Comparison of Selected Aspects of Growth and Development among Pre-School Children Attending Anganwadi in Selected Urban and Rural Area At, Bangalore.

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ABSTRACT

Background
Comparison of Selected Aspects of Growth and Development among Pre-School Children Attending in Anganwadi Selected Urban and Rural Area At, Bangalore” was undertaken, by Mr. Nitesh Kumar Sharma.

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

Hypothesis

$H_1$: There is a significant difference in selected aspect of growth and development among preschool children in selected rural and urban anganwadi.

$H_2$: There is a significant association between selected aspects of growth and development among preschool children in rural and urban with selected demographic variables.

Materials & Methods:
A structured interview schedule was developed to assess the growth and development of preschool children. The study was conducted in Chandra layout, Mallathahalliaand Kengerianganwadi, Bangalore. 90 children I have taken out of them 45 belongs to urban and 45 from rural anganwadi under 45 I have categorization 15 from 3 years old, 15 have 4 years old and rest 15 from 5 years old same in rural also. Sample were selected by, non probability purposive sampling techniques. The data obtained was analyzed by using descriptive and inferential statistics.

Results:
Assessment of the 3 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. In rural, 11 (73.33%) of 4 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.

Considering the motor development of preschool children in anganwadi of urban and rural, 29 (64.44%) of children from urban are 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 45children 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.

Chi square was used to find the association of the demographic variables with the anthropometric and developmental measurements for rural and
urban preschool children. It was found that religion for anthropometric, type of family and dietary pattern for development for rural preschool children association at [0.005] level, thus $H_2$ is accepted for them and it is rejected of mother demographic variable For urban anthropometric, order of the child and type of the family shows significant association, for development of urban preschool children type of family and dietary pattern show significant association.

**Interpretation and conclusion:**
The growth and development is differs from urban and rural preschool children in type of the family, dietary pattern and order of child in the family. Thus there is need for rural mothers to educate on the factors influencing normal growth and development to enhance the growth and development of preschool children.

**Key words:** Physical growth; motor development and cognitive development of preschool children; ICMR rating scaling.

**Introduction**
Health is a resource for life, not the object of living; it is a positive concept emphasizing social and personal resources, as well as physical capacities. All communities have highly variable, unique strengths and health needs; and is a common theme in most cultures. Health is multidimensional and is the condition of being sound in body, mind or spirit especially freedom from physical disease or pain.¹

Growth is an essential feature of life of a child that distinguishes him or her form an adult. The process of growth starts from the time of conception and continues until the child grows into a fully mature adult. Its starts from ovum, embryo, fetus before birth and neonate, infant, toddler, preschooler, schooler and adolescence after birth. The process of growth includes increase in number as well as the size of cells. Maximum increase in the number of cells occurs in the fetal life as evidenced by an increase in the DNA content of tissues. The cell size continues to enlarge till about 10.5 years of age manifesting as increase in the protein to DNA ratio.

The terms growth and development are not interchangeable because they represent two different factors of the dynamics of change, i.e. growth is quantitative while development is qualitative. It is important to study growth and development because of the following reasons: to know what is expected of a child at a given age in terms of physical and mental ability, to identify children who may not look apparently sick but who still have suboptimal health and malnutrition or are suffering from dormant illness. Remedial interventions tried at this point of time are much more effective for prevention of disease and promotion of health. Early identification of handicaps, suitability of a baby for adoption through developmental examination, to assess the general health and nutrition status of the community and evaluation of social action or social actions for promoting health of the community the growth data before and after the remedial action such as mid-day meal or other preschool programs.²

The importance of the growth and development includes to observe and assess each child in term of norms for specific levels of development. Knowledge of growth and development is essential to determine whether the child is healthy, mentally alert and well adjusted to environment or not. To teach caregivers, special focus to parents the procedure for observing their children’s optimal growth and development, which aids them, to put effort to attain optimal development of their children helps the health care professionals to work effectively with children in health and sickness and to carry out guidance activities or training programs as well as school teachers to make the child to be grown in a matured manner.³

**Objectives**
1. To assess the physical growth of pre-school children in selected urban and rural anganwadi.
2. To assess the developmental mile stones of pre-school children who are attending in rural and urban anganwadi.
3. To compare the selected aspects of growth & development of pre-school children who are attending in rural and urban anganwadi.
4. To associate the finding of growth and development with selected demographic variables of rural and urban preschool children.

