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Study the differences in the developmental outcomes of infants stimulated with smart phones and indigenous play materials: A comparative study

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Abstract

The current study deals with Study the differences in the developmental outcomes of infants stimulated with smart phones and indigenous play materials. A comparative study living in Rural and Urban Areas of Guntur District of Andhra Pradesh. The Study Consists of 120 which included 30 infants out of whom 15 were boys and 15 were girls and their respective parents form rural area and 30 infants out of whom 15 were boys and 15 were girls and their respective parents mothers form urban area. Purposive random sampling technique, Ex-post facto research design was taken up for the study. Tools used smart phone usage schedule prepared by researcher, Indigenous play material usage schedule prepared by researcher, developmental assessment scale for Indian infants and general information schedule. The study concluded that both rural and urban areas of infants were exposed to smart phone usage. However developmental outcomes are more in usage of indigenous play material stimulated infants compared to smart phone usage stimulated infants.

Keywords: infants, usage of smart phone, usage of indigenous play material, rural area, urban area

Introduction

Today infants are exposed to technology such as tabs, mobiles, computers and videos. But play contributes to child's mental and emotional development. Children who spend most of their time using technology are less physically active. Some studies show that children might be benefited from gadgets; however, studies also reveal that usage of gadgets might have negative effects on the growth and development of children. Playing is the instinct humans are born with just like eating and sleeping, playing is a survival instinct. During play, we develop social skills, learn about give and take interactions and test limits. Recent developments in brain research have proven that an infant's environment has a dramatic effect on brain building and healthy development. It is this early stage of brain development that results in how, and how well, one thinks and learns-both as children and as adults.

Methodology

The study was carried out at Rural and Urban Areas of Bapatla mandal, Guntur district, Andhra Pradesh was selected as locale for the present study. Sample size for the present study is 120 which included 30 infants out of whom 15 were boys and 15 were girls and their respective mothers form rural area and 30 infants out of whom 15 were boys and 15 were girls and their respective mothers form urban area. The tools used were a) Smart Phone usage schedule developed by the researcher b) Indigenous play material usage schedule developed by the researcher c) Developmental assessment scale for Indian infants d) General information schedule developed by the researcher to collect demographic profile of the respondents.

Results and Discussion

Table 1: Mean Differences between developmental outcomes of infants in Urban and Rural Areas (N=60)

S. No	Area of study	Motor Development Quotients		Mental Development Quotients		t- test	
		Mean	S.D	Mean	S.D	DMQ	DMEQ
1	Rural	109.4	12.04	101.9	13.7	1.091 ^{NS}	0.493 ^{NS}
2	Urban	106.0	9.34	100.6	11.7		

Note: **Significant at 0.01 level * Significant at 0.05 level Ns Not significant

The data given in table 2 show the difference in Motor development quotients and mental development quotients of Rural and Urban Infants. It is clearly stated that rural infants had high mean scores in motor development quotients

compared urban infants. Similarly rural infants had higher mean in mental development quotients. But no differences were found to be significant.

Table 2: Gender wise differences between Developmental Outcomes of infants among Boys and Girls in Rural and Urban Areas (N=60)

S. No	Gender	Motor Development Quotients (DMQ)		Mental Development Quotients (DMEQ)		t- test	
		Mean	S.D	Mean	S.D	DMQ	DMEQ
1	Girls	108.4	10.96	101.1	12.9	0.42 ^{NS}	0.104 ^{NS}
2	Boys	107.0	10.82	102	12.5		

Note: **Significant at 0.01 level * Significant at 0.05 level Ns Not significant

The data given in table 2 reveals the gender difference in Motor development quotients and mental development quotients. It is clearly stated that girls had high mean scores in Motor development quotients compared boys. But boys had

higher mean scores in mental development quotients compared to girls. But no significant differences were found to be.

Table 3: Difference in Motor Development quotients of Rural and Urban infants Stimulated with smart Phone & Indigenous Play Material

S. No	Sample	DMQ in Infants stimulated with Smart Phone Stimulated		DMQ in Infants stimulated with Indigenous Play Material		t-test
		Mean	S.D	Mean	S.D	
1	Rural Infants	67.76	24.48	103.76	10.23	7.836**
2	Urban Infants	75.1	16.0	102.7	7.3	7.827 **

Note: **Significant at 0.01 level * Significant at 0.05 level Ns Not significant

Table 3 indicates that Motor development quotients of Urban Infants stimulated with smart phone had higher mean scores compared to rural infants. Were as rural infants had higher Motor development quotients who have been stimulated with

Indigenous play material. It is clearly stated that infants stimulated with indigenous play material had high mean scores as compared stimulated with Smart Phone usage. However the differences were found to be significant.

Table 4: Difference in mental development quotients of rural infants and urban infants stimulated with smart phone & indigenous play material

S.NO	Sample	DMEQ in Infants stimulated with Smart Phone		DMEQ in Infants stimulated Indigenous Play Material		t-test
		Mean	S.D	Mean	S.D	
1	Rural Infants	78.5	26.1	102.3	11.6	4.908**
2	Urban Infants	81.0	12.6	89.6	12.3	2.69**

Note: **Significant at 0.01 level * Significant at 0.05 level Ns Not significant

Table no 4 indicated that higher mean values in mental development quotients of urban Infants was more compared to rural infants. But higher DMEQ were observed in rural infants who were being stimulated with Indigenous play material compares to urban infants. A high mean scores was observed in urban infants stimulated with smart phone as compared rural infants. Data also depicts that infants stimulated with indigenous play material living in rural area had high DMEQ levels compared to urban infants and infants stimulated with smart phones. However the differences in usage of smart phone and indigenous were found to be significant at 0.01 level of significance.

Conclusion

The Study inferred that both rural and urban areas of infants were using Smart phone, however the present study helps to understand the effect of smart phone usage of self and family on developmental status of infants. The developments are more in infants who are stimulated with indigenous play material compared to smart phone stimulated infants. The findings of the research indicate that need for suitable programmes to improve the developments outcomes of infants conducted to know the developmental and academic achievement of rural and urban children.

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