# Are Working Mothers in India Investing Less Time in the Next Generation?

**SIVAKAMI MUTHUSAMY**

**Assistant Professor**
**Population Research Centre**
**Institute for Social and Economic Change**
**Bangalore-560 072**
**INDIA**

**Email: siva4432@yahoo.com**

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**ABSTRACT**

The relationship between increased female work participation and mother's time with children in developing countries remains inconclusive. This paper suggests that a more detailed disaggregated analysis of various childcare activities in terms of **essential** and **non-essential activities** can explain this ambiguity. Hence, this paper looks in detail at how mother's time with children on essential and non-essential activities varies among poor women in India according to their work status, in the context of a decline in fertility and the number of extended families and a scenario where patriarchy remains prevalent. Women in the age group 15-49 who had at least one living child below 10 years in urban slums and in rural Scheduled Caste settlements were selected for this study. While regression analysis shows that working women spend significantly less time on childcare than non-working women, a disaggregated analysis of **essential activities** illustrates that working women spend as much time on childcare as non-working women, except playing with children.

[*] **Assistant Professor, Population Research Centre, Institute for Social and Economic Change, Bangalore-560 072, INDIA. Email: siva4432@yahoo.com**

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With an increase in the female labour force participation over the past decade, the dual role of women, both as income earners and chid care providers, has emerged as an important issue of concern amongst sociologists, anthropologists and demographers. In her presidential address at the Population Association of America (PAA) annual meeting in Los Angeles in 2000, Suzanne Bianchi highlighted that women's movement into the paid labour force has not been accompanied by a dramatic decrease in maternal time with children (Bianchi, 2000). Her position challenged the common hypothesis that working women spend less time with their children due to their increasing involvement in market-based activities.

Bianchi provided four explanations for her argument that a mother's time with her children was actually much more constant over time using evidence from both developing and developed countries: (1) maternal time with children in the past had been overestimated, (2) women have made efforts to protect their time spent with children, (3) children were available less for time to be invested in them, and (4) greater men's involvement in domestic activities (especially in the case of developed countries) and involvement of siblings and grandparents (in the case of developing countries) meant that women could continue to focus on their children.

A main aim of this paper is to examine Bianchi's claims in more detail in the context of a developing country, India. Two of Bianchi's arguments hold true in most developing countries including India, namely an over estimation of women's non-market activities and a failure to appreciate working women's investment in childcare once women enter the labour market. However, her claim that other family members contribute to domestic chores allowing women to continue to focus on their children appears to be more problematic. Not only are fertility rates declining in most developing

[*] **Assistant Professor, Population Research Centre, Institute for Social and Economic Change, Bangalore-560 072, INDIA. Email: siva4432@yahoo.com**

countries (thereby reducing the availability of other siblings), but the family structure is also changing (from extended family to nuclear family thus discounting the possible role of grandparents). Moreover, participation of men in domestic and childcare activities would seem to be less than she accounted for given the continued patriarchal system in most developing countries. Furthermore, a vast majority of children in developing countries still enter into school at later ages (thereby suggesting that there has not been much change in children's lives) and hence they continue to demand a lot of time from their mothers, especially in the case of families in the low economic strata.

My intuitive criticisms of Bianchi's position, however, are not fully borne out by existing literature. There is in fact no common consensus among researchers in developing countries about mothers' time with children. On the one hand, a few studies in developing countries have found that working women spend less time on childcare as compared to non-working women. On the other hand, a few other studies show very little decline in mother's time with children as women's work participation rates increase. In other words, the relationship between mother's work participation and time spent on childcare appears to be ambiguous in developing countries.

The main aim of this paper is, therefore, to try to explain these differing results in developing countries by doing a more disaggregated analysis of women's allocation of time for various household activities in general and their time with children in particular. Unlike in developed countries where time series data sets on household time allocation on various activities are available and comprehensive, large data sets are largely absent in developing countries and time series data not available, and hence little is known about how women allocate time to various household activities. Therefore, I propose first to contribute to the literature by examining how allocation of time on various household activities vary between working and non-working women using a systematic time diary method as there are significant gaps in our knowledge especially in developing countries. Second, I try to look in detail how mother's time with children varies according to their work status in situations where poverty compels mothers to participate in wage earning activities: this too in the context of a decline in fertility and the number of extended families and a scenario where patriarchy remains prevalent.

**Background**

The relationship between maternal employment and time spent with children is assumed to be important as the time mothers spend with children has a significant impact on congenital developments and over all well-being of children[1]. In other words, reduction in maternal time devoted to child rearing may be directly related to child health, through the loss of specific childcare activities. This becomes all the more important as more and more women are moving to the labour force in both developed and developing countries although to different degrees. Yet, we have relatively little knowledge about mothers' time spent with children especially in the case of developing countries.

The most commonly discussed factor possibly responsible for the influence of maternal work on child development and health is that working women cannot spend as much time on childcare as non-working women due to the dual role played as income earner and childcare provider. Numerous studies, especially in developed countries, have looked at trends in mother's time with children to see whether mothers spend less time today with the increase in female work participation as compared to earlier. A detailed analysis by Bryant and Zick (1996) using time series data showed that mother's time spent on childcare has remained unchanged with an increase in the labour force in the United States between the 1924 and 1981. Sandberg and Hofferth (2001) also examined the changes in time American children spent with their parents, in this case between 1981 and 1997. The authors found that American children overall spent more time with their mothers in 1997 than in 1987, a finding that obviously is contrary to the belief that children spend less time with parents today than earlier due to the changes in mothers participation in labour market and patterns of family formation and dissolution. Bianchi (2000) concluded that mother's time and attention to children has been far more constant over the past few decades given the increase in women's labour force participation and the number of single mothers in the United States in the twentieth century.

Fisher *et al*. (1999) found a similar trend using time series data from the United Kingdom, namely that time spent on childcare by mothers increased between 1961 and 1999. Evidence obtained from Australia also lead to a similar conclusion. Using 1992 time-use survey data, Miller and Mulvey (2000) found that although there is a difference between the time parents devoted to children between employed and non employed

parents, the difference is much less than expected. Gershuny (2000), however, suggests a slightly different trend using time use data from 20 countries, namely that time parents time with children decreased between 1960 and 1984, but increased thereafter. Zuzanek (2001), on the other hand, found in the context of Canada that there was an increase in parental time children between 1981 and 1998.

These studies illustrate, by and large, that parents time with children increased or remained unchanged over a period of time with more and more women entering the labour force in the recent decades. Hence, there is a common consensus among researchers in developed countries that an increase in female labour force participation, especially mothers with younger children, has not lead to a decrease in mother's time with children at least in the case of two parent families.

Studies that have looked at the relationship between maternal work participation and time spent with children over a period of time are scanty in developing countries due to an absence of systematic large scale surveys on actual time use pattern. Hence, it is difficult to look at trends and changes in mother's time with children in developing countries. However, a few micro level studies in developing countries have examined the difference in time spent on childcare between working and non-working mothers, yet there is no common consensus from these studies. On the one hand, a few researchers in developing countries found that working women spent less time on childcare as compared to non-working women (Basu and Basu, 1991; Sivakami, 1997 for India; Paolisso *et al*. 1991 for Kenya, Wongboonsin and Ruffolo, 1992 for Thailand). Mother's time investment in childcare is presumed to be strongly influenced by whether she is economically active or not. Due to the natural constraint of time, a working woman would have less time at her disposal for childcare as compared to a non-working woman. Women who participate in the labour market are believed to spend less time in maternal activities such as feeding, bathing, and other activities than those who do not participate in market activities. Also, working women may not be able to provide care with the same intensity to their children as non-working women. Moreover, working women may not be able to spend much time in playing with young children and this could adversely affect psychological development, which consequently could result in poor health and higher mortality among children of working women. This is most likely to happen in those

families where poverty compels the mother to participate in wage earning activities soon after a delivery.

On the other hand, however, as suggested above a few studies have shown very little or no decline in mother's time with children along with the increase in time on market activities (see Ho, 1979; Popkin, 1983 and Popkin and Doan, 1990 for Philippines, Da vanzo and Lee, 1983 for Malaysia, and Desai and Jain, 1994 for India). The reason for this was that any way (regardless of whether mother's work or not) children spent a significant amount of time with other childcare providers such as older siblings (especially daughters) and grandparents, which compensated for the mother's absence to a certain extent (Desai and Jain, 1994; Bianchi, 2000).

Nonetheless, the care given by relatives is declining as work schedules are becoming diverse and the average age of children with employed mother's becoming younger (Pressure, 1989:29). Furthermore, grandparents are often themselves otherwise employed, and in most cases the grandparents in poor families also work at the same time as the mothers making nobody available. High domestic demands on women consumes a major proportion of women's time especially in rural areas where women spend a considerable amount of time on other activities, apart from routine household activities, such as fetching water or fire wood, or carrying food to family members who work outside the village that affect women's time with children irrespective of work status (Desai and Jain, 1994). A few other studies also point out that mothers' often spend very little time per day in direct childcare (Leslie, Lycette and Buvinic, 1988; Ware 1984). Thus, the effect of female work participation on time with children in developing countries is very ambiguous.

