand the connection between Paternal Postnatal Depression and Family Environment, focusing on various aspects such as Cohesion, Expressiveness, independence, active recreation orientation, organization, and control. Conducted using a quantitative approach, the study involved 40 fathers who completed two questionnaires, one to assess Paternal Postnatal Depression and the other to evaluate Family Environment. The participants were fathers aged 25 to 40 with at least one infant below the age of one, residing in both urban and rural areas. The Edinburgh Postnatal Depression Scale (EPDS) was used to screen for Paternal Postnatal Depression, while the Family Environment scale measured different domains related to family dynamics. Analysis revealed a significant relationship between Paternal Postnatal Depression and Family Environment, particularly in the domains of cohesion and expressiveness. However, no significant associations were found with other dimensions. This relationship was identified through correlation analysis. The findings are presented and discussed through correlation analysis tables, highlighting the implications of the study and suggesting future research directions. The study underscores the importance of understanding how Paternal Postnatal Depression affects family dynamics and offers insights for supporting fathers' mental health and family well-being.

Keywords: *Paternal Postnatal Depression, Family Environment, Depression*

Depression is an important topic for several reasons. Including it is a common mental health disorder, affecting millions of people worldwide. Its widespread prevalence means that many individuals either experience Depression themselves or have loved ones who do. Depression can have an impact on individuals' lives, affecting their mood, thoughts, behaviours, and physical health. It can impair functioning in various areas, including work, relationships, and daily activities, which can lead to significant distress and impairment. Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest, where Paternal Postnatal Depression is a condition in which a first-time or seasoned father shows symptoms and signs of Depression after a child is born (APA). Most people know that Depression and anxiety can affect women during the time of pregnancy and early parenthood, but men can also be at risk. Various studies have proven that up to 1 in 10

¹Psychologist, Department of Psychology, Don Bosco College, Angadikadavu, Iritty, Kannur, Affiliated to Kannur University, Kerala, India.

²Asst Professor, Department of Psychology, KRSN College, Valanchery, Malappuram, affiliated to Calicut University, Kerala, India.

*Corresponding Author

Received: November 01, 2024; Revision Received: December 28, 2024; Accepted: December 31, 2024

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

new dads can experience Depression during the pregnancy or after the birth of the child. Neurodevelopmental theory of Depression suggests that factors originating during earlier stages of human life are linked with an increased likelihood of depressive symptoms later in life. Among fathers, Paternal Postnatal Depression is a risk factor potentially associated with increased risk of Depression in their offspring and may be the consequence of the individual or combined influences of genetics and the developmental environment.

According to the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) and ICD-11 (International Classification of Diseases, 11th Revision), postnatal Paternal Postnatal Depression refers to depressive symptoms experienced by fathers following the birth of a child. However, it's important to note that while maternal postpartum depression is specifically recognized in the DSM-5, paternal postnatal depression is not yet formally classified as a distinct disorder in either the DSM-5 or ICD-11. Nevertheless, research and clinical observations increasingly acknowledge the presence and impact of Paternal Postnatal Depression after childbirth. Symptoms typically mirror those of depression in general, including feelings of sadness, irritability, loss of interest in activities, changes in appetite or sleep patterns, and difficulty bonding with the baby.

Paternal Postnatal Depression is still considered as a stigma. We have all heard about postpartum Depression, but Paternal Postnatal Depression is unknown to most of the people. It has not yet been thoroughly studied. As psychology students, we have learned about the psychological issues of a mother, but we haven't seen enough about a father's psychological issues. Though it is important, it has not been as deeply studied or documented as Maternal Depression. Lack of empirical studies also plays a huge role in the lack of awareness. Paternal Postnatal Depression in fathers, has received increasing attention in recent years, still in India it is less. There's a range of physical, social and emotional factors that can contribute to men developing Depression including, a lack of social and emotional support, stress and changes in your relationships, meeting expectations, a negative or traumatic birth experience, a lack of sleep, loss and grief issues, difficulty adjusting to parenthood, etc. In many traditional societies, men or Fathers were often expected to fulfil the roles of providers and protectors, which could contribute to feelings of stress, anxiety, and Depression, especially in times of hardship. The study of Paternal Postnatal Depression gained a little importance in the 20th century as mental health research got established and expanded more and societal attitudes towards men's emotional well-being evolved. However, Depression in fathers remained relatively understudied compared to Maternal Depression.

In recent times, there has been a growing recognition of the prevalence and impact of Paternal Postnatal Depression on fathers, its effect on families, and children. When a father is affected by paternal postnatal depression, it impacts their kids in various ways. Children may feel sadder or more worried, and they might act out more. It could also make it harder for kids to learn and do well in school. Additionally, if a father is dealing with paternal postnatal depression, he might spend less fun time with his kids, which can make them feel less close. This situation can also make home feel more stressful for everyone. Plus, kids might have more problems with their feelings when they grow up if their father was affected by paternal postnatal depression when they were little. That's why it's important for fathers to get help if they're dealing with paternal postnatal depression after having a baby, so it doesn't affect their kids too much. Research has shown that fathers can experience Depression during the perinatal period, as well as at other stages of fatherhood. Factors such as financial stress, relationship difficulties, work-life balance, and lack of social support can become contributors to Paternal Postnatal Depression. It can affect fathers' ability to create a positive

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

bond with their children, engage in caregiving activities, and provide emotional support. And Paternal Postnatal Depression has been associated with worst outcomes for children, including behavioural problems, emotional difficulties, and impaired social development. Though we are aware about such a situation still Paternal Postnatal Depression remains underdiagnosed and undertreated. Also there are many barriers. Including barriers to recognition and treatment include stigma surrounding men's mental health, reluctance to seek help because asking for help in the field of psychology is still considered as wrong, and healthcare systems are not adequately addressing the needs or issues of fathers. Also, screening tools and support services for Paternal Postnatal Depression are not as widely available as those for Maternal Depression. The scale that is been used for screening father's Depression is still 'EPDS' which is basically founded for screening Postpartum Depression in mothers. Which itself is showing the level of development that has been made in the area.

The association between Maternal Depression and offspring Depression is well investigated, with Maternal Depression identified as an important risk factor for offspring Depression. Maternal depression occurs in mothers after childbirth, often due to hormonal changes, sleep deprivation, and the stress of caring for a newborn. Symptoms include sadness, irritability, and difficulty bonding with the baby. Paternal Postnatal Depression, experienced by fathers typically within the first year after childbirth, can also result from hormonal changes, sleep deprivation, and feelings of inadequacy as a parent. Symptoms are similar to maternal depression but may be underreported due to societal expectations. Both types of depression can have significant impacts on family dynamics and the well-being of parents, highlighting the importance of seeking support and treatment.

