



RESEARCH ARTICLE

Association between Digital Addiction and Eating Behaviors for Preschool Children

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ABSTRACT

Background: Eating habits are formed at an early age and the control of screen time is mostly the responsibility of the parents, the involvement of parents in the use of Technology resources and kids' eating patterns should be explored. According to the recommendations of American Academy of Pediatrics the children's watching time be limited to 1-2 hours per day and that no television or other screens be permitted in their bedrooms.

Objective(s): The aim of this study is to detect the association between digital addiction and Eating Behaviors for preschool children.

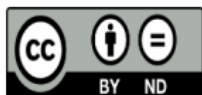
Methodology: A descriptive (Cross-Sectional Design) study was conducted on preschooler's parents by using the instrument of the study, the study was carried out through different governmental kindergartens at Al-Russafa and Al-Karkh Districts in Baghdad City through period from November 1st, 2021, to March 7th 2022. The accessible population included the preschooler's parents whom their children attended to Government kindergartens. Non-probability, convenient sample of (200) child and parents is selected; (100) participant from Al-Rusafa District Government Kindergartens and (100) participant from Al-Karkh District Government Kindergartens.

Results: The results indicates that 50.5% of preschool children show fair level of eating behavior, and the mean score was (43.84±7.239).

Conclusion: Half of study sample on fair level of eating behavior. High significant association between digital addiction and eating behavior of preschool children.

Recommendations: Encourage parents' guidance and supervision for limited digital screen and content for their children by using special supervisor programs.

Keywords: Digital Addiction, Eating Behaviors, Preschool Children.



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INTRODUCTION

One of the most prevalent sedentary behaviors among toddlers is watching digital media. Television, computers, smart phones, and tablets are all examples of digital viewing (Kristo et al., 2021).

Infants and young children utilize screens; 75% of those aged 0 to 8 and 97% of those aged 0 to 4 have used a mobile device. Over 89 percent of kids have a smartphone, 39 percent are "phone addicts," and 68 percent sleep with or near their phone at night. The usage of screen media by adults and parental views have a significant impact on young people's use of it (Lauricella, et al., 2015).

According to international statistics, United States children (ages 4-7), Canada (ages 3-4), Australia (ages 2-6), and India (ages 2-6) spend between 1.5 and 7.0 hours per day watching screens.

A substantial majority of children under the age of three (68%) utilize digital screen on a regular basis, such as television, DVDs, and video games. Increased digital time in young children has been associated to unfavorable health effects, such as an increase in BMI (Duch et al., 2013).

In the United States, young children like watching television, DVDs, and other types of digital media. Although the American Academy of Pediatrics advises parents to avoid exposing children under the age of two to screen media, a nationally representative survey indicated that 68 % of children under the age of two use it on a daily basis, with an average screen time of 2.05 hours . In addition, children in daycare and home-based childcare settings may be exposed to increased time in front of the television (Christakis & Garrison, 2009).

Between 2011 and 2013, huge national US sampling of data show a rise in tablet device ownership among young children (ages 0-8) from 8% to 40%, as well as increased accessibility to mobile "smart" gadgets at home, ranging from 52% to 75%. According to another study from 10 percent to 38 percent more kids under two utilized mobile devices than they did previously between 2011 and 2013 (Hale et al., 2018).

Depending on a survey, 88 % of children aged (1 to 14) years old surpass the recreational screen time requirements. According to data from the Growing Up in New Zealand research, over 80 % of two-year-olds have the television on in the same room as them, and 12% are exposed to more than six hours of television every day (MOH, 2020).

According to a series of Kaiser Family Foundation (KFF) research, 4-27% of children younger than 6 years old used a computer for over 1 hour per day, whereas Christakis et al. found that daily use of television was 1.45 hours and computer gaming was 0.54 hours in these age groups.

Eating habits are formed at an early age and the control of screen time is mostly the responsibility of the parents, the involvement of parents in the use of Technology resources and kids' eating patterns should be explored. According to the recommendations of American Academy of Pediatrics the children's watching time be limited to 1-2 hours per day and that no television or other screens be permitted in their bedrooms. at Australia it is advised for 2 to 5 year olds children be confined to under one hour of screen time and use of other electronic instruments every day (Kelly et al., 2010).

METHOD

Design of the Study

A descriptive (Cross-Sectional Design) study was conducted on preschooler's parents by using the instrument of the study, the study was carried out through different governmental kindergartens at Al-Russafa and Al-Karkh Districts in Baghdad City through period from November 1st, 2021, to March 7th 2022.