**Operational definitions**
1. **Growth:** It refers to increase or change of the physical characteristics taking place in the body such as height, weight, head circumference, chest circumference and mid arm-circumference of the preschooler.
2. **Development:**- It refers to an increase in the skills and capacity to function towards cognitive skills such as intellectual ability to learn, remember and recognize, solve the problems, and motor skills such as fine and gross motor development of the preschooler.

3. **Anganwadi Centre:**- It is a center where supplementary nutrition, health check up, medical referral service, and non formal education are provided in the children age group of 3-5 years

**Assumptions**
The study assumes that,
1. Growth and development may be affected in rural preschool children due to poor hygiene, poor nutritional supplements, lack of experience, lack of trained personer and illiterate parents such as anganwadi teacher and knowledgeable parents.
2. Preschooler of anganwadicenter in urban area will maintains better health status than rural anganwadicenter.

**Hypotheses**

- **H1:** There is a significant difference in selected aspect of growth and development among preschool children in selected rural and urban anganwadi.
- **H2:** There is a significant association between selected aspects of growth and development among preschool children in rural and urban with selected demographic variables.

**Conceptual framework**

**Conceptual frame work based on the health belief model**
A concept is an abstract idea or mental image of phenomena or reality. Conceptualization is a process of framing ideas, which utilized and forms conceptual frame work for development of research design. A frame work is a basic structure or outline of abstract ideas or images that represent reality (Kozier-1987)

Conceptual frame work is a theoretical approach to the study of problems that are significantly based and emphasis the selection, arrangement and classification of its concepts.

The conceptual frame work for this study is based on the review of literature and clinical experience of the investigator. The present study is particularly intended to assess the growth and development of the preschool children in turns of their demographic data, physical examination and developmental assessment. The investigator identified that the health belief model was suitable for this study.

Health belief model by Becker 1974 has become popular conceptual frame work in nursing especially in studies focusing on health assessment, promotion of health and prevention of diseases. It is based on motivational theory.

The three major components of Health belief model are:

1. Individual perception
2. Modifying factors
3. Variables affecting likelihood action

In order to accomplish the goal of the present study, the review of literature has been organized under the following headings.

1. Literature related to physical development
2. Literature related to motor development
3. Literature related to cognitive development
4. Literature related to knowledge regarding parenteral role on growth and development of children.

**Population**
The population is defined as the entire aggregation of cases that meet a designated set of criteria (Polit&Hungler).

In the present study, the population was preschooler children who were coming in rural and urban anganwadi namely Chandra layout, Mallathahalli, Gollahalli and Dubasipalya at Bangalore.

**Sample and sampling technique**
Sample is defined as the subset of the population selected to participate in the research study (Polit&Hungler).

The sample for the study was 90 preschooler children attending at selected urban and rural anganwadi.

Sampling is the process of selecting representative units of a population for study in a research. The investigator used non-probability purposive sampling technique for the selection of the sample. The investigator had gone to the urban and rural anganwadisetting in under Chandra layout, Mallathahalli and Kengeri P.H.C. Bangalore and selected the samples and the investigator has taken oral consent from the each anganwadi worker and mothers of preschool children.
Inclusion criteria
The study include preschool children who are
1. Aged between 3-5 yrs. residing in rural and urban area.
2. Attending at selected urban and rural anganwadi at Bangalore
3. Have no fear and willing to participate in the study

Exclusion criteria
The study excludes the preschool children who are
1. Preschool children whose mothers/anganwadi workers have not given consent.
2. Aged more than 5 years.
3. Children were having systemic disease

Table 1.1 Frequency and Percentage Distribution of urban and rural preschool children by age, gender, birth order of child, immunization status Occupation, and type of family

