

Perceived Social Support on Depression, Anxiety and Stress During Pregnancy

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ABSTRACT

The current study was conducted to understand effect of perceived social support on depression, anxiety and stress during pregnancy and whether there is any significant difference based on trimesters. The study sample consists of 107 pregnant women of age range 18 to 50 which was collected from different parts of Kerala. Google forms were used for the study and a questionnaire measure was used for the data collection. They responded to demographic variables, Depression Anxiety Stress Scale (DASS) and Multidimensional Scale of Perceived Social Support (MSPSS). The data analysis done by SPSS software version 23 using statistical indicators such as mean, standard deviation, Pearson correlation coefficient and ANOVA. Findings revealed that there is significant negative correlation between perceived social support, stress and depression. Also perceived family support and depression are negative correlated in pregnancy. In addition, there is a statistically significance difference in the mean value of depression between the different trimesters (first, second and third trimesters) we considered. Results clearly point out that psychological health of pregnant women is vulnerable and perceived social support positively affecting their mental health.

Keywords: *Anxiety, Depression, Perceived Social support, Pregnant women*

Pregnancy is one of the most beautiful time in a woman's life, but in some of them their doubts and anxieties also grow as a life grows inside them. Every woman goes through various emotional changes during her pregnancy. The fact is that the mental changes that occur in a pregnant woman are often not taken care of by us. Pregnancy, supposed to be a time of emotional well-being, may be a difficult period for many women. Pregnancy period is a long period of 280 days or 40 weeks. According to National Health Portal (NHP) India the different terms in pregnancy and stages of pregnancy are First trimester (from week1-week12), Second trimester (week 13-week 28) and Third trimester (week 29-week 40). Since December, 2019, the outbreak of coronavirus disease 2019 (COVID-19) has become a worldwide public health threat. Experts haven't yet identified its effects on pregnancy. They continue to be unsure whether pregnant women are more in

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danger of getting COVID-19 or experiencing more severe symptoms and whether or not they might pass the virus to the baby. According to the World Health Organization (WHO), no evidence currently exists to suggest that pregnant women are at higher risk of experiencing severe COVID-19 symptoms than the overall population.

Pregnant women feel additional stress, anxiety, or depression during this pandemic condition. Since the coronavirus disease 2019 (COVID-19) pandemic began, perinatal women have experienced psychological stress and anxiety due to changes in labor and delivery hospital policies, possible perinatal COVID-19 transmission, and COVID-19 clinical maternal-infant outcomes. These perinatal-related stressors are cause to the economic and mental health issues that many people are currently experiencing. High levels of anxiety, during pregnancy, have adverse effect on mother and baby. Another condition is antenatal depression, Antenatal depression is feeling sad all the time for weeks or months during pregnancy. The condition can vary from mild to severe and may affect women in several ways.

Some factors helps to reduce the intensity of these feelings. Perceived social support is a factor. Social support plays a crucial role within the quality of life, physical and psychological state of pregnant women. Social support helps the transition to motherhood, social support, including the positive support of family and friends, increases parenting competence by providing encouragement and resources during the period of role-transition. Social support is like a barrier that protects people against potential effects of stressful life events and enables people to cope with the difficulties in life. Some of the studies proved the effect of perceived social support in these psychological imbalance. Harrison V, Moulds L M & Jones K in 2020 conducted a study titled 'Perceived social support and prenatal wellbeing; the mediating effects of loneliness and repetitive negative thinking on anxiety and depression during the COVID-19 pandemic'. Their result was consistent with predictions, perceived social support was significantly negatively related to depression, anxiety, loneliness and repetitive negative thinking. Furthermore, continuous negative thinking and isolation mediated the relationship between perceived social support and both depression and anxiety.

The present study will make a clear understanding about the influence of perceived social support on depression, anxiety and stress in pregnant women during this COVID 19 pandemic. The study would be helpful to understand the individual's level of these above factors. This will also help to find out the differences in these factors among the individual who reared up in different environment. By understanding these factors through this research, it will make awareness to the family members, friends as well as the partner for a better being of pregnant woman and growing child in different trimesters.

