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Comparing different aspects of growth and development among preschool children

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Abstract

Growth is an essential feature of life of a child that distinguishes him or her from an adult. The process of growth starts from the time of conception and continues until the child grows into a fully mature adult. A cross-sectional study was conducted in Karachi to know the Anthropometrics indices of middle socio-economic class school children in Karachi compared with NCHS (National Centre for Health Statistics) standards-a pilot study. The study found that height and weight of these children is below the NCHS centile for height and weight. The findings related to The comparison of urban and rural preschool children physical growth or anthropometrics measurement are as follows, the Mean, SD, Percentile and Mean Percentage of urban preschool children are 4.67, 0.47, 80% and 93.40% respectively. The Mean Percentage value of urban is 93.40 where as for rural it is 84.40. The Mean, SD, Percentile and Mean Percentage of rural preschool children were 4.22, 0.73, 60% and 84.40% respectively. Thus it indicates that the mean percentage was higher in the urban children. The Mean and SD of urban and rural preschool children's motor development of urban were 8, and 1.59 respectively. In rural the mean and standard deviation was 12.28 and 1.53 respectively. The Mean and SD of urban and rural preschool children's cognitive development of urban were 13.93, and 1 respectively. In rural, the Mean and SD was 8.92, and 1.11 respectively. The paired t-test was carried out to compare the selected aspects of growth and development of urban and rural preschool children and the value obtained for growth was 2.02 and was found significant at 0.05 levels. The paired t-test was calculated for comparison of motor development of pre-school children and the calculated value is 9.68 for the cognitive development the paired t-test value is 1.02 and shows significant at 0.05 levels.

Keywords: Aspects of growth and development, preschool children

Introduction

Growth is the result of the concerted effect of a complex network of many regulatory factors with varying interactions. Each individual has a definite growth potential which may be modulated by these factors both in the prenatal period and in postnatal life. Optimal growth can only be achieved when all these factors operate in harmony. Growth refers to an increase in the physical size of the whole or any of its parts. Development refers to a progressive increase in skill and capacity to function. It is very important to monitor growth and development of children regularly. It indicates health and nutrition status of the child. It helps in identification of any deviation from normal growth and development and timely corrective measures can be taken at the family and health Centre level.

Objectives

1. To assess the physical growth of pre-school children of urban and rural Anganwadies.
2. To assess the developmental milestones of pre-school children of rural and urban Anganwadies.
3. To compare the selected aspects of growth & development of pre-school children in rural and urban Anganwadies.
4. To associate the finding of growth and development with selected demographic variables of rural and urban preschool children.

Methodology

The research design used for the study was comparative research design to assess different aspects of growth and development among pre-school children. The study was conducted in Anganwadi of urban and rural, Gandhi Nagar Bhopal. The analysis, interpretation and discussion of data collected from 90 preschool children, NICU. Descriptive and inferential statistics were adopted for the analysis and interpretation of the data.

Findings and Discussion

Section-I: Description of demographic variables

- The all age groups are belongs to the equal percentage i.e. 33.33% in urban and rural.
- Majority 51.11% were female. In rural, 68.89% were belongs to female.
- Maximum of 57.78% were belongs to 2nd birth order of urban. In rural 40% were 2nd order.
- Higher 37% were had primary and booster doses in urban. Where as in rural, 40% had primary and booster doses.
- In occupation 40% were self-employed. In rural 57.78% were working on daily wages.
- In relation to type of family, 71.11% were belongs to nuclear family of urban people. In rural 53.33% belongs to joint family.
- 48.89% of urban people fall in Hindu religion. Where as in rural 66.66% was Hindu.
- In relation to education of urban mother, 40% were had secondary education. Whereas 42.22% had primary education in rural.
- Education of father in urban, 31.11% were higher secondary education, in rural 31.11 were having secondary education
- With regard to income of the family of urban, 46.67% have above 15000 rupees per month income. In rural 48.89% have 5001 to 10000 rupees per month.
- 60% of urban family consists of 2 children. Where as in rural 37.78% consists of 3 children in the family.
- 75.56% of urban people were non-vegetarians and in rural 64.44% were non-vegetarians.

Section-II: Compare the selected aspects of growth & development of pre-school children who are attending in rural and urban Anganwadies

The three years preschool children, 11 (73.33%) the urban preschool children achieved the normal physical growth and 4 (26.67%) were not achieved the normal physical growth. In rural, 5 (33.33%) were achieved the normal physical growth and 10 (66.67%) were not achieved the normal physical growth. 11 (73.33%) of four year urban preschool children achieved the normal physical growth and 4 (26.67%) were not achieved the normal physical growth. In rural, 5 (33.33%) were achieved the normal physical growth and 10 (66.67%) were not achieved the normal physical growth. From five years urban preschool children, 08 (53.33%) were achieved the normal physical growth and 7 (46.67%) were not achieved the normal physical growth. In rural, 08 (53.33%) were achieved the normal physical growth and 7 (46.67%) were not achieved the normal physical growth. Considering the motor development of preschool children in anganwadies of urban and rural, 29 (64.44%) of children from urban did not achieved the normal motor development and 16 (35.55%) were achieved the normal motor development. In rural 42 (93.33%) were not achieved the normal motor development and 03 (06.66%) were achieved the normal motor development. From 45 children from urban, 37 (82.22%) were not achieved the normal cognitive development and 08 (17.77%) were achieved the normal cognitive development. In rural among 45 preschool children, 41 (91.11%) were not achieved the normal cognitive development and 04 (08.88%) were achieved the normal cognitive development.

The obtained paired t-test value for assessing the anthropometrics measurement between urban and rural was 2.02 and was significant at 0.05 levels. The paired t test

value of motor development for urban and rural was 9.68 and is significant at levels. The paired t test value of cognitive development of urban and rural was 1.02 and is significant at 0.05 levels.

The obtained chi-square values for anthropometrics measurements and selected demographic variables, such as religion of the family in rural was found associated. For developmental measurement in rural the demographic variables were associated such as type of family and dietary pattern. In urban, the demographic variables associated with the anthropometrics measurements are birth order of child and type of family and for developmental dietary patterns of families of urban preschool children in selected Anganwadies was found associated.

Section-III: Association of physical growth of rural children with selected demographic variables

The obtained chi-square values for anthropometrics measurements and selected demographic variables, such as religion of the family in rural was found associated. For developmental measurement in rural the demographic variables were associated such as type of family and dietary pattern. In urban, the demographic variables associated with the anthropometrics measurements are birth order of child and type of family and for developmental dietary patterns of families of urban preschool children in selected Anganwadies was found associated.

Conclusion

In India, poverty, population explosion, low female literacy and environmental degradation, protein energy malnutrition contributes to majority of preschooler mortality or abnormal development. Nutrition affects the physical dimensions of the body, particularly in the rapidly growing period of early childhood. The present study was carried out to investigate the physical growth and development status of urban and rural preschool children with special attention to nutrition status in terms of anthropometrics measurements.

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