# A COMPARATIVE STUDY OF GROWTH AND DEVELOPMENT AMONG TODDLERS OF WORKING AND NON-WORKING MOTHERS, GUWAHATI. ASSAM

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## Abstract

**INTRODUCTION AND OBJECTIVES:** A toddler is a young child who is at the stage of learning to walk. Toddlers are completely dependent on their parents especially upon their mothers for the fulfilment of their basic. The study was attempted to assess and compare the growth and development among 40 toddlers of working and non-working mothers residing in Mathura Nagar and Dwaraka Nagar, Guwahati. Assam.

**MATERIALS AND METHODS:** Comparative descriptive survey research design was adopted for the present study. Purposive sampling technique was used to select 40 toddlers of working and non-working mothers in Mathura Nagar and Dwaraka Nagar area in Guwahati. Data was collected by questionnaire on demographic proforma and developmental milestone of toddler. Anthropometric measurement of the toddlers was taken using weighing machine to measure the weight of the child and measuring tape to measure the mid upper arm circumference.

**RESULTS AND ANALYSIS:** The independent 't' value of the weight, mid upper arm circumference, gross motor development, fine motor development, language development, cognitive development, self-help development and social development was found to be t= 0.879, 1.304, 0.079, 0.713, 0.133, 0.078, 0.283, 0.623 respectively, which were not significant at $p<0.05$ levels of significant. The mean weight of toddlers of working mother was $\bar{x}$=11.67 while in toddlers of non-working mother it was $\bar{x}$=11.32. The mean mid upper arm circumference of toddlers of working mother was $\bar{x}$=13.22 and in toddlers of non-working in mothers it was $\bar{x}$= 13.35.

**DISCUSSION AND CONCLUSION:** The finding of the study revealed that there is no statistical significant difference between the growth and development among toddlers of working and non-working mothers. In the study of association between the growth and development of toddlers with their selected demographic variables, it is found that there is significant association between the growth and development of toddlers with family monthly income and initiation of weaning.

**Keywords:** Toddler, growth, development, working mothers, non-working mothers

## INTRODUCTION:

A toddler is a young child who is of age of learning to walk between infancy and childhood. During the toddler stage, the child learns a great deal about social roles, develops motor skills and first starts to use language. They are completely dependent on their parents especially upon their mothers for the fulfilment of their basic needs[1]

Growth is a process of physical maturation resulting on increase in size of the body and various organs. It is a quantitative change of the body which can be measured in inches/centimeters and pounds/kilograms. Development is a process of functional and physiological maturation of the individual. It is a progressive increase in skill and capacity to function.[2] All types of expected growth and development do not occur at the same time. The mothers has to regulate the child behavior, attitudes, outlook and the home environment in the family since this are the basic factors that influence the growth of children.[3]

The importance of 1 to 3 years of life of a child for its growth and development is well known. Any adverse influences operating on children during this period may result in severe limitations in their development, some of which at least are reversible.[4]

## MATERIALS AND METHODS

Comparative descriptive survey research design was carried out among the toddlers in Mathura Nagar area and Dwaraka Nagar area in Guwahati, Assam. Purposive sampling technique was used to select the sample. The sample size is 40 consisting of 20 toddlers of working mothers and the other 20 toddlers of non-working mothers. Ethical permission was obtained from the Councillor of Mathura Nagar area and Dwaraka Nagar area and written consent was taken from the mothers of toddler selected for the study. Data was collected by using a structured questionnaire on demographic proforma and developmental milestone of toddler. Anthropometric measurement of the toddlers was taken using weighing machine to measure the weight of the child and measuring tape to measure the mid upper arm circumference. Mothers of toddlers who are not willing to give consent to carry out the study and toddlers who are sick during the study were excluded in the study. Data analysis was done using descriptive and inferential statistics. Statistical analysis was done manually and compared with SPSS for windows version 20.

## RESULTS AND DISCUSSION

Findings of the study showed that majority of toddlers 13(65%) belongs to the age group of 2-3 years in working mothers and 1-3 years in non-working mothers. Majority of toddlers 11(55%) were female in working mothers and male 13(80%) in non-working mothers. Majority of toddlers 13(65%) belongs to nuclear family in working mothers and majority12 (35%) in joint family in non-working mothers. Regarding weaning, majority of toddlers 10(50%) started at the age of 6 months among working mothers, whereas in toddlers of non-working mothers majority 12(60%) started at 7 months.

**Assessment of growth and development among toddlers of working and non-working mothers**

Data presented in the **Fig-1** showed that all toddlers from working mothers 20(100%) and non-working mothers 20(100%) attained a normal nutritional status according to Indian Academy of Paediatric using weight for age. According to mid upper arm circumference, it seemed that majority of toddlers 8(40%) had no malnutrition (satisfactory nutritional status) which was followed by 7(35%) at risk of malnutrition, 5(25%) of them were moderately malnutrition in working mothers. Similarly majority of toddlers 10(50%) had no malnutrition (satisfactory nutritional status) which was followed by 6(30%) at risk of malnutrition, 4(20%) of them were moderately malnutrition in non-working mothers (**Fig-2**). The study is supported by Kaur R et al., Dariya BL et al., Kaur G et al. where reported that nutritional status of children in non-working mothers was better than the children of working mothers.

