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Relationship Between Quality of Sleep and Behavioral Problems among School Children, Coimbatore

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Abstract

Children are vital to the nations present and its future. In recent years there has been an increased focus on issues that affect children and on improving their health. Children from different parts of the world have radically different habitual sleep durations. Children are "in need of more sleep" and that children are chronically sleep deprived contemporary concerns in our society. The aim of the study is to identify the relationship between quality of sleep and behavioural problems among school children. The objectives of the study were to assess the quality of sleep and behavioural problems among children, to correlate the quality of sleep and behavioural problems among children and to find out the association between quality of sleep and behavioural problems with selected demographic variables. Quantitative approach and descriptive research design was adopted. This study was conducted on 50 samples after getting necessary permission from private school authority, consent was obtained from each sample. Data were analysed by using descriptive and inferential statistics. This study findings shows that there is a positive relationship between quality of sleep and behavioural problems. Sleep and behavioural problems had significant association with selected demographic variables. Sleep is associated with gender, screen time of the child and education of the child. Behavioural problems are associated with gender, education of the child and screen time of the child. Hence this study concludes that Parents are prime responsible person to establish positive and quality sleep habits to the children.

Keywords: Sleep; Behavioural problems; Screen time.

Introduction

Children are the world's most valuable resource and its best hope for the future,[1] Children are the rock on which our future will be built, our greatest asset as a nation. They will be the leaders of our country and creators of our national wealth who care for and protect our people.[2] Sleep is a power source that keeps their mind alert and calm. Every night and at every nap, sleep recharges the brain's battery. Sleeping well, increases brain power just as weight lifting builds stronger muscles, because sleeping well increases the attention span and allows the child to be physically relaxed and mentally alert.[3] Children with sleep problems may have over –reactive emotional responses to events during the day and be preoccupied with trying to regulate their emotional system. This limits their opportunity to focus and benefit from activities that build attentional regulation.[4] Sleep problems not only disrupt a child's nights–they disrupt his days, too, by making him less mentally alert, more inattentive, unable to concentrate, and easily distracted. They also make him more physically impulsive, hyperactive or lazy.[4] In adequate sleep –whether too short or poor quality –causes specific changes in mood and thinking. to prevent sleep problems in children, parents should establish

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positive sleeping habits. These habits include setting a bedtime, having a consistent bedtime routine and encouraging children to fall asleep independently. In addition, keeping all electronics out of the bedroom will help children to get a good night's sleep.[4] This study aims to assess the relationship between quality of sleep and behavioral problems.

Objectives

- To assess the quality of sleep among school children.
- To assess the behavioral problems among school children.
- To correlate the quality of sleep and behavioral problems among school children.
- To associate the quality of sleep with demographic variables among school children.
- To associate the behavioral problemswith demographic variables among school children.

Materials and Methods

Research approach was quantitativeand research design was descriptive research design, 50 samples that fulfilled the inclusion criteria were selected by simple random sampling technique. Children who had less attention and sick were excluded in the study. The tool used for the data collection comprises 3 sections— Section A: Demographic variables which consists of age, gender, education of the child, education of the parents, occupation of the parents, type of the family, number of siblings, religion, bed time of the child, screen time, day time sleep, duration of playing games, dinner pattern. Section B: It consist of 15 statements related to quality of sleep and Section C: consists of 15 statements regarding to behavioural problems. After written permission was obtained from the principal, the study was conducted in a private school. The researches were introduced personally and explain the purpose and the importance of the study and get the oral consent from the school children. Data was collected from each child by interview method. At the end of the study pamphlets was given regarding sleep hygiene. Data were analyzed by using descriptive and inferential statistics.

Results

Regarding the demographical variables most of the children are females between the age group of 11–12 years. Most of the parents were graduates working in a private sector and they belong to Hindu religion. Many children were found to be a single child from nuclear family. It is found that most of the children go to bed regularly between 9:00 pm and 10:00 pm after watching TV. Usually most of the children sleep one hour daily in day time and play games daily one hour. Most of the children daily eat less in the night time.

Regarding the distribution of quality of sleep among children 27 children have moderate sleep disturbance and 23 children have severe sleep disturbance (Fig. 1).

Regarding the distribution of behavioural problems among school children 28 children have moderate behaviour problems, and 22 children have severe behavioural problems.