This ambiguity is partly explained perhaps by the income status of the family. Some studies have revealed that mother's from a higher socio-economic status spent more time with their children than the mothers from a lower socio economic status (Sayer, Gauthier and Furstenberg, 2004). It is possible that women from higher socio-economic groups might have time at their disposal as they are in a position to afford to purchase time saving devices like pressure cookers, gas stoves, grinders etc. for their own household task. But in most developing countries, women who are involved in labour market are more likely to be poor, landless and from poorer socio-economic

groups (Desai and Jain, 1994). In many developing countries, including India, women are forced to move into the paid labour force due to economic hardship and this too is obviously linked to economic status. In developed countries, on the other hand, women enter the labour force often to use their education and skills. In developed countries, moreover, women often take up part time jobs, which would make it possible for them to still spend a considerable amount of time with their children. Hence, there is a need to look at the effect of work participation on time spent on childcare within a context or within a settlement or within a similar socio-economic class especially in developing countries. With this in mind, this article first examines the level of women's time spent on various household activities within poor localities with special reference to India. Next, this paper also explores further whether working women invest less time with their children in the context of declining fertility, break-up of extended family systems and patriarchal norms.

**Data and Methods**

It must be noted at the outset that this survey was not primarily designed to examine the relationship between maternal work participation and time spent with children. Instead, it sought to examine the effect of mothers' work participation on child health. Maternal time with children was conceived as an important intermediate factor (with detrimental effect) and hence detailed data on respondents' actual use of time were also collected. It is this data that is used for this paper. As the original study, moreover, was designed to examine the relationship between mother's work status and child health, it was necessary to select an area that had a large proportion of both working and non-working women. This called for the selection of a region with a high level of female labour force participation. Therefore, it was decided to select the state of Tamil Nadu in India. Tamil Nadu has a relatively high level of female participation in the labour force, 29.9 percent in 1991 and 31.5 per cent in 2001, well above the national average of 22.3 and 25.6 per cent respectively (Registrar General, India, 1992; Registrar General and Census Commissioner, India, 2004).

Within the state Coimbatore district, which has a high level of urbanisation, namely 52. 6 per cent (1991 Census), was selected. The nature of work is different in both rural and urban areas. In rural areas, most women are engaged in agricultural and related activities having more flexibility in time and possibility of taking the child to the place of

work. But in urban areas, the employment conditions are likely to be more rigid. Hence, it was proposed to cover both rural and urban areas. The study specifically concentrates on women in poor localities as earlier studies that looked at the relationship between female work participation and child mortality have pointed out that working women are generally from the lower socio-economic strata, and are under pressure to work in order to meet essential needs (see for example Hobcraft *et al.* 1984, Desai and Jain, 1994). Also, by focusing on a homogeneous population one is able to examine the differential impact on childcare between working and non-working mothers. Slums in Coimbatore city, where the majority of the poor live, was chosen for the study. By and large, in rural areas the poor population is the Scheduled Caste[2] population who are mostly landless. Desai and Jain (1994) have also pointed out that studies that have looked at the relationship between women's economic role and child survival generally have ignored selectivity into female employment. Selectivity is important because women who enter the market are more likely to be poor, landless and scheduled castes and tribes. Hence, it was decided to cover only Scheduled Caste settlements in rural areas. For this purpose, villages in Coimbatore district have been chosen.

In Coimbatore city, out of 59 municipal wards, two wards with high female work participation and low literacy were identified[3]. From each ward, one slum, with the highest level of female participation in the labour force was selected. For the rural sample, one taluk[4] (Palladum) from Coimbatore district with a female literacy rate, SC population and a female labour force participation rate close to the district rural population average was chosen. In Palladam taluk, three villages, which had female work participation rates and female literacy rates close to the district average and SC population of at least 500 persons were first chosen. The SC settlements in those villages were covered. The survey was carried out during August 1998 to January 1999 (for more details of sampling, see Sivakami, 2001).

A preliminary listing of households in the slums as well as in the village was undertaken. Currently married women in the age group 15-49 who had at least one live birth were systematically selected for the survey. Women who were normally engaged in economic activity during the previous year were identified as working women. There were 529 women, 285 in the urban slums and 244 in the rural settlements. Women who were widowed and separated were excluded from the survey[5].

The specific questions addressed in the paper are: (1) How does women's allocation of time on various household activities in the Indian context vary between working and non-working women?, (2) How much time do women invest in the next generation?, (3) Does working mothers' time with children vary between urban and rural areas?, (4) Do working mothers prioritise certain childcare activities? (5) What type of childcare activities have been prioritised (if any)?, and (6) Does the effect of work participation on time with children persist even after controlling for other factors?

A woman is expected to perform a number of tasks in a day and given the constraint of time, her allocation to various activities would depend on the requirements and the relative priorities. With this in mind, information about time input on all activities was obtained from all women in the survey (women in the age group of 15-49 who had at least one live birth). Women were asked to report the tasks that they perform on a normal day starting from the time they rise till they sleep at night. The most common method in survey research is to ask women directly how much time they spend on certain specific activities but it has also been proved inaccurate and biased (Marini and Shelton 1993; Robinson and Godbey 1997). Hence, a time chart or 24 hours time diary form was used to list the activities were carried out by women throughout the day. The time chart accounted for the total time used by the woman. From this, time input on specific activities was calculated. This included time input on market activities by working women and other household activities such as cooking, cleaning etc. as well as leisure time by both working and non-working women.

Data on time input on various aspects of childcare were also obtained from all women who had at least one living child below the age of 10. There were 391 such women in the study (89 urban working, 111 urban non-working, 84 rural working, and 107 rural non-working). Observation of mother's time spent with children would be the accurate way to estimate how much time mothers actually spend with their children and for what activities. But it is often very expensive and not possible especially where the survey involves a large sample size. In this paper, data on childcare activities come from 24 hour time diaries obtained from the women who were selected for the study. However, a direct question *"How much time do you (respondent) normally spend in a day to take care of your children?* was also asked separately. A similar question was also asked for each of the following specific childcare activities: bathing children, feeding

children, preparing special food for children, dressing up children, and other activities such as playing with children, taking children around. This was asked to see the variation on time spent on various activities of childcare by women according to the two common methods of collecting time allocation data; data that was obtained in the 24 hours time diary chart exactly in the order that women reported and mothers' time spent on various childcare activities based on a separate direct question pertaining to each of the childcare activities. During the interview, total time input on childcare was checked with time spent on each of the specific activities, and in case of inconsistency, corrected after probing. It is important to note that there was not much discrepancy in mothers' time spent with children based on the data collected through the two methods. However, it was decided to provide the estimates on specific childcare activities that were obtained from the direct questions on specific childcare activities because this method of enquiry is more likely to capture intense mother child interaction. Note that this time was recorded for the time spent by the mother on all children, not separately for each child, since it was difficult to separate the activities of the mother for each child individually. Thus, the unit of analysis is a *woman*, and not a *child*. The time input was recorded in minutes. For working women, this refers to input on working days.

The paper first proposes to provide estimates of women's time spent on six main activities (including childcare) in order to answer the first research question, namely how does women's time allocation on various household activities vary between working and non-working women. Following Gauthier *et al*. (2004), this paper also provides estimates of time spent on five main activities by women. However, Desai and Jain (1994) have pointed out that fetching water and firewood demand a significant amount of women's time especially in poor households. Hence, the time spent on fetching water and firewood is provided separately (which was included in household work by Gauthier *et al*. 2004) in this paper. Therefore, there are six main activities discussed in this paper: (1) market activity (2) fetching water and firewood (3) household activity (4) childcare (5) leisure time (includes watching TV and listening to radio) and (6) personal activity (includes sleeping, eating and personal care). It should be noted that these six activities constitute the main activities carried out by women during the day. All the estimates have been provided for rural and urban women separately according to work status of the women.

The paper also proposes to analyse a mother's time with children in detail to see whether working mothers spend less time with their children. Here, the analysis has been restricted to currently married women with at least one child below 10 years of age. Three estimates have been given: 1) a mother's time spent with children on all childcare activities (total time spent on childcare), 2) a mother's time spent on essential (bathing and feeding the child, preparing special food for the child, dressing up the child, teaching the child, taking the child to school) childcare activities, 3) a mother's time spent on non essential (playing with the child) childcare activities. The estimates have been provided separately for women with at least one child in the age group of 0-4 and women with no child in the age group of 0-4 but at least one child in the age group 5-9 again according to work status of the mother. The net contribution of maternal work participation on childcare is assessed using the ordinary least square linear regression (OLS) model.

**Setting**

Tamil Nadu, situated on the south eastern side of the Indian Peninsula, extends between $8^0$5' and $13^0$35' north latitude and $76^0$15' and $80^0$20' east longitude. According to the 2001 census of India, Tamil Nadu has the sixth largest population among the states in India (Office of the Registrar General and Census Commissioner, 2001) and has an area of 130,058 $km^2$. Tamil Nadu is one of the economically and industrially more developed states. Although it continues to be predominantly an agricultural state, the Tamil Nadu economy has been changing rapidly into an industrial economy. According to the 2001 census, Tamil Nadu has a population of 62.1 million, accounting for six percent of the total population of India (Office of the Registrar General and Census Commissioner, 2001). Except for Kerala, Tamil Nadu recorded the lowest population growth rate in 1991-2001 among all the states in India. The population density in Tamil Nadu (478) is much higher than the density for the country as a whole (324).

