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The relationship of Long-term Television Watching to Overweight and Anxiety Problems on Iranian Primary Students Reza zavaraghi¹, Leila amiri²

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ABSTRACT

Background: Television has become an important part of the children's world. They spend much of their time on watching television. Television has some positive and negative effects on children's health.

Materials and Methods: This research as a correlation study reviews the relationship between long-term TV watching to overweight and anxiety problems among primary students. Our subjects were 50 (boy) students in grades of fourth and fifth at a primary. The students completed Spielberger State-Trait Anxiety Inventory (STAI) and a researcher-made questionnaire.

Results: The results showed that there was a significant relationship between duration of watching TV and overweighting. Also there was a significant relationship between daily TV watching duration and anxiety. There was no significant relationship between daily time spent on TV watching and Trait-anxiety. There was also a significant relationship between daily hours of watching TV and State- anxiety.

Conclusion: The study showed a direct correlation between time spent on TV watching and overweighting and anxiety related problems with primary students. Reducing times spent on TV could help prevent this health related conditions.

KEY WORDS: Anxiety, Children, Overweight, Primary Students, Watching Television.

INTRODUCTION

Families have increasingly become the users of multimedia in the past decades and it opened a new field for a variety of people (1). Marshal McLuhan coined the term Global Village to describe a new era which media play an important factor in global changes. He described the radio as a tribal drum and television as a shy monster. Television is the most important media (2). Meanwhile, television as a powerful medium in family contexts, could potentially have positive and negative effects (3). Watching TV for long hours could has health outcomes (4). The effects depend on type of viewers and their impressibility. Confessing some positive effects, researchers seriously warned its negative effects on children and teenagers (3). Our environment is a principal factor in human development. Undoubtedly the environment will affect the children and this will be represented in their acts and behaviors. Piajet believed that the process of perception and rationality preciously is due to environmental stimulations (5). Today, children around the world are exposed to direct and indirect messages from the media include radio, television, press and internet (6). Among them, the TV has an important role. Children continue to develop their abilities, attitudes and habits and this period is an eventful time for emotional, intellectual, and physical development so that any negative factors could have long effects. The neurologists also verify this issue. Watching TV programs with any levels of stimulation, may affect emotional and intellectual development in childhood. This effect could take place through special networks (mental habits) or depriving the child's mind from other experiences. Although special stimulus could facilitate some developments in the brain, the environments encouraging passive thinking or unadjusted behaviors (aggression or impulsivity for example), could deprive the child from important opportunities that facilitate active participation in social contexts. In other word trying to involve the child with the TV academic education while he/she should discover the world personally, could put the secondary but important facets of education in danger (2). Over 50 % of parents reported that their children use of television more than 2 h in every day and 64 % reported that their children have a television in their bedrooms (7). Researchers interviewed 1454 parents of under 11 year-old children and showed that their children watched TV 1.45± 1.5 hours and watched video 1.1±1.3 hours a day. 30% of the parents said that their child eat their meals in front of the TV. There was also a positive relationship between having a TV set in the bedroom and TV watching hours for children (8). Also another researchers using 90 studies from 1994 to 2004, showed that under 19 year-old teenagers watched TV, video and computer 1 to 8 hours daily (9). The Iranian Management and Planning survey also showed that Iranian students watched TV 19.1 to 19.5 hours weekly (10). In general, parents did express concern about the content of their children's viewing but parents were unconcerned about the amount of television their children watched (7).

Diagnosing anxiety and other Childs' psychological problems are also another important issue, because their personality is formed in these years. The negative effects of TV on children's mental problems are frequently explored by researchers. Some results showed that the more TV watching could result in more anxiety. Parents reported that their children react with anxiety while watching horrible scenes (1).

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Some researchers mention sleep problems as a frequent consequence of watching horrible films in children. Another surveying design investigated the relationship of TV watching types to children's psychological pathology (depression and anxiety) and observed aggressive behavior and also self-reported aggressive behavior among 2245 elementary students during 1995-1996 showed that:

- 1. The children watched TV for more hours have a higher rate of psychological pathology.
- 2. The children who reported watching TV every day had a higher level of aggressive behaviors.
- 3. The children who prefer aggressive and action programs had a higher rate of aggressive behavior.

