

WORKING STATUS AND ANXIETY LEVELS OF URBAN EDUCATED WOMEN IN CALCUTTA

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SUMMARY

The primary objective of the present study was to assess the impact of out-of-home employment on anxiety levels of mothers. A study group of working mothers resident in Calcutta (India) was compared with a socioeconomically similar group of non-working mothers with respect to their anxiety level, measured by the Anxiety Scale Questionnaire, in terms of the total anxiety score and its various personality components. The possible relationships between anxiety score and age of these mothers as well as their children were studied.

Non-working mothers showed higher anxiety levels than their working counterparts with respect to the total anxiety score as well as its components, although the differences were statistically non-significant. The anxiety scores of non-working mothers showed increasing values with increasing age of children. This trend was absent among the working mothers. The age of these mothers was not related to their anxiety level.

INTRODUCTION

It may be surmised that to carry out effectively the double burden of work at home and at the workplace, the urban middle-class working mother often faces unavoidable physical and psychological stresses. She has, in fact, to carry out two full-time jobs, with little time for rest, leisure or self-care (Report of the Committee on the Status of Women in India, 1974).

In western societies investigations of the effects of stress on physical and mental health and well-being started from the beginning of the twentieth century. Since then there has been considerable research on stress and health particularly in relation to behavioural and mental disorders (Cooper & Shepherd, 1970; Cooper & Morgan, 1973; Hinkle, 1973). Physical ailments, such as cardiovascular and bronchial disorders, diabetes, tuberculosis, migraine and gastrointestinal disorders, are often found to be related to stress (Selye, 1976). Anxiety has long been known to be closely associated with adjustment/maladjustment to social roles. Several studies were conducted within and outside India to measure the levels of anxiety using various anxiety scales. A study by Hundal and Kaur (1974), aimed at adopting the Anxiety Scale Questionnaire (ASQ) developed by Cattell (1963) to the Indian setting, found the scale to be reasonably reliable and valid for Indian adults with knowledge of the English language. Newberry *et al.* (1979) examined the psychiatric status and social adjustment of matched groups of working married women

and housewives. No difference in overall psychiatric symptoms was observed between the groups: however, the working married women did differ significantly from housewives in their attitudes towards work outside and at home.

A large number of urban educated women today play dual roles - at the workplace as well as in the family - both of which are physically and psychologically stressful. Upon a review of literature on the aspects of *Women, Work and Health*, Sorensen and Verbrugge (1987) suggested that "women's multiple responsibilities and attendant role conflicts will have negative consequences for their health". Research on the effects of job stress suggests that the job situation may account for decrements in mental well-being, increased physical morbidity and elevated rates of cardiovascular disease. Some suggest that "women's exposure to the job stressors ...is likely to increase their disease risks" (Sorensen & Verbrugge, 1987). On the other hand, some other studies related to psychological distress, life satisfaction or positive well-being suggest no significant difference between employed and unemployed married women with children at home (Warr & Parry, 1982). Davidson and Cooper (1983) studied the sources of stress and their effects on the health of a group of female managers compared to their male counterparts in Britain, and observed that the women manifested psychosomatic symptoms, poorer work performance and experienced "higher pressure levels stemming from stressors in the work, home/social and individual arenas". However, it appears that within a culture, individuals respond and adapt to stress with varying depths of sensitivity and success, so that they show varying degrees of susceptibility to stress induced illnesses (Giggs, 1980). It is also believed that the differing tempo of life in different cultures produces different exposures to stress, which is particularly marked in Western urban cultures (Howe, 1980).

Mukhopadhyay (1989), while comparing groups of working and non-working mothers, showed a positive statistically significant relationship between the 'health score' and 'anxiety score' - both defined in terms of responses to questions representing the popular notion of stress - as is intuitively expected, but no significant difference was observed between the two groups with respect to the mean values of the two scores mentioned above.

