EFFECT OF SCREEN TIME ON EATING BEHAVIOUR AMONG CHILDREN OF AGE 5 TO 12 YEARS

Dissertation submitted to

ST. TERESA'S COLLEGE (Autonomous)

ERNAKULAM

Affiliated to

MAHATMA GANDHI UNIVERSITY

In partial fulfilment of requirement for the

AWARD OF THE DEGREE OF MASTERS OF SCIENCE IN HOME SCIENCE (BRANCH A) CHILD DEVELOPMENT

By

NAFEESATHUL NAHAN BINTH SHAMSU

(Register No: AM22HCD011)

Valued
29/4/24

'Certified as bonafide research work'

29/4/24

Signature of Head of the Department

DEPARTMENT OF HOME SCIENCE ST. TERESA'S COLLEGE COCHIN-11

Signature of the Guide

ST.TERESA'S COLLEGE (AUTONOMOUS) ERNAKULAM

Certificate of Plagiarism Check for Dissertation

Author Name	NAFEESATHUL NAHAN BINTH SHAMSU
Course of Study	M.Sc. Home Science -Branch A- Child Development
Name of Guide	Ms. Nimmi Jacob
Department	Home Science & Centre For Research
Acceptable Maximum Limit	20%
Submitted By	library@teresas.ac.in
Paper Title	EFFECT OF SCREEN TIME ON EATING BEHAVIOUR AMONG CHILDREN OF AGE 5 TO 12 YEARS
Similarity	0% AI 10%
Paper ID	1695899
Submission Date	2024-04-25 12:54:40

Signature of Student

For

Signature of Guide

Checked By
College Librarian

ST. TERESA'S COLLEGE LIBRARY

* This report has been generated by DrillBit Anti-Plagiarism Software

CERTIFICATE

This is to certify that the research project submitted by NAFEESATHUL NAHAN BINTH SHAMSU titled, "***Effect of screen time on eating behaviour among children of age 5 to 12 years***" is a record of original work done by him/her during the academic year 2023 - 2024 under my supervision in partial fulfilment for the award of Master of Science in Home Science (Branch A) Child Development. I hereby confirm the originality of the work and there is no plagiarism and ai detection in any part of the research project.

29/4/24

Signature of Head of the Department

DEPARTMENT OF HOME SCIENCE
ST. TERESA'S COLLEGE
COCHIN-11

Signature of the Guide

Smt. Nimmi Jacob

Assistant Professor
Department of Home Science
St. Teresa's College,
Ernakulam

DECLARATION

I (NAFEESATHUL NAHAN BINTH SHAMSU) hereby declare that this dissertation entitled **"Effect of screen time on eating behaviour among children of age 5 to 12 years"** is a bonafide record of research work done by me for the award of the degree of Master of Science in Home Science (Branch A) Child Development, under the guidance and supervision of Smt. Nimmi Jacob, Assistant Professor, Department of Home Science. I also declare that this research project has not been previously submitted by me for the award of degree, diploma or recognition elsewhere. I hereby confirm the originality of the work and that there is no plagiarism and ai detection in any part of the research project.

Nahan

NAFEESATHUL NAHAN BINTH SHAMSU

Place: Ernakulam

Date: 29/04/2024

ACKNOWLEDGEMENT

First and foremost, my wholehearted indebtedness to Almighty God for the blessings, love and care, I experienced during my project work.

I would like to express my sincere gratitude to Rev Dr. Sr. Vinitha, provisional superior and manager, and Dr. Alphonsa Vijaya Joseph,principal, St. Teresa‟s college, Ernakulam for providing me with the facilities for the smooth conduct of the study.

I would like to thank, Dr. Susan Cherian, Head of the Department of Home Science, St. Teresa‟s college, Ernakulam who had been a source of support.

I owe a deep sense of gratitude to my guide, Ms. Nimmi Jacob,Assistant Professor, Department of Home Science, St. Teresa‟s college, Ernakulam for her timely advice, patience and guidance that has enabled me to complete my thesis. I would also like to thank all teachers in the Department of Home Science.

I would like to express my indebted gratitude to all the respondents who cooperated with the study. I express my sincere gratitude to the authorities of the St. Teresa‟s college library, Ernakulam for granting permission to use the library facilities.

I extend my heartfelt gratitude to Dr. Sunitha T R, Assistant Professor, Department of Management Studies, St. Teresa‟s college, Ernakulam for their valuable advice in statistical analysis.

I cannot end without thanking my family members, whose constant encouragement, love and support I have relied on throughout my thesis. Their unflinching courage and conviction will always inspire me.

I am forever grateful to all well - wishers for their timely help and support.

NAFEESATHUL NAHAN BINTH SHAMSU

CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
1	INTRODUCTION	1- 6
2	REVIEW OF LITERATURE	7- 13
3	METHODOLOGY	14-17
4	RESULTS AND DISCUSSIONS	18-34
5	SUMMARY AND CONCLUSIONS	35-40
6	BIBLIOGRAPHY	41-43
7	APPENDICES	44-50

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
1	General information of the child	20
2.	Eating behaviours influenced by screen time in children	22
3.	Parental perceptions regarding influence of screen time in eating behaviours of the child	23
4.	Information on screen usage among selected samples	25
5.	Average daily screen time * Excessive snacking habit Crosstabulation	27
6.	Screen time * Eating speed Crosstabulation	29
7.	Overall eating behavior * Parent's perception Crosstabulation	31
8.	Excessive snacking habit * Overall eating behaviour Crosstabulation	33

LIST OF FIGURES

TABLE NO.	TITLE	PAGE NO.
1	Research design	17
2.	Relation between screen time and excessive snacking habits	28
3.	Relation between screen time and speed of eating	30
4.	Relation between parental perceptions on reducing screen time and overall eating behaviour	32
5.	Relation between overall eating behaviour and excessive snacking habit	34

APPENDICES

TABLE NO.	TITLE	PAGE NO.
1	Appendix I	45-50

INTRODUCTION

CHAPTER 1

INTRODUCTION

The rapid pace of change in the digital age has made screens ubiquitous,and this has changed the experience of children aged from 5 to 12 in a critical stage for cognitive, emotional and social development. This age group is growing up in an environment where digital devices are now part of their daily lives ranging from smartphones, computers to televisions. The confluence of prolonged screen time, universal access to technology and recent disruptions due to covid-19 has presented various challenges as well as opportunities with specific reference to understanding complex interplay between screen time and eating habits.

Today, the rise in screen time among young kids is alarming. Across all platforms from smart phones to tablets, laptops or TV sets; we have seen an increase in the hours spent by these minor children on their gadgets such that they rarely spend a minute without glancing at screens. Formerly known exclusively as entertainment tools, the invasion has turned these media into teaching aids, channels of interaction and places for fun.

Increased screen time in this age group is caused by a variety of factors. The COVID-19 pandemic has led to an increase in online education, which has made the use of electronic devices in educational settings necessary. Moreover, screens become highly interwoven with different aspects of children‟s‟ lives that range from teaching to playing thus there is an increasing imperative to understand the potential implications of this increased digital exposure.

The widespread acceptance of screens by children has raised several concerns as regards wellbeing issues. Long hours spent using a screen can lead to sedentary life styles which in turn may result into physical health problems such as obesity. Additionally, there are growing worries about mental health effects; sleep disturbance and impaired socialization abilities among others. In addition, as screens become part of daily routines like meals, it is necessary to explore how screen time relates with eating behavior patterns.

This study looks into one area that has often been neglected within the wider debate over the impact of screen time on children; this is how screens affect eating behavior in kids aged between 5 and 12. Gone are the days when meal times were marked by personal contacts and shared moments as they are now mostly done with screens hence introducing new eating

behaviors. Children can be caught up watching videos, playing games or engaging in social media while eating something which could result to them not paying attention to what they are doing. This shift of focus raises important concerns about whether these dietary changes contribute to unhealthy habits and what nutritional value their diets have.

An added complication in this respect is the kind of content that children come across during their screen time. On different digital platforms, sugary snacks, junk food and other less nourishing options bombard them. The existence of such ads on different digital platforms may make a child‟s food choices unhealthy because it makes them prefer poor quality foods.Thereforeit is crucial for parents, teachers as well as healthcare practitioners to understand how screen time relates to eating behaviour so that they can help nurture healthier habits among children.

Childhood obesity and unhealthy eating habits have reached alarming levels, hence necessitating this study. The Centers for Disease Control and Prevention (CDC) estimates that more than 14.4 million American children aged between five and seventeen are obese thus closely related to the fact that they consume too many processed foods and sweetened beverages. On the other hand, screen time is now a dominant feature of young people‟s lives.