METHODOLOGY

Sample

The study was conducted on pregnant women. 107 pregnant women between the ages of 21-35, were selected using a convenient sampling method from different areas of Kerala for the study. We have considered women in all three trimesters. Also collected information from literate, legally married women.

Hypothesis

1. There will there be a significant relationship between perceived social support and depression in pregnant women.

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2. There will there be a significant relationship between perceived social support and anxiety in pregnant women.
3. There will there be a significant relationship between perceived social support and stress in pregnant women.
4. There will there be a significant relationship between perceived family support and depression in pregnant women.
5. There will there be a significant relationship between perceived friends support and depression in pregnant women.
6. There will there be a significant relationship between perceived significant other support and stress in pregnant women.
7. There will there be a significant difference in the level of depression in first, second and third trimester.

Instruments

Tools used for Assessment

Personal Google form data sheet: current age, married age, state, occupation, annual income, which trimester they are in were gathered with a demographic questionnaire.

1. **Multidimensional Scale of Perceived Social Support (MSPSS):** MSPSS founded by Zimet Dalhem & Zimet Farley. Purpose of the scale to measure perceived social support. The Multidimensional Scale of Perceived Social Support (MSPSS) is a brief questionnaire designed to measure perceptions of support from 3 sources: Family, Friends, and a Significant Other. MSPSS was originally developed in 1988. The scale is comprised of a total of 12 items, with 4 items for each subscale. The original English version has been widely used. The reliability of the MSPSS is first supported with the inclusion criterion that Items correlated with total scores and differentiate high from low scores on the total MSPSS. The internal consistency of the MSPSS range from .79 to .83 for a number of samples. The test-retest showed acceptable to very good reproducibility for the items and the scales. There is considerable evidence of the validity of the MSPSS. Scores on the three constructs. Known group validity 0.91-0.95 was supported for all scales.
2. **Depression and Anxiety Stress Scale -21 (DASS):** DASS founded by Lovibond. Purpose of DASS is to measure depression, anxiety and stress. The Depression, Anxiety and Stress Scale -21 (DASS) is a set of three self- report scales designed to measure the emotional state of depression, anxiety and stress. DASS-21 was developed in 1995. Each of the three DASS-21 scales contains 7 items, complete 21 items. DASS-21 is based on dimensional rather than a categorical conception of psychological disorder. The reliability of DASS-21 showed that it has excellent Cronbach`s alpha values of 0.81,0.89 and 0.78 for the subscales of depressive, anxiety and stress respectively. It was found to have excellent internal consistency, discriminative, concurrent and convergent validities.

Procedure

data-collection was started and the online Google form were given. Assurance was given to each subject about the confidentiality of their identity. In initial phase of the sample selection, samples are selected based on exclusion and inclusion criteria

Inclusion criteria

- Age range of 21-35 years
- Pregnant ladies who were legally married

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- Literate pregnant women
- Who were willing to participate in this study

Exclusion criteria

- Illiterate pregnant women
- Postpartum mother
- Women who were physically unstable
- Excluded women who unavailable of getting information and follow up of pregnancy

The researcher briefed all the details regarding the study to the participants in the description of Google form provided. Confidentiality of the data collected was kept anonymous and privacy of the participants was given importance. Informed consent was taken from the participants and no deception was involved, also no mental and physical stress and discomfort were present, the participants were given complete rights to withdraw from the study.

Statistical analysis

Here the researcher used descriptive statistics, Pearson correlation, one way ANOVA would be used for analysing the data.

RESULTS

The result of the statistical technique used in the current study and its findings are discussed below. The aim of the study was to find out the relationship between perceived social support on depression, anxiety and stress in pregnant women during COVID 19 pandemic. 107 samples were collected. The data were collected from different areas of Kerala state.