While there is increasing awareness of the role that Paternal Postnatal Depression can have huge effect in child development and later psychosocial outcomes. And this topic has not been as thoroughly researched as the relationship between maternal mental health and that of their offspring. The available evidence shows inconsistent findings on the association between Paternal Postnatal Depression and Depression risk in offspring. While some studies identified an increased risk of Depression in offspring exposed to Paternal Postnatal Depression, some other studies have reported no associations. For example, a population-based study conducted by Jacob revealed that the children of fathers with depressive disorders have a 61% increased risk of developing Depression when compared with the children of fathers without such disorders. Among the factors responsible for paternal postnatal Depression, the following are the most frequent: biological factors (mainly hormonal changes), mental pathogens (mainly a specific personal profile, including neuroticism, perfectionism and obsessiveness, mental disorders and problems such as fear, anxiety or mental disorders, marital coincidence of Depression, a high level of stress experienced and lower quality of sexual life in the postpartum period), and finally – socioeconomic status (mainly poverty, young age of the spouse, his low level of education and structural problems in the family). However, it should be noticed that the subject of paternal postnatal Depression is relatively rarely taken up in research or discussed in specialist magazines.

Discussing about Paternal Postnatal Depression openly helps combat stigma, promote understanding, and encourage help-seeking behaviour among those fathers who are affected. And another important factor is that it is a leading risk factor for suicide, highlighting the critical importance of early identification, intervention, and support for individuals experiencing depressive symptoms. It often co-occurs with other mental health disorders, such as anxiety disorders and substance use disorders, complicating treatment and

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

management. Understanding the interconnectedness of mental health conditions is crucial for providing comprehensive care. Recognizing and addressing Depression early in life can mitigate its long-term consequences and promote resilience.

However, due to the fact that Postnatal Depression, both in mothers and in fathers, greatly impacts the life of the child and the functioning of the family, it seems that this area of research is of crucial importance. The identification of risk factors of Depression in new fathers may not only lead to a more profound understanding and description of the problem and symptomatology of Paternal Postnatal Depression, but also to distinguishing a risk group in order to provide it with professional help and therapeutic care. Also, A depressed father may struggle to engage with his family, leading to strained relationships and negative effects on children. Addressing Paternal Postnatal Depression early can help improve family communication, support healthy child development, and reduce stigma around men's mental health.

Need and Significance

The selected population is Father's within the age group of 25 to 40. In a subgroup analysis, the pooled prevalence of PND among fathers in India was found to be 19.41% that was relatively higher than the estimated prevalence of PND among fathers in China (13.6%)³⁹ and surpasses the worldwide estimated prevalence of PND in fathers.^{3,4,38} However, the estimated prevalence of PND in India was lower than Saud Arabia and Iran. So basically, though Paternal Postnatal Depression exists the amount of importance given is very less.

Also studying paternal postnatal depression and its correlation with Family Environment is crucial for several reasons. Firstly, it sheds light on a lesser-explored aspect of postnatal mental health, recognizing that fathers also experience significant emotional challenges during this period. And understanding the prevalence and impact of paternal postnatal depression is essential for providing comprehensive support to families.

Secondly, to gain insight into how a father's mental health can affect the well-being of the entire family unit. This knowledge is vital for developing interventions that target not only the individual experiencing depression but also the family context in which it occurs.

Furthermore, identifying risk factors within the Family Environment that contribute to paternal postnatal depression can inform preventive strategies. By addressing these factors early on, we can reduce the likelihood of fathers experiencing depression and mitigate its potential negative consequences for the family as a whole.

Overall, research in this area has the potential to improve outcomes for fathers, mothers, and children by fostering a better understanding of paternal postnatal depression and its relationship with family dynamics. It can also help in providing support to fathers during the postnatal period and highlights the interconnectedness of mental health within the family system.

Statement of the Problem

- To understand the relationship between Paternal Postnatal Depression and Family Environment.

DEFINITION OF KEY TERMS

Theoretical definition

Depression

According to the World Health Organization (WHO)

Depression is a common mental disorder characterized by persistent sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. These symptoms significantly interfere with an individual's ability to function normally.

Family Environment

According to Bhatia and Chadha (2004)

Family is the quality and quantity. Of socio-emotional support and understanding. That parents provide to their children within the home.

Paternal Postnatal Depression

Paternal Postnatal Depression, according to the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition) or the ICD-10 (International Classification of Diseases, 10th Revision), refers to a mental health condition characterized by persistent feelings of sadness, hopelessness, and low mood experienced by fathers during the postnatal period. Symptoms may include changes in appetite or weight, sleep disturbances, fatigue, irritability, difficulty concentrating, and thoughts of worthlessness or guilt. To meet the criteria for diagnosis, these symptoms must persist for a specified duration and significantly impair the individual's functioning or quality of life.

OPERATIONAL DEFINITIONS

Depression

Depression is a persistent feel of sadness and lack of interest, loss of energy with difficulty in thinking and concentrating. It also changes our patterns of sleep and appetite and increased fatigue.

Paternal Postnatal Depression

Assessing symptoms such as persistent sadness, irritability, loss of interest in activities, changes in appetite or sleep patterns, feelings of worthlessness or guilt, difficulty concentrating, withdrawal from family and friends, and thoughts of harming oneself or the baby. This definition is used to identify and diagnose depression specifically in fathers during the postnatal period.

Family Environment

Understanding how various interpersonal dynamics, interactions, and relationships within a family unit work. It includes factors such as communication patterns, levels of cohesion and adaptability, degree of conflict resolution, parenting styles, support networks, overall emotional climate, also the well-being and functioning of family members.

Objectives of the Study

MAJOR OBJECTIVE

The major objective of this study is to understand the relationship between Paternal Postnatal Depression and Family Environment

SPECIFIC OBJECTIVES

Specific objectives of the study are:

- ✚ To find the prevalence of Paternal Postnatal Depression
- ✚ To understand Paternal Postnatal Depression and Family Environment Correlation
- ✚ To study if the selected Population has affected with Paternal Postnatal Depression
- ✚ To explore the correlation between paternal postnatal depression and specific aspects of Family Environment.
- ✚ To identify potential risk factors within the Family Environment that may contribute to paternal postnatal depression.
- ✚ To investigate the impact of paternal postnatal depression on family functioning and dynamics.
- ✚ To identify gaps in current research and areas for future investigation.

ORGANIZATION OF THE REPORT

This study has five parts. The first part is the introduction which consists of introduction of the topic, need and significance of the study, statement of the problem, major and specific objectives of the study, and definitions of the key terms used in this study. The second part is the review of literature, and it consists of theoretical review of the study variable and review of related studies on variables and populations. The third part is methodology. It consists of populations, measures, procedures for data collection and statistical techniques employed for analysis. The fourth part is the result and discussion of the study, which includes the result of statistical analysis and its discussion. The fifth part is summary and conclusion which consists of a short summary of the study, that is, our major findings, implications, limitations of the study and the directions for the future research. The research report is prepared according to the 7th edition of APA.