This research aims at investigating in depth the subtle associations between screen time and dieting among children from 5-12 years old with much emphasis on ways through which it occurs. Previous studies have examined how screen time affects different aspects of child well-being but we do not know what happens during feeding times when children are passing through this critical stage of growth and development. Using current literature to build on will help obtain information about changes that occur when children transit from one form of screen use to another. Moreover, Parental monitoring also assesses the quality of products consumed by children in relation to those consumed by others as affected by factors such as food marketing exposure, sedentary behavior etc.,

The COVID-19 pandemic has further complicated the already changing screen time patterns and effects on the eating behavior of 5 to 12 year olds. During the lockdown, most students were forced to study at home making them spend more hours on computers and tablets during learning. The move towards increased use of screens for educational purposes could also spill over into recreation resulting in a general rise in screen time. Unless properly controlled, prolonged screen use can heighten issues with mindless eating and exposure to unhealthy food materials.

Again, regular mealtimes have been disrupted by the pandemic. As a result of disruptions in their schedules or stress levels going up, families may opt for convenient fast foods rather than sticking to their normal feeding habits. These changes may intertwine with more time spent on screens potentially affecting children‟s dietary choices as well as eating practices.

However, there is something positive that has come out of it as well since this period has ushered in new changes which are related to digital technology and maintaining social ties. This means that children need virtual gatherings and online social life for connection with friends when they are separated from them physically. However, this heavy screen reliance for socializing may eventually leakage onto social context of meals and, consequently, eating behaviors.

As we move into a post-pandemic environment it is important to understand the subtle interactions between screen time and eating behavior in children this requires a comprehensive approach that considers not only the quantity but also the quality of the screen time, and ways to promote mindful eating and a balanced lifestyle. Parental guidance, educational programs, and health care services all play an important role in helping children develop positive behaviors in the face of digital and social trends.

The selection of 5- to 12-year-old children as the primary focus of this study provides a valid and important perspective for several complex reasons. This developmental stage represents a critical period in a child‟s life, marked by important cognitive, emotional, and social development. Analysis of this age group allows researchers to go deeper into the entry-level age at which initial attitudes and behaviors are established, and provides an opportunity to examine the effects of various factors such as screen time on their development.

The chosen age range understands the growing influence of digital devices in the lives of youth and emphasises the significance of comprehending the ways in which screen time impacts their behaviour, including eating patterns, in order to foster a more thorough understanding of the links that promote the positive relationship between electronic devices and child development.

Childhood obesity and unhealthy eating habits are on the rise, posing a significant public health challenge. According to the Centers for Disease Control and Prevention (CDC), more than 14.4 million children between the ages of 5 and 17 are overweight in the United States alone. An unhealthy diet, characterized by excessive consumption of processed foods and sugary drinks, is a major cause. At the same time, screen time is increasingly present in

children‟s lives. A recent study by the Kaiser Family Foundation found that children between the ages of 8 and 18 spend an average of 7.5 hours a day. Given this qualitative trend, examining the potential relationship between children‟s screen time and dietary intake emerges as an important area of research. Understanding this relationship may inform strategies to promote normal development and well-being in this age group.

In conclusion, today‟s digital landscape presents a challenging environment for 5- to 12-year-olds, with increased screen time associated with various aspects of their lives While screens have become primary tools for education, entertainment and socializing, concern about its potential impact on well-being is paramount. By studying the dynamic relationship between screen time and eating behaviour during this crucial developmental stage, this study aims to fill a research gap that currently exists. Research into understanding insights that can be applied to parents, educators, and health care providers is necessary in light of the specific issues presented by the COVID-19 pandemic. This study looks at multifaceted relationships in an effort to support children's healthy, holistic development in the digital age.

1.1 Relevance of the study

The study on the effect of increased screen time on the eating behavior of 5 to 12 year old children in Ernakulam is of great importance in the current socio-cultural technological context. Ernakulam, the metro city of Kerala, exhibits a huge increase in the use of digital devices, which inturn escalates children‟s screen time. Many families in the state now assume mobile phones, tablets, individuals computers and television as essential components of daily life due to their wide availability. Difficulties in finding balance are also increasing. Digital literacy and the use of technology have increased in India, particularly in its urban areas and towns.The results of Ernakulam can add to the national debate about children' screen time and how it affects eating habits. As India struggles with rising rates of childhood obesity coupled with a shift towards a more sedentary lifestyle, this study can provide insights into potential contributing factors and inform us of policies aimed at them to promote healthy behaviors among young people.

In conclusion, studies on how greater exposure to screens affects the eating habits of 5- to 12-year-old children in Ernakulam are crucial considering the current environment of

technological advancement and character assimilation. The results of the study can help parents, educators, and legislators create policies that strike a balance between the advantages of technology and the maintenance of traditional customs in order to improve the general wellbeing of the future generation.

1.2 Aim of the study

To investigate the relationship between screen time exposure and eating behavior in children aged 5 to 12 years, with a focus on understanding how digital device usage may influence dietary habits.

1.3 Objectives of the study

- To discover whether children's screen time contributes to their overindulgent snacking habits
- To investigate whether children‟s speed of eating is influenced by screen time.
- To understand the correlation between parental perceptions on how reducing screen time would impact child‟s eating behaviour and their belief on how it currently influences child's overall eating behaviour.
- To study if excessive snacking habit because of screen time has an impact on overall eating behaviour.

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

This chapter will explore studies that were conducted previously. In recent research studies that concentrate on examining past research efforts on a particular topic, the relevant literature plays an important role. Understanding the research findings and identifying areas where future research is possible is necessary and crucial. It also enhances knowledge by evaluating already existing knowledgethat results in a more profound understanding of the challenges and the progress that is made in the field.

The review of literature pertaining to the study entitled “Effect of screen time on eating behaviour among children of age 5 to 12 years” is reviewed and presented under the following headings:-

2.1 Impact of screen time on overall health and well-being

2.2 Effects of screen time on eating behaviours

2.3 Role of parental mediation in moderating screen time effects

2.4 Cultural and societal factors influencing screen time and eating behaviour

2.5 Interventions and recommendations for promoting healthy screen habits and eating behaviours

2.1 Impact of screen time on overall health and well-being

In Tezol's (2022) study, in which 220 mother-child pairs participated, the results showed that the children with excessive screen time had significantly higher emotional symptoms, conduct problems, and peer relationship problems. However, prosociality and hyperactivity-inattention did not differ between the low and excessive screen time groups. The children with excessive screen usage had significantly greater conduct and peer relationship difficulties, even after controlling relevant variables. In conclusion, there was a significant positive relationship found between excessive screen time and poor psychological well-being in Turkish preschoolers. Tezol came to the conclusion that preschoolers with behavioural issues need to have their excessive screen use monitored.

According to the Belton, Sarahjane, et al., (2021) study, it was found that children who self-reported less than two hours of screen time had significantly greater physical, school, peer, and parent wellbeing compared to children who reported two hours or more. The study highlights the diverse health profiles of children in terms of psychological wellbeing across screen time limits and adds weight to the growing evidence of the negative impacts of screen time on health. Establishing specific guidelines regarding children's hourly screen time limitations should be a top priority on a global scale, since there is growing evidence. The study suggests that the rules should be regularly followed globally, so as to make it easier to compare trends and habits between nations.

Twenge (2018) reported that there is a negative association between screen time and psychological well-being among children and adolescents.The study found that more screen time after 1 hour/day was associated with lower psychological well-being. High screen users were more than twice as likely to have been diagnosed with depression, anxiety, or have taken medication for a psychological or behavioural issue in the last 12 months. Moderate screen use was also associated with lower psychological well-being. The associations between screen time and lower psychological well-being were larger among adolescents than younger children.

2.2 Effects of screen time on eating behaviours

The study conducted bySemar andBakshi (2023)focuses on how screen time affects the health and behaviour of children in school. The results revealed that, with the exception of school-related activities and online classes, the data showed that almost 52% of the children used screens for more than four hours per day. Children's screen time was directly correlated with parents' screen time ($P < .05$). Children's physical activity levels and screen time had a negative trend ($P < .01$). Screen time was found to be positively correlated with emotional undereating, emotional overeating, slow eating, satiety responsiveness, and desire to drink ($P < .01$). Though the differences were not statistically significant, BMI was inversely correlated with physical activity and positively correlated with screen time. The BMI was inversely correlated ($P < .05$) with satiation responsiveness, a subscale measuring avoidance of eating. In overall, the study concludes that excessive screen time among 8 to 10 years old school-going children has been associated with physical inactivity and poor eating behavior which could lead to an increased risk of being overweight and obese.

