



A COMPARATIVE STUDY TO ASSESS THE USAGE OF ELECTRONIC MEDIA AND ITS IMPACT ON TRADITIONAL PLAY, HEALTH AND WELL-BEING, AND ACADEMIC ACHIEVEMENT AMONG SCHOOL CHILDREN AT URBAN AND RURAL SCHOOLS IN SELECTED AREAS, WEST BENGAL

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ABSTRACT

Electronic media have become an important part of children's daily lives. Although electronic media may provide educational and recreational opportunities, excessive or unregulated use may reduce opportunities for traditional play and may influence physical health, well-being and academic functioning. The investigator conducted a comparative study to assess the usage of electronic media and its impact on traditional play, health and well-being and academic achievement among school children at urban and rural school in Kolkata and Paschim Medinipore. Purposive sampling technique was used to select 50 students from urban school and 50 students from rural school. Modified Pender's health promotion model served as a conceptual frame work for this study. Data was collected by semi structured questionnaire and physical assessment proforma to assess the BMI. Record analysis of progress report to assess the academic achievement.

Results: Most students in both groups had medium electronic-media use. In the urban group, 45 (90%) had medium and 5 (10%) had high use. In the rural group, 44(88%) had medium, 2(4%) high and 4(8%) low use. Mean electronic-media-use scores were 17.64 in urban students and 14.62 in rural students; the difference was statistically significant ($t=3.93$, $df=98$, $p < 0.05$). Traditional play was predominantly medium in urban students (84%) and high in rural students (62%). BMI below 18.5 kg/m² was recorded in 70% of urban and 64% of rural students using the study classification. Grade C was the most frequent academic category in both groups.

Conclusion: Urban students demonstrated significantly greater electronic-media use, while rural students demonstrated greater engagement in traditional play. The findings support balanced electronic-media use together with opportunities for physical activity, traditional play, healthy development and academic engagement.

Keywords: Electronic media; screen use; school children; traditional play; health and well-being; BMI; academic achievement; urban, rural.

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INTRODUCTION

Twenty first century has witnessed a marked increase in the usage of electronic medias like mobile phones, television, computer and videogames especially among the school children, thereby reducing the exposure to traditional games and transmission of cultural values through the generations.

Electronic media such as television, mobile phones, computers and video games are increasingly integrated into children's everyday lives. These technologies can support communication, education and recreation, but excessive use may compete with physical activity, outdoor play, sleep, study and social interaction.

Traditional play contributes to physical, cognitive, social and emotional development. Games such as cricket, football, kabaddi, skipping, running, carrom and badminton provide opportunities for exercise, cooperation, creativity and social interaction. Increasing screen-based leisure may reduce the time available for such activities. Electronic-media exposure may also be associated with health-related outcomes through sedentary behavior, altered sleep, physical in activity and eating patterns. Academic achievement may similarly be affected when entertainment-oriented screen use competes with study and sleep, although educational use of technology may be beneficial. Urban and rural children may differ in electronic-device access, recreational facilities, parental supervision and opportunities for outdoor play. The present study therefore compared electronic-media use and related outcomes among school children in selected urban and rural schools of West Bengal.

BACKGROUND OF THE STUDY

Electronic media has become a part of regular life for all, and particularly more so for children and adolescent. Children and adolescents are exposed to electronic media for considerable time daily, and exposure to electronic media may be beneficial as well as harmful. However, the content of exposure, timing of exposure, duration of exposure, and socio-demographic characteristics of children and adolescents influences the impact of exposure to these interventions.

Electronic media may be useful for creating positive social behaviour, prevent violence, and enhance academic performances. The intervention may also be used to prevent or quit the habit of substance abuse. On the other hand, negative effects of exposure of electronic media may be drug and tobacco abuse, unhealthy eating habits and obesity, sexual aggression, and poor academic performances.

AIMS OF THE STUDY

The aim was to assess and compare the usage of electronic media and its impact on traditional play, health and well-being, and academic achievement among school children in selected urban and rural schools of West Bengal.

OBJECTIVES

1. To assess the usage of electronic media among school children in urban and rural school.
2. To compare the usage of electronic media among school children in the urban and rural areas.
3. To assess the impact of electronic medias on the traditional play, health and well- being and academic achievement among school children.
4. To determine the association between selected factors and the impact on the traditional play, health and well-being and academic achievement among school children.