According to the 2001 census, Tamil Nadu has become one of the most urbanised and educationally more advanced states in the country (Office of the Registrar General and Census Commissioner, 2001). The literacy level for the population aged 7 years and above in 2001 is 73 percent, which is above the national average of 65 percent. Male literacy is 82 percent, whereas female literacy is 65 percent as opposed to 76 percent for males and 54 percent for females at the all India level. The crude birth rate of 18.5 per 1000 population in Tamil Nadu is substantially lower than the all India

crude birth rate of 25.0, as estimated by the Sample Registration System in 2004 (Registrar General, India, 2004). The infant mortality rate is also lower in Tamil Nadu than in the country as a whole. For the year 2002, the infant mortality rate estimated by the SRS was 44 per 1000 live births as compared to 63 for all India (Registrar General, India, 2004). The population sex ratio (number of females per 1000 males) of 986 in 2001 is much higher than the figure of 933 for all India (Office of the Registrar General and Census Commissioner, 2001). For 2001-2006, life expectancy in Tamil Nadu is projected to be 67.0 years for males and 69.8 years for females (http://www.tn.gov.in/misc/tnataglance.htm). Overall, the performance of maternal and child health services in the state appears to have been above the all India level.

Coimbatore district has an area of 7,469 sq. $km^2$ (Registrar General, India, 1991) with a total population of 3,508,374 as enumerated in the 1991 census, 1,663,381 in rural areas and 1,844,993 in urban areas (Registrar General, India, 1994). Fertility in the district is slightly lower than the state average. The crude birth rate was indirectly estimated from the 1991 census at 22.5 per thousand for the district compared to 26.4 for the state whereas the total fertility rate was 2.46 for the district as compared to 3.10 for the state (Registrar General, India, 1997). Similarly, child mortality is also lower in the district than in the state. The estimate of q(2), i.e. probability of death before completion of two years of age, for the district was 48 per thousand, lower than the state estimate of 58. Child mortality in the district is slightly higher for males than females; the q(2) values are 54 and 46 respectively. According to the 1991 census, the literacy level (for ages 7 and above) of the district is 66.4 percent, slightly higher than the state average of 62.7 percent (Registrar General, India, 1994). Male literacy is 76.5 percent and female literacy 55.7 percent.

Coimbatore, the district headquarters, is the largest city in the district. Coimbatore Municipal Corporation has an area of 105.6 sq. $km.^2$ with a population of 816,321 in 1991 (Registrar General, India, 1998). Coimbatore Urban Agglomeration (U.A), which includes the municipal area and contiguous urban spread, has an area of 317.2 sq. $km^2$. The Coimbatore urban agglomeration has attained the status of metropolitan city, with the population exceeding one million (1,100,746) by the 1991 census.

Coimbatore City has a large number of poor localities or slums (Economist Group, 1988). A majority of the people in the slums belong to the Scheduled Castes and a few belong to other backward communities. People generally live in small single room tenements; sometimes, a two-room house is shared by two families. The room is generally used for all purposes - cooking, sitting, sleeping etc. Most of the houses in slums have no toilets and very few have bathrooms. However, a few houses, which were built by the government to uplift slum dwellers, have toilets but they are mainly used to store goods. A few households use the toilet room for their cattle. Men have low paid occupations such as those of construction workers, sweepers, casual workers, while a few are in the organised sector. Women who work are engaged either in construction or domestic services. The incomes are generally low. The overall living conditions are poor.

The Scheduled Caste (SC) settlements in villages are generally separated from the main village inhabited by the dominant agricultural communities. This is because of the practice of untouchability in the past and often in the present as well. The Scheduled Castes are socially and economically disadvantaged. Most do and did not own land or owned very little land and worked as agricultural labourers or in other low paid occupations. The housing conditions are poor and most live in single room huts mostly without bathrooms or toilet.

**Description of Sample Localities and Sample Population**

During the process of house listing, the general conditions in the slums and villages were noted. The two sample slums were situated along the main roads. The sample villages are situated about 30 kilometres from Coimbatore City, in a southeast direction, and about 15 kilometres from Palladam town. The sample villages could be reached by asphalt roads and were well served by public transport. All the five localities (two slums and three SC settlements) had very poor living conditions. Normally, the area occupied by a household in slums was about 100 sq. ft. and about 150 sq. ft. in villages. Houses were generally one-room structures of poor quality without toilet facilities. The drainage facility was very poor in all the five settlements, hardly any drainage at all either for storm water or household water. The people were mostly very poor, socially and economically disadvantaged and engaged in low paid occupations mostly outside the organised sector. However, a few were able to secure employment in power looms and spinning mills in Coimbatore City. In spite of generally poor conditions, certain common

facilities were available. Water supply was mostly through borewell or common taps. Tap water was supplied on once in 3-4 days in slums and on a daily basis in the villages. Common taps were available in street corners. Most of the houses in slums as well as in villages had electricity connections and streetlights were also available.

Two of three villages had a health sub-centre and the other village was served by the sub centre in a neighbouring village. Thus, all the three villages had easy access to basic health care. Maternity hospitals situated in Coimbatore City were near the selected slums. Midwives usually visited the slums regularly and Village Health Nurses (VHN) provided health care to the rural settlements. Two of the three villages had a higher secondary school and the other village had a middle school. Corporation schools were available near the selected slums. Government nursery schools (called Balwadis) were available for young children in all the five selected settlements. These also served as nutrition centres for pre-school children, pregnant and lactating women, and formed a part of the Integrated Child Development Service (ICDS) project. These centres provided free services to children in the age group 1-5, but not to infants. Besides, these worked for only a short period in the mornings and thus did not serve as childcare centres for working women. There were no childcare centres as such in any of the urban and the rural settlements in the study. Post office facilities were available in all the three villages and a telephone exchange in one village.

Safety, especially at night, in the slums, was not a problem. But alcoholism of men, especially of husbands was a main problem in slums as well as in villages because men spent a considerable amount of money for alcohol consumption. There was also the fear of a drunken husband beating his wife. Love marriages and elopements were common in all the five settlements. But the family accepts the couple soon after the marriage. Hence, marriage expenses and especially dowry were not a major issue unlike farm families in villages and middle class families in urban areas. It was a common practice for a son to begin living separately soon after marriage in a portion of the house, either taking up one of the two rooms or by partitioning the single room.

Table 1 presents some basic demographic and socio-economic characteristics of the sample population. Of the 391 currently married women with at least one child below 10 years in the sample for which the information on time spent on childcare activities

was obtained, 173 (89 from urban area and 84 from rural area) were working women and 218 (111 from urban area and 107 from rural area) were non-working. It can be seen that the non-working women and their husbands were younger than working women and their husbands on average in both rural and urban areas. The mean age at marriage of non-working women as well as their husbands was slightly higher than that of working women and their husbands. The mean number of pregnancies, mean number of live births, mean number of living children were higher among working women than non-working women. Working women had higher household incomes than non-working women do in both the areas, but the gap was wider in the village (among working women, the annual household income included their own income also). In both rural and urban areas, the level of literacy and average years of schooling was higher among non-working women compared to working women; overall it was quite low in rural areas as compared to urban areas. Mean household size was slightly higher among working women than non-working women. In urban areas, a greater proportion of non-working women than working women resided in *pucca*[2] houses and had a separate kitchen; no such difference was seen in rural areas. A significant proportion of working and non-working women resided in their own house; over all it was higher in rural areas as compared to urban areas. The percentage of households having flush toilet and pucca[6] bath room was slightly higher among urban non-working women than working women; it was very low in rural areas irrespective of the works status of the women. The proportion of households having electricity and using LPG or bio gas was higher among non-working women than working women in both rural and urban areas but over all it was low in rural areas. The proportion of households using LPG or biomass was less than 10 per cent in rural areas. Overall, working women were slightly older, had more children and higher incomes, but were less literate and in urban areas, had poorer living conditions, as compared to non-working women.

**TABLE 1 Demographic and socio-economic characteristics of the sample population**

| Characteristics | Urban | | Rural | |
|---|---|---|---|---|
| | Working women | Non-working women | Working women | Non-working women |
| Mean age of the respondent | 29.4 | 27.2 | 28.5 | 24.5 |
| Mean age of the husband | 34.9 | 33.0 | 33.6 | 29.4 |
| Mean age at marriage of the respondent | 18.8 | 19.5 | 17.1 | 17.8 |
| Mean age at marriage of the husband | 24.4 | 25.2 | 22.2 | 22.8 |
| Mean number of pregnancies | 2.8 | 2.3 | 2.9 | 2.3 |
| Mean number of live births | 2.4 | 2.0 | 2.7 | 2.1 |
| Mean number of living children | 2.2 | 1.9 | 2.4 | 1.9 |
| Mean annual household income | 25595.3 | 23284.0 | 24459.5 | 19961.8 |
| Mean years of schooling of the respondent | 3.6 | 5.6 | 1.1 | 2.1 |
| Mean years of schooling of the husband | 4.4 | 6.8 | 1.6 | 3.1 |
| Percentage of respondents literate | 59.6 | 81.1 | 20.2 | 35.5 |
| Percentage of husbands literate | 68.5 | 86.5 | 32.2 | 53.3 |
| Average number of persons in the household | 4.6 | 4.4 | 4.8 | 4.5 |
| Percentage of households owning the house | 64.0 | 66.7 | 88.1 | 86.0 |
| Percentage residing in pucca houses | 34.8 | 47.7 | 36.9 | 39.3 |
| Percentage having separate kitchens | 16.9 | 23.4 | 29.8 | 29.0 |
| Percentage of households having flush toilets | 15.7 | 23.4 | 7.1 | 1.9 |
| Percentage of households having pucca bath rooms | 24.7 | 40.5 | 11.9 | 14.1 |
| Percentage of households having electricity | 60.7 | 82.9 | 44.0 | 55.1 |
| Percentage of households using LPG or bio-gas for cooking | 49.4 | 65.8 | 4.8 | 8.4 |
| **Number of women** | **89** | **111** | **84** | **107** |

## Results

### Women's participation in labour force and time input on various activities

Women's time input on various activities is provided in this section first in order to answer the first research question, namely how does women's allocation of time on various activities vary between working and non-working women. Mean time input on six main activities is given in Table 2 and shown in Figure 1 and 2. It should be noted that mean time input on various activities by working women includes time input on market activities. Despite the different nature of job between urban and rural areas, there was not much difference in the time spent on most of the activities among working women between rural and urban areas. The same was observed among non-working women. However, as expected, non-working women spent more time on all the six activities than working women in both urban and rural areas.