A study conducted by Sharma, Bimala, et al., (2022) reported that screen time and unhealthy eating habits seemed to be linked together, and approximately two thirds of children did not adhere to the guidelines for two or more health behaviours. The likelihood of co-occurring multiple health risks was higher in children whose parents offered them screen devices, let them use screens more often than advised, and didn't cook them food after school. This was also higher in children whose parents had a TV with cable at home and a gadget of their own. The study demonstrates the co-occurrence of risky behaviours for health. Children, families, schools, and the community can all participate in integrated methods and interventions that can assist address a variety of health issues.

It was found from a study byTambalis, Konstantinos, et al., (2020), the binary logistic regression comparisons between screen time levels (e.g., < 2 vs. ≥2 – < 3 h/d, < 2 vs. ≥3 – < 4 h/d and < 2 vs. ≥4 h/d) and dietary habits revealed that, after controlling multiple covariates, the longer the screen time, the higher the odds of unhealthy dietary habits like skipping breakfast, eating fast food frequently, and eating sweets, and the lower the odds of healthy dietary habits like eating a second fruit daily, eating cooked or fresh vegetables, or/and fish on a regular basis, is found in both genders. Additionally, the likelihood of overall and central obesity, poor sleep (less than 8–9 hours per day), insufficient physical activity, and decreased physical activity was also increased with increasing screen time.

2.3 Role of parental mediation in moderating screen time effects

Regulating and monitoring a child's media use involves parents employing a variety of parenting strategies. Yuin, Fam, et al., (2023) examined 41 research articles on parental mediation and problematic media usage in children and adolescents. Lower levels of screen usage among children were linked to the use of restrictive mediation (e.g., setting rules) and active mediation (e.g., active conversation). On the contrary, children and adolescents who co-use mediation (such as watching TV together) had higher amounts of screen usage. (All rights reserved; PsycInfo Database Record (c) 2023 APA)

Beyens, Ine, andBeullens (2017) examined the relationship between parent-child conflict around children's tablet use and the parents' mediation concerning tablet use. A sample of 364 parents of children aged 2–10 years was used to investigate the relations. According to the findings, children who used the tablet more frequently had more conflicts with their parents. Additionally, children who had a lot of restricted mediation also had more disputes with their

parents around the tablet. However, there was less conflict between children who used the device with their parents frequently. The association between tablet use and conflict was shown to be stronger when restrictive mediation was used, but it was weaker when co-use was involved.

2.4 Cultural and societal factors influencing screen time and eating behaviour

In their study, Kim, Kay, et al., (2024) discovered that, among Korean 7-to 9-year-olds, broader parenting variables can work as protective factors for both childhood happiness and eating habits. There is a connection between this relationship and less screen usage for children. In particular, researchers are able to argue that children may unintentionally learn to use self-regulation to practise better behaviours when parents actively interact with them, showing them that they are cared for and seen. However, further research is needed to fully comprehend the potential pathways. Moreover, the surprising discovery about the impact fathers play in boys' unhealthy food intake highlights the need for social support to promote increased father involvement in their children's lives. This might include work-life balance campaigns and public health campaigns that provide beneficial guidance on how fathers can interact more actively with their children. Ultimately, a customised approach to screen content and duration is desperately needed in the current digital era where children have access to a vast array of media for both amusement and education. This makes it even more important to support alternative leisure pursuits within the family and provide parents with the tools they need to support and encourage these choices.

According to Scaglioni, Silvia, et al.,(2018), Multiple factors influence dietary habits, including family systems, father-mother interactions, and early-life experiences. Fathers tend to indulge more and exert less control over food intake, while mothers may be more authoritative. Limiting unhealthy food intake, avoiding unhealthy stores, and serving small portions can help children develop self-regulation. Early exposure to different tastes and flavours, as well as exposure to disliked foods, can promote healthy eating habits.
Socioeconomic status also plays a role, with families with high educational levels consuming more healthy foods. Educational programs should promote physical activity, reduce screen time, and provide adequate sleep.

A 2017 study by Määttä, Suvi, et al., identified several factors in the relationships between children' screen usage and their parents' level of education. When compared to parents with

middle or lower education levels, parents with higher education levels had a lower descriptive norm and used fewer devices in front of their child. Such traits were linked to children from higher education parents spending less time on screens. Children from higher educated parents had less screen time because these parents valued screen time limits more than parents from lower educational backgrounds did, and they also felt less pressure from society to limit their child's screen time.Parental role models, attitudes, and norms around children's screen time should be the main focus when trying to reduce socioeconomic status differences in children' screen time.

2.5 Interventions and recommendations for promoting healthy screen habits and eating behaviours

Oh, et al., (2022) found that interventions promoting physical activity and reducing screen time are crucial for long-term health and development. These interventions include classroom education, family and community engagement, and counseling. Some also include school and home environment modifications. The study found that digital technologies have led to increased sedentary behaviors among youth and adolescents. Future research should examine screen time as a proportion of sedentary time and use standardized measures of screen use. Policies and programs reducing sedentary time and excessive screen use are essential, especially in the post-COVID 19 reality.

Pearson, Natalie, et al., (2020) in their study used The Kids FIRST trial which was aimed to reduce screen-time and unhealthy snacking in children aged 9-11 years. Four UK schools were randomized to control or one of three interventions targeting these behaviors. Parents received four online sessions and four packages of resources, while children received four 30-minute lessons during school time. Initial feasibility showed that children's TV/DVD viewing and computer game use decreased, while smartphone use increased. Parents' TV/DVD, computer, and smartphone use increased. Little to no changes were found in dietary variables assessed. Future trials should recruit a more diverse sample of families and optimize intervention resources to fully engage parents with the dietary-based components.

According to Biddle, Stuart, et al., (2014), Sedentary leisure time, including screen-viewing, motorized travel, school/work, and socializing, is linked to obesity due to unhealthy behaviors like energy-dense food snacking, low physical activity, and inadequate sleep. The study synthesised systematic reviews and meta-analyses of interventions aimed at decreasing sedentary behaviours among children and adolescents. Results showed a small but significant

reduction in sedentary time, with a trend favoring interventions with children younger than six years. Effective strategies include family involvement, behavioral interventions, and electronic TV monitoring devices. Future research should expand on these findings.

METHODOLOGY

CHAPTER 3

METHODOLOGY

“Research methodology refers to how a researcher systematically designs a study to ensurevalid and reliable results that address the research aims, objectives, and research questions”(Kerryn Warren, 2020). The methodology adopted for the study titled “Effect of screen time on eating behaviour among children of age 5 to 12 years” is given under the following headings.

3.1 Nature of the study

3.2 Selection of Area.

3.3 Sampling Procedure.

3.4 Selection of Sample.

3.5 Selection of Tool.

3.6 Collection of Data.

3.7 Analysis of Data.

3.1 Nature of the study:

The present study is survey research, where data is collected through questionnaires to gather information from participants regarding their opinions or beliefs regarding screen time and the eating behaviour of their children.

3.2 Selection of Area:

The area selected for the survey was Ernakulam district. Because of Ernakulam's diversified population and urban landscape, the city was chosen intentionally as the research region for this study. Additionally, Ernakulam is a good place to do this research because it is easily accessible, has a large number of educational institutions, and has families ready to participate. The urban setting facilitates a thorough investigation of the effects of screen time

on children's eating habits, offering insightful information about the larger context of child development in urban settings in Kerala and, consequently, in India.

3.3 Sampling Procedure:

The method selected for the study was the survey method. This method is used for systematically collecting data. The sampling technique used was convenient sampling. It is a non-probability sampling technique that selects individuals depending on their availability and desire to participate. The samples were collected from rural and urban areas. Participants are recruited through readily available online channels where parents of children aged 5-12 are likely to be present.

3.4 Selection of Sample.

The sample selected included 112parents having children within the age group of 5 - 12 years for assessing the effect of screen time on their eating behaviour.

3.5 Selection of Tool

The most important part of research is the selection of an appropriate tool.The tool used for the survey was a self-structured questionnaire. Regarding the questionnaire, it consists of both close ended question and open endedquestions. The close ended questions just required the parent tochoose the suitableanswer from the options and the open ended questions required the respondents to write their responses in detail,The medium of the questionnaire was Malayalam, in order to make it easily understandable by parents. A copy of the questionnaire is given in Appendix - I.

3.6 Collection of Data

The participants were accessed using an online survey. The motive and significance of the study were explained to one of the parents, and confidentiality regarding their details was assured. Once consent was obtained, the questionnaire was given through Google Forms and asked to be filled out. The completed questionnaires were submitted by the respondents upon filling them out.