RESEARCH METHODOLOGY

Research Approach and Design

A comparative survey approach with a comparative survey design was adopted.

Setting and Population

The urban setting was Patipukur Pallishree Vidyalaya Higher Secondary School, Kolkata. The rural setting was Srinagar School(H.S.),Paschim Medinipur, West Bengal. The population consisted of students studying in Classes VII and VIII.

Sample and Sampling

The sample consisted of 100 students:50 urban and 50 rural. Purposive sampling was used.

Inclusion Criteria

Students studying in Classes VII or VIII, willing to participate, and able to read and write Bengali or English were eligible.

Variables of the study

Research variables: Usage of electronic media and its impact on traditional play, health well-being and academic achievement. Demographic variables: Age, gender, type of family, number of siblings, ordinal position among siblings

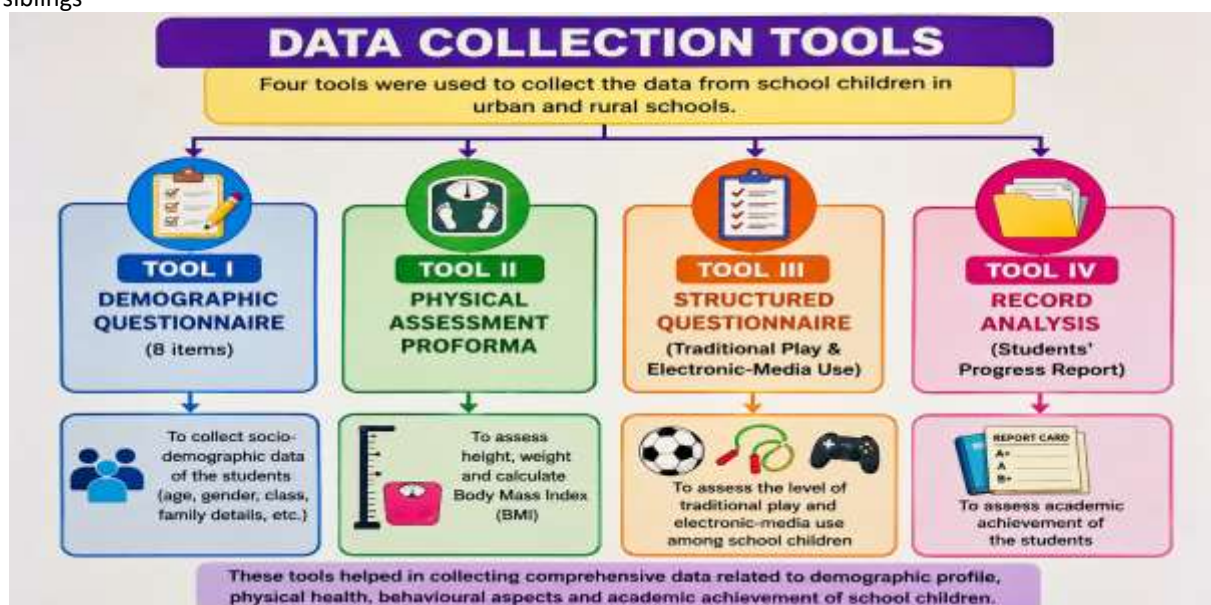


Figure 1: Description of Tools



Validity and Reliability of the tool

Content validity was established by nine experts. Reported reliability coefficients were 0.78 for the demographic questionnaire, 0.96 for the traditional-play section and 0.81 for the electronic-media-use section.

Data Collection Procedure and Ethical consideration

Permission was obtained from school authorities and ethical approval was obtained from the Institutional Ethics Committee of R.G. Kar Medical College and Hospital. Informed consent, anonymity and confidentiality were maintained.

Data Analysis

Frequency and percentage were used for descriptive analysis. An independent-samples t test was used to compare electronic-media-use scores, and chi-square tests were used for associations. Statistical significance was assessed at $p < 0.05$.

RESULT

Section -IA : Description of the sample characteristics

Table-1: Frequency and Percentage distribution of the sample characteristics in terms of age, gender and class of student, Education of mother & education of father, type of family and number of siblings.

