



# Impact of Maternal Employment on Child Academic Performance Aged 16 - 20 Years: An Indian Perspective

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## Abstract

The relationship between maternal employment and the academic performance of adolescents has been a subject of growing interest, particularly in India, where traditional family structures and evolving economic roles of women intersect with educational outcomes. Maternal employment refers to the labor force affiliation of mothers with children 0 - 18 years. This term, however, includes a wide variety of labor force participation patterns, from full-time work to part-time work, including contract work as well as working out at home [1]. Academic performance refers to the extent to which the student to which a student teacher or an institution achieves their educational goal, often measured through grades, test scores, and overall achievement in school [2]. This study evaluates the psychological impact of working mothers on the academic performance of their children, highlighting particularly the role of mothers in the same. It aims to emphasize the role of mothers in nurturing early teenagers with reference to their social, cultural as well as academic development. This study aims to empirically analyze the impact of work stress, along with the absence of motherly care on a child's academic development, in turn identifying the extent. With the adoption of a quantitative research design, the study will have a sample size of 150 pairs of parents and children (of age group 16 - 20), chosen through the process of stratified sampling. The tool used to assess the variable (Likert scale) will be altered in reference to the dependent and independent variables. The study also aims to identify other sub-variables like work-life balance and emotional stress of mothers through the Likert scale. It, in turn, aims to justify that the academic performance of a child is largely correlated with that of the child's relationship with the mother. The findings of the study indicate that there is no significant correlation between maternal employment and the academic performance of teenagers. The research suggests that maternal stress, often associated with employment, does not negatively affect children's academic outcomes. Instead, the results conclude

that most adolescents can manage their academic responsibilities independently, regardless of their mother's employment status.

### **Subject Areas**

Higher Education, Psychology

### **Keywords**

Working Mothers, Academic Performance, Academic Development, Teenagers

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## **1. Introduction**

The culture of India does not permit women to take up jobs while rearing their offspring, or other household responsibilities. Roughly a third of adults (34%) feel that childcare should be handled primarily by women [2]. Given that there are very few women who go against societal norms and go on to work regardless, constituting about 48 percent of them [3]. However, in doing so they tend to manage household responsibilities along with work. In doing so maintaining a work-life balance becomes a challenging task, which in turn leads to the neglect of the child. Maternal love and guidance are at their peak during the adolescent years of a child (the time when they have their boards). While most of the researchers have identified impact of maternal employment on academic achievement, the impact of stress and difficulty in managing work-life balance remains a little less discovered. Moreover, while most of the research focus on the large idea of teenage being impacted by maternal employment, what they fail to acknowledge is the amount of stress and emotional imbalance the mother goes through in the process of managing a healthy life along with a balance within the family. This study aims to fill those research gaps and identify the underlying aspects of work stress and its impact on adolescent academic performance. The motive of the study tends to conduct an in-depth analysis of impact of employment on working mothers, bringing to light their stress and anxiety while doing the same. The focal point of the research is to analyze the external factors impacting the interpersonal relationship between a mother and her child, vs the internal factors affecting the child in turn hampering their relationship with each other. By doing so the study also aims to raise awareness among society and mothers about work-life stress and the amount of strain that is caused to them.

## **2. Introduction**

Academic performance plays an important role in producing the best learners to nurture great leaders to contribute towards a bright future of the country's socio-economic development. According to the latest census, the literacy rate of India reached 94.02% in 2021 [4].

Between 2018-21 the literacy rate of India grew by 2.6%, which seems to be a considerable rise considering the different government schemes for the education of rural and urban children during the COVID era. For this purpose, factors like parents' level of education, family size, income and the number of siblings were considered as the essential variables to measure academic performance. That is the reason most researchers aim to investigate the factors affecting academic performance, specifically during the primary years when the child is naive and does not understand the goal of his study, although these years prove to be the foundation of higher studies. Parental involvement in their child's education as well as their interpersonal relationships may become one of the major factors to determine the grades that a child gets in his/her school.