3.7 Analysis of Data

The data collected from the survey were compiled and analysed using the Statistical Package for the Social Sciences (SPSS) and are presented in the chapter „Result and Discussion“ with appropriate tables and figures. The data obtained was consolidated, and due to the categorical

nature of the variables involved, the chi-square test was chosen for analysis. Through this statistical method, several correlations among the variables were revealed.

Research design

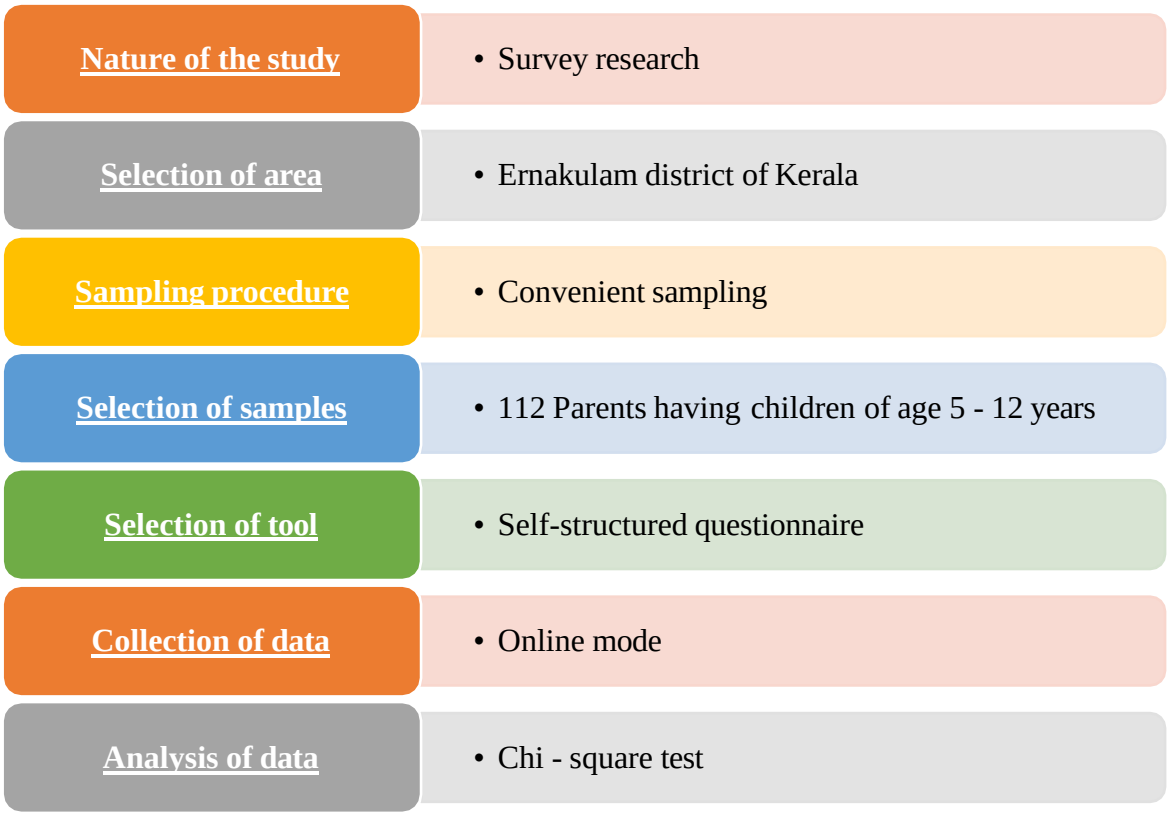

Figure 1: Research design

RESULTS AND DISCUSSIONS

CHAPTER 4

RESULTS AND DISCUSSIONS

This chapter includes the findings of the study entitled “Effect of screen time on eating behavior among children of age 5 to 12 years” as well as its analysis. The outcome and discussions are broken down under the following headings for comprehension and convenience.

4.1 Demographic profile of the children

4.1.1 General information of the children

4.2 Influence of screen time on children’s eating behaviour

4.2.1 Eating behaviours influenced by screen time in children

4.2.2 Parental perceptions regarding influence of screen time in eating behaviours of the child

4.3 Information on screen usage among children

4.4 Correlation

4.4.1 Relation between screen time and excessive snacking habit

4.4.2 Relation between screen time and speed of eating

4.4.3 Relation between parental perceptions on reducing screen time and overall eating behaviour

4.4.4 Relation between overall eating behaviour and excessive snacking habit

4.1 Demographic profile of the children

The sample for the study consisted of 112 parents having children within the age group of 5 - 12 years for assessing the effect of screen time on their eating behaviour.The following section details the counts and percentages of variables regarding the demographic profile of the respondents.

4.1.1 General information of the children

The children's general information is provided in Table 1, which is presented below.

Table 1

General information of the child

Sl. No.	Particulars		Respondents	
			n=112	%
1.	Age	5-7	58	51.8%
		8-10	32	28.6%
		11-12	22	19.6%
2.	Gender	Male	62	55.4%
		Female	50	44.6%
3.	Height	< 90 cm	15	13.4%
		90 - 120 cm	62	55.4%
		120 - 150 cm	30	26.8%
		> 150 cm	5	4.5%
4.	Weight	< 15 kg	19	17%
		15 - 45 kg	89	79.5%
		45 - 75 kg	4	3.6%
5.	School grade	Nursery	27	24.1%
		1^{st} - 4^{th}	60	53.6%
		5^{th} - 7^{th}	25	22.3%
6.	No. of siblings	0	16	14.3%
		1	64	57.1%
		2	24	21.4%
		> 2	8	7.1%
7.	Area of residence	Urban	80	71.4%
		Rural	32	28.6%
8.	Monthly income of family	<₹ 10,000	11	9.8%
		₹ 10,000 - 30,000	40	35.7%
		₹ 30,000 - 50,000	31	27.7%
		>₹ 50,000	30	26.8%

The demographic details of 112 respondents are compiled in table 1. The age distribution of the respondents showed that the majority (51.8%) were in the age group of 5 - 7 years, followed by 28.6% who are in the age group of 8 - 10 years, and 19.6% who are in the age group of 11 - 12. In terms of gender, there are marginally more men (55.4%) than women (44.6%).

The greater number of respondents (55.4%) reported heights fall between 90 and 120 cm, while 26.8% go between 120 and 150 cm. The percentage of respondents who are shorter than 90 cm (13.4%) and taller than 150 cm (4.5%) are lower. In terms of weight, smaller groups weigh less than 15 kg (17%) or between 45 and 75 kg (3.6%), with the majority (79.5%) falling between 15and 45 kg.

In terms of school grades, the first to fourth grade accounts for 53.6% of the total, while the nursery (24.1%) and fifth to seventh grade (22.3%) are smaller. The majority of respondents (57.1%) only have one sibling, whereas other respondents have two siblings (21.4%), no siblings (14.3%), or more than two siblings (7.1%).

Regarding the area of residence, the majority of respondents (71.4%) live in cities, while 28.6% live in rural areas. In conclusion, when looking at family income, 35.7% of respondents are from families that make between ₹ 10,000 and ₹ 30,000 per month, and 27.7% are from households that make between ₹ 30,000 and ₹ 50,000 per month. Families making less than ₹ 10,000 (9.8%) and those making more than ₹ 50,000 (26.8%) have smaller percentages.

4.2 Influence of screen time on children’s eating behaviour

The impact of screen time on children's eating behaviour and how parents perceive it is covered in length in the following sections.

4.2.1 Eating behaviours influenced by screen timein children

Table 2, which is shown below, has a variety of information about the ways in which children's screen time affects their eating habits.

Table 2

Eating behaviours influenced by screen time in children

Items	Responses			
	n = 112		Percentage %	
	Yes	No	Yes	No
Does the child tend to snack frequently while watching the screen?	38	74	33.9%	66.1%
Does the child skip meals (breakfast, lunch, etc.) due to excessive screen time?	7	105	6.3%	93.8%
Does the child notice how much food he eats while watching the screen?	50	62	44.6%	55.4%
Does the child tend to snack during mealtimes as a result of excessive screen time?	41	71	36.6%	63.4%
Does screen time affect the child's eating speed?	67	45	59.8%	40.2%

The table 2 provides key insights into the influence of screen time on eating behaviour of children. It is stated that 33.9% of children snack frequently when using screens, indicating an association between screen time and increased snacking. The discovery that 36.6% of children often nibble during meals as a result of excessive screen time brings greater validity to the idea that screen use may interfere with traditional mealtime routines.

It's interesting to note that fewer children (6.3%) skip meals as they spend too much time on screens during the day. This implies that although using screens can increase snacking, missing meals is less common as a result of screen time. Nevertheless, this behaviour still needs to be addressed because it may have an effect on regular eating patterns.