Table1: Correlation Matrix: Perceived social support with depression anxiety stress (Pearson correlation analysis)

	Perceived social support	Depression	Anxiety	Stress
Perceived social support	1			
Depression	-.211*	1		
Anxiety	-.92		1	
Stress	-.244*			1

* P < 0.05.

The correlation value indicates that the variables perceived social support and depression have a negative correlation. The correlation value indicates that the variables perceived social support and anxiety have negative correlation. The correlation value indicates that the variables perceived social support and stress have a slight negative correlation that is not statistically significant.

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Table 2: Correlation Matrix: Perceived social support sub scales with depression. (Pearson correlation analysis)

	Depression	Perceived family support	Perceived friends support	Perceived significant other support
Depression	1			
Perceived family support	-.386**	1		
Perceived friends support	.044		1	
Perceived significant other support	-.039			1

** $P < 0.01$ level (2-tailed)

The correlation value indicates that the variables perceived family support and depression have a negative correlation. The correlation value indicates that the variables perceived friends support and depression have slight positive correlation. The correlation value indicates that the variables perceived support from significant others support and depression have a slight negative correlation that is not statistically significant.

Table 3– ANOVA Table: Significant difference between means of depression and different pregnancy period

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	239.156	2	119.578	3.260	.043
Within Groups	3557.684	97	36.677		
Total	3796.840	99			

Table 3.1 – Multiple comparison table of mean differences of first, second and third trimesters (Result of Turkey Post hoc test)

Multiple Comparisons

(I) In which trimester you are in now	(J) In which trimester you are in now	Mean Difference (I-J)	Std. Error	Sig
first trimester	Second tri	2.222	1.480	.328
	Third tri	3.788*	1.491	.044
second trimester	First tri	-2.222	1.480	.328
	Third tri	1.566	1.480	.573
third trimester	First tri	-3.788*	1.491	.044
	Second tri	-1.566	1.480	.573

Table 3 is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is 0.43 which is below 0.05. Therefore, there is a statistically significance in the mean value of depression between the different trimesters (first, second and third trimesters) we considered. The descriptive table provides some very useful descriptive statistics, including the mean, standard deviation and 95% confidence intervals for the

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dependent variable (depression) for each separate group (first, second and third trimesters), as well as when all groups are combined. This is great to know, but we do not know which of the specific groups differed. Luckily, we can find this out in the multiple comparisons table which contains the results of the turkey post hoc test (table 3.1).

Multiple Comparisons, shows which groups differed from each other. The Tukey post hoc test is generally the preferred test for conducting post hoc tests on a one-way ANOVA, but there are many others. We can see from the table 3.1 that there is a statistically significant difference in depression between the group first trimester and the third trimester ($p = 0.044$), as well as between the first trimester and third trimester. However, there were no differences between the groups that which compared with second trimester ($p = 0.480$). There was a statistically significant difference between groups as determined by one-way ANOVA ($F = 3.260, p = .043$). A Tukey post hoc test revealed that the depression was significantly occur at the first trimester compared with third trimester. There was no statistically significant difference between the first and second trimester.

DISCUSSION

From the table 1 we can see there is a negative correlation of -0.211 between perceived social support and depression in pregnant at $p < 0.05$ indicates it is significant relationship. It points out that when social support increases depression decreases in current population. This result is backed by a study by Harrison V, Molds L M and Jones K, directed an investigation during pandemic in pregnant ladies. Their discoveries are supporting our outcome, they demonstrated that apparent social support was essentially adversely identified with depression. Moreover, dreary negative reasoning and forlornness intervened the connection between saw social support and depression.

The correlation obtained between perceived social support and anxiety is given in table 1. It is evident that there is no significant relationship between perceived social support and anxiety in pregnant women during COVID 19 pandemic. The correlation value indicating that there is a no correlation (-0.092) between the variables perceived social support and anxiety, and it is statistically not significant (0.343) at the 0.005 level. As one value increases, there is no tendency for the other value to change in a specific direction.