The health of an individual in a society is closely related to his/her social status, particularly for women "whose health is conditioned to a great extent by social attitudes. The health status of women includes their mental and social conditions as affected by prevailing norms and attitudes of society in addition to their biological and physiological problems" (Report of the Committee on the Status of Women in India, 1974).

The objective of the present study was to investigate the impact of out-of-home employment on mental and physical health parameters of mothers. This study, therefore, investigated the relationship between the working status of mothers and the health of these mothers as well as their children. The present discussion deals with the mental health of mothers, measured in terms of anxiety score.

MATERIAL AND METHODS

In the present study, a group of working mothers was compared with a socioeconomically similar group of non-working mothers with respect to their anxiety levels. Anxiety level

was scored with the help of the Anxiety Scale Questionnaire (Krugg *et al.* 1976) which is described in detail below.

Women teachers working in non-government undergraduate colleges belonging to the 25-50 year age group, living in wedlock, having at least one child, and residing in Calcutta, constituted the working mother group. The selection of non-working mothers was made after interviewing the working mothers. Each working mother was asked to select, from among her acquaintances, a non-working mother of her own age group, having broadly similar socioeconomic and cultural backgrounds, educational levels, and so on. The non-working mother, thus selected, was subsequently interviewed. All interviews were conducted by one of us (SM).

The sample consisted of 94 working and 94 non-working mothers. The selection of college teachers from among all possible middle-class working mothers in different occupations was purposively made, because they constituted a relatively homogeneous socioeconomic group, and also because women in Bengal have a strong preference for teaching, which as an occupation is considered to be very 'honourable' (Standing, 1985). The middle-class was purposively chosen because women of this group form the largest section of employed women in urban India.

The anxiety level of each selected woman was measured with the help of the Anxiety Scale Questionnaire (ASQ) which consists of 40 questions. It was introduced as 'Self Analysis Form'. The scale gives an accurate appraisal of free anxiety level, supplementing clinical diagnosis.

The term 'anxiety' has been defined in various ways. A distinction is made between 'Test' and 'General' anxiety (Sarason, 1957). While 'Test' is concerned with transitory state or fluctuating condition of the organism, 'General' anxiety relates to relatively stable personality characteristics. In the ASQ the two categories of anxiety have been denoted as 'State' and 'Trait' anxiety, respectively (Hundal & Kaur, 1974). Both types of anxiety can be expressed in covert as well as overt behaviour (Krugg *et al.* 1976). Scoring was done with the help of a scoring key. A higher score is a reflection of a higher anxiety level. Three kinds of test scores may be obtained: (i) total anxiety score (based on responses to all 40 questions); (ii) a breakdown into 'covert' i.e. unrealised, anxiety scores (based on responses to 20 questions) or an 'overt' i.e. symptomatic, anxiety score (based on responses to 20 questions); and (iii) a breakdown of the total score into five personality components, eg. 'apprehension', 'tension', 'low self control', 'emotional instability' and 'suspicion'. "The number of items per anxiety component was approximately proportional to that component's importance in the anxiety pattern" (Krugg *et al.* 1976).

Of the various scores, "the total anxiety score is by far the most important one and will in almost all cases be the only one depended upon" (Krugg *et al.* 1976). Results of a number of studies which have related ASQ scores to the questionnaire measures of anxiety show that the presently used ASQ has an average correlation of 0.76 with the State Trait Anxiety Inventory or STAI (Spielberger *et al.* 1970).

In the present study, however, the total anxiety score and the scores of various components were used to compare the anxiety levels of the two groups of mothers. The anxiety scores of mothers having children of various ages were also computed, taking into consideration the age of the youngest child, in case of mothers having more than one child. Since the total fertility rate and the completed family size of the two groups of

Table 1
Mean values and standard deviations of total and component anxiety scores among working and non-working mothers

Working status	Working mothers (N = 94)		Non-working mothers (N = 94)	
	Mean	SD	Mean	SD
Low self-control	4.73	2.99	5.37	3.11
Emotional instability	4.20	2.40	4.71	2.21
Suspicion	5.14	1.73	5.00	1.58
Apprehension	11.06	4.19	11.30	4.09
Tension	8.24	4.37	8.68	3.91
Total score	33.44	12.15	35.14	11.09

mothers are similar, no attempt was made to correlate the anxiety level of a mother with the number of children she had.