Administrative Arrangements

A consequence of an Official permissions obtained from College of Nursing Council university of Baghdad, the Scientific Research Ethical Committee at the College of Nursing University of Baghdad, Ministry of Planning Central System for Statistics, Ministry of Education, that allows the researcher to collect the data in the related governorate Kindergartens

Setting of the Study

The present study is conducted through for (20) Government kindergartens in Baghdad city, the kindergartens was chosen by simple random sampling out of 345 kindergartens in Baghdad city, (10) kindergartens from Al-Russafa District out of (169) and (10) kindergartens from Al-Karkh District out of (176).

Sample of the Study

The accessible population included the preschooler's parents whom their children attended to Government kindergartens. Non-probability, convenient sample of (200) child and parents is selected; (100) participant from Al-

Rusaafa District Government Kindergartens and (100) participant from Al-Karkh District Government Kindergartens. The sample was collected by Danial soper (2006) method. the sample of study were interviewed at the time around 8:00 - 9:00 am and 12:00 - 1:00 pm during parents followed up their children at kindergartens at that time.

Ethical Considerations

Regarding participant confidentiality and anonymity, the ethical committee of research at the college of nursing at the University of Baghdad and the faculty of education in Baghdad provided their consent. Parents of all children who have participated in the study had agreed to a written consent form which were attached with question. All parents are introduced with the study objectives and they are presented with the opportunity of being aware of the study affairs through written speech at the top of questionnaire.

Study Instrument

The instrument of the study included three scales, they were developed and adjusted by the researcher from the original one to be more consistent and clearer by the samples to be filled and more ease to be statically measured.

Data Collection

Data are collected by using the study instruments as means of data collection through self-report method. Data are collected for the period of February 25th, 2022, to March 25th 2022. After the official permissions are obtained from the managers of kindergarten, the questionnaires were distributed to be filled by parents, the researcher explained the purpose of the study in a simple paragraph that was written at the top of questionnaire.

Data Analysis

Analysis of Data The application of descriptive statistical data analysis methods such as frequency, percentage, mean, standard deviation, mean of scores, total of scores, and ranges as well as inferential statistical data analysis methods such as multiple linear regression and analysis of variance is used to analyze data. The data are examined between March 25 and April 10, 2022.

RESULTS

Table (1): Distribution of Sample`s Socio-demographic Characteristics

List	Child Characteristics	f	%		
1	Gender				
	Male	107	53.5		
	Female	93	46.5		
	Total	200	100		
2	Birth order				
	First	81	40.5		
	Second	55	27.5		
	Third	29	14.5		
	Fourth +	35	17.5		
	Total	200	100		
3	Child age when get first digital screen				
	Haven't phone	75	37.5		
	2 years	20	10		
	3 years	40	20		
	4 years	35	17.5		
	5 years	30	15		
	Total	200	100		
Parent educational level		Father		Mother	
		f	%	f	%
	Illustrate	0	0	8	4

Primary school qualification	24	12	24	12
Secondary school qualification	40	20	47	23.5
Bachelor qualification	136	68	121	60.5
Total	200	100	200	100

f: Frequency, %: Percentage

Table (2) Overall assessment Level of Digital Screen Addiction among preschool children

Levels	F	%	M	SD	Assess.
Low	74	37	30.03	4.039	Moderate
Moderate	124	62			
High	2	1			
Total	200	100			

f: Frequency, %: Percentage, Assess.: Assessment

M: Mean for total score, SD: Standard Deviation for total score

Low: 17 - 28.33, Moderate: 28.34 - 39.66, High: 39.67 - 51

Table (3): overall assessment Level of Eating Behavior among Preschool Children

Levels	F	%	M	SD	Assess.
Poor	10	5	43.84	7.239	Fair
Fair	101	50.5			
Good	89	44.5			
Total	200	100			

f: Frequency, %: Percentage, Assess.: Assessment

M: Mean for total score, SD: Standard Deviation for total score

Poor: 19 - 31.66, Fair: 31.67 - 44.33, Good: 44.34 - 57

DISCUSSION

The study sample represents by approximately half of them (53.5%) are boys, and more than one third of them (40.5%) born as the first child in their family. In addition, more than half of preschooler (62.5%) owned their first digital screen before age of 5 years (table, 1).