Moreover, the study of interpersonal relationships between the parents and the child is based on the *Attachment theory*: A theory that emphasizes the importance of caring relationships for the child's normal development. It focuses on the internal representations of the child that are formed because of their primary interactions with their caregivers (mothers), in turn helping in their social, cognitive and emotional development, and other long-lasting psychological functioning.

The Bowlby attachment theory proposes 4 stages of attachment:

*Secure Attachment*: The phenomena of experiencing distress while separated from mothers and comfort upon the return of mothers.

*Anxious-Resistant Attachment*: A stage-like secure attachment only with the predicament that the children often tend to punish their parents for leaving.

*Avoid Attachment*: Children in this category often show minimal to no stress upon separation from their parents and either ignore or avoid reuniting with their parents.

*Disorganized Disoriented Attachment*: Children with no predictable pattern of attachment behavior.

Centered towards the cognitive development of adolescents the Cognitive development theory by Piaget emphasizes on the different growth stages of a child from infancy to adulthood. He divided the cognitive development into 4 stages:

*Sensorimotor Stage (Infancy to 2 years)*: A stage where infants tend to acquire knowledge through sensory experiences and the manipulation of objects. Basic reflexes, motor responses and senses play a major role in learning. In the later years an interaction with the environment facilitates dramatic growth and learning.

*The Preoperational Stage (2-7 years)*: The emergence and development of language is one the main focal points of this stage. It is during this age that the children learn through pretend play. However, the development of the concept of constancy tends to be underdeveloped. However, the concept of egocentrism tends to overpower their decisions.

*The Concrete Operational Stage (7 - 11 years)*: At this stage, the phenomena of egocentrism is replaced by logic, in turn leading to logical yet rigid thinking. Absence of abstract and hypothetical concepts.

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*The Formal Operational Stage (Ages 12 and above):* This is the highest stage in one of the 4 stages of development wherein abstract and deductive reasoning starts developing. Some of the critical abilities that emerge during this stage include systematic planning for the future and reasoning of hypothetical situations.

In other words, Piaget tries to explain that the intellectual development of children is a qualitative process and is done gradually. This also means that the children keep on adding to their knowledge slowly and gradually as they progress in their lives.

## 2.1. Role of Mothers in Society

According to the Catholic gods, the role of mothers from the Paleolithic era is highly valued and celebrated in all cultures. There are certain motherhood and fatherhood characteristics that are pre-defined by society, which highlight the role of mothers as caregivers and the role of fathers as providers for the family. While these characteristics, seem to categories the roles of both the parents in child-rearing, the role of women as mothers is given utmost importance, especially in Indian society.

It is believed that from birth, children start looking up to mothers to satisfy their basic needs, which makes it the responsibility of the mothers to nurture their children and provide them with guidance to face the real world. It has also been identified that children spend most of their time with their mothers. Because of this, the moods of both the mother and the child are relatively linked with each other. Any effect on the mood of the mother will largely impact that of the child. The prospect of an ideal mother in society seems to be one who is supposed to stay at home and look after their children along with the household chores [5]. The rising number of working women has led to a progressed mindset in society wherein working mothers earn equal importance for themselves. The predefined characteristics of mothers include women who work part-time or full-time and manage children. The ideal role of mothers does give them the freedom to manage motherhood with freedom.

## 2.2. Background

The proportion of women in India's workforce is low and is gradually declining [6]. Over the past 2 years, the female labor participation rate has been steady. From 32% in 2005, it has come to 19% in 2021 [7]. Labor participation of women, especially mothers have a lot to do with their responsibility towards their house and offspring. It has also been observed that out of the total participation rate the number of mothers with small infants in the labor force decreased by 1.8% [8]. Moreover, according to a survey about 46% of working mothers report working till late to make up for work and 42% are unable to focus on work with children at home [9]. This data indicates that working mothers find it difficult to maintain work-life balance and, hence, end up spending less amount of time with their children.