Data on general health score was collected using the questionnaire adopted in a study by Davidson and Cooper (1983) on British women managers. The scale used was a modified version of the Gurin Psychosomatic Symptom List (Gurin, Veroff & Feld, 1960). The dimensions were scored on a 5-point Likert type scale from 1 (never) to 5 (always). An overall health score was then calculated, where lower score indicated better health. The questionnaire used was considered to be sufficiently general to be used in the present study (Cooper, 1984).

Statistical analyses of data on anxiety scores included computation of descriptive statistics (eg. means and standard deviations), parametric tests of hypothesis (t-test), and correlation coefficients and analysis of covariance. Non-parametric tests - Kolmogorov-Smirnov two-sample test and sign test (Siegel, 1956), which are analogous to the parametric t-test and the paired t-test, respectively, were performed for testing the hypothesis of equality of probability distributions of scores of working and non-working mothers.

RESULTS

Table 1 shows the means and standard deviations of each personality component score, as well as the total anxiety score, in the two groups of mothers. The working mothers show lower mean values of all the anxiety component scores, and also the mean total score, than their non-working counterparts, except for the 'suspicion' component. In this component, the working mothers show a slightly higher value. None of the mean component scores or the total score, however, show statistically significant difference, at the 5% level, between working and non-working mothers.

In Table 2, the anxiety scores of mothers are shown by the age group of their children. The differences in mean anxiety scores between the working and non-working mothers

Table 2
Total anxiety scores of working and non-working mothers classified by age of children:
mean values, standard deviations and values of the t-statistic

Age group of children (yrs)	Working mothers			Non-working mothers			t-value	(df)
	N	Mean	SD	N	Mean	SD		
0-5	21	32.14	10.82	21	32.14	10.40	0.00	(40)
6-10	38	34.10	11.61	39	34.74	10.45	1.65	(75)
11-15	29	33.03	13.33	28	36.71	10.92	0.85	(55)
> 15	6	33.67	15.98	6	40.33	0.81	0.81	(10)
All ages	94	33.46	12.15	94	35.14	11.09	0.98	(186)

are not statistically significant, at the 5% level, for any of the children's age groups. However, among the non-working mothers, the anxiety score increases with increasing age of their children, but no such pattern is observed among the working mothers.

For both groups of mothers, the correlation coefficients between age and anxiety score (r_W and r_{NW} for working and non-working mothers, respectively) were calculated. The total anxiety score of neither working nor non-working mothers is found to be significantly correlated (at the 5% level) with age ($r_W = 0.053$, $r_{NW} = 0.121$).

Table 3 presents the statistics for testing the equality of anxiety score distributions between working and non-working mothers. Using a parametric t-test it is seen that with respect to anxiety scores - total as well as its various components - the difference between the two groups of mothers is non-significant at the 5% level. In the present study, since each non-working mother was selected by her working counterpart, taking into consideration similarities of age and socioeconomic status, such a selection procedure might have induced a correlation between anxiety score of a working mother and the non-working counterpart selected by her. To accommodate this possibility, we have tested the null-hypothesis of equality of mean anxiety scores, using a two-sample paired t-test. As is seen from Table 3, no statistically significant difference was detected by this test procedure also. Moreover, since the t-tests rely on the assumption of normality of the distribution of anxiety scores (which may not be valid), a non-parametric analogue of the t-tests was also performed. Even these tests did not indicate any statistically significant difference between the two groups of mothers (see Table 3).