The data suggests that market activities by working women is financed mainly through a reduction in time devoted to three activities namely childcare, leisure time and personal time. In other words, working women spend considerably less time on childcare, leisure time and personal activity as compared to non-working women. Working women spend as much time as non-working women in household activities such as cooking, cleaning vessels, washing clothes etc. especially in urban areas. Working women devoted 2.6 hours less in urban areas and 3.1 hours less in rural areas on childcare activities than non-working women. Similarly, working women spent 2.5 hours in urban areas and 1.1 hours in rural areas less on leisure time activities as compared to non-working women. By and large non-working women spent about 8 hours on personal activities (eating and sleeping) where as working women spent less than 7 hours. This indicates that market activities of the working women seem to reduce not only their time with children but also the time available for themselves. Further, it is important to note that both working and non-working women spent a considerable amount of time in fetching water and firewood.

**TABLE 2 Mean time spent on various activities per day by work status of the women**

| Various activities | Urban | | Rural | |
|---|---|---|---|---|
| | Working Women | Non-working women | Working Women | Non-working women |
| | Mean time spent on various activities per day (in hours) | | | |
| Household | 5.4 | 6.1 | 4.9 | 6.2 |
| Fetching water and firewood | 1.5 | 2.1 | 1.8 | 2.1 |
| Childcare | 1.3 | 3.9 | 1.1 | 4.2 |
| Leisure time# | 1.3 | 3.8 | 2.0 | 3.1 |
| Market | 7.7 | NA | 7.9 | NA |
| Personal* | 6.8 | 8.1 | 6.3 | 8.4 |
| **Total time spent on all activities** | ***24*** | ***24*** | ***24*** | ***24*** |
| **Number of women**** | **141** | **144** | **126** | **118** |

Note: #: Leisure time includes talking to neighbour, watching TV and listening to radio.

*: Personal activity includes eating and sleeping.

**: This number is bigger than the number of women in other Tables because time spent on various activities was obtained from women with at least one live birth, whereas time spent on childcare activities was obtained for women with at least one living child below 10 years of age. Time spent on various activities for women with at least one living child below 10 years of age is also available with the author. [Those who are interested in this information can write to the author].

**FIGURE 1 Time input on various activities: urban women**

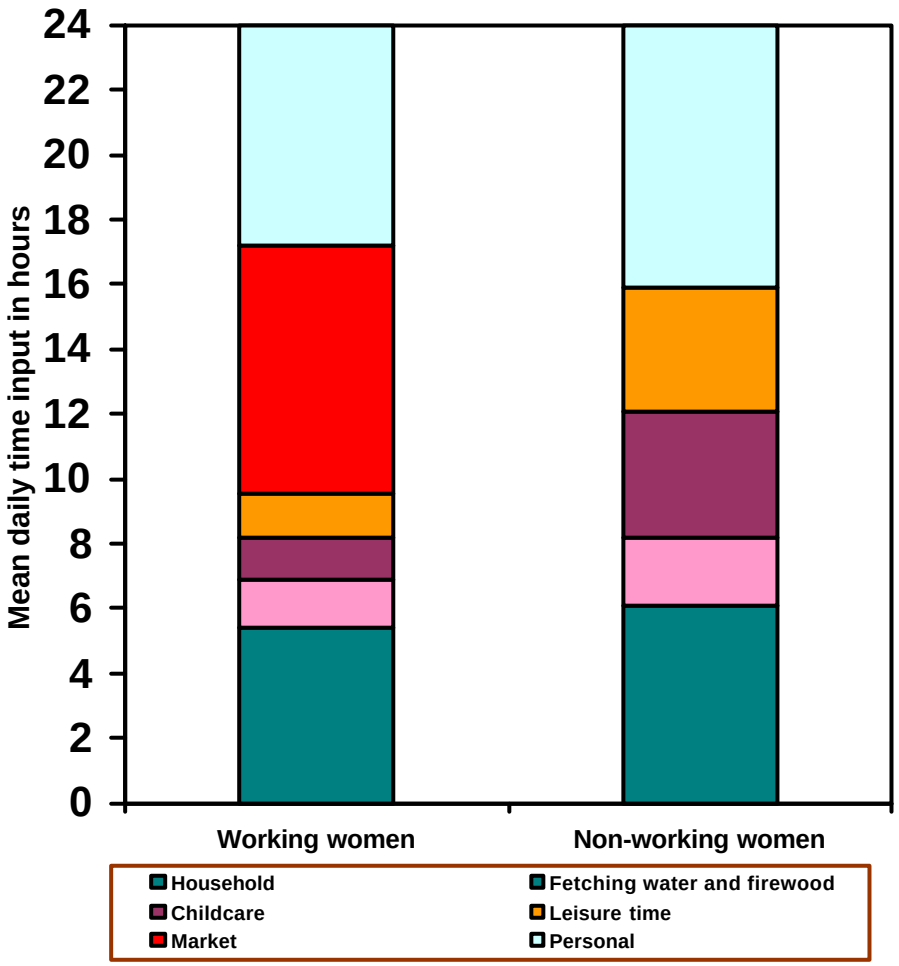
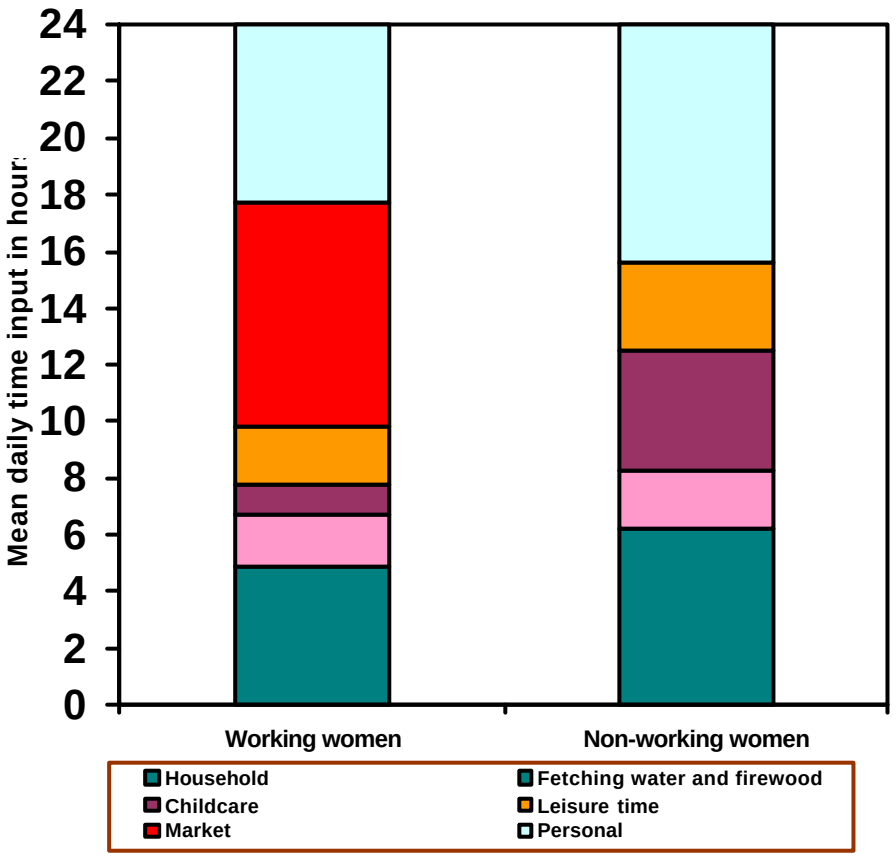


**FIGURE 2 Time input on various activities: rural women**



**Mother's participation in labour force and time with children**

A detailed study of a mother's time with children is necessary in the case of developing countries in general and India in particular for the following reasons. First, hardly any study exists from developing countries that attempts to understand how much time women, especially from the lower socio-economic strata who are forced to work (they are the ones who can not avail of any formal childcare facilities), normally spend with their children. Second, it is required in order to understand whether working women spend less time with their children and whether it varies due to the nature of job available. Third, information is necessary to see and understand whether certain activities of childcare receive less time than other activities due to the mother's participation in the labour force (if at all) and what those activities are.