It was found that 44.6% of children do not pay attention to how much they eat while using screens is another significant statistic that points to a lack of mindfulness or attention to food consumption during screen time. This might be a factor in bad eating habits including overindulging in food or picking harmful snacks.

The most important finding is that children's eating pace appears to be impacted by screen time; 59.8% of respondents said that their child's eating speed is affected by screen use. This impact on eating speed may result in fast eating and inadequate chewing, which may have negative effects on satiety signals and digestion.

In conclusion, the data points to a number of ways in which screen time might influence children's eating habits, including increased snacking, disturbed mealtimes, a diminished awareness of what they consume, and altered eating speeds. These results highlight how crucial it is to limit screen time in order to encourage children to eat healthy and lower their chance of developing associated health problems. In order to lessen the detrimental impacts of excessive screen time on children's eating patterns, more research could examine the underlying causes of these behaviours.

4.2.2 Parental perceptions regarding influence of screen time in eating behaviours of the child

The perspectives of parents regarding the impact of screen time on the child's eating behaviour is presented in Table 3, which appears below.

Table 3

Parental perceptions regarding influence of screen time in eating behaviours of the child

Items	Responses			
	n = 112		Percentage %	
	Yes	No	Yes	No
Have you observed any changes in child's food preferences due to excessive screen use?	25	87	22.3%	77.7%
Does screen time affect a child's overall eating behavior in any way?	24	88	21.4%	78.6%
Do you believe that reducing screen time can positively affect child's eating behaviour?	64	48	57.1%	42.9%

The table 3 illustrates how parents perceive on how screen time impacts their children's eating habits. Only 22.3% of parents reported observable changes in their child's food preferences as a result of excessive screen time, compared with the majority of parents (77.7%) who have not noticed any changes at all. This suggests that, for the majority of parents, screen time may not have a significant impact on influencing their children's food preferences.

However, 78.6% of parents who were asked if screen time influences eating behaviour in general said "no," indicating that they do not believe there is a direct link between screen use and eating behaviour. A significant minority of 21.4%, however, think that screen usage has some impact on their child's eating habits. This may involve problems like skipping meals, indulging in unhealthy snacks, or engaging in other disorderly eating practices.

It's interesting to note that most parents (57.1%) think that reducing screen time will help to improve their child's eating habits. This suggests that parents do believe that screen time influences eating behaviour, even though it's not always evident. According to this context, parents typically believe that encouraging their children to eat healthily can benefit from a decrease in screen time.

In conclusion, a substantial number of parents believe that cutting down on screen time could result in improved eating habits, even though the majority do not believe that screen time has a major influence on food preferences or general eating behaviour. This emphasises how crucial it is to look at ways to cut screen time in order to encourage healthier eating habits in children as well as to investigate the complex relationship between screen time and eating behaviours in children.

4.3 Information on screen usage among selected samples

The following sections provide extensive information on children's screen usage. Details on the same are provided in table 4 below.

Table 4

Information on screen usage among selected samples

Particulars		Respondents	
		n=112	%
How much time does the child spend on a screen on a daily basis?	**< 1 hr**	38	33.9%
	1 - 3 hrs	61	54.5%
	3 - 5 hrs	13	11.6%
Which of the following screens does the child spend the most time on?	**T V**	56	50%
	Tablet	9	8%
	Computer/Laptop	6	5.4%
	Smart phone	41	36.6%
During screen time, what types of content does the child engage with?	**Animated shows**	68	60.7%
	Educational	4	3.6%
	Videogames	15	13.4%
	Social media	12	10.7%
	Others	13	11.6%
Does the child spend more screen time during the holidays?	**Yes**	74	66.1%
	No	38	33.9%
How much time does the child spend on screen during holidays? :	**< 1 hr**	23	20.5%
	1 - 3 hrs	52	46.4%
	3 - 5 hrs	28	25%
	>5 hrs	9	8%
How often does the child eat with family members without using a screen?	**Seldom**	6	5.4%
	Sometimes	51	45.5%
	Always	54	48.2%
	Never	1	0.9%

Table 4 provides an extensive overview of children's screen usage, including information on their preferred devices, daily screen time, engagement with content, holiday screen habits, and mealtime routines. Of the 112 participants, a sizable percentage (54.5%) stated that their children use screens for one to three hours per day. Less than an hour is spent by a smaller fraction (33.9%), but 3 to 5 hours is spent by 11.6% of people daily on screens.

With 50% of children using televisions for most of their screen time, televisions are the most often utilised type of screen. With 36.6% of children using them, smartphones are the second most popular gadget, followed by tablets (8%) and computers/laptops (5.4%). Animated shows are the most common type of content that children engage during screen time, with 60.7% of children watching them. Additional content categories include social media (10.7%), video games (13.4%), and educational content (3.6%).

66.1% of respondents said that screen usage is higher during holidays, which is in line with children raising their screen time. Of them, a quarter (25%) spend three to five hours on screens, 8% spend more than five hours, and nearly half (46.4%) spend between one and three hours.

There is a strong shift towards traditional mealtimes, as seen by the fact that nearly half (48.2%) of children always eat with family members without screens, while 45.5% occasionally do. On the other hand, 0.9% never eat with family without screens, while 5.4% seldom do so. There are differences in the limitations placed on screen use during family meals: 24.1% of families have tight rules, 30.4% have some rules, and 21.4% have none at all. An additional 24.1% forbid screens during mealtimes.

Finally, regarding the association between snack consumption and screen time, the majority of respondents (65.2%) said that there is no correlation between screen time and increased snack or candy consumption. A smaller subset (25.9%) said it happens occasionally, while only 7.1% said they rarely notice more snacking.
Overall, these results show how extensively children use screens, with many of them using screens for longer periods of time, especially over the holidays. Despite varying limits, family meal customs indicate that the majority of families continue to eat at least some meals without screens. While certain children might munch more during screen time, there doesn't seem to be a general tendency across this group, according to the data on snack consumption.

4.4 Correlation

The following section deals in details with various correlations including relation between screen time and excessive snacking habit, relation between screen time and speed of eating, relation between parental perceptions on reducing screen time and overall eating behaviour, relation between overall eating behaviour and excessive snacking habit

4.4.1 Relation between screen time and excessive snacking habit

The tables and graphs below indicate the correlation between screen time and excessive snacking habit

Table 5

Average daily screen time * Excessive snacking habit Crosstabulation

		Excessive snacking habit		Total
		No	Yes	
Average daily screen time	< 1 hr	26	12	38
	1 - 3 hr	41	20	61
	3 - 5 hr	4	9	13
Total		71	41	112

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.760[a]	2	.034
Likelihood Ratio	6.500	2	.039
Linear-by-Linear Association	3.558	1	.059
N of Valid Cases	112		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.76.

