

Comparative evaluation of Development, Dental behavior and Dental caries among children of working and non-working mother

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Abstract:

Introduction: Family is the child's first school and the mother is the first tutor. Each member of the family forms an important position in the interaction map of a child but among them the role of mother is most essential and varied as the child spends most of his time with his mother. Mother is the glue that keeps the family together as it is up to her to provide the love, care and support needed by growing children.

Materials and Method: 40 working and 40 non-working mother's children were included in the study. A self-complied questionnaire was prepared consisting of 20 questions which were divided into – Operator's criteria, Clinical criteria and Questionnaire to the mother for the evaluation of Dental behavior, Development and dental caries in children of working and non-working mother. After data collection Fischer exact test and chi-square test was performed for statistical analysis.

Results: The results indicate that there is a correlation between the Dental behavior and occupational status of the mother. There is also positive correlation between the development of a child and occupational status of the mother. Dental caries was found to be more profound in children of non-working mother.

Conclusions: Behavior and development of a child is influenced by a number of factors. The occupational status of the mother can be termed as one of the several factors that determine the behavior and rate of development of any child.

Keywords: Behavior management, Working mother, Non-working mother, Dental caries

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I. Introduction

From last few decades, there is substantial increase in ratio between no. of working mothers to non-working mothers. Numerous studies concluded that children whose mothers work in their first year of birth have more behavioral problems and lower cognitive scores than non-working mother's children.¹

Bronfenbrenner U et al (1984)² stated that maternal employment leads to early development of child while Belsky J (1988)³ reported that maternal employment causes adverse effects on child development.

Due to this conflict, this study was carried out to find out any differences in behavioral problems, development and dental caries between children of working and non-working mothers.

II. Material and Method

The study was conducted in the Department of Pedodontics and Preventive dentistry. The entire sample was collected from the OPD. The sample consist two groups of 40 children each between the age of 4-7 years of working and non-working mother respectively. Inclusion criteria was-

1. 4-7 year old child
2. Working mothers who were working since the 1st yr of child birth

3. Middle class family (working mother's salary 2-5 lac/annum)
4. First child
5. Children living in nuclear family

Exclusion criteria was-

1. Working mothers who were not working during the 1st yr of child birth
2. Working mother's salary above 2-5 lac/annum
3. Mentally- challenged child
4. Uneducated mother

Both groups of mothers were interviewed through a questionnaire which focused on the subject's age, gender, socio-economic status and the family status. A self- complied questionnaire was prepared consisting of 20 questions which were divided into –

- I. Operator's criteria
- II. Clinical criteria and
- III. Questionnaire to the mother.

In operator's criteria behavior of each child was assessed with the help of Frankel's behavior rating scale (1975). Operator's criteria also included the assessment of physical development by means of height and weight of the child which were determined using height scale and weighing scale in accordance with the growth chart of world health organization.⁴

Clinical criteria included dental caries examination with mouth mirror and probe which was recorded in accordance to decayed, extracted, filled teeth index (1944).

Questions to mother were categorized into 4 areas such as –

- i. Physical development which included developmental milestone
- ii. Cognitive development which included eating problems and speech problems
- iii. Social development which included behavior in school and interaction with non- family members
- iv. Emotional development which included presence of oral habit and sleep problems

The questions were scored under two point scale of present or absent.

After data collection was completed, statistical analysis was done using fisher exact test and chi- square test.

III. Result

Assessment of behavioral problems of children among working and non- working mother's revealed that 45% of working mother's children and 35% of non-working mother's children showed negative behavior. However the result was not statistically significant. (Table 1)

Height and weight of children between working and non-working mother's showed no statistical difference. (Table 2)

Dental caries were found to be higher in children of non-working mother at 37.5% as compared to working mother at 15%. The result was statistically significant (<0.005) with a mean value of 9.35 ± 8.56 and 4.35 ± 6.77 for non-working and working mother's children group respectively.(Table 2)

Developmental milestones among 80% working mother's children were found to be delayed while 55% non-working mother's children showed delayed developmental milestones. However, the result was statistically non-significant. (Table 3)

In cognitive development, both groups showed no statistically significant (<0.05) differences in speech and eating problems. (Table 4&5)

Comparison of social behavior among both groups showed that 65% children of working mothers were interactive while only 50% non- working mother's children were interactive. Non-working mother's children were more introvert (10%) and shy (40%) as compared to working mother's children. However, the result was not statistically significant. (Table 6)

In emotional development, sleep problems were found in 60% children of non-working mother's as compared to children of working mother's (20%). The result was statistically significant. (Table 7)

Oral habits were more profound in children of working mother (65%).Among this percentage, thumb sucking habits were more common followed by tongue thrusting and mouth breathing whereas in children of non-working mother, oral habits were seen only in 40% of children. The result was statistically significant. (Table 8)

IV. Discussion

The past few decades have seen an unprecedented increase in early maternal employment. Women are now nearly as likely to be working when they have an infant as they are when they have an older preschooler. Yet, questions remain as to what the impact of this rapid shift toward early maternal employment might be.

In this study it was found that children of working mother showed slight negative behavior during dental treatment as compared to children of non-working mother. There are no studies available which compare the behavior between children of working and non-working mothers during dental treatment. The reason of this finding may be children of working mothers are more pampered.