An analysis of the literature shows that studies are generally about pregnant women's anxiety levels during the pandemic. Anxiety is a normal response in stressful conditions. During epidemics and pandemics, factors like fear over affliction and death and disturbances in daily activities to the need of quarantining cause varying levels of hysteria. Uncertainties over transmission routes and doubts about national readiness for pandemic management affect people's adherence to preventive measures and cause them psychological strains. The sources of concern and anxiety for pregnant women during pandemics include concern over quarantine-related loneliness during and after delivery, limited access to healthcare services also to fear over affliction, increased requests for delivery through elective cesarean delivery, concerns associated with the frequent use of disinfectants, and concerns over child care, breastfeeding, and vaccination. These kinds of reasons cause high levels of anxiety in them. Anxiety caused by such factors during this period of pandemic is uncontrollable. So we can assume that, that is why perceived social support become irrelevant here in relation with anxiety.

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From the Table 1. The correlation value indicating that there is a low degree negative correlation (-.244) between the variables perceived social support and depression, and it is statistically significant (0.011) at the 0.005 level.

It is evident that there is a significant relationship among perceived social support and stress in pregnant women. From this result we can say that there is negative correlation existing between perceived social support and stress that means if perceived social support is high or increased there is a decrease in level of stress. Result is consistent with prediction. Perception of social support during times of stress may have a positive impact on health by helping alter perceptions of threat, lower anxiety, and increase coping ability. Additionally, cognitive aspects of social support may serve as a buffer, which may attenuate physiological reactivity to worry. Iranzad I.et. al conducted a cross sectional study in pregnant women their findings are really close to our result. They concluded from their study that pregnant women had relatively favorable social support. Of the study population, 11.1% had unfavorable social support. The rate of stress in mothers with less social support was significantly more than others.

Mothers with undesirable social support may experience more stress in their life and consequently, the risk of mental disorders and undesirable pregnancy and childbirth outcomes increases in these mothers, therefore, it seems that empowerment of the individuals in adulthood in the field of interpersonal communication skills can increase the necessary abilities in achieving social resources needed for maintaining mental health and resisting against the stressful life events.

The results from table 2 indicate that perceived family support influences the depression level of pregnant women. The correlation value indicating that there is a high negative correlation (-.386) between the variables perceived social support and depression, and it is statistically significant (0.000) at the 0.001 level. Where value of Significance (2-Tailed) is less than 0.001 significant at 99% confidence interval.

We can assume that the reason behind the result is that at this lock down time, all the family members are at home, away from all the hustle and bustle. That's a big deal for a pregnant women. Being with family members 24 hours a day makes them mentally and physically stronger. Feeling we have 'run out of gas' emotionally become remedy for their mental problems like depression. Unlike at other time in this lock down time presence and availability of family members in is very high, that may be the reason for such an outcome. But condition of some pregnant women may not be so. There may be less support for pregnant women who are part of the nuclear family. But most of the pregnant women who are part of this study are people with good family support.

From the table 2 we can also see perceived friends support and perceived significant others support are not having a significant relationship with depression. Friends are an important part of life. Their consideration and love can change for the better, especially during pregnancy. But in our study, perceived friends support is low. The reason for that may be that friends are not able to get close because lock down restriction. We often share with friends what we cannot tell to our family and to our partner. Especially a pregnant woman. But is not possible to see friends during this lockdown era. Not only that, there are very few people who use mobile phones during pregnancy. Mobile phone use is being reduced due to fear of radiation. Therefore, it is not possible to maintain friendships through online too. All of these factors may have contributed to the lack of a relationship between perceived friends

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support and depression. As we all know significant other means a person who is important to one's well-being especially, a spouse or one in a similar relationship. What a pregnant woman wants and expects most is her husband's closeness, love and consideration. It affects the health of not only the mother but also the baby too. But our study shows that partner support is low for pregnant women. The reasons for this can be many. May be the same reason is the changes happening during this COVID 19 pandemic controlling lock down. The number of husbands working in distant places from home is very high. Such may not be able to return home from work place due to lockdown restrictions. At the time of lock down inter district travelling also restricted. Therefore, pregnant women may not get the presence of significant person they want. That may be the reason for such a result. Also, we can assume another reason for such a result. If the husbands of these pregnant women are may be COVID sufferers or they may had close contact with COVID patients and that make them to be in quarantine. It will leads to take a complete distance from the wives. These are may be the reason for no correlation between perceived significant other support and depression in our study. After all, partner support is essential to reduce the mental health issues like stress, anxiety and depression.