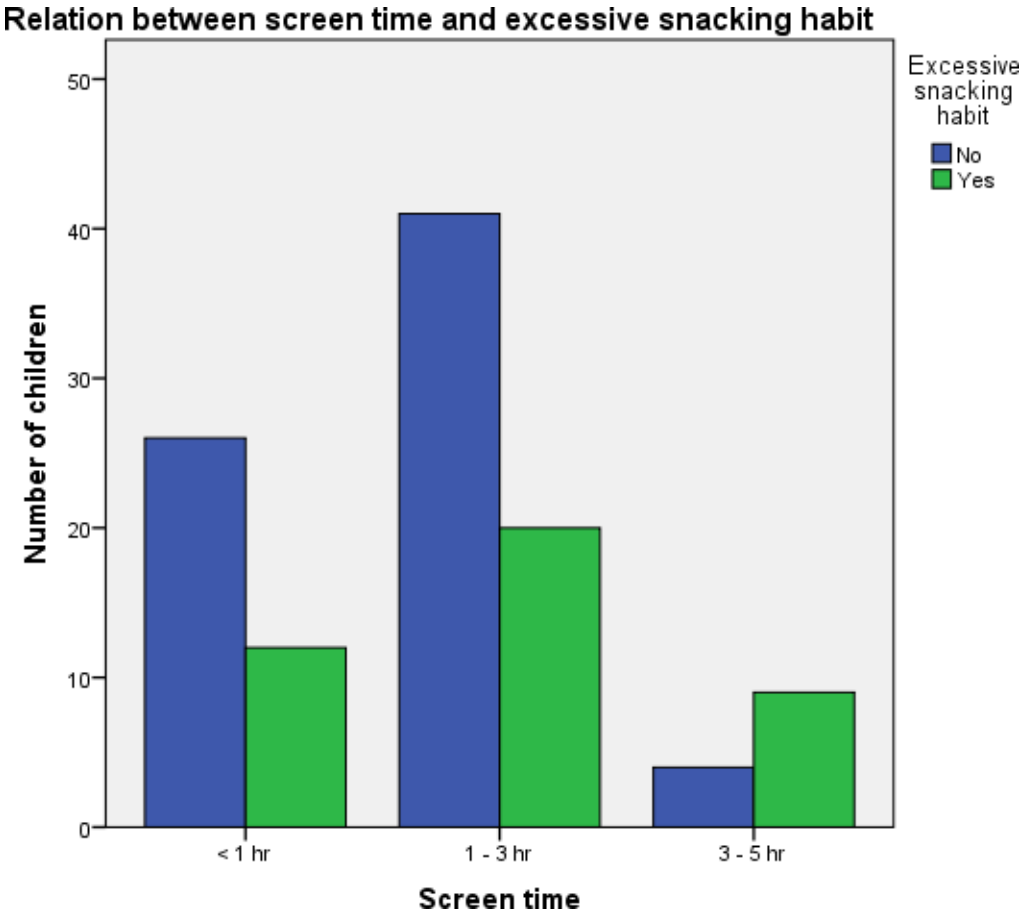

Figure 2: Relation between screen time and excessive snacking habits

A Chi-Square Test of Independence was performed to test Hypothesis. Following are the results from SPSS for testing the relation between screen time and snacking behaviour. There was a significant relationship between the two variables, $\chi 2(2, N=112) = 6.76$, $p = .034$. Children who watched 3 - 5 hours displayed excessive snacking tendencies than children who watched for lesserduration(<1 hour and 1 – 3 hours), as these children did not display excessive snacking tendency.

4.4.2 Relation between screen time and speed of eating

The tables and graphs below indicate the correlation between screen time and speed of eating.

Table 6

Screen time * Eating speed Crosstabulation

		Eating speed		Total
		No	Yes	
Screen time	< 1 hr	21	17	38
	1 - 3 hr	21	40	61
	3 - 5 hr	3	10	13
Total		45	67	112

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.019[a]	2	.049
Likelihood Ratio	6.066	2	.048
Linear-by-Linear Association	5.746	1	.017
N of Valid Cases	112		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.22.

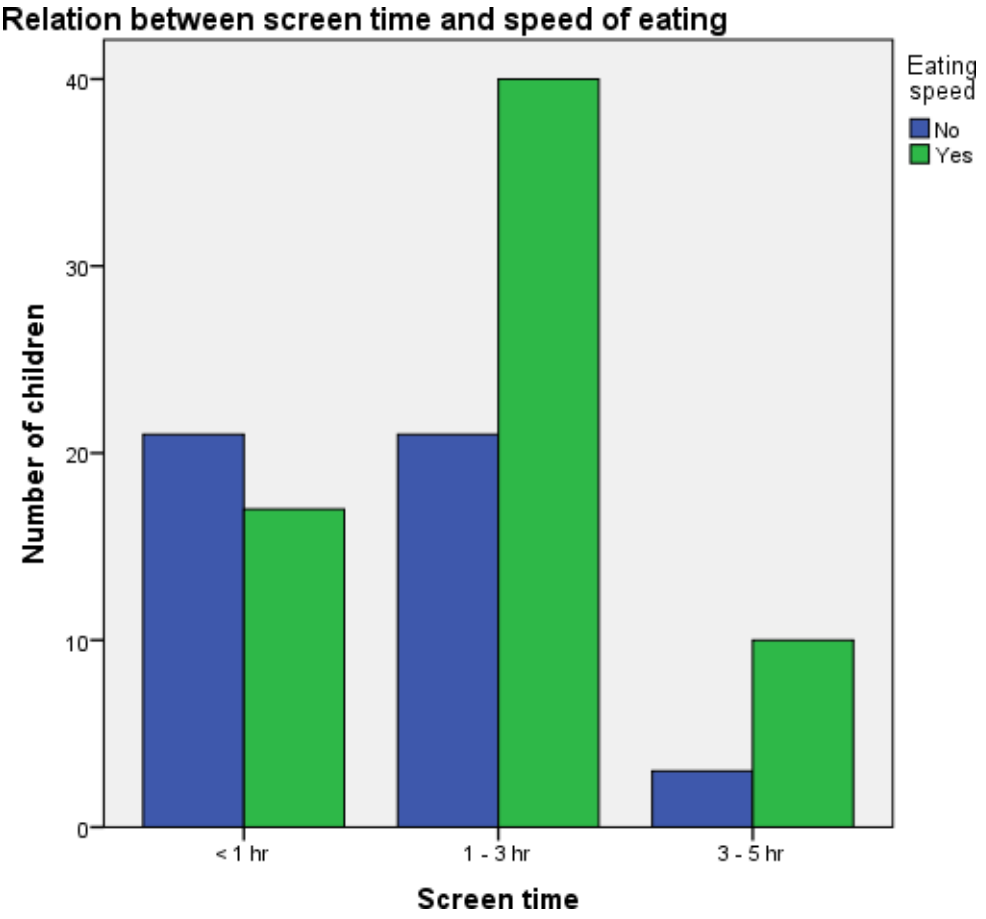

Figure 3: Relation between screen time and speed of eating

A Chi-Square Test of Independence was performed to test Hypothesis. Following are the results from SPSS for testing the relation between screen time and pace of eating. There was a significant relationship between the two variables, $\chi 2$ (2, N = 112) = 6.01, p = 0.4. Children who watched 1 - 3 hours and 3 - 5 hours of screens per day shows a change in their eating speed than children who watched for <1 hour, as these children did not display a change in their eating speed.

4.4.3 Relation between parental perceptions on reducing screen time and overall eating behaviour

The tables and graphs below indicate the correlation between parental perceptions on reducing screen time and overall eating behaviour

.

Table 7

Overall eating behavior * Parent's perception Crosstabulation

		Parent's perception		Total
		No	Yes	
Overall eating behavior	Yes, positively	4	5	9
	Yes, negatively	1	14	15
	No	43	45	88
Total		48	64	112

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.328[a]	2	.009
Likelihood Ratio	11.310	2	.004
Linear-by-Linear Association	2.593	1	.107
N of Valid Cases	112		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.86.

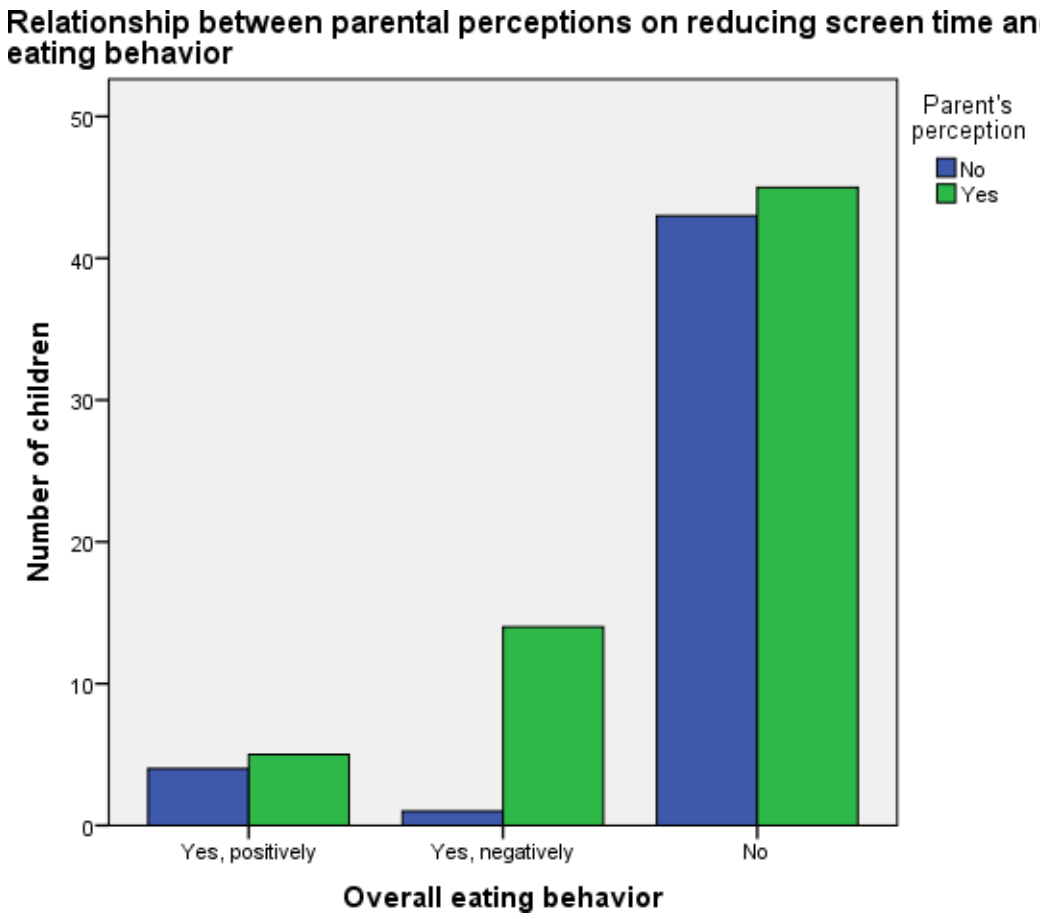

Figure 4: Relation between parental perceptions on reducing screen time and overall eating behaviour

A Chi-Square Test of Independence was performed to test Hypothesis. Following are the results from SPSS for testing the relation between parental perceptions of reducing screen time and its impact on children's overall eating behaviour. There was a significant relationship between the two variables, $\chi 2$ (2, N = 112) = 9.32, p = 0.09. Parents who think reducing screen time would improve their child's eating habits are likely to see their child's current eating behavior as negatively influenced by screens.