The researcher proposed that Child's TV watching should be investigated by psychiatrists or other mental health experts (11). The results of some studies on adults also were similar. For example, they investigated psychological effects of TV news on 179 college students showed that these TV programs had a considerable effect on their anxiety levels and general mood (13). The other investigations showed that putting TV in Childs' bedroom in increasing so that 50 to 70 percent of teenagers have a TV set in their rooms. They always watch TV and their parents have no resistance to the issue (14, 15). This could have an effect on their overweighting, because they are not physically active during TV watching and are away from bodily exercises (2, 4). Also some researchers conducted an investigation on 2762 children and teenagers and notified that putting a TV set in the children's and teenagers' bedroom is a risk factor to overweighting and obesity (16). Results of a research showed that watching television excessively in early childhood, may eventually compromise muscular fitness and waist circumference in children as they approach pubertal age (17). During 1990-1986 Gortmaker and colleagues explored the relationship between overweighting and hours of TV watching among 10 to 15 teenagers in the United States. This study showed that the relationship was eye catching after a four-year follow up. TV watching is one of the most important indicators for immobility that in turn is connected with obesity (18). Hager investigated the relationship of TV watching to physical activity on 80 (9-12 year-old; 40 boys and 40 girls) students. In a four-day evaluation, he measured their physical activity and by an accelerometer and their daily reports about TV watching. Results showed that total relationship between physical activity and TV watching was not significant but the relationship was significant for boys during after-school period that it was 3 times more in boy students. On the other hands, the boys that had the least TV watching on after- school periods considerably had more physical activity. The same manner was observed for girls but the results were not significant among them (19). For a cross-sectional study about television viewing, computer use, obesity, and adiposity in US preschool children. results shown, Watching > 2 hours/day of TV/videos in US preschool-age children was associated with a higher risk of being overweight or at risk for overweight and higher adiposity-findings (20).

The more TV watcher people tend to eat more sweets. Today they are exposed to a variety of advertisements encouraging them to eat unhealthy food like crisp (4, 21). Therefore TV watching could be followed by harmful eating behaviors (21). The effect includes calorie over input and decreased physical activity. Advanced new marketing has targeted children and adults with fatty foods, sugar and high caloric drinks. The advertisements designed to affect children's preferences, tendency toward unhealthy foods and ultimately using them. Those who watch TV have more tendency toward eating fast-food as the main meal that in turn leads to increased calorie intake and decreased fruits or vegetables using (14, 15). A group of researchers explored the relationship of being exposed to TV advertising for buying, demanding or consuming the edible advertised things among 1552 participants (12 to 18 year-old) that watched TV 9 to 10 hours on average. Meanwhile approximately a half of the participants (42.9%) said that they sometimes or almost, noticed TV advertisements. Those who noticed the ads more, tended to buy and eat the edible advertised things and almost ate them during TV watching. The researchers proposed that paying attention to TV ads and consequently eating the edibles could be an increasingly effective factor in Chinese children and adults (21).

So, TV could have harmful effects on the child mind and body. Investigating these effects and informing people about them is important and crucial issue. In our study we tried to reach these targets:

Target:

This research explored the relationship of daily TV watching duration to anxiety and overweighting levels of primary students of Tehran city (the capital of Iran). In reaching these targets we proposed two main hypothesizes and two subordinate ones as below:

1. There is a relationship between time spending on TV watching and being overweight in elementary school students.

2. There is a relationship between time spending on TV watching and anxiety levels of elementary school students.

3. There is a relationship between time spending on TV watching and anxiety-trait of elementary students.

4. There is a relationship between time spent on TV watching and anxiety-state of elementary students.

Tools:

The tool used to measure anxiety was Spilberger's state-trait inventory (STAI). The test is used widespread in clinical research and activities and includes separate scales of self-report to measure state and trait anxiety. The anxiety scale includes 20 items that evaluate personal feelings include tension, distress, agitation and self-blaming on the present. The Trait- anxiety scale is also includes 20 items that measure general and usual personal feelings. The reliability of the inventory in test-retest method is reported to be 0.73 to 0.86. The inventory has a good correlation to other anxiety measuring scales such as the explicit anxiety scale of Talor. This represents the external validity of the scale. The relationship is reported 0.75 to 0.85.

We also used a short researcher-designed demographic questionnaire.

