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### Influence of Home Environment on the Physical and Mental Health Care of Pregnant Women

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**Abstract:** The present study examined the influence of home environment on the physical and mental health care of pregnant women. A sample of 120 pregnant women was selected through random sampling from Urban Primary Health Centres, comprising 60 women below 25 years and 60 above 25 years. Each age group included 30 pregnant women in their first pregnancy and 30 in their subsequent pregnancies. The tools employed were the Home Environment Questionnaire for Pregnant Women and the Physical and Mental Health Care Inventory for Pregnant Women, both developed by the investigator (2025). A pilot study was conducted to ensure feasibility, and the tools were tested for validity and reliability. Statistical analysis included mean, standard deviation, t-test, and Karl Pearson's coefficient of correlation.

The findings revealed no significant differences in home environment and physical and mental health care based on age and pregnancy status, except among women above 25 years, where those in subsequent pregnancies reported better home environment. A significant relationship was found between home environment and physical and mental health care, except among women below 25 years in their first pregnancy and women above 25 years in their subsequent pregnancies.

**Keywords:** Pregnant Women, Age, Home Environment, Physical Health Care, Mental Health Care.

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#### Introduction

Pregnancy is a critical life stage characterized by profound physical, emotional, and psychological changes. During this period, a woman's health is influenced by a multitude of factors, not only biological but also environmental and social. Matthew et al. (2019) indicated that pregnancy is a critical and transformative period in a woman's life, marked by significant



physiological, psychological, and emotional changes. It is not only a time of physical development for the fetus but also one of preparation and adaptation for the mother.

Schumers et al. (2015) examined that maternal age is a significant factor influencing pregnancy outcomes, with both younger and older maternal ages associated with increased risks for the mother and fetus. Bayram pour et al. (2015) indicated that pregnancy experiences can differ significantly between first-time mothers (primigravida) and those who have experienced one or more previous pregnancies (multigravida).

Evans et al. (2003) described that the home environment is a central determinant of health, significantly influencing both physical and mental well-being. It encompasses not only the physical aspects of the living space—such as cleanliness, safety, and overcrowding—but also emotional and social factors, including family dynamics, interpersonal relationships, financial stability, and access to supportive resources.

According to Lynch & Smith (2005) the home environment plays a critical role in shaping the health and well-being of individuals, particularly during vulnerable periods such as pregnancy. For pregnant women, the home is not only a place of residence but also a key setting that can significantly influence their physical, emotional, and psychological health. A supportive, safe, and nurturing home environment can promote positive maternal behaviours, reduce stress, and improve overall prenatal care adherence. Conversely, an unstable or harmful home environment can pose serious risks to both maternal and fetal outcomes,

Figueiredo et al. (2014) highlight that supportive family environments also play a protective role in shaping a woman's perception of pregnancy. When pregnant women feel valued and supported by their families, they are more likely to engage in positive health behaviours, attend prenatal visits regularly, and maintain better dietary and lifestyle habits. Family support serves as a cornerstone for promoting healthy pregnancies. The home environment plays a pivotal role in shaping the physical and mental health of pregnant women

According to American College of Obstetricians and Gynaecologists (2021) physical health care during pregnancy is essential for maternal and foetal well-being, including regular antenatal care, nutritional support, and management of health conditions. Kingston et al. (2012) depicted that prenatal mental health care is vital, as stress, anxiety, and depression can negatively affect pregnancy outcomes and child development.

The relationship between the home environment and physical health during pregnancy is well-documented. Inadequate housing conditions, such as mold, pests, poor ventilation or exposure to toxins, can increase the risk of respiratory infections, allergies, and other health complications that may adversely affect pregnancy outcome. Additionally, overcrowding and poor sanitation can lead to increased rates of infectious diseases, reduced sleep quality, and elevated stress—all of which may negatively impact foetal development and maternal well-being. Importantly, physical health during pregnancy is closely tied to one's ability to engage in healthy behaviours such as proper nutrition, regular prenatal checkups, and physical activity, which are all affected by the physical and social environment of the home.



## Objectives of the Study

- To find out whether there is any difference in home environment and physical and mental health care among pregnant women below 25 years and above 25 years.
- To determine the difference in home environment and physical and mental health care among pregnant women in their first pregnancy and subsequent pregnancies.
- To find out the influence of home environment on the physical and mental health care of pregnant women.

## Methodology

The sample for the present study was selected using a random sampling method from different Urban Primary Health Centres in Chennai city and consisted of 120 pregnant women, of whom 60 were below 25 years and 60 were above 25 years. Each group was further divided into 30 women in their first pregnancy and 30 in their subsequent pregnancies. The tools used for data collection were the Home Environment Questionnaire for Pregnant Women and the Physical and Mental Health Care Inventory for Pregnant Women, both developed by the investigator (2025). A pilot study was conducted to ensure clarity and feasibility of the tools. Content validity was established with the help of experts in the field, and reliability was found to be satisfactory using appropriate statistical methods. The study was conducted after obtaining permission from the Institutional Ethical Committee, and informed consent was obtained from all participants prior to data collection.