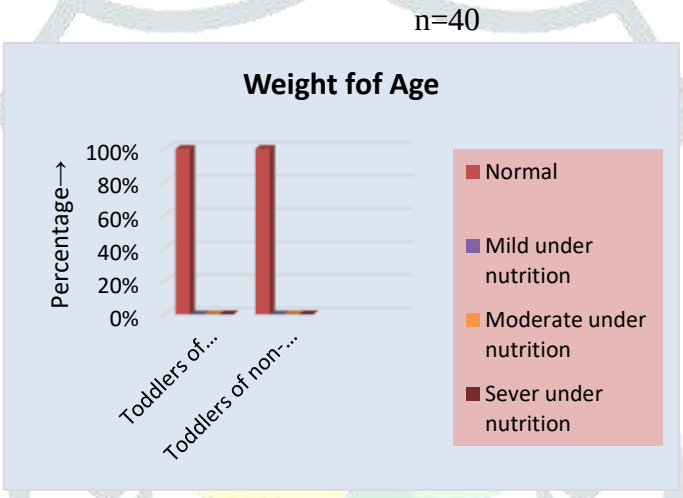


**Fig 1: Nutritional status according to IAP classification using weight for age**

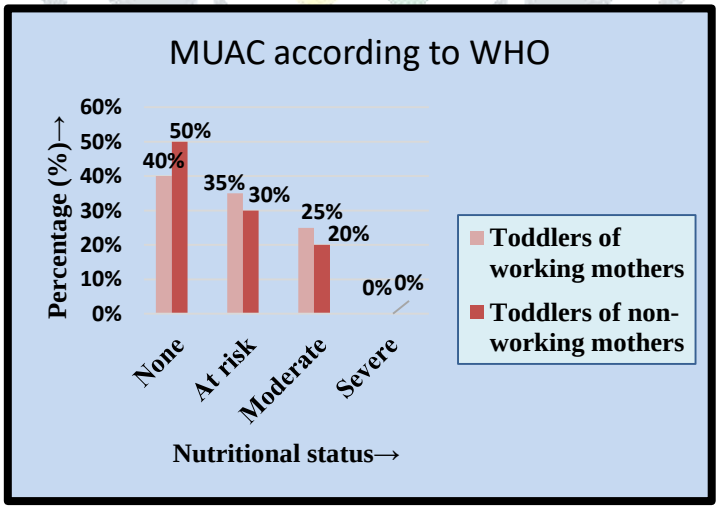


**Fig 2:** Nutritional status using mid upper arm circumference.

**Table 1: Frequency and percentage distribution of developmental milestone among toddlers of working and non-working mothers.**

| Developmental domain | Developmental achievement | Toddlers of working mother (n=20) | | Toddlers of non- working mother (n=20) | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |

| | | | | | |
|---|---|---|---|---|---|
| Gross motor development | Early | 7 | 35% | 10 | 50% |
| | Normal | 12 | 60% | 6 | 30% |
| | Late | 1 | 5% | 4 | 20% |
| Fine motor development | Early | 4 | 20% | 5 | 25% |
| | Normal | 8 | 40% | 10 | 50% |
| | Late | 8 | 40% | 5 | 25% |
| Language development | Early | 8 | 40% | 8 | 40% |
| | Normal | 8 | 40% | 8 | 40% |
| | Late | 4 | 20% | 4 | 20% |
| Cognitive development | Early | 4 | 20% | 6 | 30% |
| | Normal | 13 | 65% | 11 | 55% |
| | Late | 4 | 20% | 3 | 15% |
| Self-help development | Early | 5 | 25% | 6 | 30% |
| | Normal | 11 | 55% | 9 | 45% |
| | Late | 4 | 20% | 5 | 25% |
| Social/emotional development | Early | 7 | 35% | 6 | 30% |
| | Normal | 12 | 60% | 9 | 45% |
| | Late | 1 | 5% | 5 | 25% |

As shown in table 1 in the gross development, majority of toddlers of working mothers 12(60) achieved normal gross motor development, whereas in toddler of non-working mother majority 10(50%) have achieved early gross motor development**.** In fine motor development, 8(40) each of toddlers of working mothers have normal and late development, whereas in toddlers of non-working mother, majority 10(50%) achieved normal fine development. In language development, 8(40%) of toddlers achieved early and normal development in case of both toddlers of working and non-working mother. In cognitive development, majority 13(65%) of toddlers of working mother achieved normal development whereas majority of normal achiever are 11(55%) in toddlers of non-working mother. In self-help development, majority 11(55%) of toddlers of working mother achieved normal self-help development whereas it was 9(45 %) in toddlers of non-working mother. In social/emotional development majority of toddler both in working mothers 12(60%) and non-working mothers 9(45%) achieved a normal social/emotional development.