Table 3 is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is 0.43 which is below 0.05. Therefore, there is a statistically significance in the mean value of depression between the different trimesters (first, second and third trimesters) we considered. The descriptive table provides some very useful descriptive statistics, including the mean, standard deviation and 95% confidence intervals for the dependent variable (depression) for each separate group (first, second and third trimesters), as well as when all groups are combined. This is great to know, but we do not know which of the specific groups differed. Luckily, we can find this out in the multiple comparisons table which contains the results of the turkey post hoc test (table 3.1).

Multiple Comparisons, shows which groups differed from each other. The Tukey post hoc test is generally the preferred test for conducting post hoc tests on a one-way ANOVA, but there are many others. We can see from the table 3.1 that there is a statistically significant difference in depression between the group first trimester and the third trimester ($p = 0.044$), as well as between the first trimester and third trimester. However, there were no differences between the groups that which compared with second trimester ($p = 0.480$). There was a statistically significant difference between groups as determined by one-way ANOVA ($F = 3.260$, $p = .043$). A Tukey post hoc test revealed that the depression was significantly occur at the first trimester compared with third trimester. There was no statistically significant difference between the first and second trimester.

May be most women are in their first pregnancy. Most of those in our study are in their first trimester. Some of such women may find it difficult to accept this kind of physical and life changes at the beginning of the pregnancy. Such mental stress may lead to depression. Also, in this COVID 19 pandemic condition at the beginning of pregnancy, of course, they may have been over concerned about the health and living conditions of the baby. This may leads to show significant level of depression in first trimester. Similarly, even if it is an unexpected pregnancy there is chance of occurrence of depression in first trimester women. But by the third trimester, everything may have changed enough in this mindset. They may fully accept pregnancy. This may be why women in first trimester show higher level of depression than women in the third trimester. It is all for these reasons that such a result was obtained.

CONCLUSION

we can conclude that in pregnant women perceived social support is an important thing. Perceived social support has a negative correlation depression and stress in pregnant women during this COVID 19 pandemic. Due to lockdown rules their favourite ones are available for them and also perceiving high support from them, that's why depression and stress rate minimized here. Also, we can find relation between high perceived family support and low rate of depression in our samples. This is also because of the influence of lockdown rule, family members avoid all hustle and bustle and tried to be with them. Also found out that level of depression in three trimesters are different. Women in first trimester show higher level of depression than women in the third trimester. These are the major findings concluded with this study.

Implications

Maternal mental health is being mostly unaddressed or ignored, which plays huge role in child's development and health also. Screening and providing support to pregnant to be enhanced for better outcome as a person and as a mother.

The study points out that perceived family support and depression are negatively correlated in prenatal period, thus family have to look forward into providing emotional support to pregnant to reduce the risky outcomes.

Also found out that level of depression in three trimesters are different. Women in first trimester show higher level of depression than women in the third trimester. Assisting pregnant from early stages will enhance their mental health and pregnancy outcome.

Limitations of the study:

- A. There may be other extraneous variables that may affect the results
- B. The sample size of the study was too small
- C. Types of pregnancy not specified
- D. Not categorized into first pregnancy or later pregnancy

Suggestions for the future research

- A. More reliable data collection method to be used
- B. Sample size to be increased
- C. Types pregnancy determinant to be added in data collection
- D. Effect of other variables to be studied.

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Conflict of Interest

The author(s) declared no conflict of interest.

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