It has been observed that maternal attachment and interpersonal relationship is the most important factor in a child's cognitive and emotional development. It is this interpersonal relationship that determines the child's intellectual development.

Intellectual development refers to the changes that take place because of growth and experience in thinking, reasoning, relating, judging, and conceptualizing. The average IQ level of a child ranges from 90-109 at any age in life [6]. One of the key factors during this period is motherly affection and love, attachment. Such bonds highly facilitate cognitive development in an individual. Although conflicts between mothers and children become more frequent and more intense during adolescence, these conflicts are also thought to be a means to negotiate relational changes. The short-term dyadic processes that occur during conflict interactions are important in the development of interpersonal relationships. During adolescent, this interpersonal relationship is more interdependent and reciprocal, and hence, teenagers tend to be more attached to their mothers during this stage of their life. While most of the researchers have identified impact of maternal employment on academic achievement, the impact of stress and difficulty in managing work-life balance remains a little less discovered. This study aims to fill those research gaps and identify the underlying aspects of work stress and its impact on adolescent academic performance.

### 2.3. Problem Statement-

Employment status and attachment largely influence development throughout the lifespan. This interpersonal relationship is essential for the cognitive and emotional development of the child. While there are many studies that study the effect of maternal employment on the child's growth, there as academics achievement, there is relatively very few that measure academic performance. The goal of this research is to evaluate the impact of stress, whether it is work-related or academic, on the children as well as the working mothers and its influence on other relationships in the house.

### 2.4. Hypothesis

Maternal employment will have a larger negative impact on academic performance as compared to a positive impact.

**Null hypothesis:** There is no significant relationship between maternal employment and teenage academic performance.

**Alternate hypothesis:** There is a significant relationship between employment and teenage academic performance.

### 2.5. Objective The Study's Main Objective is to Analyse the Impact of Working Mothers on the Academic Performance of Teenagers

- 1) The study also focuses on the interpersonal relationship between a mother

and child, the effect of social environment on the child's behavior and the family size.

2) It aims to emphasize the impact of work-life balance on working women as mothers.

3) The study also aims to understand the degree to which mothers have knowledge of their child's academic schedule (examinations and extracurricular activities).

4) The focal point will also study the average level of intellectual development in a teenager at the age of 14 - 18 versus the intellectual development of teenagers of the same group with working mothers.

### 3. Sampling Design

It is not possible to address the research to the whole target population at one time, so different sampling techniques are used to ease the purpose of conducting research. To ensure equal representation of the sample *i.e.*, working mothers and teenagers aged between 16 - 10 years of age, the methods of Convenience and Snowball sampling were used. The categorization of the sample was later down based on gender with further classification into demographic categories.

Statistical technique: To analyze the data, mean, median, mode, standard deviation, correlation coefficient and t-test were used as statistical techniques.

#### 3.1. Procedure

The research method selected entailed the collection of data from 100 pairs of respondents namely (working mothers and their children) through convenience and snowball sampling. The data was collected through the self-questionnaire method where the respondents were required to fill out an online survey which was passed on through Google Forms. The online form, however, consisted of sections that debriefed the participants, took informed consent, and recorded Demographic details as well as responses to the questions provided in the questionnaire. The final online survey was made by combining 2 standardized questionnaires were merged to measure the interpersonal relationship of the mothers with their children as well as the academic performance of the teenagers in school. Once the respondents had recorded their responses, the data was transferred to an Excel sheet and the responses were then given scores based on the available scoring key, following which data analysis was done using the respective software. This data analysis was carried out based on the generated hypotheses.

#### 3.2. Review of Literature

Mothers are considered to have a great impact on the lives of their children during the early years of their life especially during their teenage and adolescence. Having said that Working mothers often find it difficult to manage household chores with their work commitment whilst ensuring their children have an average GPA of 6.0, however, when considering the impact of work hours on the child's performance

most research studies suggest that increase in the work hours do not impact the performance of children suggesting a little to no link of interference in the relationship between academic studying and motherly affection and working hours. However, it is also important to note here that the age of the child plays a major role in determining the results of their academics [10].