Characteristic	Urban n (%)	Rural n (%)
Age 13 years	21 (42)	19 (38)
Age 14 years	29 (58)	31 (62)
Male	16 (32)	25 (50)
Female	34 (68)	25 (50)
Class VII	30 (60)	28 (56)
Class VIII	20 (40)	22 (44)
Nuclear family	39 (78)	33 (66)
Joint family	11 (22)	17 (34)
One sibling	31 (62)	16 (32)
More than one sibling	14 (28)	28 (56)

Most students were 14 years old. Female students constituted 68% of the urban group, while gender was equally distributed in the rural group. Most participants were studying in Class VII and belonged to nuclear families.

Section IB: Frequency and percentage distribution of usage of electronic medias of school children at urban and rural areas.

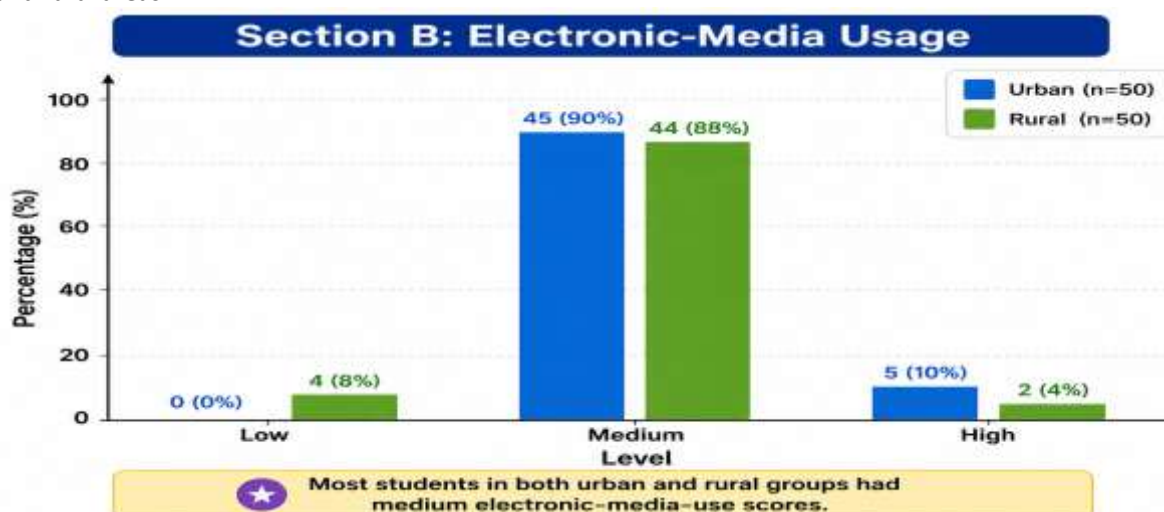


Figure 2: Frequency and percentage distribution of usage of electronic medias of school children at urban and rural areas.