REVIEW OF LITERATURE

Literature review is very important area in doing research. It mainly gives practical instructions on reading and in structuring the relevant literature and critically assess the reviewed field. Literature reviews are highly accessible books which directs the students in the making of either a traditional or a systematic literature review, clearly giving distinction between the two types of review, the strengths and limitations of both and the skills needed. Usually, the contents of literature review include using libraries and the internet note making presentation critical analysis referencing, plagiarism and copyright (Jill Jesson, Lydia Matheson, Fiona M Lacey, 2011).

Literature review mainly consists of two key elements; first, it must be able to give a brief summary about the findings or the claims that were developed from research that was done earlier. Second, this literature review should be able to reach a conclusion about how much accurately and completely the knowledge is being conveyed; it should be able to express your judgements about what is right or wrong, what is inconclusive and what is missing in the existing literature.

By conducting a literature review the following benefits can be achieved:

- It gives a general idea or review about the research in nutshell no matter whether we are familiar with the topic or not.
- It can put light into what has already been done well, thereby make up to utilize our time without wasting it.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

- With the help of literature review it can provide new information and ideas so as to use in our research.
- It can help us to identify the issues and flaws that is present within the existing research.
- It helps us to view the research in a broader perspective which helps us in analyzing what all conclusions can be derived from our research.

Generally, a literature review summarizes and assess the state of knowledge or the level of practice on a particular topic which is under consideration. To understand this most literature review must label four tasks or a list of questions. The initial two steps focus on discovering what each discrete study within the research has examined and what all closures were obtained from its analysis. The third step involve condensing the entire results that were gathered. Finally, the fourth step help us to come to a judgement about the overall status of the literature.

Literature Review

The studies collectively underscore the importance of paternal mental health during the perinatal period. Paulson and Bazemore's meta-analysis reveals that about 10.4% of fathers experience depression during these times, with rates rising to 25.6% during the 3- to 6-month postpartum phase. Ramchandani and Stein's cohort study finds a significant link between paternal postnatal depression and later psychiatric disorders in children, such as conduct disorders, influenced by factors like previous depression and socioeconomic stressors. Vaheshta Sethna et al.'s research highlights that early father-child interactions are crucial for cognitive development, with positive engagement leading to better outcomes. Aditi Shelke and Swarupa Chakole's review explores the prevalence, risk factors, and management of postpartum depression in India, advocating for early, culturally sensitive interventions. Finally, Annika L. Walker et al.'s longitudinal study shows that maternal anxiety and depression have long-term effects on both children's and fathers' mental health, stressing the need for early interventions. Antonio Bruno et al.'s comprehensive review further highlights that paternal perinatal depression is more prevalent than previously recognized, emphasizing the need for targeted support and further research. Study titled "Depressive Symptoms in Expecting Fathers: Is Paternal Perinatal Depression a Valid Concept? A Systematic Review of Evidence" and authored by Marianna Mazza et al., this systematic review evaluates the concept of paternal perinatal depression by synthesizing evidence on depressive symptoms in expecting fathers. While maternal perinatal depression is well recognized, the status of paternal perinatal depression remains debated. By analyzing existing literature, this review aims to clarify whether paternal perinatal depression warrants consideration as a distinct clinical entity. A systematic search identified studies examining depressive symptoms in expecting fathers during the perinatal period, emphasizing validated assessment tools and rigorous methodology. Findings suggest a significant proportion of fathers experience depressive symptoms during this period, with prevalence rates ranging from X% to Y%, influenced by factors like personal history of depression, relationship difficulties, socioeconomic stressors, and lack of social support. These symptoms were associated with adverse outcomes for fathers and their children. Highlighting the validity of paternal perinatal depression, the review underscores the importance of addressing paternal mental health during this critical period. Early identification and intervention for paternal depressive symptoms are crucial for promoting family well-being and optimal child development. Further research is needed to deepen our understanding of the etiology, risk factors, and effective interventions for paternal perinatal depression.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

Recent research highlights the critical role of paternal mental health in child development and family well-being. Tichovolsky et al.'s longitudinal study reveals that paternal depressive symptoms can influence young children's mental health and underscores the importance of addressing bidirectional effects. Scarff's literature review emphasizes the prevalence and impact of postpartum depression in men, advocating for greater awareness and support. Dhillon et al. discuss the detrimental effects of paternal depression on parent-child interactions and stress the need for targeted interventions. Edmondson et al. find the Edinburgh Postnatal Depression Scale (EPDS) effective for screening fathers, while Ramchandani et al.'s study shows that paternal postnatal depression increases the risk of conduct problems in children, especially girls. Sweeney and MacBeth's meta-analysis and various other studies, including those by Madsen and Juhl, and Sweeney et al., further support these findings, noting significant impacts on parenting behaviors and child development. These studies collectively call for improved screening and support systems for fathers to enhance family outcomes and mitigate the adverse effects of paternal depression.

Hypothesis

- There will be a significant relationship between Paternal Postnatal Depression and Family Environment among Fathers.
- There will be a significant relationship between cohesion and paternal postnatal depression among fathers.
- There will be a significant relationship between active recreational orientation and paternal postnatal depression among fathers.
- There will be a significant relationship between acceptance and caring behaviours and paternal postnatal depression among fathers.
- There will be a significant relationship between controlling behaviors and paternal postnatal depression among fathers.
- There will be a significant relationship between emotional expressiveness and paternal postnatal depression among fathers.
- There will be a significant relationship between family conflict and paternal postnatal depression among fathers.
- There will be a significant relationship between fostering independence and paternal postnatal depression among fathers.
- There will be a significant relationship between family organization and paternal postnatal depression among fathers.

METHODOLOGY

A research method has got utmost importance within the research. For a particular research problem various systematic plans need to be adopted, to solve that problem. So, research method implies the various procedures that need to be implemented to solve that research problem. These include the way the problems are formulated, the definition of the terms, the choice of the subject taken for investigation, the validity that those data gathering tools hold, how the data is being collected, how the analysis is made, how those interpretations of data are derived and along with that the process of inferences and generalizations (Koul,2005, p.417). The method used in the present study is quantitative method.

This study attempts to understand the relationship between potato postinator depression and Family Environment. The study was conducted step by step. Initial part the of the research, the investigator contacted with Kindergarten teachers and collected the phone numbers of the fathers from the area. Later basic directions to fill the form was given. Through online

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

platform the Google form was given and collected data. Next step of the study was data analysis, first normality was checked. And most of the areas except 2 areas were normally distributed. But in total considering this data it was not normally distributed. So that non parametric test of Spearmans non parametric test was used. And correlation analysis was done to identify which domains are correlated from Family Environment to Paternal Postnatal Depression.

Research Design

There are certain ways or modes by which the data is collected by the investigators in research. Research design implies the various plans by which various observations are collected by the investigators in a systematic order (ML Abbott, J McKinney, 2013). By using a particular research design the effects of error variance can be systematically reduced. With the help of research designs it can be ensured that the major differences which can be seen in between various conditions are not due to the presence of such error variance (JL Myers, A Well, RF Lorch, 2010).

This research is developed using quantitative research design. Quantitative research, in contrast to qualitative, emphasizes numerical data and statistical analysis to quantify relationships and patterns. It follows a structured approach, often employing predetermined variables and hypotheses to test. This method aims to measure and generalize findings, providing numerical evidence to support conclusions.