***Mean time spent on all childcare activities***

As mentioned earlier data on mother's time with children is presented here for mothers who had at least one living child below the age of 10 years. The mean time spent by a mother on childcare per day is presented in Table 3 and shown in Figure 3 and 4 for working and non-working women (with at least one child in the age group of 0-9) in urban and rural areas in order to know how much time mothers invest in the next generation. In order to see if the difference in time input between working and non-working women is significant, the test for equality of means has been performed for each pair (working and non-working). The test statistics and the corresponding p-values are shown in parentheses below the respective means in the table. Working women spent on an average less than two hours daily with their children whereas non-working women spent three to four hours per day. Thus, working women invested about two hours less on childcare activities than non-working women which was also highlighted in the previous section while discussing the time allocation on various household activities by working and non-working women. The difference is significant both in rural and urban areas.

**TABLE 3 Mean time spent on all childcare activities per day by work status of mother**

| Mean time spent on all childcare activities (in hours) | URBAN | | RURAL | |
|---|---|---|---|---|
| | Working women | Non-working women | Working women | Non-working women |
| Mothers with at least one child in the age group of 0-9 years | 1.75 (t = - 9.23; | 4.04 p = 0.000) | 1.54 (t = - 9.66; | 3.40 p = 0.000) |
| **Number of women** | 89 | 111 | 84 | 107 |
| Mothers with at least one child in the age group of 0-4 years | 2.28 (t = -5.38; | 4.28 p = 0.000) | 1.92 (t = - 6.20 | 3.52 p = 0.000) |
| **Number of women** | 37 | 79 | 34 | 101 |
| Mothers with no child in the age group 0-4 but at least one child in 5-9 years | 1.38 (t = -6.38; | 3.45 p = 0.000) | 1.28 (t = -0.25; | 1.40 p = 0.806) |
| **Number of women** | 52 | 32 | 50 | 6 |

Note: Figures in parentheses are 't'-values (test statistics for equality of means for working and non-working women) and corresponding 'p'- values.

In general, women having very young children spent more time compared to women who did not have a very young child. To see this, means were computed separately for women with at least one child in the age group of 0-4, and women with no child in the age group of 0-4 but at least one in the age group 5-9 (Table 3 and Figure 3 and 4). As expected women with at least one child in the age group of 0-4 spent more time (about three hours) with children in both rural and urban areas as compared to women with no child in the age group of 0-4 but at least one in the age group 5-9 (less than two hours) per day; the difference between working and non-working women is significant. In rural areas, time input of mother on childcare was a little over one hour per day for women with no child in the age 0-4, but at least one in the age group 5-9; however it does not differ between working and non-working women.

**FIGURE 3 Total time input by mother on all child care activities: urban areas**

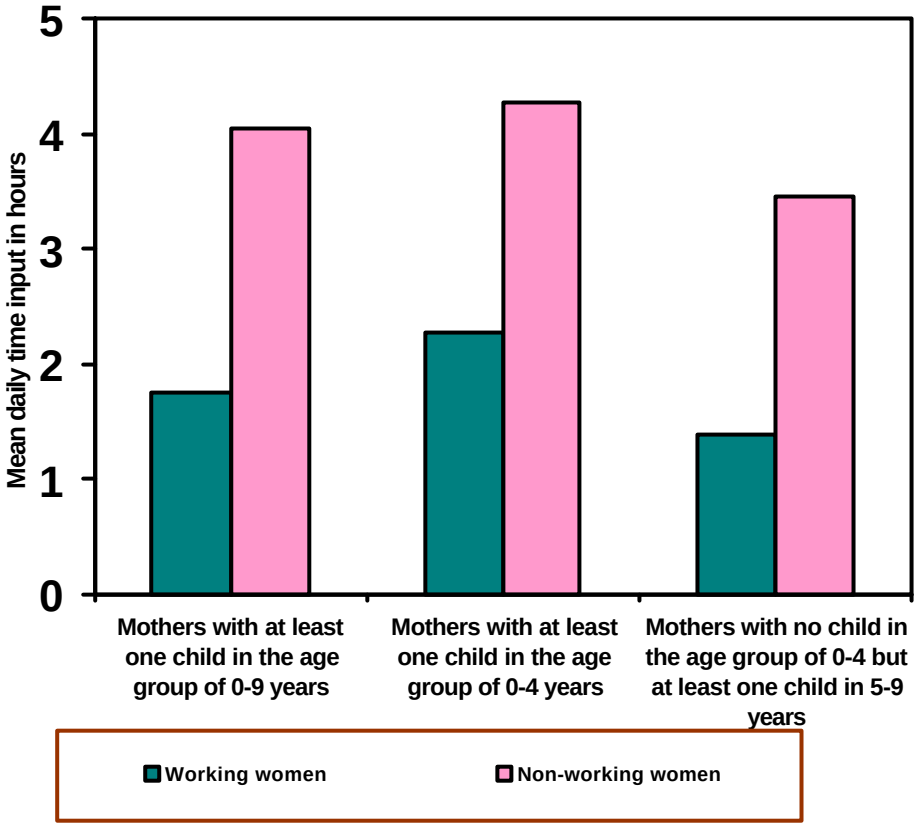
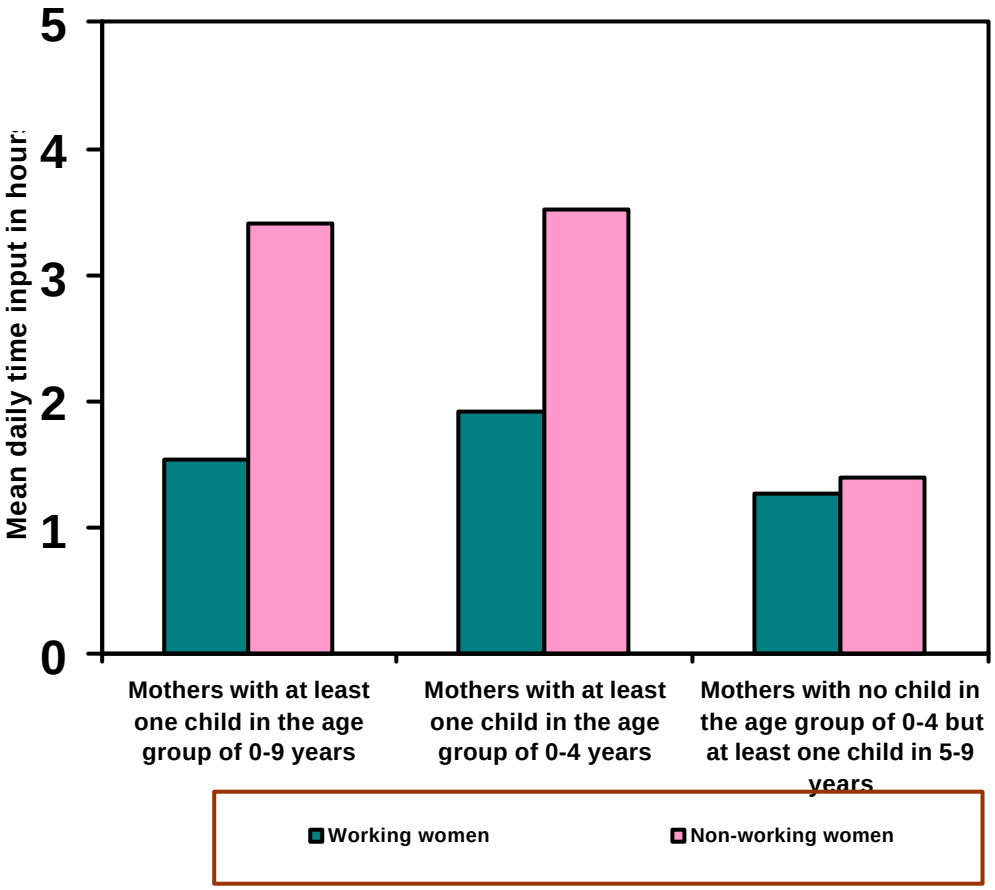


**FIGURE 4 Total time input by mother on all child care activities: rural areas**



**Mean time spent on specific childcare activities**

Generally, studies that have looked at mothers' (or parents') time with children have considered all childcare activities in a single category. However, there is a possibility that certain childcare activities are basic or essential irrespective of whether the mother is working or not. Hence, an attempt is made now to look at how a mother's time varies in terms of each of the specific childcare activities by work status. There are seven specific childcare activities considered for the analysis; 1) bathing children, 2) feeding children, 3) preparing special food for children, 4) dressing up children, 5) teaching children, 6) taking children to school, and 7) playing with children. Though the mean time spent on various specific childcare activities are given separately in this section, I have grouped them into two broad categories namely essential (bathing, feeding, dressing up the child, preparing special food for children, teaching and taking the children to school) and non-essential (playing with children) childcare activities as certain activities might be more important than other activities irrespective of work status of the mother. The mean time spent on specific childcare activities is given separately for women with at least one child in the age group of 0-4 years and women with no child in the age group of 0-4 but at least one in the age group 5-9.

***Essential childcare activities***

Regarding specific activities, women spent considerable time on bathing and feeding children. The mean time input was greater among women with very young children than women with no young child but at least one in the 5-9 years category (means shown in Table 3 and Figure 5 and 6 are in minutes per day). But the difference between working and non-working women was very small in the case of time spent on bathing children (except women with no young child but at least one in the 5-9 years of age category in urban areas). Time input on feeding children among women with a very young child differed significantly by work status of the mother in both rural and urban areas. By and large, women spent very little time for preparing special food in both rural and urban areas. Women also spent some time on dressing up children. This was significantly less for urban working women than for non-working women with a young child. Women spent little time on teaching and taking children to school, except for in the case of urban non-working women with no young child but at least one in the 5-9 years category.