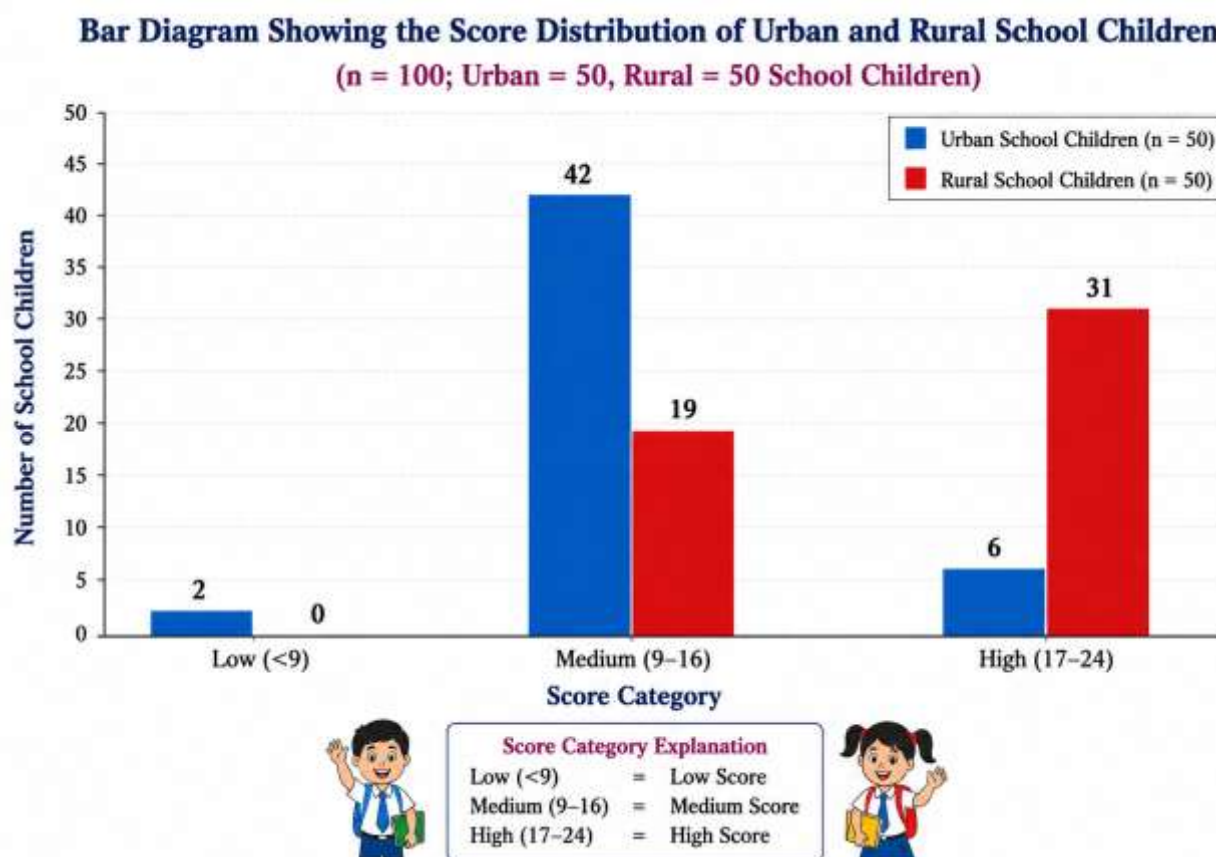
Maximum possible score = 32, Minimum possible score = 8, [Score distribution: Not at all = 1, Rarely = 2, Sometimes = 3, Regularly = 4], [No of questionnaire = 8]

Figure -2 shows that maximum (90%) students spent medium time in using electronic devices whereas 10% students spent high time in using electronic devices at urban school.

Maximum (88%) students spent medium time in using electronic devices whereas 4% students spent high time in using electronic devices and rest 8% spent less time in using electronic devices at rural school.

Section IIA: Frequency and percentage distribution of engagement of traditional play activities of school children at urban and rural areas.

Figure- 3: Frequency and percentage distribution of engagement of traditional play activities of school children at urban and rural areas.



Maximum possible score= 24

Minimum possible score= 6

[Score Distribution : Not at all=1, Rarely= 2, Sometimes= 3, Regularly= 4.]

[No of questionnaire = 6]

Figure -3 shows that maximum (84%) students playing traditional play activities achieved medium score while 12 % of them playing traditional play activities achieved high score and rest 4 % playing traditional play activities achieved low score at urban school.

Majority (62%) students playing traditional play activities achieved high score whereas 38% students playing traditional play activities achieved medium score at rural school.

Section III B : Frequency and Percentage distribution of the physical assessment in terms of BMI.

Figure- 4: Frequency and Percentage distribution of the physical assessment in terms of BMI.