Adolescence or high school is the foundation year for the establishment of a career path and hence adolescent students tend to develop a positive relationship with their mothers in order to seek guidance, self-esteem and motivation for academics. Given, the mothers have a dual responsibility with added stress of work life, they never fail to fulfil their academic responsibilities towards their children ensuring that their children receive the amount of love and attention that they deserve.

Given the parent-child relationship, it also becomes essential to identify the important aspects affecting the academic performance within the classroom environment in turn shaping the child's relation with the teachers. The amount of involvement parents had in their child's life predicted the child's perception towards cognitive competence and in turn, determined the student-teacher relationship in the classroom (another one of the factors that affected academic performance). Increased parental involvement leads to a positive perception towards the parents and studies have found that this, in turn leads to good academic performance for the child in the school environment [11].

Many studies have been done to compare or analyse the impact of parents on adolescent academic performance, however, very few tend to explain in depth its impact on rural areas. The impact of parental involvement is the same in both urban and rural areas, it is evident that children in both scenarios equally need their parents during the academic years however there are several other factors that need to be taken into consideration. These factors include family income, family size, and the home environment. Parental involvement here also depends on parents' connection, their interest, and the amount of freedom that they are willing to give to their child, these factors largely determine the academic achievement of the child. It was also found that the level of involvement of the parents determines whether or not the children can adjust to the environment and cope with their academics [5].

There were many studies that found characteristics like parental education, socio-economic background, and family support a major factor in influencing the academic performance of a teenager. This paper also aims to showcase the role of religion in academic performance. Apart from the religious impact, attendance proved to be one of the major factors that was responsible for higher academic performance among students [12].

While working mothers were the centre of most of the studies some of them also aimed to compare stress levels both. It was thus proved that the study higher work stress leads to a lower parent-child relationship, in turn influencing the mental health of the parent as well as the child during the developing years. Most mothers experienced parenting as well as work stress [13].

So, to speak, most working mothers also face difficulty managing their work life with their personal life and cannot juggle both responsibilities. Large amount of energy is invested in managing the household and children along with work. The primary responsibility of a working mother till today is child rearing and managing the household chores. The research findings suggest that working mothers are in a miserable state in terms of financial responsibilities, childcare support, workload, and the security of their children while they work. The most stressful part for the mothers is that they do not receive support from their homes in terms of child-rearing or other activities [14].

The research study finds that maternal employment has a negative impact on the test scores of the child and affects the interpersonal relationship between the mother and child [15].

#### 4. Analysis and Discussion

To study the difference between male and female academic performance during the secondary school years, mean, median mode, SD and t-values were found.

**Table 1** shows the mean scores of both male and female students. From the table, it can be inferred that male students between the age of 14 - 18 have a mean score of 39.7. This shows that male students have a low-moderate academic performance score, in turn indicating that they do not perform well in their academics irrespective of their interpersonal relationships. On the other hand, the data for female students states otherwise; it shows a mean of 41.7 which is higher than that of the males, showcasing that females have higher academic scores than males. This could also be a result of the male-to-female ratio that persists within the data. However, it is also important to note here that there exists only a slight difference between the means of both genders, indicating that the data is significant at 0.05 level.

**Table 1.** Table type styles (Table caption is indispensable).

Category	N	Variable	Mean	Median	SD	t-Value
Male	36	Academic Performance	39.69444	40	4.421032	1.8905
Female	64	Academic Performance	41.70313	42	5.369706	1.8905

There is a slight difference observed between the mean scores of both genders which indicates that the data is normally distributed. To sum it up the difference between the data sample and normal distribution is not big enough to be statistically significant. The p-value of the test is 0.086 which is more than 0.05 indicative of the fact that the given data is a less extreme statistic. The graph of the data set is highly decided by the sample size of the data. The graph above represents the data set in the form of a normally distributed bell curve.