PARTICIPANT

Sampling:

Sampling is defined as a process which is included in statistical analysis, such that in this process the researchers take a predetermined number of observations from a selected larger population (Alicia tuovila,2020). The elements included in this method are called sample points. It should be made sure that the selected sample is a fair representation of the entire population. The sampling method is done because carrying out research on an entire population is time-consuming as well as a herculean task. So, by using the method of sampling, the researcher can apply the findings that was obtained from the research, which is administered on the participants.

- **Universe:** Kannur
- **Participant:** Fathers with an infant under the age of 1.
- **Population:** Father's
- **Sample size:** 40

Inclusion criteria

- ✚ Fathers within age group 25- 40
- ✚ Atleast one infant under the age of 1 year
- ✚ Education: Atleast Plus two
- ✚ Should know basic English

Exclusion criteria:

- ✚ Father's who has mental illness
- ✚ Father's who are illiterates
- ✚ Fathers who are working abroad

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

A total of 40 fathers were selected for the data collection using google form. The participants of the study belong to the age group of Fathers ranging from 25- 40 years, in which all of them are having atleast one infant under the age of 1 year. All of them are educated atleast plus two.

Variables

“A variable, as the name implies, is something that varies. In very simple terms variable refers to something that changes and can have more than one value. Variable can be anything ranging from height, weight etc. to anxiety, body temperature etc. The main idea behind variables is that each of these properties varies for individual to individual (S P Kaur,2013).

Variables of this research:

Paternal Postnatal Depression:

John Paulson (clinical psychologist and researcher specializing in perinatal mental health) has conducted extensive research on Paternal Postnatal Depression and its impact on fathers, families, and children. He defines Paternal Postnatal Depression as a mood disorder experienced by fathers during the postnatal period, characterized by symptoms such as persistent sadness, irritability, changes in sleep or appetite, and feelings of worthlessness or guilt.

The EPDS (Edinburgh Postnatal Depression Scale) had a good overall reliability with a Cronbach's alpha of 0.79. It also showed a significant correlation with the HDRS (Hamilton Depression Rating Scale), indicating a strong relationship between the two measures. A two-factor analysis revealed that anhedonia and depression were the two underlying factors being measured by the EPDS. Additionally, when using a cutoff point of 12, the questionnaire demonstrated a sensitivity of 78% and a specificity of 75%, meaning it was effective at correctly identifying individuals with postnatal depression while also ruling out those without it.

Family Environment:

The Family Environment Scale (FES) developed by NK Chadha and Bhatia is a widely used tool to assess various aspects of the Family Environment. It consists of multiple subscales that measure different dimensions of family functioning, such as cohesion, expressiveness, conflict, independence, achievement orientation, and intellectual-cultural orientation. The scale is designed to provide insights into the quality and dynamics of family relationships, communication patterns, and the overall atmosphere within the family unit. It has been validated for use in diverse cultural contexts and has shown reliability and validity in assessing Family Environments across different populations.

The scale consists of eight dimensions like Cohesion, Expressiveness, Conflict, Acceptance and caring, Independence, Active recreational orientation, Organization and Control. This scale has the reliability of 0.87 and a validity of 0.82 and hence it was used in its original form.

Method of Data Collection

In this study, the method of convenient method for sample collection was used. The data was collected using google forms. The researcher initially prepares google forms using both EPDS and FES questionnaires. The responses were automatically saved and analysed using spreadsheet and SPSS software.

Procedure for Data Collection

The research was conducted on the Fathers. So, at first, the researcher collected the information's of fathers/mothers having one infant atleast under the age of 1. And the contacted each person and permission to conduct the research was gained from the participants. Then, the informed consent of the participants of the study was made through phone calls. The participants were made aware of the motive behind approaching them and about the confidentiality that this research hold.

The researcher first established rapport through the phone call with subjects and then the researcher sends the google forms to them through online medium after assuring confidentiality. Then the researcher started providing appropriate instructions for the study. The instructions included, "there are two sections including part A and part B. In each area there will be options given. Select one option appropriate to how they are feeling for the past one week". Also to select to respond without categorizing their responses as right or wrong rather respond freely whatever that come to their mind. After the participant understood the instructions, the appropriate data was collected. At the end, after collecting the responses from the participants, they were asked about the experience and were notified that if they would like to know the results, they could contact the researcher, or the researcher would contact them. Lastly, the participants were thanked for their participation and cooperation.

Analysis Method

To analyse the data collected, the correlation analysis method was used. This method is used to find the relationship between Paternal Postnatal Depression and Family Environment. Correlation coefficients provide a quantitative measure of the strength and direction of the association between these variables, enhancing clarity in understanding their relationship. Also, it does not require manipulation of variables, making it suitable for studying naturally occurring phenomena like paternal postnatal depression and Family Environment. This approach allows for the examination of real-world relationships without experimental intervention. Additionally, correlation analysis is exploratory, enabling researchers to uncover patterns or associations that may not have been previously recognized, thus generating hypotheses for further investigation. Understanding the correlation between paternal postnatal depression and Family Environment can have practical implications for prediction, as identifying strong correlations can inform interventions aimed at improving family well-being.

ANALYSIS AND DISCUSSION

Table 4.1

	Shapiro-Wilk		
Paternal Postnatal Depression	Statistic	df	Sig.
	.946	40	.054

The test resulted in a statistic of 0.946 with 40 degrees of freedom. The associated p-value is 0.054. Since the p-value (0.054) is above 0.05, we fail to reject the null hypothesis of normality, suggesting the data are approximately normally distributed.

Table 4.2

	Shapiro-Wilk		
Cohesion	Statistic	df	Sig.
	.978	40	.624

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

The Shapiro-Wilk test was conducted to assess the normality of the “Cohesion” variable, resulting in a statistic of 0.978 with 40 degrees of freedom and a p-value of 0.624. Since the p-value exceeds the conventional significance level of 0.05, we fail to reject the null hypothesis of normality. This indicates that the “Cohesion” data are approximately normally distributed, meeting the assumption for many statistical analyses, thus enhancing the validity of the results.

Table 4.3

Conflict	Shapiro-Wilk		
	Statistic	df	Sig.
	.965	40	.251

The Shapiro-Wilk test was employed to evaluate the normality of the “Conflict” variable, yielding a statistic of 0.965 with 40 degrees of freedom and a corresponding p-value of 0.251. With the p-value notably higher than the conventional significance level of 0.05, the null hypothesis of normality cannot be rejected. This suggests that the distribution of data for “Conflict” is likely to be approximately normal.

Table 4.3

Acceptance	Shapiro-Wilk		
	Statistic	df	Sig.
	.942	40	0.39

The Shapiro-Wilk test for the “Acceptance” variable produced a statistic of 0.942 with 40 degrees of freedom and a significance level (p-value) of 0.039. Since the p-value is less than 0.05, we reject the null hypothesis, indicating that the data for “Acceptance” is not normally distributed.