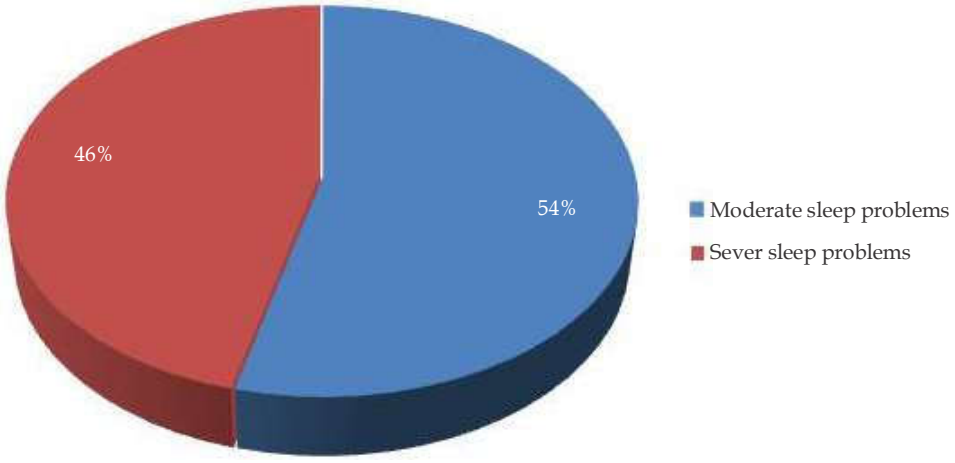

Fig. 1: Distribution of sleep

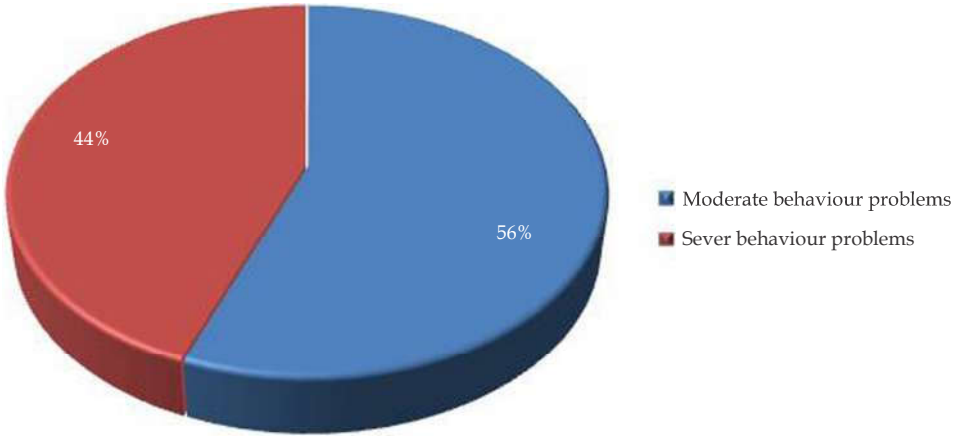

Fig. 2: Distribution of behavioural problems

Regarding mean and standard deviation the quality of sleep (mean–30.9, SD–5.19), the behavioural problems (mean–30, SD–5.89) regarding the correlation coefficient between quality of sleep and behavioural problems among school children the *r*-value is 0.638. It shows that there is a positive correlation between quality of sleep and behaviour problems (Table 1).

Table 1: Correlation of coefficient between quality of sleep and behavior problems among school children.

$n = 50$

S. No	Variables	Mean	SD	*r*
1.	Quality of Sleep	30.9	5.19	0.638
2.	Behavior problems	30.0	5.89	

Regarding association of the quality of sleep with selected demographical variables, there is significant association between gender of the child, and education of the child and screen time of the child (Table 2).

Table 2: Association between quality of sleep among school children

$n = 50$

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
1	**Age in years**				
	(a) 10–11 years	5	6	0.64	
	(b) 11–12 years	23	16	(NS)	
2	**Gender**				
	(a) Male	8	13	4.71	
	(b) Female	20	9	(S)	
3	**Education of the child**				
	(a) 6th standard	8	16	7.93	
	(b) 7th standard	19	7	(S)	
4	**Education of the parents**				
	(a) Under graduate	15	17	0.0047	
	(b) Graduate	13	10	(NS)	
5	**Occupational status of the parents**	2	2	0.074	3.84
	(a) Government employee	26	20	(NS)	
	(b) Private employee and daily wages				

(Contd.)