4..4 Relation between overall eating behaviour and excessive snacking habit

The tables and graphs below indicate the correlation between overall eating behaviour and excessive snacking habit.

Table 8

Excessive snacking habit * Overall eating behaviour Crosstabulation

		Overall eating behaviour		Total
		Yes, positively	Yes, negatively	
Excessive snacking habit	No	1	5	6
	Yes	8	10	18
Total		9	15	24

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.599[a]	2	.000
Likelihood Ratio	20.648	2	.000
Linear-by-Linear Association	20.047	1	.000
N of Valid Cases	112		

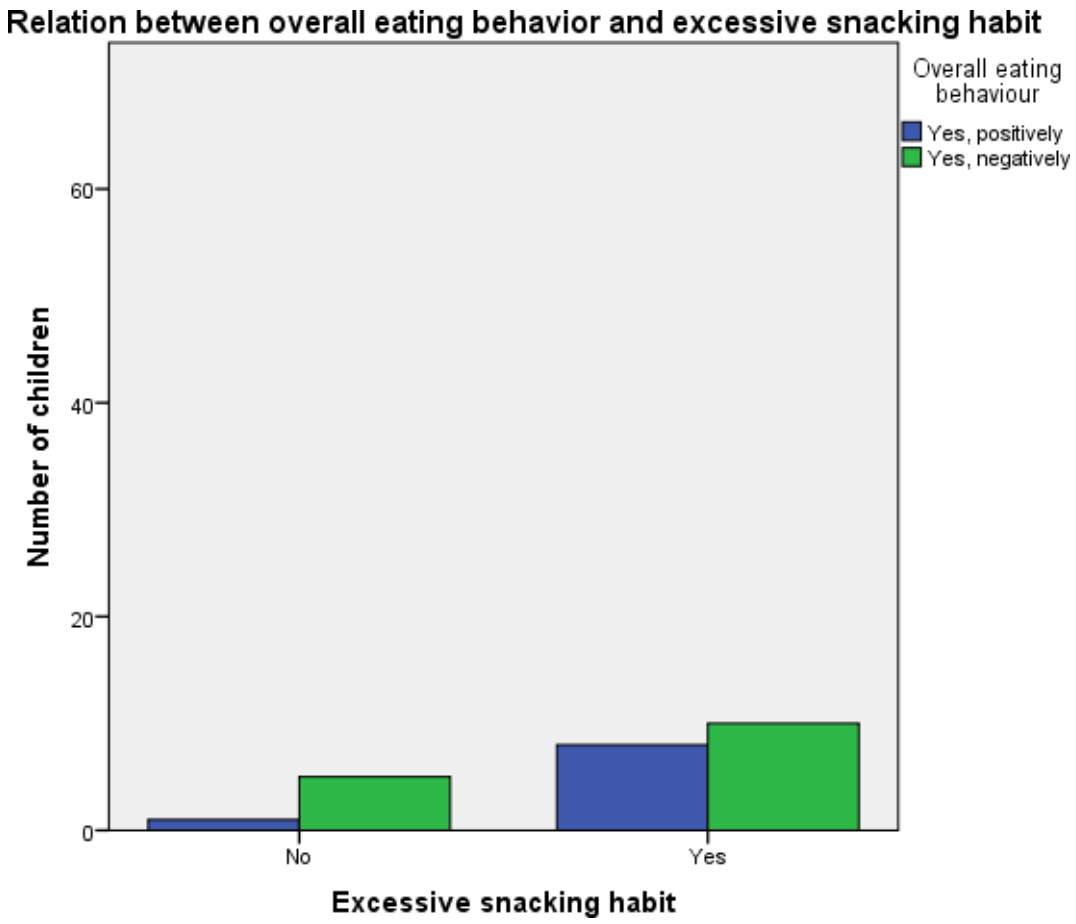

Figure 5: Relation between overall eating behaviour and excessive snacking habit

A Chi-Square Test of Independence was performed to test Hypothesis. Following are the results from SPSS for testing the relation between excessive snacking habit and overall eating behaviour. There was a significant relationship between the two variables, $\chi 2$ (2, N = 24) = 20.59, p = 0. Excessive snacking habit in children has a negative impact on their overall eating habit.

SUMMARY AND CONCLUSION

CHAPTER 5
SUMMARY AND CONCLUSION

This study investigated the potential impact of screen time on children's eating habits, with a focus on children aged 5 to 12 years. It makes use of information from 112 parents to understand how screen time affects their child's eating habits. Information about several aspects of screen time and eating behaviours were acquired for the study using a structured online questionnaire. Children who used screens for three to five hours a day were likely to nibble more, according to statistical research that found strong links between excessive screen time and increased snacking. It was also observed that children who spent more time on screens shows a change in their eating pace. Additionally, there was an association found between parents' perspectives on screen time reduction and overall eating behaviour; parents who believed that screen time reduction could be advantageous were more likely to observe improvements in their child's eating habits. These results shed light on the relationship between young children's screen usage and eating patterns, which is helpful knowledge for parents and educators trying to establish better practices. Future research should look more closely at how using screens for education may be done so without endangering children's well-being.

Findings

The findings of the study can be summarized as follows:

- **Profile of the children:**

Understanding the demographic profile of the respondents is crucial for contextualizing the subsequent analyses. The data revealed that the sample primarily consisted of 112 parents having children within the age group of 5 - 12 years, with the majority falling in the age group of 5 - 7 years. Moreover, the gender distribution indicated a significant majority of male participants. This demographic snapshot provides valuable insight into the characteristics of the population under study, allowing for a more nuanced interpretation of the findings in later sections.

- **Impact of screen time on children's eating behaviors:**

The impact of screen time on children's eating habits revealed complex challenges. There is a correlation between screen use and increased snacking, as evidenced by the statistics, which revealed that 33.9% of youngsters frequently snack while watching screens. In the same way, 36.6% of children snack during mealtime as a result of screen usage, indicating that using screens interferes with customary eating times. Nonetheless, just 6.3% of children skip meals due to screen time, indicating that although snacking may rise, complete meal skipping is less common.One interesting finding is that 44.6% of children are less careful of their portion sizes when using screens, which suggests a decrease in mindfulness around eating. This may result in overindulging in food or selecting unhealthy snacks, among other bad eating habits. Furthermore, according to 59.8% of parents, screen time influences the speed at which their children eat, which may lead to quicker eating and insufficient chewing, which can alter satiety and digestion.

Additional perspectives on the impact of screen time come from parents. Although a smaller percentage of parents (57.1%) think that limiting screen time could have a good impact on their child's eating habits, just 22.3% of parents detected changes in their child's food preferences as a result of excessive screen use. This suggests that even while the majority of parents fail to connect screen time to significant changes in dietary habits, many still recognize that less screen time may encourage healthier eating habits.

- **Overview of children's screen usage patterns:**

Significant variations have been found in daily screen time, preferred devices, content categories, and screen habits connected to holidays among the children surveyed for this study. According to the data in Table 4, 54.5% of children use screens for one to three hours per day, whereas 33.9% use screens for less than an hour. A smaller but noteworthy subset (11.6%) of individuals use screens for three to five hours a day. With 50% of screen time spent on them, TVs are the most popular gadget. Smartphones come in second with 36.6%, tablets come in third with 8%, and PCs and laptops with 5.4%. The most popular content category is animated shows (60.7%), whereas educational content (3.6%), video games (13.4%), and social media (10.7%) are less popular among children.Seasonal differences in screen time are also highlighted by the study. 66.1% of children use screens more frequently during the holidays, with 46.4% spending one to three hours and 25% spending three to five

hours. A smaller subset (8%) of respondents limits their holiday screen usage to more than five hours, while only 20.5% restrict it to less than an hour.