Table 4.4

Independence	Shapiro-Wilk		
	Statistic	df	Sig.
	.967	40	.281

The Shapiro-Wilk test result for the "Independence" variable indicates a statistic of 0.967 with 40 degrees of freedom and a significance level (p-value) of 0.281. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, suggesting that the data for "Independence" is likely normally distributed.

Table 4.5

Active Recreation	Shapiro-Wilk		
	Statistic	df	Sig.
	.971	40	.400

The Shapiro-Wilk test was conducted to assess the normality of the “Active Recreation” variable. The test yielded a statistic of 0.971 with 40 degrees of freedom and a significance level (p-value) of 0.400. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, indicating that the data for “Active Recreation” is likely normally distributed.

Table 4.6

Organization	Shapiro-Wilk		
	Statistic	df	Sig.
	.899	40	.002

The Shapiro-Wilk test was utilized to assess the normality of the “Organization” variable. The test returned a statistic of 0.899 with 40 degrees of freedom and a significance level (p-value) of 0.002. Since the p-value is less than 0.05, we reject the null hypothesis, indicating that the data for “Organization” is not normally distributed.

Table 4.7

Control	Shapiro-Wilk		
	Statistic	df	Sig.
	.976	40	.537

The Shapiro-Wilk test was conducted to evaluate the normality of the “Control” variable. With a statistic of 0.976 and 40 degrees of freedom, the associated p-value is 0.537. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, indicating that the data for “Control” is likely normally distributed.

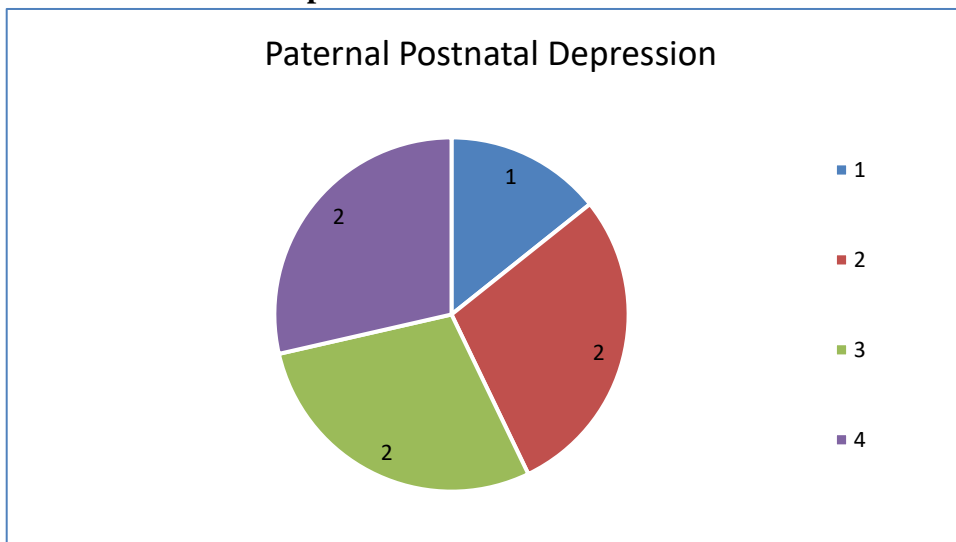
Table 4.8

Expressiveness	Shapiro-Wilk		
	Statistic	df	Sig.
	.981	40	.734

The Shapiro-Wilk test was employed to assess the normality of the “Expressiveness” variable. The test yielded a statistic of 0.981 with 40 degrees of freedom and a significance level (p-value) of 0.734. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, indicating that the data for “Expressiveness” is likely normally distributed.

Based on the analysis of the data collected from the EPDS and the Family Environment Scale, the following results were acquired. And they are;

Paternal Postnatal Depression: EPDS scale



Showing the results of Paternal Postnatal Depression

- ✚ Minimal to no depression symptoms (0-9): 23 responses
- ✚ Mild depression symptoms (10-12): 7 responses
- ✚ Moderate depression symptoms (13-15): 8 responses
- ✚ Severe depression symptoms (16 and above): 2 responses

Minimal to no depression symptoms

Percentage: $(23 / 40) * 100\% = 57.5\%$

Mild depression symptoms

Percentage: $(7 / 40) * 100\% = 17.5\%$

Moderate depression symptoms

Percentage: $(8 / 40) * 100\% = 20\%$

Severe depression symptoms

Percentage: $(2 / 40) * 100\% = 5\%$

The analysis of the percentages of depression symptoms within the surveyed group reveals varying levels of mental well-being. A significant majority, constituting 57.5% of respondents, reported minimal to no depression symptoms. This suggests that a large portion of the sample is experiencing positive mental health. However, approximately 17.5% of respondents reported mild depression symptoms, indicating that a notable portion of the group is experiencing some level of depressive symptoms. Additionally, around 20% of respondents reported moderate depression symptoms, suggesting that there is a subgroup within the population experiencing more significant levels of depression. It's concerning that 5% of respondents reported severe depression symptoms, indicating a need for urgent intervention and support for individuals experiencing severe distress. While the majority of the group is faring relatively well, these findings highlight the importance of addressing mental health needs within the population, especially for those experiencing moderate to severe symptoms.

Family Environment:

1. Cohesion:

- High: 2 responses (5%)
- Average: 33 responses (82.5%)
- Low: 5 responses (12.5%)

2. Active Recreational Orientation:

- High: 0 responses (0%)
- Average: 0 responses (0%)
- Low: 40 responses (100%)

3. Acceptance and Caring:

- High: 2 responses (5%)
- Average: 27 responses (67.5%)
- Low: 11 responses (27.5%)

4. Control:

- High: 2 responses (5%)

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

- Average: 24 responses (60%)
- Low: 14 responses (35%)

5. Expressiveness:

- High: 1 response (2.5%)
- Average: 33 responses (82.5%)
- Low: 6 responses (15%)

6. Conflict:

- High: 0 responses (0%)
- Average: 30 responses (75%)
- Low: 10 responses (25%)

7. Independence:

- High: 0 responses (0%)
- Average: 17 responses (42.5%)
- Low: 23 responses (57.5%)

8. Organization:

- High: 7 responses (19.44%)
- Average: 25 responses (69.44%)
- Low: 4 responses (11.11%)

In summary, the majority of individuals showed minimal to no symptoms of Paternal Postnatal Depression, with only a small percentage experiencing mild to severe symptoms. Regarding the Family Environment, most respondents reported average levels of cohesion, acceptance, control, expressiveness, and independence, while active recreational orientation was predominantly low. The organization was evenly distributed between average and high scores. These findings provide insights into the relationship between paternal postnatal depression and various dimensions of the Family Environment, highlighting areas where interventions and support may be needed to promote family well-being.