**FIGURE 5 Time spent by mother on specific chil care activities: women with at least one child in th age of 0-4 years**

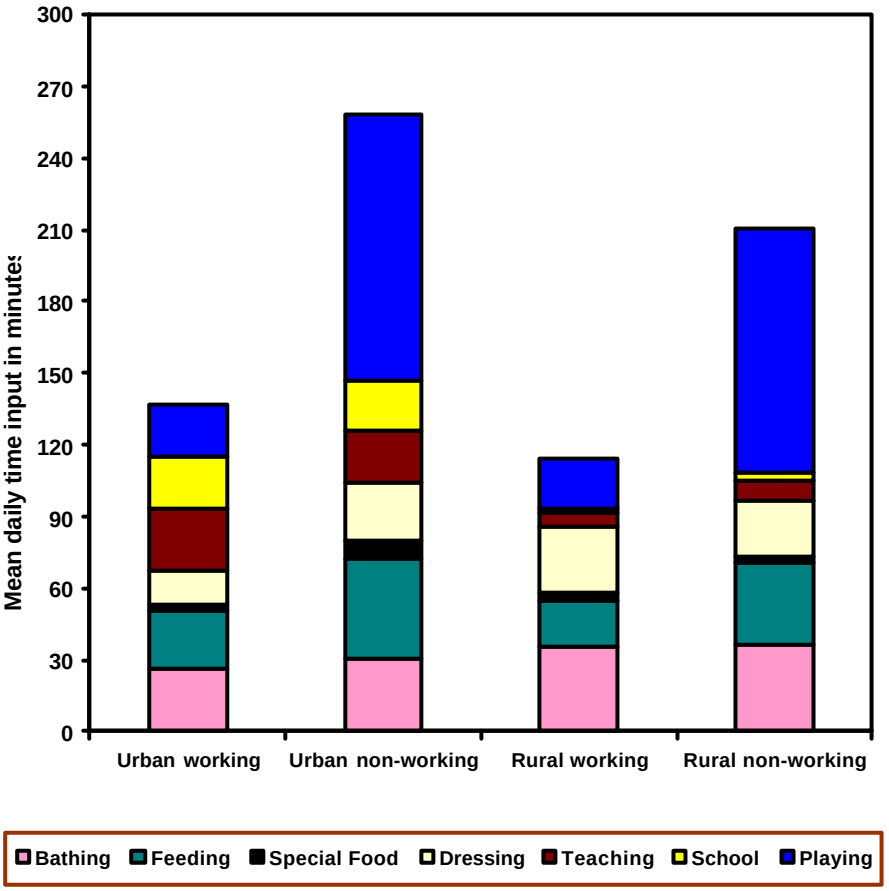
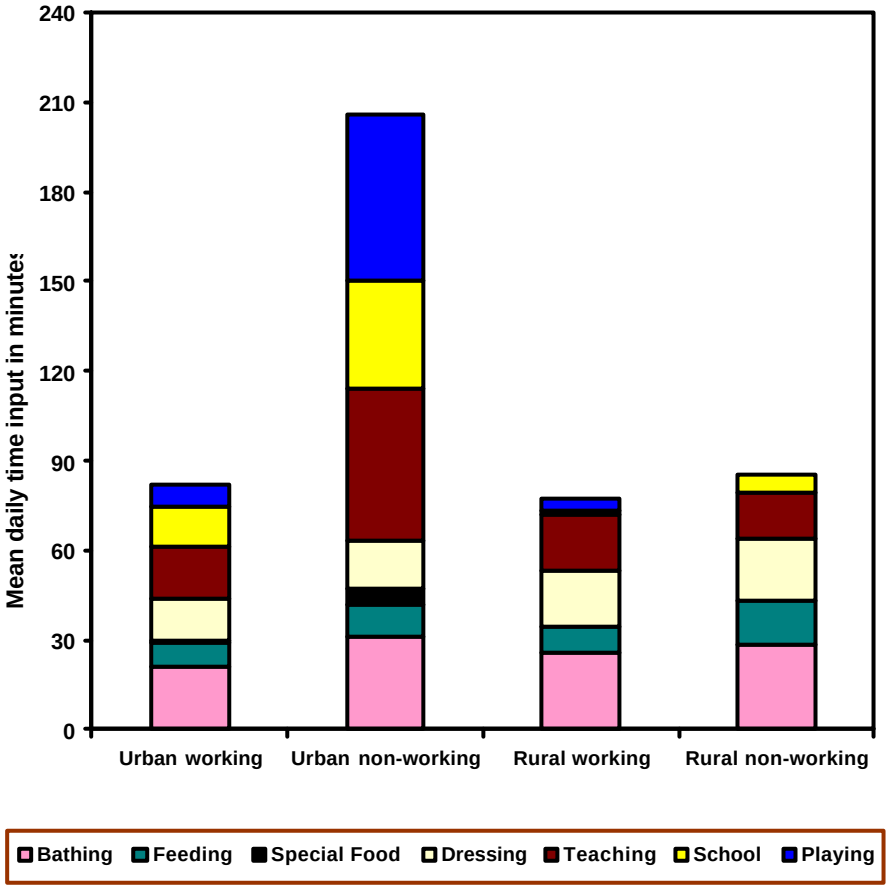


**FIGURE 6 Time spent by mother on specific child care activities: women no child in the age group of 0 but at least one child in the age group of 5-9 years**



**Non-essential childcare activities**

Regarding non-essential childcare activities, non-working women spent substantially more time than working women on playing with children. This was especially the case with women with very young children in both rural and urban areas (Table 3). The difference was about eighty minutes (nearly an hour and a half), and it is highly significant. But among non-working women with no young child but at least one in the 5-9 years category, only those in urban areas spent significantly more time playing with children.

Overall, the gross differentials in time spent on childcare by work status of the mother were large for total time spent, but generally small (though significant, especially in urban areas) for specific activities other than playing with children. The results presented so far, however, have been descriptive and have not controlled for other socio-economic factors in the population namely education of mother, age of child, household income, total number of living children etc. In order to see if a mother's work status had a significant effect on time with children, and particularly to see if the effect is significant after controlling for other socio-economic factors, multivariate analysis has been performed.

**TABLE 3 Mean time spent on specific childcare activities per day by work status of mother**

| | URBAN | | RURAL | | URBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|
| | Women with at least one child in the age group of 0-4 years | | | | Women with no child in the age group of 0-4 but at least one child in 5-9 years | | | |
| | Working | Non-working | Working | Non-working | Working | Non-working | Working | Non-working |
| | Mean total time spent on childcare *(in hours per day)* | | | | | | | |
| All childcare activities | 2.28 | 4.28 | 1.92 | 3.52 | 1.38 | 3.45 | 1.28 | 1.4 |
| | (t = - 5.38; p = 0.000) | | (t = - 6.20; p = 0.000) | | (t = - 6.38; p = 0.000) | | (t = - 0.25; p = 0.806) | |
| ***Essential childcare activities*** | Mean time spent on specific activity *(in minutes per day)* | | | | | | | |
| Bathing children | 26 | 31 | 35 | 36 | 21 | 31 | 26 | 28 |
| | (t = - 1.23; p = 0.222) | | (t = - 0.18; p = 0.861) | | (t = - 2.25; p = 0.027) | | (t = - 0.17; p = 0.869) | |
| Feeding children | 25 | 41 | 20 | 35 | 8 | 11 | 8 | 15 |
| | (t = - 2.78; p = 0.006) | | (t = - 2.81; p = 0.006) | | (t = - 0.85; p = 0.397) | | (t = - 1.06; p = 0.293) | |
| Preparing special food for children | 2 | 8 | 3 | 2 | 1 | 5 | 0 | 0 |
| | (t = - 2.35; p = 0.020) | | (t = 1.02; p = 0.310) | | (t = - 2.40; p = 0.019) | | (t = 0.34*; p = 0.732) | |
| Dressing up children | 14 | 24 | 28 | 24 | 14 | 16 | 19 | 21 |
| | (t = - 3.21; p = 0.002) | | (t = 0.85; p = 0.394) | | (t = - 0.49; p = 0.627) | | (t = - 0.23; p = 0.816) | |
| Teaching children | 26 | 22 | 6 | 8 | 17 | 51 | 19 | 15 |
| | (t = 0.62; p = 0.536) | | (t = - 0.59; p = 0.553) | | (t= -3.98; p = 0.000) | | (t= 0.30; p = 0.762) | |
| Taking children to school | 22 | 21 | 1 | 3 | 14 | 36 | 1 | 6 |
| | (t = 0.15; p = 0.880) | | (t = -0.84; p = 0.401) | | (t = -2.99; p = 0.004) | | (t = -1.95; p = 0.056) | |
| ***Non-essential childcare activities*** | | | | | | | | |
| Playing with children | 22 | 111 | 21 | 103 | 7 | 56 | 4 | 0 |
| | (t = - 5.85; p = 0.000) | | (t = - 7.45; p = 0.000) | | (t = - 5.72; p = 0.000) | | (t = 0.83; p = 0.413) | |
| **Number of Women** | **37** | **79** | **34** | **101** | **52** | **32** | **50** | **6** |

Note: Figures in parentheses are 't'-values (test statistics for equality of means for working and non-working women) and corresponding 'p'- values.
*: The means shown in the table are rounded off in minutes; the actual means are 0.2 and 0.0 for working and non-working women respectively.