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
6	**Types of family**				
	(a) Joint family	13	10	0.0047	
	(b) Nuclear family	15	12	(NS)	
7	**Number of siblings**				
	(a) One	26	21	0.046	
	(b) Two and three	2	1	(NS)	
8	**Religion**				
	(a) Hindu	20	9	1.15	
	(b) Muslim and christian	8	13		
9	**Bed time of the child**		9	0.14	
	(a) 7–8 pm and 8–9 pm	10	13	(NS)	
	(b) 9–10 pm	18			
10	**Screen time of the child**				
	(a) Up to 9 pm	13	20	8.97	
	(b) Up to 10 pm and up to 11 pm	15	2	(S)	
11	**Day time sleep of the child**				
	(a) 1 hour	20	19	0.85	
	(b) 2 hours and 3 hours	8	3	(NS)	3.84
12	**Duration of playing games**			0.93	
	(a) 1 hour	14	14	(NS)	
	(b) 2 hours and 3 hours	14	8		
13	**Dinner pattern of the child**				
	(a) Eat less	17	19	2.85	
	(b) Eat more and eat only snacks	11	3	(NS)	

Note: NS – No significant S – Significant

Regarding the association of behavioural problems with selected demographical variables, there is a significant association between gender, education of the child, screen time of the child and behaviour problems (Table 3).

Table 3: Association between the behavior problems in selected demographic variables among school children

N = 50

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
1	**Age in years**				
	(a) 10–11 years	5	6	0.41	
	(b) 11–12 years	22	17	(NS)	
2	**Gender**				
	(a) Male	7	14	6.23	
	(b) Female	20	9	(S)	
4	**Education of the child**				
	(a) 6^{th} standard	9 18	15	5.06	
	(b) 7^{th} standard		8	(S)	
5	**Education of the parents**				
	(a) Under graduate	12	15	1.34	3.84
	(b) Graduate	13	14	(NS)	

(Contd.)

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
6	**Occupational status of the parents**				
	(a) Government employee	1	3	0.48	
	(b) Private employee and daily wages	26	20	(NS)	
7	**Types of family**				
	(a) Joint family	12	11	0.06	
	(b) Nuclear family	15	17	(NS)	
8	**Number of siblings**				
	(a) One	25	22	0.02	
	(b) Two and three	2	1	(NS)	
9	**Religion**				
	(a) Hindu	18	16	0.05	
	(b) Muslim and christian	9	7	(NS)	
10	**Bed time of the child**				
	(a) 7–8 pm and 8–9 pm	11	8	0.19	
	(b) 9–10 pm	16	13	(NS)	
11	**Screen time of the child**				
	(a) Up to 9 pm	14	19	3.95	
	(b) Up to 10 pm and up to 11 pm	13	4	(S)	
12	**Day time sleep of the child**				
	(a) 1 hour	18	21	1.48	
	(b) 2 hours and 3 hours	8	3	(NS)	
13	**Duration of playing games**				
	(a) 1 hour	14	14	0.93	
	(b) 2 hours and 3 hours	14	8	(NS)	
14	**Dinner pattern of the child**				
	(a) Eat less	18	18	1.83	
	(b) Eat more and eat only snacks	9	5	(NS)	

Note: NS- No Significant S- Significant

Discussion

The present study findings show that there is a positive relationship between quality of sleep and behavioural problems, this may be related to the statement stated by E. Joulia Paa Voren, that short sleep duration and sleeping difficulties are associated with children behavioural problems.[8] Mark Aistein stated that, there was an association between the sleep pattern and behaviour problems.[9] Dr. Dean Beeb states that inadequate sleep whether too short or poor quality causes specific changes in mood and thinking.[5] These studies are congruent with the result of the present study which revealed that when sleep problems occurs children have the behaviour problems. The results concluded that there is a significant association between the quality of the sleep and screen time of the child, education of the child and gender of the child.

Conclusion

Every living creature needs to sleep. It is the primary activity of the brain during early development.[6] Sleep is especially important for children as it directly impacts mental and physical development. Children who don't get enough sleep also don't pay attention as well as likely to think before they act and are not able to solve problems as well.[7] So the author concluded that parents are the prime responsible person to establish positive and quality sleep habits to the children to prevent the sleep problems and behavioural problems.

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