According to research done in Diyala city in Iraq which aimed There are statistically significant differences between playing electronic games and gender, favoring male, according to research done to measure the level of addiction of kindergarten students to electronic games and the level of addiction of kindergarten students to electronic games depending on the gender variables. (Al-Mahdawi and Ali, 2019). A study in Saudi Arabia Arabian (2022) described that, most children get their smart phone at age seven

years (Arabian Business, 2022). Add to that, a study done in United State (2022) about Children's engagement with digital devices, screen time and its results reported that, (40%) of children are introduced to smartphone use at the age of 5 to 11 years (Auxier et al.,2020).

More than half of preschool children (62%) score on moderate level of overall digital screen addiction, while one third of them (37%) score on low level as shown in table (2) and figure (2).

Parents were take a part and responsible for their children behaviors, children guardians should set a limit for digital use in addition to supervisor the content of digital media and its suitability for their age. The data was collected during the pandemic of COVID 19, most individuals worldwide use digital screen this could be another reason for overuse.

Unfortunately, the statistics show the highest percentages of parents sometime did not set a limit when their children use digital screen, their TV still on even they did not watch, and children did not ask for permission before use screen. Most of children use digital screen every day, especially after morning wake up, and most of them use digital screen at younger age. Most children prefer use digital screens rather than physical activities, they show conflicts when parents try to withdraw digital screens, and they imitates cartoon characters.

Behadil et al. (2020) in their study done in Baghdad on 240 primary school pupils in order to better understand how people respond to today's fast-paced, pervasive technology, it showed that Less than a half of students experience a severe level of smartphone addiction (44.2%), followed by those who experience a moderate level of smartphone addiction (43.3%), and those who experience a mild level of smartphone addiction (12.5%)

A study done by Diyala within (160) preschooler children to find out the addiction on electronic games the results showed that, children level of addiction on digital electronic games reaches the border line (Al-Mahdawi and Ali, 2019). Also Niranen et al. (2017) to examined the frequency of preschoolers' use of electronic media and the effects of heavy e-media use on their psychosocial development reported that, preschool children exceeded (95%) of the daily recommendation use of digital screen for their age group. [Another study by Shah](#) et al. (2019) which aimed to evaluate Children in rural Western India who are preschoolers (6 years old) who use screens. Additionally, consider how these lifestyle characteristics affect the amount of time these kids spend on screens reported that, most of children under six years used digital screens more than recommended daily use in India.

The table (3) shows that, half of preschool children (50.5%) score on fair level for overall eating behavior, while (44.5%) of them score on a good level.

The statistics document most of preschooler children score on fair and good level of eating behavior (11 and 8 out of 19) items respectively. Children unaccepted eating behavior could be for most of parents observe children desire of eat after finishing their games or try to finish their meal quickly to reuse their digital screen, and they forget to drink fluid due to screen use. Always parent noted their children refusing to eat their meals when they deprivate from use digital screen, moreover children screen still turnover during mealtime in order to reuse it quickly, and they did not ask to eat anything during time of digital screen so that gives the mother a free time to connect her issues while

her children are continuous distracting with screens media for hours and when the time happened that the child feels hunger there is no food to be served to him so the sweets and junk foods are consider best choices for mother to deliver and that makes Parent observe their children gain weight due consuming sweet and junk foods that enriched with high calories, moreover children refuse to eat because of game failure.

A study by Carothers (2014) with topic "is it ok to let kids use a phone or screen at dinner?" about parent behavior with their children showed that, many parents used digital screens as a method with their children to be relax or keep them quiet at mealtime. Another study by Jusiené et al. (2019) wanted to look at the prevalence and contributing variables of young children using screens during meals reported that, most children during time of screen use were continued their feeding in front of screens with sweet and junk food, children weight gain may related to unhealthy food consuming. Raghuram (2022) in his article with topic " Do you allow your child screen time while eating? Why it might be a bad idea and what you can do instead " reported in that, some parent used digital screen to encourage their children to eat, however this behavior may distract children to realizing their bodies feeling whether hungry or full.

CONCLUSION

Half of study sample scored on fair level of eating behavior. High significant association between digital addiction and eating behavior of preschool children. A significant difference between preschooler digital addiction and their age when get first digital screen.

RECOMMENDATIONS

Encourage parents' guidance and supervisor for limited digital screen and content for their children by using special supervisor programs. Encourage the nursery teachers to instruct preschool children about the benefit of physical activities and negative effects of digital screens. Future studies about the effect of digital screen addiction up on different age group of children life style.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

This study was completed following obtaining consent from the University of Baghdad.

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AUTHOR'S CONTRIBUTIONS

Study concept, Writing, Reviewing the final edition by all authors.

DISCLOSURE STATEMENT:

The authors report no conflict of interest.

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