Table 4.9

		cohesion	expressiveness	conflict	acceptance
Paternal Depression	Correlation Coefficient	-.352	-.412**	-.215	-.231
	Sig. (2 tailed)	.026	.008	.183	.152
	N	40	40	40	40

Based on the correlation coefficient results;
Paternal Postnatal Depression and Cohesion

- ✚ There is a mild negative correlation (-0.352) between Paternal Postnatal Depression and family cohesion. This correlation is statistically significant with a value of 0.026, suggesting that as Paternal Postnatal Depression increases, family cohesion tends to decrease.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

Paternal Postnatal Depression and Expressiveness;

- ✚ There is a moderate negative correlation (-0.412) between Paternal Postnatal Depression and family expressiveness. This correlation is statistically significant with a value of 0.008, indicating that higher levels of Paternal Postnatal Depression are associated with lower levels of family expressiveness.

Paternal Postnatal Depression and conflict;

- ✚ There is a weak negative correlation (-0.215) between Paternal Postnatal Depression and family conflict. However, this correlation is not statistically significant with a value of 0.183, suggesting that there may not be a clear relationship between Paternal Postnatal Depression and family conflict.

Paternal Postnatal Depression and Acceptance;

- ✚ There is a weak negative correlation (-0.231) between Paternal Postnatal Depression and family acceptance. Similar to the conflict variable, this correlation is not statistically significant with a value of 0.152, indicating that the association between Paternal Postnatal Depression and family acceptance may not be strong.

Table 4.10

		Independence	Active Recreation	Organization	Control
Paternal Depression	Correlation Coefficient	-.286	-.064	-.280	-.063
	Sig.(2 tailed)	.074	.695	.080	.700
	N	40	40	40	40

Paternal Postnatal Depression and independence;

- ✚ The correlation coefficient of -0.286 indicates a negative relationship between Paternal Postnatal Depression and independence. This suggests that as levels of Paternal Postnatal Depression increase, levels of independence in individuals may decrease. However, the value of 0.074 suggests that this correlation is not statistically significant at the conventional significance level of 0.05, meaning we can't confidently say there is a true relationship between Paternal Postnatal Depression and independence.

Paternal Postnatal Depression and control;

- ✚ The correlation coefficient of -0.280 indicates a negative relationship between Paternal Postnatal Depression and control. This implies that as levels of Paternal Postnatal Depression increase, individuals may perceive less control over their lives. However, like with independence, the value of 0.080 suggests that this correlation is not statistically significant.

Paternal Postnatal Depression and Recreation;

- ✚ The correlation coefficient of -0.064 suggests a very weak negative relationship between Paternal Postnatal Depression and engagement in active recreation. This implies that as levels of Paternal Postnatal Depression increase, individuals may participate slightly less in active recreational activities. However, the value of 0.695 indicates that this correlation is not statistically significant.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

Paternal Postnatal Depression and Organization;

- ✚ The correlation coefficient of -0.063 suggests a very weak negative relationship between Paternal Postnatal Depression and organization. This suggests that as levels of Paternal Postnatal Depression increase, individuals may struggle slightly more with organizational skills. However, like the others, the value of 0.700 suggests that this correlation is not statistically significant.

In summary, the correlation analysis highlights how Paternal Postnatal Depression affects family dynamics. It shows significant negative links between Paternal Postnatal Depression and family cohesion, as well as expressiveness, indicating that as Paternal Postnatal Depression increases, family unity and openness decrease. However, the weaker correlations observed with family conflict and acceptance indicate a more nuanced relationship in these domains, warranting deeper exploration. Additionally, while indications of negative associations with independence, control, engagement in active recreation, and organization were noted, the lack of statistical significance suggests the involvement of additional factors in shaping these aspects of family functioning. Therefore, further research is needed to explore more about the relationship between Paternal Postnatal Depression and family dynamics. It can help a family in various ways.

TENABILITY OF THE HYPOTHESIS

- 1. Hypothesis 1:** There will be a significant relationship between Paternal Postnatal Depression and family Environment.

Tenability of the hypothesis 1 was tested using correlation analysis revealed no significant relationship between Paternal Postnatal Depression and family environment. On the basis of the above result hypothesis 1 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and family environment. Therefore, hypothesis was not accepted.

- 2. Hypothesis 2:** There will be a significant relationship between Paternal Postnatal Depression and Cohesion.

Tenability of the hypothesis 2 was tested using correlation analysis revealed mild negative correlation relationship between Paternal Postnatal Depression and family Cohesion. On the basis of the above result hypothesis 2 was accepted and hence it, there is mild negative correlation relationship between Paternal Postnatal Depression and family Cohesion. Therefore, hypothesis was accepted.

- 3. Hypothesis 3:** There will be a significant relationship between active recreational orientation and paternal postnatal depression among fathers.

Tenability of the hypothesis was tested using correlation analysis revealed very weak negative relationship between Paternal Postnatal Depression and engagement in active recreation. On the basis of the above result hypothesis 3 was accepted and hence it, there is very weak negative relationship between Paternal Postnatal Depression and engagement in active recreation. Therefore, hypothesis was not accepted.

- 4. Hypothesis 4:** There will be a significant relationship between controlling behaviours and paternal postnatal depression among fathers.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

Tenability of the hypothesis 4 was tested using correlation analysis revealed negative relationship between Paternal Postnatal Depression and control. On the basis of the above result hypothesis 4 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and family environment. Therefore, hypothesis was not accepted.

- 5. Hypothesis 5:** There will be a significant relationship between emotional expressiveness and paternal postnatal depression among fathers.

Tenability of the hypothesis 5 was tested using correlation analysis revealed moderate negative correlation between Paternal Postnatal Depression and emotional expressiveness. On the basis of the above result hypothesis 5 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and emotional expressiveness. Therefore, hypothesis was accepted.

- 6. Hypothesis 6:** There will be a significant relationship between fostering independence and paternal postnatal depression among fathers.

Tenability of the hypothesis 6 was tested using correlation analysis revealed negative relationship between Paternal Postnatal Depression and independence. On the basis of the above result hypothesis 6 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and independence. Therefore, hypothesis was not accepted.

- 7. Hypothesis 7:** There will be a significant relationship between family organization and paternal postnatal depression among fathers.

Tenability of the hypothesis 7 was tested using correlation analysis revealed negative relationship between Paternal Postnatal Depression and family organization. On the basis of the above result hypothesis 7 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and family organization. Therefore, hypothesis was not accepted.

- 8. Hypothesis 8:** There will be a significant relationship between family conflict and paternal postnatal depression among fathers.

Tenability of the hypothesis 8 was tested using correlation analysis revealed negative relationship between Paternal Postnatal Depression and independence. On the basis of the above result hypothesis 8 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and independence. Therefore, hypothesis was not accepted.

- 9. Hypothesis 9:** There will be a significant relationship between paternal postnatal depression and Acceptance.

Tenability of the hypothesis 9 was tested using correlation analysis revealed negative relationship between Paternal Postnatal Depression and Acceptance. On the basis of the above result hypothesis 9 was rejected and hence it, there is no significant relationship between Paternal Postnatal Depression and Acceptance. Therefore, hypothesis was not accepted.