This research received no specific grant from any funding agency.

## Results and Discussion

The findings of the study on influence of home environment on the physical and mental health care of pregnant women are presented and discussed:

### I. Home environment and age of pregnant women

t-test was carried out and the results are presented in the table given below

**Table-1: Comparison of home environment among pregnant women below 25 years and above 25 years who are in their first pregnancy**

Variab les	Age of pregnant women	N	Mean	Standard Deviation	't' value	Level of Significan ce
Home environ ment	Below 25 years	30	35.57	1.27	1.65	NS
	Above 25 years	30	34.98	1.26		

**Note: NS-Not Significant**

Table 1 indicates that there is no significant difference in home environment of pregnant women below 25 years and above 25 years who are in their first pregnancy. The mean value for home environment among pregnant women below 25 years and above 25 years who are in their

first pregnancy are 35.57 and 34.98 respectively. The calculated 't' value 1.65 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women below 25 years and above 25 years who are in their first pregnancy have the same home environment. The reason for the above finding is that during first pregnancy, home environment was uniformly supportive due to traditional family involvement, regardless of the mother's age.

**Table-2: Comparison of home environment among pregnant women below 25 years and above 25 years who are in their subsequent pregnancies**

Variables	Age of pregnant women	N	Mean	Standard Deviation	't' value	Level of Significance
Home environment	Below 25 years	30	35.03	2.37	1.54	NS
	Above 25 years	30	35.80	1.32		

**Note: NS-Not Significant**

A perusal of table 2 indicates that there is no significant difference in home environment of pregnant women below 25 years and above 25 years who are in their subsequent pregnancies. The mean value for home environment of pregnant women below 25 years and above 25 years who are in their subsequent pregnancies are 35.03 and 35.80 respectively. The calculated 't' value 1.54 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women below 25 years and above 25 years in their subsequent pregnancies have similar home environments. The reason for the above finding is that women in subsequent pregnancies have already had the experience of pregnancy and childbirth. Thus practices, family support, and familiarity with what to expect might be similar, regardless of whether they are younger or older than 25.

## II. Home environment and pregnancies

**Table-3: Comparison of home environment among pregnant women below 25 years old who are in their first pregnancy and subsequent pregnancies**

Variables	Pregnancies	N	Mean	Standard Deviation	't' value	Level of Significance
Home environment	First Pregnancy	30	35.57	1.27	1.08	NS
	Subsequent Pregnancies	30	35.03	2.37		

**Note: NS-Not Significant**

An observation of table 3 indicates that there is no significant difference in home environment among pregnant women below 25 years old who are in their first pregnancy and subsequent pregnancies. The mean values for home environment of pregnant women below 25

years old who are in their first pregnancy and subsequent pregnancies are 35.57 and 35.03 respectively. The calculated 't' value 1.08 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women who are below 25 years old who are in their first pregnancy and subsequent pregnancies have the same home environment.

It is interesting to note that physical aspects of home (housing quality, sanitation, space, amenities) generally do not change quickly between pregnancies, especially within the same young age group. This stability translates into comparable home environment scores across first and subsequent pregnancies.

**Table-4: Comparison of home environment among pregnant women above 25 years old who are in their first pregnancy and subsequent pregnancies**

Variables	Pregnancies	N	Mean	Standard Deviation	't' value	Level of Significance
Home environment	First Pregnancy	30	34.93	1.66	2.23	0.05
	Subsequent Pregnancies	30	35.80	1.32		

Table 4 indicates that there is a significant difference in the home environment of pregnant women above 25 years who are in their first pregnancy and subsequent pregnancies. The mean values for home environment of pregnant women above 25 years who are in their first pregnancy and subsequent pregnancies are 34.93 and 35.80 respectively. The calculated 't' value 2.23 is greater than the table value 1.96 at 5% level of significance, hence it is significant. The findings indicate that there is a significant difference in home environment among pregnant women above 25 years old who are in their first pregnancy and subsequent pregnancies. From the above results it is interesting to note that pregnant women above 25 years old who are in their subsequent pregnancies have better home environment compared to their counterparts.