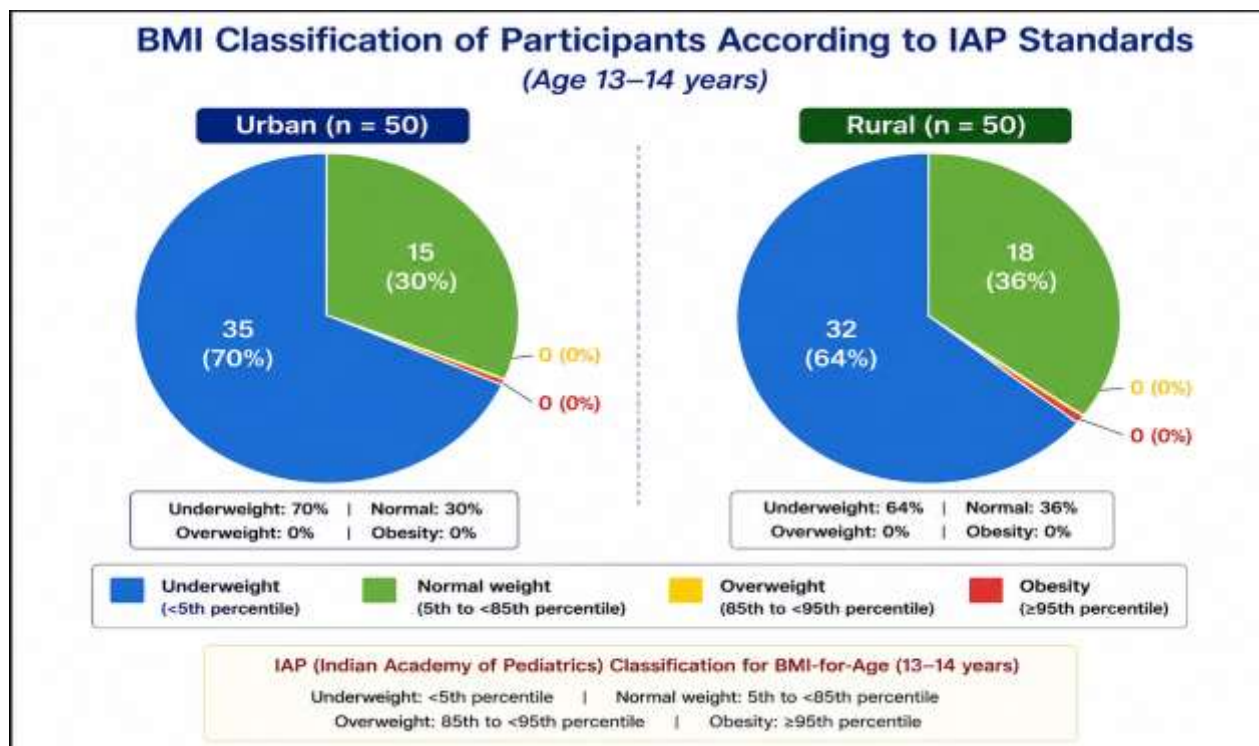


Figure -4 shows that maximum (70%) students were within below normal and (30 %) students were at and above normal in urban school.

In rural school, majority of the students (64%) were within underweight. 18 (36%) students were at and above normal weight.

Section IIC: Findings related to academic achievement among school children in urban and rural areas.

Table 2

Grade	Urban n(%)	Rural n(%)
A (75-100%)	6 (12%)	0 (%)
B (50-74%)	13 (26%)	20 (40%)
C (25-49%)	21(42%)	25 (50%)
D (<25%)	10 (20%)	5 (10%)
Total	50 (100%)	50 (100%)

Table 2 shows that In urban school majority of the students (42%) had scored 'C' grade whereas 26 % had scored 'B' grade, 20% had scored 'D' grade and rest 12 % had scored 'A' grade.

In rural school, most of the students (50%) had scored 'C' grade while 40% had scored 'B' grade and rest 10 % had scored 'D' grade. Grade C was the most frequent academic-achievement category in both groups.



Section III: Finding related to comparison of usage of electronic media among school children at urban and rural areas. Mean, mean difference, standard deviation and 't' value of usage of electronic media.

Table 3

Usage of electronic media	Median	Mean(X)	Mean difference	Standard deviation	t-value
Urban	17	17.64	3.02	3.81	3.93*
Rural	14	14.62		3.88	

t' df(98)= 1.98 ; p<0.05 level of significance*

Table 3 shows that the mean score 17.64 among students in urban areas was higher than mean score 14.62 among students in rural areas. The median 17 among students in urban areas was higher than median 14 among students in rural areas.

The data also shows that the standard deviation 3.88 of school children in rural areas was higher than standard deviation 3.81 of school children in urban areas.

't' value obtained on comparing the usage of electronic media among students at urban and rural school was 3.93 which was more than the table value at 0.05 level of significance. Therefore, the usage of electronic media at urban school was significantly more than the usage of electronic media at rural school.