**Table 2. Comparison of growth and development between toddlers of working and non-working mothers by measuring the weight of the toddler.** n=40

| Sl.no. | Group | Mean | Mean difference | Standard deviation | t-value | df | Inference |
|---|---|---|---|---|---|---|---|
| 1. | Toddlers of working mother | 11.67 | | 1.1 | | | |
| 2. | Toddlers of non-working mother | 11.32 | 0.35 | 1.4 | 0.879 | 38 | NS |

NS=Not significant at p<0.05 level of significance

As shown in table 2, the mean weight of toddlers of working mother was $\bar{x}$=11.67 while in toddlers of non-working mother it was $\bar{x}$=11.32. The mean mid upper arm circumference of toddlers of working mother was $\bar{x}$=13.22 and in toddlers of non-working in mothers it was $\bar{x}$= 13.35 shown in **table-3**. Toddlers of working mothers, the mean score of developmental domain were gross motor development was $\bar{x}$=6.2, fine motor development was $\bar{x}$=3.05, language development is $\bar{x}$=7.25, cognitive development is $\bar{x}$=5.25, self-help development was $\bar{x}$=3.8 and social/emotional development was 4. In toddlers of non-working mothers the

mean score of developmental domain were $\bar{x}$= 6, $\bar{x}$ = 3.3, $\bar{x}$= 6.17, $\bar{x}$= 5.2, $\bar{x}$=3.65, $\bar{x}$= 3.7 respectively. The unpaired t-test value were found 0.89, 0.334, 0.319, 0.536, 0.104, 0.078, 0.283, 0.512 respectively, which were not significant at p<0.05 levels of significant as shown in **table- 4**. This is supported by a study conducted by Almani A.S., Abro A., Mugheri R.A. (2012) on the effects of working mothers on the development of children is which the result found that there is no significant difference between children of employed and non-employed mothers[5].

**Table 3. Comparison growth and development of toddlers working and non-working mother by comparing the mid upper arm circumference of toddlers.** n=40

| Sl.no | Group | Mean | Mean difference | Standard deviation | t-value | df | Inference |
|---|---|---|---|---|---|---|---|
| 1. | Toddlers of working mother | 13.225 | 0.13 | 0.966 | 1.304 | 38 | NS |
| 2. | Toddlers of non-working mother | 14.35 | | 3.734 | | | |

NS=Not significant at p<0.05 level of significance

**Table 4. Comparison of growth and development of toddlers of working and non-working mother by comparing the developmental milestone of toddlers.** n=40

| Developmental domain | Group | Mean | Mean difference | SD | t-value | df | Inference |
|---|---|---|---|---|---|---|---|
| Gross motor development | Toddlers of working mother | 6.05 | 0.2 | 1.669 | 0.079 | 38 | NS |
| | Toddlers of non-working mother | 6 | | 2.294 | | | |
| Fine motor development | Toddlers of working mother | 2.95 | 0.3 | 1.605 | 0.713 | 38 | NS |
| | Toddlers of non-working mother | 3.35 | | 1.926 | | | |
| Language development | Toddlers of working mother | 7.25 | 0.1 | 2.291 | 0.133 | 38 | NS |
| | Toddlers of non-working mother | 7.15 | | 2.476 | | | |
| Cognitive development | Toddlers of working mother | 5.25 | 0.5 | 1.65 | 0.078 | 38 | NS |
| | Toddlers of non-working mother | 5.2 | | 2.33 | | | |
| Self-help development | Toddlers of working mother | 3.8 | 0.15 | 1.472 | 0.283 | 38 | NS |
| | Toddlers of non-working mother | 3.65 | | 1.843 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Social/emotional development | Toddlers of working mother | 4 | 0.3 | 1.21 | 0.623 | 38 | NS |
| | Toddlers of non-working mother | 3.7 | | 1.78 | | | |

NS=Not significant at p<0.05 level of significance

## CONCLUSION

The investment on child in terms of developing environment both physical and emotional, is going to reap rich individuals in future. So, every child should have tender loving care and sense of security from parents. Allthough the present study revealed that there is no statistical significant difference between the growth and development among toddlers of working and non-working mothers, but many previous research findings statedv that there is a collision of idea on the impact of working mother on the growth and development of toddlers. While it is believed that toddler who are well supervised and monitored, who received a contant love, warmth and affection 24 hours by their mother who stays at home will have some hogher level of growth and develpoment than those toddlers whose mother went out to their employment status.

## ACKNOWLEDGEMENT

Deeply acknowledge Mrs. Manjula Kakoty, Councillor of Ward no-26, Guwahati Municipal Corporation for granting me the permission to conduct my study in Mathura Nagar and Dwaraka Nagar area and Ethical committee of Assam down town University to for giving me permission to conduct research study.

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