Soumita Ranjan et al (2013) conducted a study on effect of Mother's working status on cognitive and emotional behavioral problems of primary school children and found that children of employed mother had more behavioral problems⁵ Moatz M. et al (2004) undertook a study on prevalence and risk factors of emotional & behavioral problems among school going children. He considered mother's occupation as one of the most prominent risk factors which leads to development of emotional & behavioral disturbances in school going children.⁶ Jackson A.P. (2003) also conducted a similar study and found that problems of children are linked to mother's depressive symptoms due to her employment status.⁷

In contradiction to popular belief according to Crockenberg and Litman (1991), employed mothers are generally less stressed when they return back from work and are able to encourage & praise their children more as compared to non- working mother who are already stressed out after a tiring day working at home and would want to take a break from their children.⁸

The current study also indicates that developmental milestones of working mother's children were delayed which is in accordance with the study conducted by Belesky (1988) .³ However, the study conducted by Gottfried & Gottfried (1988) contradicts our study and states that maternal employment does not cause adverse effect on development of child.⁹

Findings of this study indicate that children of non-working mother have significant more sleeping problems in the form of frequent night awakenings, difficulty falling asleep and bedwetting as compared to children of working mother. As proposed by Owens et al (2000), sociological factors like over scheduling of children, day care, television use and family stress leads to sleep problems.¹⁰ However, Stewart J (2014) in conflict to this study concluded that children with employed mothers have more sleep related problems.¹¹

This study showed oral habits were more common in children of working mother in which thumb sucking was most prominent. This may be attributed to the fact that mother starts working during the first year of her child birth. Kearny et al. in (1991) found that woman who started working within one year of child birth, experienced shorter duration of breast feeding than those who planned to remain at home.¹² Taran SJ et al in (2015) studied the health profile of children of working women and concluded that the children of working mothers who stopped receiving breastfeeding in the first year of the birth , easily developed deleterious habits , among them thumb sucking were most common followed by pica, irritability and the least common was aggressiveness & stranger anxiety.¹³

In this study Dental caries were found to be higher in non- working mother children as compared to that of children of working mother. The reason attributed to this finding in the present study is due to the fact that non-working mother included in the study were less educated and had minimal awareness of oral hygiene maintenance. In contradiction to present study Plutzer K (2012) stated that children of working mothers had less caries score as compared to children of non-working mothers.¹⁴

V. Conclusion

The present study concludes that children of working mother had more negative behavior during dental treatment, delayed development and emotional problems while the children of non-working mother had more sleep problems and dental decay. Although these results have implied that child holistic development may benefit from mothers taking time off from work in the initial months after giving birth, these results examine only a small number of child outcomes. Further, early maternal employment may have additional longer-term effects on children. Thus, more research is needed to determine whether the effects of early maternal employment are temporary or long lasting in overall development of child. A research in this field can help Pedodontists to well manage these children with both pharmacological and behavioral techniques. It can result in improvement of oral health and overall quality of life.

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Table 1: Chi-square = 2.605 with 3 degrees of freedom; P = 0.622

Behavior	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Definitely Negative	4	10.00	4	10.00	8	10.00
Definitely Positive	2	5.00	0	0.00	2	2.50
Negative	14	35.00	18	45.00	32	40.00
Positive	20	50.00	18	45.00	38	47.50
Total	40	100.00	40	100.00	80	100.00

Table 2:

Variables	Group	N	Mean	Std. Deviation	'p' Value*
Age (Yrs.)	Non-working Mothers	40	5.48	1.19	0.142
	Working Mothers	40	5.85	1.06	
Height (cm.)	Non-working Mothers	40	108.43	11.34	0.266
	Working Mothers	40	111.00	9.07	
Weight (Kg.)	Non-working Mothers	40	18.18	3.78	0.813
	Working Mothers	40	18.35	2.74	
Dental caries (no. of teeth)	Non-working Mothers	40	9.35	8.56	0.005
	Working Mothers	40	4.35	6.77	

Table 3: Fisher Exact Test P = 0.031

Developmental Milestones	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Delayed	22	55.00	32	80.00	54	67.50
Normal	18	45.00	8	20.00	26	32.50
Total	40	100.00	40	100.00	80	100.00

Table 4: Fisher Exact Test P = 1.000

Speech Problems	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Absent	34	85.00	34	85.00	68	85.00
Present	6	15.00	6	15.00	12	15.00
Total	40	100.00	40	100.00	80	100.00

Table 5: Fisher Exact Test P = 0.790

Eating Problems	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Absent	10	25.00	8	20.00	18	22.50
Present	30	75.00	32	80.00	62	77.50
Total	40	100.00	40	100.00	80	100.00

Table 6: Chi-square = 2.021 with 2 degrees of freedom; P = 0.364

School Behavior	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Interactive	20	50.00	26	65.00	46	57.50
Introvert	4	10.00	2	5.00	6	7.50

Shy	16	40.00	12	30.00	28	35.00
Total	40	100.00	40	100.00	80	100.00

Table 7: Fisher Exact Test P = 0.001

Sleep Problems	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Absent	16	40.00	32	80.00	48	60.00
Present	24	60.00	8	20.00	32	40.00
Total	40	100.00	40	100.00	80	100.00

Table 8: Fisher Exact Test P = 0.043

Oral Habits	Non-working Mothers		Working Mothers		Total	
	No.	%	No.	%	No.	%
Absent	24	60.00	14	35.00	38	47.50
Present	16	40.00	26	65.00	42	52.50
Total	40	100.00	40	100.00	80	100.00

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