Section IV: Findings related to the association between impact of electronic medias on traditional play activities, health and well-being and academic achievement and selected demographic characteristics of urban and rural students.

Table-4 : Chi square showing association between the impact of electronic medias on traditional play activities and selected demographic variables of urban students.

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Gender	Male	7	11	18	1.38	Not significant
	Female	18	14	32		
	Total	25	25	50		
Education of the mother	Below H.S	13	12	25	0.08	Not significant
	Above H.S	12	13	25		
	Total	25	25	50		
Education of the father	Below H.S	9	5	14	1.58	Not significant
	Above H.S	16	20	36		
	Total	25	25	50		
Type of family	Nuclear	20	19	39	0.11	Not significant
	Joint	5	6	11		
	Total	25	25	50		

Chi-square df(1) 3.84, P <0.05 level of significance

Table 4 shows that calculated Chi-square value is less than table value (3.84) at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on traditional play activities and selected factors (gender, education of mother, education of father, type of family) among urban school children.

**Table -5 Chi square showing association between the impact of electronic medias on traditional play activities and selected demographic variables of urban students.**

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Gender	Male	7	18	25	2.12	Not significant
	Female	12	13	25		
	Total	19	31	50		
Education of the mother	Below H.S	13	25	38	0.96	Not significant
	Above H.S	6	6	12		
	Total	19	31	50		
Education of the father	Below H.S	8	16	24	0.42	Not significant
	Above H.S	11	15	26		
	Total	19	31	50		
Type of family	Nuclear	12	21	33	0.11	Not significant
	Joint	7	10	17		
	Total	19	31	50		

Chi-square df(1) 3.84, P <0.05 level of significance

Table 5 shows that calculated Chi-square value is less than table value (3.84) at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on traditional play activities and selected factors (gender, education of mother, education of father, type of family) among rural school children.

Table -6 Chi square showing association between the impact of electronic medias on health and well-being and selected demographic variables of urban students.

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Gender	Male	8	10	18	0.002	Not significant
	Female	15	17	32		
	Total	23	27	50		
Type of family	Nuclear	20	19	39	1.99	Not significant
	Joint	3	8	11		
	Total	23	27	50		

Chi-square df(1) 3.84, P <0.05 level of significance

Table -6 shows that calculated Chi square value is less than table value at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on health and well-being (BMI) and selected factors (gender, education of mother, education of father, type of family) among urban school children.

**Table -7 Chi square showing association between the impact of electronic medias on health and well-being and selected demographic variables of rural students.**

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Gender	Male	14	11	25	0.72	Not significant
	Female	11	14	25		
	Total	25	25	50		
Type of family	Nuclear	18	15	33	0.80	Not significant
	Joint	7	10	17		
	Total	25	25	50		

Chi-square df(1) 3.84, P <0.05 level of significance

Table -7 shows that calculated Chi square value is less than table value at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on health and well-being (BMI) and selected factors (gender, education of mother, education of father, type of family) among rural school children.

Table -8 Chi square showing association between the impact of electronic media on academic achievement and selected demographic variables of urban students.

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Education of the mother	Below H.S	15	10	25	2.00	Not significant
	Above H.S	10	15	25		
	Total	25	25	50		
Education of the father	Below H.S	6	8	25	0.39	Not significant
	Above H.S	19	17	25		
	Total	25	25	50		
Type of family	Nuclear	19	20	33	0.11	Not significant
	Joint	6	5	17		
	Total	25	25	50		

Chi-square df(1) 3.84, P <0.05 level of significance

Table -8 shows that calculated Chi square value is less than table value at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on academic achievement and selected factors (gender, education of mother, education of father, type of family) among urban school children.

Table -9 Chi square showing association between the impact of electronic media on academic achievement and selected demographic variables of rural students.

n=50

Demographic characteristics	Categories	Below Median	At and above Median	Total	Chi square (X ²)	Significance at 0.05 level
Education of the mother	Below H.S	19	19	38	0.00	Not significant
	Above H.S	6	6	12		
	Total	25	25	50		
Education of the father	Below H.S	11	13	24	0.39	Not significant
	Above H.S	14	12	26		
	Total	25	25	50		
Type of family	Nuclear	17	16	33	0.11	Not significant
	Joint	8	9	17		
	Total	25	25	50		

Chi-square df(1) 3.84, P <0.05 level of significance



Table -9 shows that calculated Chi square value is less than table value at the 0.05 level of significance. There is no significant association seen between impact of electronic medias on academic achievement and selected factors (gender, education of mother, education of father, type of family) among rural school children.