**Regression results for time input on childcare**

The individual woman having at least one child below the age of 10 years is the unit of analysis and total time spent on childcare is used as the dependent variable. Ordinary least square (OLS) linear regression is adopted to quantify the net effect of time spent on childcare by women. In addition to work status of the mother (Dichotomous: Non-working = 0, Working = 1), education of the mother (Dichotomous: Illiterate = 0, Literate = 1) and annual household income (log) are used as explanatory variables. The total number of living children (actual number) is also included as an explanatory variable, since the mother's time input is likely to be influenced by the number of children she had to cater to. Age of the youngest child (age in completed years) is included because there would be greater demands on mother's time if a child is very young, especially an infant. Moreover, the presence of other adult women (such as mother-in-law, mother, sister-in-law, or sister of the woman) in the household (Dichotomous: Not-present = 0, Present = 1) is also included as an explanatory variable since such women could share some childcare tasks, lessening the demand on mother's time. Similarly, the presence of girls of age 12-17 (Dichotomous: Not-present = 0, Present = 1) is also included since girls of this age are traditionally expected to take care of younger siblings. As noted earlier, the analysis is first carried out for all women with at least one child below 10 years of age. Further, separate analyses is carried out for women with at least one very young child (age 0-4 years) and for women with no child below the age of 5 years but at least one in the age group of 5-9 years.

***Total time spent on childcare***

The regression results show that in both rural and urban areas, work status of the mother had a highly significant effect on total time spent on childcare (the left hand panel in the Table 4). As seen in Table 3, working women spent on an average about two hours less than non-working women on all childcare activities; in urban areas the difference was slightly larger (4.04 – 1.75 = 2.29 hours) than in rural areas (3.40 – 1.54 = 1.86 hours). After controlling for the effects of other variables, the net effect of work participation reduces slightly, to 1.83 hours for urban women and substantially, to 0.77 hour, for rural women. In both rural and urban areas, age of the youngest child had a negative effect on total time spent on childcare. That is, total time spent on childcare decreases as age of the youngest child increases. Education of the mother has a positive impact on total time spent on childcare. That is, more highly educated mothers

devoted more time to childcare, a fact that supports the observation made by Gauthier *et al.* (2004). Annual income of the household had a moderately negative significant effect on time input on childcare. Presence of other adult woman and total number of living children did not show a significant effect on time input. Presence of girls of age 12-17 reduced a mother's time input on childcare in urban areas.

As mentioned earlier, women with young children are expected to spend more time on childcare. To see this, the regression was rerun separately for women with at least one child below five years of age and for women with no child below five years of age, but at least one in the age range 5-9 years. The results of regression for women with a child below five years of age are given in the two columns in the middle panel of Table 4. In both urban and rural areas, the work status variable showed a significantly negative effect on time spent on childcare: the effect is about two hours in urban areas and one hour in rural areas. Education of the mother showed a positive effect in both urban and rural areas and age of the youngest child showed a negative effect in rural areas. Annual household income and presence of an adult woman failed to show any significant effect. However, presence of girls in the household significantly reduced a mother's time input on childcare. On the other hand, the number of living children increased a mother's time input, as expected, but only for urban areas.

The results of regression for women with no child below five years but at least one child of age 5-9 years are given in the right hand panel of Table 4. In urban areas, work participation reduced time input on childcare by 1.91 hours but there was no such effect in rural areas. A caveat is in order here since the number of non-working women of this category was very small in the rural sample. Age of the youngest child showed a negative effect in both rural and urban areas, the effect being stronger in rural areas. The total number of children showed a negative effect in urban areas and presence of other adult women showed (an unexpected) positive effect in rural areas. None of the other variables showed any significant effect.

Multivariate results show that the work status of mother had a strong negative effect on total time with children in both rural and urban areas. In other words, working mothers spent significantly less time with children after controlling for other factors such

as education, annual household income, total number of living children, age of youngest child and presence of other girls and women in the household.

**TABLE 4 Regression analysis for total time spent on childcare (in hours per day)**

| Explanatory Variables | Women with at least one child in the age group of 0-9 | | Women with at least one child in the age group of 0-4 | | Women with no child in the age group of 0-4 but at least one in the 5-9 age group | |
|---|---|---|---|---|---|---|
| | URBAN | RURAL | URBAN | RURAL | URBAN | RURAL |
| | Regression Coefficients | | | | | |
| ***Work status of the mother*** (Dichot.: Non-Working = 0, Working = 1) | **-1.8334** (0.000) | **-0.7678** (0.003) | **-2.0102** (0.000) | **-1.0077** (0.002) | **-1.9076** (0.000) | 0.0867 (0.851) |
| ***Education of the mother*** (Dichot.: Illiterate = 0, Literate = 1) | **0.5539** (0.047) | **0.3952** (0.050) | **0.7988** (0.051) | **0.5086** (0.032) | 0.2297 (0.499) | 0.0979 (0.788) |
| ***Annual household income*** (log) | -0.5396 (0.059) | -0.4112 (0.078) | -0.5410 (0.158) | -0.4106 (0.136) | -0.3655 (0.382) | 0.5797 (0.273) |
| ***Presence of girls in the age of 12-17 in the HH*** (Dichot.: Not present = 0, Present = 1) | **-1.0219** (0.024) | -0.1981 (0.595) | **-2.8348** (0.011) | 0.4979 (0.421) | 0.0050 (0.992) | -0.4254 (0.341) |
| ***Presence of other adult women in the HH*** (Dichot.: Not present = 0, Present = 1) | -0.2908 (0.370) | 0.1667 (0.493) | -0.1048 (0.808) | -0.0816 (0.781) | -0.4785 (0.301) | **0.8959** (0.035) |
| ***Total number of living children*** (actual) | 0.1238 (0.448) | 0.0321 (0.735) | **0.5017** (0.023) | 0.1030 (0.431) | -0.5143 (0.031) | -0.1015 (0.498) |
| ***Age of the youngest child*** (in completed years) | **-0.0976** (0.042) | **-0.2353** (0.000) | 0.1405 (0.266) | **-0.2976** (0.002) | -0.2334 (0.068) | **-0.2380** (0.047) |
| Constant | 9.1416 | 7.5290 | 7.9359 | 7.4984 | 9.6988 | -2.7290 |
| $R^2$ | 0.3871 | 0.4522 | 0.3175 | 0.3163 | 0.4403 | 0.3054 |
| **Number of Women** | **200** | **191** | **116** | **135** | **84** | **56** |

Note: Figures in parentheses are 'p' values.
Coefficients significant at at least 5% level are shown in bold type.

***Time spent on specific childcare activities***

To see whether the strong negative effect reflected in total time input on childcare is found in all the seven specific activities or in only a few of them, the regression analysis was carried out separately for all the seven specific activities. For each of the specific activities, the regression is rerun with the same set of variables included in total time spent on childcare. These regressions are used to estimate the *net effect* of work participation on time input on the specific activity of childcare, after controlling for the effects of other variables. The regression coefficient of the work status variable gives the estimated net effect. A negative value indicates that work participation reduces a mother's time input on the specific activity and vice versa. The estimated effects are presented in Table 5 and the level of significance is also indicated. The coefficients of the other variables are not presented in Table 5 as the focus of the paper is to see the net effect of work status after controlling for other variables.

First, the regression results of all specific activities for women with at least one child below 10 years of age are discussed. Work status of the mother showed a significant negative effect on time input on bathing children among women with children below 10 years of age (first panel in Table 5) in rural areas but not in urban areas. In the case of feeding children, work participation did not seem to influence the time input in both urban and rural areas. Working women spent significantly less time on preparing special food and dressing up children in urban areas than non-working women. On the other hand, in rural areas working women spent more time on preparing special food for children and dressing up children. But it should be noted that the time spent on this particular activity was generally small, namely only a few minutes on an average. As expected, non-working women spent significantly more time with children on teaching related activities but only in urban areas. Women in rural areas hardly spent time with children on teaching related activities. Regarding time spent on playing with children, the work status of mother showed a significantly negative effect in both rural and urban areas. In the case of urban women the magnitude was very large.

Next, the regression analyses were rerun for all seven specific childcare activities separately for women with one child in the age group of 0-4 and women with no child in the age group of 0-4 but at least one child in the age group 5-9 years. Among women with one child in the age group of 0-4 (women with a very young child), the work

status of the mother did not show any significant negative effect on specific activities except for playing with children and dressing up children and too only in urban areas. In other words, working women with a very young child spent significantly less time only in playing with children and dressing up children in urban areas. Work participation of the mother did not show any significant effect on most of the specific childcare activities after controlling for other factors especially among women with a very young child. This was true for both urban and rural areas.

Among women with no child in the age group of 0-4 but at least one in the age group 5-9 years, the effect of work status is almost the same (though the values of coefficient varies) as that observed in women with at least one child in the age group of 0-9. Further, the negative effect of work status on each of specific activities was observed only in urban areas not in rural areas. In other words, among women with older children, mothers spend significantly less time on specific activities but only in urban areas. The work status of the mother showed a positive effect on specific activities in rural area although it was not significant

Overall, the analysis suggests that there is no significant effect on most of the specific activities of a woman with younger children working. What accounts for the greater time spent by non-working women on total time spent on childcare is playing with children. Non-working women spent more time than working women on playing with children. This is true in both urban and rural areas but more conspicuous in the former. Working women with older children spent less time on specific childcare activities after controlling for other factors like education, total number of living children, annual household income but it was only significant in urban areas.