The graph clearly indicates that the data set deviates from 1 standard deviation and there are very few values that fall under the standard deviation value, almost

13.5% of the values under the standard deviation. The minute gap between the red and the green line indicates that there is almost little to no data that exists between the standard deviation and the actual standard deviation, *i.e.*, there is very less probability of that data set. Moreover, the symmetrical shape of the bell curve suggests that the data has less tendency to produce extreme values, *i.e.*, it has almost no outliers.

The test was designed in a manner that measures academic performance based on the social and school environment of the teenagers as well as the peer groups that they involve themselves with. The standardized questionnaire dissects the students into 3 different categories on the basis of high moderate and low academic performance, depending upon their scores.

**Table 2** shows that the mean score of maternal employment is 44.7, and the t-value for the same is 0.7785. The questionnaire used to assess maternal employment measures work stress, work-life balance, and interpersonal relationships. The average mean score indicates a lower level of work stress among working mothers and a good interpersonal relationship with the child.

**Table 2.** Descriptive statistics for maternal employment.

Category	N	Variable	Mean	Median	SD	t-Value
Females	100	Maternal employment	44.7	46	4.99	0.7785

The graph created for the data clearly showcased that the data is not normally distributed indicating that the difference between the data sample and normal distribution is big enough to be statistically significant and that the shape of the bell curve is potentially symmetrical, meaning that it is not completely skewed toward one end. It also states that the magnitude of the difference between the sample distribution and the normal distribution is relatively small. The p-value for the data is known to be 0.04811 which is less than 0.05 indicating that the chance of type 1 error is small.

The standardized questionnaire used to measure maternal employment gives major importance to the interpersonal relationship between the mother and child. It also aims to assess the role that this interpersonal relationship plays in the academic performance of the child. Along with that, other major factors that are considered in the questionnaire include work stress that hampers the work-life balance of the mothers and awareness of the mothers about their child's academic performance.

The Spearman correlation coefficient value for Academic performance and maternal employment is 0.00947. Considering the p-value to be 0.05 the significance of the data is not found. There is weak to no correlation between both the data sets according to the R-value that was found by the Spearman calculator.

#### 4.1. Results

It is clearly seen from the table that there is no significant relationship between

maternal employment and teenage academic performance, as the correlation coefficient is 0.00947, which is greater than the p-value (0.05). This study however contradicts the results of research conducted by Rachel Dunifon, Anne Toft Hensen, Sean Nicholson, Lisbeth Neilson (2013) which states that maternal employment has a direct impact on the academic performance of teenagers. According to their research, there is a strong correlation between maternal employment and academic performance. According to the tables, the average maternal employment is quite larger than that of academic performance indicating that it proves to be an important factor in a child's life. Moreover, the average female academic performance being higher than the males proves that there is a significant correlation between working mothers and academic performance.

## 4.2. Conclusions

It is quite clear from the tables that academic performance is not linked to maternal employment, *i.e.*, the profession of mother or the mother's active involvement in the child's academic does not play a role in their overall performance or during their examinations. It is highlighted in the study that the role of mothers is largely limited towards the cognitive development of the child, in turn showcasing that the interpersonal relationship between the mother and child plays a minute role in influencing the academic performance of the child, largely because it is assumed that at this stage, they are capable enough to balance their academics in different social environments. It is also evident in the findings that mothers are more inclined towards high female academic performance in comparison to males based on difference in their mean scores indicating that they are more concerned for the daughters to perform well, to promote of the idea of independence later in life, while not so much for the boys.

It is proved by many research that parent's connection, direct interest, and freedom to the child could enhance the performance of their wards in academics. So, there is a need to identify other factors like parenting style, family environment, social environment, level of work stress and family size. The further scope of the study can also include the impact of parenting styles of both the parents on the child's intellectual as well as emotional development.

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## Conflicts of Interest

The author declares no conflicts of interest.

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