DISCUSSION

Findings related to the description of demographic characteristics of school children in urban and rural school.

Most of the students belonged to the age group of 14 years in both urban and rural school.

In urban areas, majority students were female, whereas in rural areas, both were equal.

Majority students belonged to 7th grade in both urban and rural school. Most of the students belonged to Nuclear family in both urban and areas.

Maximum students in urban area had one siblings and whereas most of the students in rural areas had more than one siblings.

Findings related to the description of usage of electronic media among school children in urban and rural school.

Maximum students in both urban and rural school spent medium time in using electronic devices.

Finding related to comparison the usage of electronic media among school children in urban and rural areas.

Significant difference seen in usage of electronic media among school children at urban school than the usage of electronic media at rural school with 't' value 3.93 at $df(98) = 1.98$ at the level of 0.05 significance. So, Urban students were more use of electronic media than rural students.

Finding related to impact of electronic media on traditional play activities among school children in urban and rural school.

In urban school, maximum students spent medium time in playing traditional play activities.

In rural school, majority of the students spent high time in playing traditional play activities.

Finding related to impact of electronic media on health and well-being among school children in urban and rural school.

Maximum students in both urban and rural school were within underweight.

Findings related to impact of electronic media on academic achievement among school children in urban and rural areas.

Most of the students in both urban and rural school had scored 'C' grade.

Finding related to association between socioeconomic status and impact of electronic media on traditional play, health and well-being and academic achievement among school children.

There was no significant association between socio-economic status of school children and usage of electronic medias on traditional play activities among school children in urban areas.

There was no such significant association between socio-economic status of school children and usage of electronic medias on traditional play activities among school children in rural areas.

There was no significant association between socio-economic status of school children and usage of electronic medias on health and well-being among school children in urban areas.

There was no significant association between socio-economic status of school children and usage of electronic medias on health and well-being among school children in rural areas.

There was no significant association between socio-economic status of school children and usage of electronic medias on academic achievement among school children in urban areas.

There was no significant association between socio-economic status of school children and usage of electronic medias on academic achievement among school children in rural areas.

NURSING IMPLICATIONS

Nursing Practice

School and community health nurses can assess electronic-media use, provide health education to children and parents, promote physical activity and traditional play, encourage healthy sleep and nutrition, and identify children at risk of excessive sedentary behavior.

Nursing Education

Nursing education should include digital-media use, sedentary behavior, child development, physical activity promotion, and parent education regarding healthy media habits.



Nursing Administration : Nursing administrators can support school-health programs incorporating periodic health assessment, parent-awareness programs, health education and collaboration with teachers.

Nursing Research : Further studies should use larger samples, objective measures of screen exposure, longitudinal designs, and comprehensive measures of sleep, physical activity, nutrition, mental well-being and academic performance.

CONCLUSION

Urban school children demonstrated significantly greater electronic-media use than rural school children. Rural students showed greater engagement in traditional play. Below-normal BMI was common in both groups according to the study classification, and Grade C was the most frequent academic category. The findings emphasize the importance of balanced electronic-media use together with physical activity, traditional play, healthy development, sleep and academic engagement. Because the study used a comparative survey design and purposive sampling, causal relationships cannot be established.

LIMITATIONS

The study was limited by the exclusion of children with sensory problems.

-Information was obtained via self -report from young people whose judgment and reporting of their behaviour may be inconsistent.

-No information was collected on the nature of the internet use or the types of electronic gaming activity.

-Limited data collection time.

RECOMMENDATIONS

-The study can be replicated on a larger group of population so that the findings can be generalized to large population.

-A study on attitude of adolescents on usage of electronic medias.

-A study on Parental attitude regarding screen media and monitor the media viewing of their children.

-A study on discourage TV viewing and all screen exposure (including on smart phones and i-Pads) for all children.

-Examine relationships between screen exposure, sleep, physical activity, nutrition, mental well-being and academic achievement.

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