A possibility that remains to be explored is whether the number of children and/or number of hired domestic help had any effect on the anxiety score. This possibility was investigated by comparing the mean anxiety scores after adjustment for number of children and number of hired domestic help. Results of the analysis of covariance performed did not indicate any significant difference between adjusted mean anxiety scores of working and non-working mothers (F ratio = 0.86; df = 1, 186; $p = 0.354$).

The anxiety and the general health scores are observed to be positively correlated within both the working and non-working groups of mothers; both correlation coefficients are significantly greater than zero. The scores are more closely correlated among the working mothers ($r = 0.571$; $t = 6.671$; $df = 92$) than among the non-working mothers ($r = 0.491$; $t = 5.406$; $df = 92$).

Table 3
Tests of equality of mean values and frequency distributions of anxiety scores among working and non-working mothers

Anxiety component	Parametric tests		Non-parametric tests	
	Two-sample ⁺	Paired ⁺⁺	Kolmogorov-Smirnov	Sign
Low self-control	1.43	1.34	0.17	1.86
Emotional instability	1.51	1.58	0.14	2.06*
Suspicion	0.58	0.37	0.04	1.65
Apprehension	0.40	0.43	0.09	1.24
Tension	0.72	0.77	0.14	0.00
Total score	0.98	0.89	0.15	1.65

⁺ degrees of freedom = 186; ⁺⁺ degrees of freedom = 93; * significant at 5% level

DISCUSSION

In the present study it is observed that out-of-home employment does not increase the anxiety score of working mothers of Calcutta city (engaged mainly as college teachers), compared to their non-working counterparts. Comparisons were made between the two groups of mothers with respect to several mental health related traits. In respect of the total anxiety score as well as its personality components, the non-working mothers actually show higher mean scores, although the differences are not statistically significant. It may be speculated that the non-working mothers are under psychological pressure due to accumulation of stress generated through monotonous housework. They get little opportunity, compared to their working counterparts, to enjoy social contacts regularly outside the home, which would probably have provided an outlet for accumulated stress. Also, unlike the working mothers, a trend of increase in the anxiety score among the non-working mothers, with increasing age of their children, is observed. The demands of children may be assumed to vary and intensify with their increasing age, and again, it may be speculated that being confined at home most of the time, the non-working mothers may sometimes find it difficult to cope with the stressful situation created by the increasing demands made by children.

A strong possible reason for there being no statistically significant difference in anxiety levels between working and non-working mothers is the confounding effect of differences in the numbers of children and in the numbers of hired domestic help. To investigate this, we performed an analysis of covariance and compared the mean total anxiety scores after adjusting for differences in the number of children and hired domestic help. No statistically significant difference was detected even in the mean adjusted scores. It therefore seems that the anxiety levels of the two groups of mothers are similar, although the non-working group of mothers show slightly higher anxiety scores.

Overall, then, our data do not support the hypothesis that working women are under greater stress and hence suffer from greater anxiety levels. In fact, our data provided indications to the contrary. The fact that non-working mothers show higher mean anxiety

scores than working mothers may be due to the monotony of household chores, and lack of wide social interactions (and also presumably lack of financial independence). We also note that the occupation of the working mothers in this study was teaching, which may not be as stressful as many other occupations (eg. secretarial) in which urban middle-class women also engage themselves. The generality of our finding can only be tested by choosing a group of women engaged in different professions. It would also be worthwhile to make an in-depth investigation into the factors that contribute to the high anxiety levels of non-working mothers.

ACKNOWLEDGEMENTS

The authors are indebted to the authorities of the Indian Statistical Institute for financial support; to the teachers of various undergraduate colleges, and to the housewives of the city of Calcutta for their kind help and cooperation; to Howard Moss, MD, for helpful comments on an earlier draft of this paper; to J.K. Ghosh, PhD, FNA, for his helpful advice on and encouragement in this work; and A. Basu, DSc, for guiding this work.

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