### III. Physical and mental health care and age of pregnant women

**Table-5: Comparison of physical and mental health care among pregnant women below 25 years and above 25 years who are in their first pregnancy**

Variables	Age of Pregnant Women	N	Mean	Standard Deviation	't' value	Level of Significance
Physical and mental health care	Below 25 years	30	35.07	1.04	0.08	NS
	Above 25 years	30	35.03	1.88		

**Note: NS-Not Significant**

An observation of the above table indicates that there is no significant difference in physical and mental health care among pregnant women below 25 years and above 25 years who are in

their first pregnancy. The mean values for physical and mental health care among pregnant women below and above 25 years who are in their first pregnancy are 35.07 and 35.03 respectively. The calculated 't' value 0.08 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women below 25 years and above 25 years who are in their first pregnancy are provided with the same physical and mental health care. The reason for the above finding is that regardless of age, first pregnancies evoke similar emotions-excitement, anxiety, curiosity and apprehension. Health workers, family members, and partner typically provide comparable emotional and psychological support to all first-time expectant mothers.

**Table-6: Comparison of physical and mental health care among pregnant women below 25 years and above 25 years who are in their subsequent pregnancies**

Variables	Age of pregnant women	N	Mean	Standard Deviation	't' value	Level of Significance
Physical and mental health care	Below 25 years	30	34.43	2.95	0.82	NS
	Above 25 years	30	34.97	1.99		

**Note: NS-Not Significant**

Table 6 shows that there is no significant difference in the physical and mental health care among pregnant women below and above 25 years who are in their subsequent pregnancies. The mean values for physical and mental health care among pregnant women below and above 25 years who are in their subsequent pregnancies are 34.43 and 34.97 respectively. The calculated 't' value 0.82 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women below 25 years and above 25 years who are in their subsequent pregnancies are provided with the same physical and mental health care. The reason for the above finding is that both age groups are likely aware of necessary care measures due to previous pregnancies and community health education programs. Family and community support systems tend to treat subsequent pregnancies with similar concern and attention, regardless of age.

#### IV. Physical and mental health care and pregnancies

**Table-7: Comparison of physical and mental health care among pregnant women below 25 years old who are in their first pregnancy and subsequent pregnancies**

Variables	Pregnancies	N	Mean	Standard Deviation	't' value	Level of Significance
Physical and mental health care	First Pregnancy	30	35.07	1.04	1.10	NS
	Subsequent Pregnancies	30	34.43	2.95		

**Note: NS-Not Significant**

Table 7 shows that there is no significant difference in physical and mental health care among pregnant women below 25 years who are in their first pregnancy and subsequent pregnancies. The mean values of physical and mental health care among pregnant women below 25 years who are in their first pregnancy and subsequent pregnancies are 35.07 and 34.43 respectively. The calculated 't' value 1.10 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women below 25 years old who are in their first pregnancy and subsequent pregnancies are provided with the same physical and mental health care. The reason for the above findings is that since both groups are below 25 years, they generally share similar physical health profiles, reproductive age and risk categories. Health providers treat all women in this age bracket with comparable attention and care, as they fall within the same clinical priority range.

**Table-8: Comparison of physical and mental health care among pregnant women above 25 years old who are in their first pregnancy and subsequent pregnancies**

Variables	Pregnancies	N	Mean	Standard Deviation	't' value	Level of Significance
Physical and mental health care	First Pregnancy	30	35.03	1.88	0.13	NS
	Subsequent Pregnancies	30	34.97	1.99		

**Note: NS-Not Significant**

An observation of table 8 shows that there is no significant difference in physical and mental health care among pregnant women above 25 years who are in their first pregnancy and subsequent pregnancies. The mean values of physical and mental health care among pregnant women above 25 years old who are in their first pregnancy and subsequent pregnancies are 35.03 and 34.97 respectively. The calculated 't' value 0.13 is less than the table value 1.96 at 5% level of significance, hence it is not significant. The findings indicate that pregnant women above 25 years who are in their first pregnancy and subsequent pregnancies are provided with the same physical and mental health care. The reason for the above finding is that for women in their first pregnancy above 25, life experience and maturity help them cope with anxiety and physical changes more effectively than younger first-time mothers. Subsequent pregnancies bring additional familiarity, but since both groups already possess coping skills, their mental health care needs remain nearly identical.

**Table-9: Relationship between home environment and physical and mental health care among pregnant women who are in their first pregnancy and subsequent pregnancies**

Pregnancies	Variables	Home environment	Physical and mental health care
First pregnancy	Home environment	1	0.323*
	Physical and mental health care	0.323*	1
Subsequent pregnancies	Home environment	1	0.602**
	Physical and mental health care	0.602**	1

**Note: Correlation is significant at 0.05 level and Correlation is significant at 0.01 level**

From table 9, shows that there is a significant relationship between home environment and physical and mental health care among pregnant women who are in their first pregnancy. The correlated 'r' value for home environment and physical and mental health care is 0.323 which is proved to be significant. The findings indicate that home environment has an effect on physical and mental health care of pregnant women who are in their first pregnancy, It is also seen that there is a significant relationship between home environment and physical and mental health care among pregnant women who are in their subsequent pregnancies. The correlated 'r' value for home environment and physical and mental health care is 0.602 which is proved to be significant. The findings indicate that home environment has an effect on physical and mental health care of pregnant women who are in their subsequent pregnancies. The reason for the above finding is that during the first pregnancy, women experience major physical, hormonal and emotional changes for the first time. If home environment is supportive, calm and nurturing, it helps the women adapt better-reducing anxiety, promoting self-care, and encouraging use of medical and psychological services. It is also found that familial and partner support significantly improved prenatal care adherence and reduced stress in multiparous women.