**TABLE 5 Estimated net effects of work participation of mother on time input on specific childcare activities**

| Specific Activities | Women with at least one child in the age group of 0-9 | | Women with at least one child in the age group of 0-4 | | Women with no child in the age group of 0-4 but at least one in 5-9 | |
|---|---|---|---|---|---|---|
| | URBAN | RURAL | URBAN | RURAL | URBAN | RURAL |
| | **Net effect on time spent by mother on specific childcare activities *(in minutes per day)*** | | | | | |
| ***Essential activities*** | | | | | | |
| Bathing children | - 8.4*** | +1.1 | - 6.3 | - 2.7 | - 10.5** | + 1.2 |
| Feeding children | - 4.7 | - 6.9 | - 8.0 | - 6.3 | - 0.8 | - 5.7 |
| Preparing special food for children | - 4.3** | + 3.0* | - 4.6 | + 4.7** | - 3.9** | + 0.5 |
| Dressing up children | - 4.7* | + 6.2 | - 8.5** | + 7.5 | - 1.0 | + 1.7 |
| Teaching children | -14.6** | - 1.8 | - 7.3 | - 8.8 | - 28.6*** | + 8.8 |
| Taking children to school | - 9.5* | -1.8 | - 8.5 | -2.22 | -19.5*** | - 5.2** |
| ***Non-essential activities*** | | | | | | |
| Playing with children | - 63.8*** | - 46.0*** | - 77.5*** | - 52.6*** | - 50.1*** | +4.0 |
| | **Net effect on total time spent by mother on childcare activities *(in hours per day)*** | | | | | |
| *All childcare activities* | - 1.83*** | - 0.77*** | - 2.01*** | - 1.01*** | - 1.91*** | + 0.09 |
| Number of Women | 200 | 191 | 116 | 135 | 84 | 56 |

Note: The estimated net effects are the coefficients of the work status variable obtained from regression equations for the respective dependent variables on time input. The other variables used in the regression equations are: education of mother, annual household income (log), presence of girls of age 12-17 in the household, presence of other adult women in the household, total number of living children, and age of the youngest child.
***, **, * : Significant at the 1% , 5% and 10% levels respectively.

## Conclusion

The economic trend of increasing participation of women in market activities, the demographic trend of declining fertility and the continuing patriarchal setting in India provide an interesting context within which to analyse the potential relationship between mother's work participation and time with children. However, studies that have focused on the relationship between mother's work participation and time with children remain scanty in most developing countries including India due to the absence of systematic data on actual time use pattern. Results presented in this article contribute to the literature by examining the level of women's time, especially women in poor localities, on various household activities including time with children. A detailed analysis in this paper of a mother's time with children also provides an answer to whether working mothers in India are investing less time in the next generation.

Results presented in this article reveal first that despite the different nature of jobs in urban and rural areas, by and large time allocation on various household activities did not differ much between working women in rural and urban areas. Often, there is a tendency among researchers to overlook working women in rural areas due to the nature of jobs women are engaged in, i.e. mainly agriculture and related activities that are seasonal, often assuming that these jobs are more flexible and compatible with other household activities, something that is not true. In fact, the present study concludes that working women in rural areas spent as much time as working women in urban areas on various household activities even though the nature of job is quite different.

Second, working women spent less time on childcare, leisure time and personal care activity as compared to non-working women in both rural and urban areas. This indicates that work participation of women not only reduces their time with children, something which is often pointed out, but also time available for themselves is less – a fact that the demographic literature in developing countries has not paid much attention to.

Third, women spent about two hours on fetching water and fire wood on an average per day and this is true both in rural and urban areas. This indicates that irrespective of work status, Indian women in poor households spend significant amount

of time on domestic activities, which might directly or indirectly put pressure on women to reduce time with children and the time available for themselves. This argument is consistent with earlier findings by Desai and Jain (1994) for poor rural households. The present study reveals that the condition of urban poor women is almost the same as rural poor women even though there are special schemes to provide infrastructure facilities like drinking water and toilets in urban slums. It was observed during the field work in urban slums that though many common drinking water taps are available, poor urban households get water once in a week during the summer season and twice in a week during the rainy season; hence, women ended up spending a significant amount of time for fetching drinking water.

Demographic literature in the past five decades has addressed various facets of female work participation namely, fertility decline, child survival and health. By consistently stressing the negative effect of women's participation in the labour market on fertility and child survival and health, earlier studies (except Desai and Jain, 1994) have ignored the effect of women's work participation on their personal time and their participation in domestic activities. The present study points out that availability of infrastructure, such us drinking water facilities in urban areas might help increase working women's time with children and time for personal activities such as sleeping and eating. Otherwise women, especially work women, might end up with poor health that in turn will affect not only their time with children but with the entire family.

Fourth, a distinction needs to be made in terms of time spent on overall household activities and childcare activities. In general, children of working mothers received about two hours less time than children of non-working mothers per day in both rural and urban areas. However, detailed analysis of a mother's time spent on specific childcare activities reveals that working women with young children (0-4 years) did not spend significantly less time with children except for playing. The results are statistically significant both in rural and urban areas. A major portion of the reduction in time input on childcare among working women was due to the reduction in playing with children which it would be fair to say is probably not perceived of as essential in general. Thus, working women especially with young children did place importance on essential childcare activities even when poverty compelled them to enter the market place. It needs to be mentioned here that time spent on playing with children might have some impact on the

development or overall well being of children. However, what needs further enquiry is whether the effect of mother's time spent with children on playing compensates for her earnings, more important no doubt in poor populations.

Finally, employed mothers devoted less time to their older children (5-9 years) with regard to specific activities than non-working mothers but only in urban areas. Why was the negative effect observed only for older children? This is probably because working women might manage to address the essential aspects of childcare especially for very young children to a fairly large extent but not for older children due to the natural constraints of time. This suggests that it is essential to provide childcare facilities out of school hours and free of cost for older children. In this regard, it is important to note that in a country like India there are no formal day care centres, even during working hours, for children, especially affordable ones for poor working women. hours.

Why is the negative effect only in urban areas? This is probably because in urban slums, the main economic activity for women is construction and domestic service. But in rural areas, the work is often seasonal and mostly in the same village or in a neighbouring village. It is possible for working women to come home and take care of the children because of the short distance between the workplace and home

This discussion is important in the context of the role of other family members in childcare. t is not that family members are generally available to provide childcare when the mother is working. In fact, the data do not indicate any major role of other care providers except for a minor role of teenage girls from the family. Moreover, alcoholism is a serious problem that prevents fathers from contributing to childcare, more so in urban areas. Research in developed countries suggests an important role for fathers (in terms of time spent with children) in the context of an increasing role for mothers in the labour market. But research in developing countries somehow has overlooked fathers' time with children and failed to understand the role played by fathers instead focusing on older siblings and grandmothers. Despite the constraints of drinking on father's contribution to childcare, a father's role requires more research attention in developing countries especially in the context of declining fertility rates, the breakdown of extended families and participation of grandmothers as well in the labour market due to economic necessity.

One last comment appears to be in order. Are older children able to adapt to their mother's absence and therefore mothers spend less time with them less time? To see how a child in the older age group spends time in the absence of the mother, direct observation of a child is necessary rather than information about time spent on childcare by the mother in order to improve the authenticity of information collected. Hence, future research especially micro level studies are needed to look at how children adapt to their mother's absence over time. Furthermore, research on mother's employment in developing countries, should focus on "quality" of time spent on childcare instead of "quantity" of time spent on childcare.

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**Endnotes**

[1] The effect of maternal work status on congenital developments of the children is not consistent in developed countries and hardly any study exists in the case of developing countries. Various studies in developed countries, especially in the United States, have examined data from the National Longitudinal Survey of Youth (NLSY) to understand the relationship between female work participation and children's cognitive development and socio-emotional development. A few researchers found a negative relationship between maternal employment and congenital outcome of children especially for mother's who worked in their children's first year of life (Desai *et al*. 1989), mothers who worked full time (Belsky and Eggebeen, 1991), and mothers who worked more weeks (Blau and Grossberg 1992). On the other hand, a few researchers found that the effect of mothers' work status on children's individual achievement was either positive (Vandell and Ramana (1992) or not significant (Parcel and Menaghan 1994). Hence, there are mixed results viz-a-viz maternal employment and children's cognitive development and individual achievement of children in developed countries. Research literature on this issue in the context of developing countries especially in India does not exist.

[2] Scheduled Castes are castes which were historically oppressed and treated as untouchables and enumerated as such by Census authorities. Most are generally very poor, own little land and traditionally engage in low paid occupations.

[3] In the absence of ward level data on incomes, wards with low literacy were presumed to have a large proportion of poor population.

[4] A *taluk* is a unit of revenue administration in India below the state and district level. It is headed by a *tehsildar*

[5] The nature of childcare arrangements and time with children would naturally differ in single parent families fom that in two parent families (see for example Bianchi 2000). In order to study this issue large samples need to be collected from both single and two parent families. As the incidence of divorce is quite low in India, single parent families would primarily be those with widowed parent. The 1991 Census of India showed that only 3.3 percent of ever married women in the age group 15-44 were widowed or divorced or separated (Registrar General, India, 1998a). It would be difficult, therefore, to obtain a large enough sample of mothers living as single parents. Hence, it was decided to concentrate only on two-parent families and only currently married women. The issue of single-parent families was not addressed in the paper.

[6] A *pucca* house is one that is made with high quality materials through out, including the roof, walls and floor.

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