METHOD

This research was a correlational study. Our participants include 50 elementary school students (grades 4 and 5) studying at a school in Tehran city (Iran). The sample selected trough a bi-phasic cluster sampling method and after personal or telephone contacts with their parents to present some information about the study, the STAI scale was administered. Then we ask some question to help them estimating their daily TV watching hours, weight, and age and school grade. The personal information was attached to anxiety questionnaire and finally the data was analyzed with SPSS software. It is important to know that before starting the research sessions, all of the parents of the children who have been participated at the research stated their written agreements.

RESULTS

In this section the results are presented in 3 tables. It table 1 the total frequency and percent of the 50 participants are shown. As it could be seen, all participants were between 9-12 years old and studied in fourth and fifth grades of elementary school. It is also shown that the subject's weight was between 20 to 55 kg and the most frequency belongs to 26-31 kg category.

Table 1. Descriptive statistics for demographic characteristic.						
		STATISTICS				
		Frequency	Percent			
DEMOGRAPHIC VARIABLES						
AGE	9-10	14	28%			
	10-11	19	38%			
	11-12	17	34%			
GRADES						
	Forth	17	34%			
	Fifth	33	66%			
WEIGHT GROUPS						
	20-25	1	2%			
	26-31	23	46%			
	32-37	8	16%			
	38-43	4	8%			
	44-49	13	26%			
	50-55	1	2%			
TOTAL FREQUENCY						
		50	100%			

Table 2 depicted the mean, standard deviation, minimum and maximum scores related to daily hours spend on TV watching, weight, total anxiety, state anxiety and trait anxiety. As it is depicted, the mean hours allocated to the TV is 2.9 hours, the mean weight was 48.64, the mean total anxiety score was 87.34, the mean score of state anxiety was 42.42, and the mean score of state anxiety was 44.48. All of the participants used to watch TV every day.

ne 2. Descriptive st	unsnes	joi inc	Sinay	variao
Statistics	Mean	SD	Min	Max
Variables				
TV watching (hour)	2.9	1.19	1	6
Weight (kg)	48.64	5.63	25	59
Total anxiety	87.34	18.27	50	125
Trait anxiety	42.42	10.15	22	64
State anxiety	44.48	9.49	23	66

Table 2. Descriptive statistics for the study variables

Table 3 represents the estimated correlations of daily TV watching hours to anxiety and bodily weight. The relationship between daily TV watching hours and weight was significant (r=0. 43, p=0. 01). Also the correlation of TV watching hours to state anxiety was considerable (r= 0.44, p= 0.01). The correlation was significant for TV watching hours and total anxiety (r=34, p=0. 05). The relationship of trait anxiety and TV watching hours was not significant, on the other hands.

Table 3. Pearson correlations of daily TV watching hours to weight, trait anxiety, state anxiety and total anxiety

STATISTICS	PEAKSUN K	P
VARIABLES:		
WEIGHT	0.43	0.01
TRAIT ANXIETY	0.16	0.27
STATE ANXIETY	0.44	0.01
TOTAL ANXIETY	0.34	0.01

CONCLUSION

Regarding the result it can be said that TV watching hours affects child's weight. This result is consistent with Sezabo and Hobkinson, 2007; Anderson and Dill, 2000; Gror and Hovel, 1999; Singer, Slovak, Fresno and York, 1998; Crome, 1994; Rajinder, Simor, 1979; Mohajeri, 1997, that all find a positive correlation between TV watching amounts and anxiety levels. The positive significant correlation estimated between TV watching amounts and the child's anxiety also is consistent with Paraventra and colleagues, 2009; Denison and Edmunds, 2008; Huger, 2006; Denison and colleagues, 2002; Fitzjerald and colleagues, 1996; Saeidi, 2004; that all found a significant positive correlation between TV watching amounts and weight.

It seems that the TV could have negative effects along with its positive ones. It should be scheduled. This study addressed two negative effects include anxiety and over weighting. Some researchers acclaimed that even one hour TV watching for a pre-school child could be harmful and the maximum time of TV watching for older children should be around two hours. TV watching should be planed. Some authors insist that TV watching should be screened by psychiatrists or psychologists, and some argue that TV watching is damaging in all forms and the damage is not depend on the content, because the TV program has a high acceleration so that their young brain could not analyze them. The results recommend that the parents and legislators should put them into operation and control TV watching duration of children and enforce physical exercise or actively playing on the child daily schedule to reduce damaging outcomes.

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