**Table-10: Relationship between home environment and physical and mental health care among pregnant women below 25 years who are in their first pregnancy and subsequent pregnancies**

Pregnancies	Variables	Home environment	Physical and mental health care
First Pregnancy	Home environment	1	0.151NS
	Physical and mental health care	0.151NS	1
Subsequent pregnancies	Home environment	1	0.697**
	Physical and mental health care	0.697**	1

**Note: Correlation is significant at 0.01 level; NS – Not Significant**

Table 10 shows that there is no significant relationship between home environment and physical and mental health care among pregnant women below 25 years who are in their first pregnancy. The correlated 'r' value for home environment and physical and mental health care is 0.151 which is proved to be not significant. The findings indicate that home environment has no effect on physical and mental health care of pregnant women below 25 years who are in their first pregnancy. It is also seen that there is a significant relationship between home environment and physical and mental health care among pregnant women below 25 years who are in their subsequent pregnancies. The correlated 'r' value for home environment and physical and mental health care is 0.697 which is proved to be significant. The findings indicate that home environment has an effect on physical and mental health care of pregnant women below 25 years who are in their subsequent pregnancies.

This finding is substantiated by Medina et al. (2021) who found that first-time mothers, regardless of home background, are highly motivated to follow medical advice and attend antenatal care. Therefore, health care behaviour depends more on personal motivation and external guidance than home conditions. The reason for the above finding is that physical rest, nutrition, and routine checkups often depend on help from the home—such as sharing chores and childcare. Supportive environments allow mothers to prioritize self-care, reducing fatigue and improving overall physical health. This finding is further correlated by a study of Qiao et al. (2020) who showed that household cooperation and family support were significantly associated with better self-care and mental health in pregnant women.

**Table-11: Relationship between home environment and physical and mental health care among pregnant women above 25 years who are in their first pregnancy and subsequent pregnancies**

Pregnancies	Variables	Home environment	Physical and mental health care
First pregnancy	Home environment	1	0.409*
Subsequent pregnancies	Physical and mental health care	0.409*	1
Subsequent pregnancy	Home environment	1	0.338NS
	Physical and mental health care	0.338NS	1

**Note: Correlation is significant at 0.01 level**

From table 11, it is seen that there is a significant relationship between home environment and physical and mental health care among pregnant women above 25 years who are in their first pregnancy. The correlated 'r' value for home environment and physical and mental health care is 0.409 which is proved to be significant. The findings indicate that home environment has an effect on physical and mental health care of pregnant women above 25 years who are in their first pregnancy. It is seen that there is a no significant relationship between home environment and physical and mental health care among pregnant women above 25 years who are in their subsequent pregnancies. The correlated 'r' value for home environment and physical and mental health care is 0.338 which is not significant. The findings indicate that home environment has no effect on physical and mental health care of pregnant women above 25 years who are in their subsequent pregnancies.

The reason for the above findings is that women above 25 years experiencing first pregnancy often face heightened psychological stress related to delayed conception, social expectations, or fear of complications. A supportive home environment where the spouse and family provide reassurance, empathy, and assistance-reduces anxiety, builds confidence, and promotes better self-care and health care adherence also women over 25 in subsequent pregnancies may have accrued experiences or coping strategies that mitigate negative home environment influences. That is, even if the home environment is suboptimal, they may ensure



adequate health care through compensatory efforts (e.g. traveling farther, seeking help, relying on social networks). Thus, home environment may have weaker impact in this subgroup.

### **Conclusion**

The findings of the study indicate that age does not significantly influence the home environment and physical and mental health care of pregnant women. However, women above 25 years in subsequent pregnancies reported better home environments compared to those in their first pregnancy. No significant differences were observed in physical and mental health care based on age or pregnancy status. A significant relationship was found between home environment and physical and mental health care, with certain subgroup variations.

### **Conflict Of Interest**

The authors declare that there is no conflict of interest regarding the publication of this paper.

### **Implications of the Study**

The study highlights the importance of a supportive home environment in promoting better physical and mental health care among pregnant women. It emphasizes the need for family support and awareness programs to improve maternal well-being.

### **Limitations of the Study**

- The study was limited to 120 pregnant women from selected urban areas in Chennai.
- The study was confined only to pregnant women attending Urban Primary Health Centres.
- The findings may not be generalizable to all populations.
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