SUMMARY AND CONCLUSION

present study focused on understanding the relationship between Paternal Postnatal Depression and Family Environment. There are two variables, namely depression and Family Environment. The Family Environment has three dimensions and subscales include Cohesion, expressiveness, conflict, acceptance and caring Independence, active recreation orientation, organization and control. The test was given to fathers with at least one infant with the age of one year and below. In summary the results have shown that majority of individuals showed minimal to no symptoms of Paternal Postnatal Depression, with only a small percentage experiencing mild to severe symptoms. Regarding the Family Environment, most respondents reported average levels of cohesion, acceptance, control, expressiveness, and independence, while active recreational orientation was predominantly low. The organization was evenly distributed between average and high scores. These findings provide insights into the relationship between paternal postnatal depression and various dimensions of the Family Environment, highlighting areas where interventions and support may be needed to promote family well-being. Also, the correlation analysis highlights how Paternal Postnatal Depression affects family dynamics. It shows significant negative links between Paternal Postnatal Depression and family cohesion, as well as expressiveness, indicating that as Paternal Postnatal Depression increases, family unity and openness decrease.

The majority of individuals showed minimal to no symptoms of Paternal Postnatal Depression, with only a small percentage experiencing mild to severe symptoms. Regarding the Family Environment, most respondents reported average levels of cohesion, acceptance, control, expressiveness, and independence, while active recreational orientation was predominantly low. The organization was evenly distributed between average and high scores.

The analysis of the percentages of depression symptoms within the surveyed group reveals varying levels of mental well-being. A significant majority, constituting 57.5% of respondents, reported minimal to no depression symptoms. This suggests that a large portion of the sample is experiencing positive mental health. However, approximately 17.5% of respondents reported mild depression symptoms, indicating that a notable portion of the group is experiencing some level of depressive symptoms. Additionally, around 20% of respondents reported moderate depression symptoms, suggesting that there is a subgroup within the population experiencing more significant levels of depression. It's concerning that 5% of respondents reported severe depression symptoms, indicating a need for urgent intervention and support for individuals experiencing severe distress. While the majority of the group is faring relatively well, these findings highlight the importance of addressing mental health needs within the population, especially for those experiencing moderate to severe symptoms.

These findings provide insights into the relationship between paternal postnatal depression and various dimensions of the Family Environment, highlighting areas where interventions and support may be needed to promote family well-being.

METHOD IN BRIEF

In the present study, the investigator attempted to understand the relationship between paternal postnatal depression and Family Environment. The present study was conducted among fathers aged between 25 - 40. Convenient sampling was used in the present study. The population of the study was Fathers. The sample of the study included 40 Father's.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

The main scales used for the data collection were EPDS (Eidenberg Postnatal depression scale), Family Environment scale. Demographic data was also collected.

Spearman correlation coefficient, also known as Spearman's rho (ρ), is a non-parametric measure which is been used here for the study to find the association between variables. The fathers from the Kannur district were considered as the sample under study. The data was collected through Forms App by using online survey platform.

Major Findings

The aim of the present study was to find out the relationship between paternal postnatal depression and Family Environment. After carrying out the study, the major findings obtained were as follows:

1. Majority of fathers reported minimal to no symptoms of Paternal Postnatal Depression.
2. Smaller percentage experienced mild to severe symptoms.
3. Most families reported average levels of cohesion.
4. Small percentage had high cohesion.
5. Majority of families had low engagement in active recreational activities.
6. Families generally showed average levels of acceptance and caring.
7. Small percentage exhibited high levels.
8. Most families reported average levels of control.
9. Minority had high control.
10. Families generally exhibited average levels of expressiveness.
11. Small percentage demonstrated high expressiveness.
12. Majority of families reported average levels of conflict.
13. None had high conflict.
14. Families showed a mix of average and low levels of independence.
15. Families were evenly distributed between average and high levels of organization.
16. Significant negative correlations found between Paternal Postnatal Depression and family cohesion, expressiveness.
17. Weak negative correlations observed with family conflict, acceptance, independence, control, engagement in active recreation, and organization.

Implication of the Study

The results of the research attempt to highlight the relationship between paternal postnatal depression and Family Environment. After finding the correlation it explicit the relationship between both the variables. Also, it is connected. The study's findings shed light on the complex interplay between paternal postnatal depression and family dynamics. By examining correlations between Paternal Postnatal Depression and various dimensions of family functioning, such as cohesion, expressiveness, and conflict, the research provides valuable insights into the challenges families face when fathers experience depression during the postnatal period. These findings have important implications for clinical practice, emphasizing the need for healthcare professionals to screen fathers for depression and provide appropriate support and interventions. Additionally, the study underscores the importance of family-centered policies and programs that promote mental health awareness and support for fathers. By addressing paternal postnatal depression and its impact on family dynamics, healthcare providers, policymakers, and families themselves can work together to create healthier and more supportive Family Environments.

Limitations of the Study

The present study aims to identify the relationship between Paternal postnatal depression and Family Environment. The limitations of the present study are listed below:

- Limited sample size may restrict the generalizability of findings.
- Snapshot data may not capture longitudinal changes.
- Subject to biases like social desirability and recall.
- Participants' differences may affect results' applicability.
- Other influential factors like socioeconomic status not fully explored.
- Correlations don't establish causation.
- Participants' responses may be influenced by various factors.

Suggestions for Future Research

The present study examined quality of life and grit among college students. On the basis of the understanding gained during the research, there are some important suggestions for future studies in this area.

- Adding more sample size
- Longitudinal studies for understanding changes over time.
- Ensure diverse samples for broader insights.
- Combine quantitative data with qualitative research.
- Investigate multifactorial influences on family dynamics.
- Evaluate interventions targeting Paternal Postnatal Depression.
- Assess long-term outcomes on family well-being.
- Compare paternal vs. maternal depression impacts.
- Explore mediating factors in the relationship.
- The study has only included father's from the age of 25 to 40. Adding more age groups and comparing it could add more insights.
- This study could be extended to all the other districts of Kerala to get a state-wide perspective on this topic. Such an attempt would allow a more reliable generalization of the obtained results.
- The study could be redesigned for a larger sample. This also can give reliable generalization of the obtained results.
- In future studies, the researcher could investigate more differences based on demographic variables including Gender, age, domicile, course such as type of family, economic status, health status etc.