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Demographic Variables</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demographic data on Child</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Age of the child</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Three year old</td>
<td>15</td>
<td>33.33</td>
</tr>
<tr>
<td></td>
<td>Four year old</td>
<td>15</td>
<td>33.33</td>
</tr>
<tr>
<td></td>
<td>Five year old</td>
<td>15</td>
<td>33.33</td>
</tr>
<tr>
<td>2</td>
<td>Gender of the child</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>22</td>
<td>48.89</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>23</td>
<td>51.11</td>
</tr>
<tr>
<td>3</td>
<td>Birth order of the child</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>One</td>
<td>14</td>
<td>31.11</td>
</tr>
<tr>
<td></td>
<td>Two</td>
<td>26</td>
<td>57.78</td>
</tr>
<tr>
<td></td>
<td>Three</td>
<td>5</td>
<td>11.11</td>
</tr>
<tr>
<td></td>
<td>Above three</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>Immunization status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary (BCG, OPV, MMR, DPT)</td>
<td>4</td>
<td>8.89</td>
</tr>
<tr>
<td></td>
<td>Primary and Boosters (OPV, DPT)</td>
<td>17</td>
<td>37.78</td>
</tr>
<tr>
<td></td>
<td>Any other (Hepatitis)</td>
<td>11</td>
<td>24.44</td>
</tr>
<tr>
<td></td>
<td>All of the above</td>
<td>13</td>
<td>28.89</td>
</tr>
<tr>
<td></td>
<td>Demographic data on family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Occupation</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Unemployment</td>
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<td></td>
<td>Daily wages</td>
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<td>31.11</td>
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<tr>
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<td>Self employment</td>
<td>18</td>
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<tr>
<td></td>
<td>Govt. employed</td>
<td>11</td>
<td>24.44</td>
</tr>
<tr>
<td>6</td>
<td>Type of Family</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Nuclear</td>
<td>32</td>
<td>71.11</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>13</td>
<td>28.89</td>
</tr>
</tbody>
</table>
The above table (1.1) represents that the frequency and percentage distribution in relation to demographic variables of pre-school children of urban and rural.

In relation to age 15(33.33%) were belongs to 3 years, 15(33.33%) were belongs to 4 years and 15(33.33%) were belongs to 5 years in urban and rural.

In relation to gender, majority of belongs to 23(51.11%) belongs to female and 22(48.89%) are belongs to male in urban. In rural 31(68.89%) belongs to female and 14(31.11%) belongs to male in rural.

With regard to birth order of the child, 26(57.78%) are 2\textsuperscript{nd} order child, 14(31.11%) belongs to the 1\textsuperscript{st} order, 5(11.11%) belongs to the 3\textsuperscript{rd} order of child and none of the children are 4\textsuperscript{th} order in urban.

In rural, 18(40.00%) belongs to the 2\textsuperscript{nd} order, 10(22.22%) are belongs to the first birth order, 9(20.00%) are belongs to 3\textsuperscript{rd} order of child, 8(17.78%) are belongs to the above fourth group.

DISCUSSION

1. The first objective is to assess the physical growth of pre-school children in selected urban and rural anganwadi.

The physical growth was assessed by the checklist of 3 years preschool children and the results are as follows, 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.

2. The second objective is to assess the developmental milestones of pre-school children who are attending in rural and urban anganwadi.

With regard to motor development, the 3 years urban children 6(40.00%) are achieved the motor development and 9(60%) have not achieved the motor development. In rural, 15(100%) of them have not achieved the motor development.

3. The third objective was to compare the selected aspects of growth & development of preschool children who are attending in rural and urban anganwadi.

The comparison of urban and rural preschool children physical growth or anthropometric measurement are as follows, the mean, SD (standard deviation), percentile and mean percentage of urban preschool children are 4.67, 0.47, 80% and 93.40% respectively.

4. The fourth objective was to associate the finding of growth and development with selected demographic variables of rural and urban preschool children.

The forth objective was to associate the finding of growth and development with selected demographic variables of rural and urban preschool children. The association between anthropometric measurements and demographic variables was done by using chi-square test and the chi-square value found was 6.55 at 0.05 levels for religion of the family of rural preschool children in selected anganwadi.

Suggestions:
- Visits to anganwadi centers and health appraisal of preschool children can be part of curriculum, to compare urban and rural where community and pediatric nurse can be able understand the factors influencing the normal growth and development.
- Mothers can be educated for the normal growth and development and delay in the development and early identification of the developmental problems. This can be done through the role play.
- Health education classes can be conducted in the OPD/ in community health centers.

Recommendations:
- Similar study can be conducted in a large scale for generalization.
- A study can be conducted to assess physical growth and development and factors influencing the normal growth and development of children.
- A comparative study should be on physical health status and development of preschool children attending the anganwadi’s.
- Similar study can be conducted to assess the physical growth and factors influencing on them.

REFERENCES


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