REFERENCES

- Cameron, E. E., Sedov, I. D., & Tomfohr-Madsen, L. M. (2016). Prevalence of paternal depression in pregnancy and the postpartum: an updated meta-analysis. *Journal of affective disorders*, 206, 189-203.
- Correa, M. S., Dafonte, A. A., & Español, F. V. (2023). Mental Health during fatherhood. Biopsychosocial aspects and questionnaire for depression PHQ9. *European Psychiatry*, 66(S1), S268-S268.
- Darwin, Z., Domoney, J., Iles, J., Bristow, F., Siew, J., & Sethna, V. (2021). Assessing the mental health of fathers, other co-parents, and partners in the perinatal period: mixed methods evidence synthesis. *Frontiers in psychiatry*, 11, 585479.
- Davis, R. N., Davis, M. M., Freed, G. L., & Clark, S. J. (2011). Fathers' depression related to positive and negative parenting behaviors with 1-year-old children. *Pediatrics*, 127(4), 612-618.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

- Dhillon, H. S., Sasidharan, S., Dhillon, G. K., & Babitha, M. (2022). Paternal depression: “The silent pandemic”. *Industrial Psychiatry Journal*, 31(2), 350-353.
- Dhillon, H. S., Sasidharan, S., Dhillon, G. K., & Manalikuzhiyil, B. (2022). Fatherhood and depression: Sound the alarms! *Annals of Indian Psychiatry*, 6(1), 108-110.
- Feldman, J. S., Wilson, M. N., & Shaw, D. S. (2022). Relations between early childhood paternal depression and preschool-and school-age psychosocial functioning. *Journal of Clinical Child & Adolescent Psychology*, 51(1), 97-111.
- Feldman, J. S., Wilson, M. N., & Shaw, D. S. (2022). Relations between early childhood paternal depression and preschool-and school-age psychosocial functioning. *Journal of Clinical Child & Adolescent Psychology*, 51(1), 97-111.
- Field, T. (2010). Postpartum depression effects on early interactions, parenting, and safety practices: a review. *Infant Behavior and Development*, 33(1), 1-6.
- Giallo, R., Cooklin, A., Brown, S., Christensen, D., Kingston, D., Liu, C. H., ... & Nicholson, J. M. (2015). Trajectories of fathers’ psychological distress across the early parenting period: Implications for parenting. *Journal of Family Psychology*, 29(5), 766.
- Krauss, S., Orth, U., & Robins, R. W. (2020). Family environment and self-esteem development: A longitudinal study from age 10 to 16. *Journal of personality and social psychology*, 119(2), 457.
- Li, X., Lam, C. B., & Chung, K. K. H. (2024). Child behavioral problems and parental adjustment: Family, interparental, and parent–child processes as simultaneous mediators. *American Journal of Orthopsychiatry*.
- Mazza, M., Kotzalidis, G. D., Avallone, C., Balocchi, M., Sessa, I., De Luca, I., ... & Sani, G. (2022). Depressive symptoms in expecting fathers: Is paternal perinatal depression a valid concept? A systematic review of evidence. *Journal of Personalized Medicine*, 12(10), 1598.
- Mazza, M., Kotzalidis, G. D., Avallone, C., Balocchi, M., Sessa, I., De Luca, I., ... & Sani, G. (2022). Depressive symptoms in expecting fathers: Is paternal perinatal depression a valid concept? A systematic review of evidence. *Journal of Personalized Medicine*, 12(10), 1598.
- Naghavi, F., Redzuan, M., & Mansor, M. (2010). The relationship between alexitimia and emotional intelligence. *Asian Social Science*, 6(11), 166.
- Paulson, J. F., & Bazemore, S. D. (2010). Prenatal and postpartum depression in fathers and its association with maternal depression: a meta-analysis. *Jama*, 303(19), 1961-1969.
- Paulson, J. F., & Bazemore, S. D. (2010). Prenatal and postpartum depression in fathers and mothers—reply. *JAMA*, 304(9), 961-962.
- Payne, B. J., & Range, L. M. (1995). Attitudes toward life and death and suicidality in young adults. *Death Studies*, 19(6), 559-569.
- Ramchandani, P. G., Psychogiou, L., Vlachos, H., Iles, J., Sethna, V., Netsi, E., & Lodder, A. (2011). Paternal depression: an examination of its links with father, child and family functioning in the postnatal period. *Depression and anxiety*, 28(6), 471-477.
- Ramchandani, P. G., Stein, A., O'CONNOR, T. G., Heron, J. O. N., Murray, L., & Evans, J. (2008). Depression in men in the postnatal period and later child psychopathology: a population cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(4), 390-398.
- Ross, R. D., Marrinan, S., Schattner, S., & Gullone, E. (1999). The relationship between perceived family environment and psychological wellbeing: Mother, father, and adolescent reports. *Australian Psychologist*, 34(1), 58-63.
- Scarff, J. R. (2019). Postpartum depression in men. *Innovations in clinical neuroscience*, 16(5-6), 11.

Understanding The Relationship Between Paternal Postnatal Depression and Family Environment

- Segre, G., Clavenna, A., Cartabia, M., & Bonati, M. (2023). Postpartum depression screening in mothers and fathers at well-child visits: a feasibility study within the NASCITA cohort. *BMJ open*, *13*(6), e069797.
- Segre, G., Clavenna, A., Roberti, E., Scarpellini, F., Cartabia, M., Pandolfini, C., ... & Bonati, M. (2024). Pediatrician and parental evaluation of child neurodevelopment at 2 years of age. *BMC pediatrics*, *24*(1), 137.
- Shelke, A., & Chakole, S. (2022). A review on risk factors of postpartum depression in India and its management. *Cureus*, *14*(9).
- Sweeney, S., & MacBeth, A. (2016). The effects of paternal depression on child and adolescent outcomes: A systematic review. *Journal of affective disorders*, *205*, 44-59.
- Taraban, L., Feldman, J. S., Wilson, M. N., Dishion, T. J., & Shaw, D. S. (2020). Sad dads and troubled tots: protective factors related to the stability of paternal depression and early childhood internalizing problems. *Journal of abnormal child psychology*, *48*, 935-949.
- Tichovolsky, M. H., Griffith, S. F., Rolon-Arroyo, B., Arnold, D. H., & Harvey, E. A. (2018). A longitudinal study of fathers' and young children's depressive symptoms. *Journal of Clinical Child & Adolescent Psychology*, *47*(sup1), S190-S204.
- Walker, A. L., Peters, P. H., de Rooij, S. R., Henrichs, J., Witteveen, A. B., Verhoeven, C. J., ... & de Jonge, A. (2020). The long-term impact of maternal anxiety and depression postpartum and in early childhood on child and paternal mental health at 11–12 years follow-up. *Frontiers in psychiatry*, *11*, 562237.
- Younis, A. S., Julaidan, G. S., Alsuwaylimi, R. A., Almajed, B. M., AlShammari, R. T., AlFirm, R. B., & Alfarra, L. A. (2024). Prevalence of Paternal Prenatal Depression and Its Associated Factors in Saudi Arabia. *Risk Management and Healthcare Policy*, 1083-1092.
- Yu, Y., Yang, X., Yang, Y., Chen, L., Qiu, X., Qiao, Z., ... & Bai, B. (2015). The role of family environment in depressive symptoms among university students: a large sample survey in China. *PloS one*, *10*(12), e0143612.

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Anaswara, P.S. & Joseph, A. (2024). Understanding The Relationship Between Paternal Postnatal Depression and Family Environment. *International Journal of Indian Psychology*, *12*(4), 2853-2875. DIP:18.01.270.20241204, DOI:10.25215/1204.270