In terms of family meal habits, 45.5% of children occasionally eat with family members without screens, compared to nearly half (48.2%) of children who do so regularly. Just 0.9% of families, on the other hand, say they never or very seldom eat without a screen. In spite of this, the majority of families continue to have screen-free meals to some extent; 24.1% adhere to stringent regulations regarding screens during mealtime, 30.4% to partial rules, and 21.4% to no rules at all. Patterns of snacking indicate that most of parents (65.2%) do not see a connection between screen time and increased snacking, with only a small percentage (25.9%) noting occasional snacking during screen use.

- **Correlation analysis of screen time and children's eating behaviors**

The correlation analysis sheds light on the associations between children's screen usage and various aspects of their eating behaviours. The study used Chi-Square Tests of Independence to look at four important connections.

Firstly, there is a strong link between excessive snacking and screen time. With a chi-square value of 6.76 and a p-value of.034, children who spend three to five hours a day in front of screens are more prone than those who spend less time on them to engage in excessive eating behaviours. This implied that increased screen time could be a factor in poor eating habits. Second, an analysis of the relationship between screen time and eating speed showed a strong correlation. Children who use screens for one to three hours or three to five hours a day typically eat at a different rate than children who use screens for less than an hour a day. With a p-value of.049 and a chi-square value of 6.01, this association suggested that children's eating speed may be impacted by prolonged screen usage.

Third, there was a strong association between parents' views about reducing down screen time and overall eating behaviours. Parents who think that reducing screen time will improve their child's eating habits perceive that excessive screen time has a negative impact on eating patterns currently.

Lastly, a substantial correlation was found between the practice of overindulging in snacks and overall eating behaviour. With a chi-square value of 20.599 and a p-value of.000, excessive snacking has a statistically significant detrimental effect on eating behaviour overall. This suggests that children who overindulge in snacks generally have healthier eating habits.

Conclusion

In conclusion, this study investigates at how screen time impacted children's eating habits between the ages of five and twelve. The results show a strong correlation between screen time and a variety of eating behaviours. It is noteworthy that children who use screens for three to five hours a day are more likely to overindulge in snacks and eat at a different pace, suggesting that prolonged screen use may cause disruptive eating habits. Additionally, the study discovered a correlation between overall eating behaviours and parents' opinions about reducing screen time.

Overall, the evidence points to the necessity of controlling screen time in order to encourage children to eat healthy. Reducing screen time can help with mealtime patterns and excessive snacking, which can lead to improved overall eating habits. This research offered insightful information for parents and educators who seek to establish healthier practices and reduce the risks associated with excessive screen use.

Limitations

This study has a number of limitations in spite of its worthwhile conclusions. First, the results' generalizability may be limited by the sample size of 112 parents, which may not be true representation of the general population. Furthermore, the data is based on self-reported information, which can contain inaccuracies and biases. The study's cross-sectional design only permits associations to be established, not cause. Furthermore, the study does not take into consideration other variables like family dynamics, socioeconomic position, or cultural influences that may have an impact on children's eating habits. These restrictions imply that care should be taken when applying the findings to wider contexts and interpreting the data.

Recommendations

Several suggestions for parents, teachers, and researchers might be made in light of the study's findings. In order to reduce excessive snacking and encourage healthier eating habits, parents should first think about keeping an eye on and restricting their child's screen usage. Establishing clear guidelines for screen usage, especially around mealtimes, could promote maintaining of traditional eating patterns.

By promoting screen-free activities and educating children about the advantages of a balanced diet and appropriate screen usage, educators and schools may help students. These initiatives

should be strengthened by including public awareness campaigns about the possible dangers of excessive screen use into educational initiatives.

In order to better understand the long-term impacts of screen time on children's eating behaviours, researchers should use longitudinal designs and increase the sample size in future studies to address the limitations of this one. A more thorough understanding of the subject would come from looking at additional variables including physical activity, sleep patterns, and peer pressure that may affect eating habits. Lastly, investigating how children use educational screens and how it affects their eating habits can provide information about how to use screens positively without having a negative impact on their health.

BIBLIOGRAPHY

CHAPTER 7

BIBLIOGRAPHY

- Beyens, Ine, and Kathleen Beullens. “Parent–Child Conflict about Children‟s Tablet Use: The Role of Parental Mediation.” New Media & Society, vol. 19, no. 12, Dec. 2 017, pp. 2075–93. DOI.org (Crossref), https://doi.org/10.1177/1461444816655099.
- Biddle, Stuart J. H., et al. “Interventions Designed to Reduce Sedentary Behaviours in Young People: A Review of Reviews.” British Journal of Sports Medicine, vol. 48, no. 3, Feb. 2014, pp. 182–86. DOI.org (Crossref), https://doi.org/10.1136/bjsports-2013-093078.
- Childhood Overweight & Obesity | Overweight & Obesity | CDC. 1 Apr. 2022, https://www.cdc.gov/obesity/childhood/index.html.
- Dietary Guidelines for Americans, 2020-2025. Ninth Edition. (2020, December). U.S. Department of Agriculture & U.S. Department of Health and Human Services https://www.dietaryguidelines.gov/sites/default/files/202012/Dietary_Guidelines_for_ Americans_2020-2025.pdf
- Fam, Jia Yuin, et al. “Is Parental Mediation Negatively Associated with Problematic Media Use among Children and Adolescents? A Systematic Review and Meta-Analysis.” Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement, vol. 55, no. 2, Apr. 2023, pp. 89–99. DOI.org (Crossref), https://doi.org/10.1037/cbs0000320.
- Kim, Kay W., et al. “Associations of Broader Parental Factors with Children‟s Happiness and Weight Status through Child Food Intake, Physical Activity, and Screen Time: A Longitudinal Modeling Analysis of South Korean Families.” International Journal of Environmental Research and Public Health, vol. 21, no. 2, Feb. 2024, p. 176. DOI.org (Crossref), https://doi.org/10.3390/ijerph21020176.
- Määttä, Suvi, et al. “The Mediating Role of the Home Environment in Relation to Parental Educational Level and Preschool Children‟s Screen Time: A Cross-Sectional Study.” BMC Public Health, vol. 17, no. 1, Dec. 2017, p. 688. DOI.org (Crossref), https://doi.org/10.1186/s12889-017-4694-9.
- Oh, Christina, et al. “Interventions to Promote Physical Activity and Healthy Digital Media Use in Children and Adolescents: A Systematic Review.” Pediatrics, vol. 149, no. Supplement 6, May 2022, p. e2021053852I. DOI.org (Crossref), https://doi.org/10.1542/peds.2021-053852I.
- Pearson, Natalie, et al. “Reducing Screen-Time and Unhealthy Snacking in 9–11 Year Old Children: The Kids FIRST Pilot Randomised Controlled Trial.” BMC Public Health, vol. 20, no. 1, Dec. 2020, p. 122. DOI.org (Crossref), https://doi.org/10.1186/s12889-020-8232-9.
- Rideout, V. J., & Robb, M. B. (2020). The Media Consumption Habits of U.S. Teens and Tweens, 2019. https://healthy.kaiserpermanente.org/content/dam/kporg/final/ documents/ healtheducati on-materials/instructions/screen-free-screen-times-effects-hi-en.pdf

- Scaglioni, Silvia, et al. “Factors Influencing Children‟s Eating Behaviours.” Nutrients, vol. 10, no. 6, May 2018, p. 706. DOI.org (Crossref), https://doi.org/ 10.3390/ nu 10060706.
- Semar, Riya, and Neha Bakshi. “Correlation of Screen Time With Eating Behavior Among School-Going Children Aged 8 to 10 Years in East Delhi, India.” Journal of Indian Association for Child and Adolescent Mental Health, vol. 18, no. 4, Oct. 2022, pp. 283–89. DOI.org (Crossref), https://doi.org/10.1177/09731342221144877.
- Sharma, Bimala, et al. Co-Occurrence of Screen Time and Eating Behaviors among Young Children Aged 5 to 9 Years. 2022. elibrary.nhrc.gov.np:8080, http://elibrary.nhrc.gov.np:8080/handle/20.500.14356/936.
- Tambalis, Konstantinos D., et al. “Screen Time and Its Effect on Dietary Habits and Lifestyle among Schoolchildren.” Central European Journal of Public Health, vol. 28, no. 4, Dec. 2020, pp. 260–66. DOI.org (Crossref),https://doi.org/10.21101/cejph.a6097.
- Tezol, O., et al. “Excessive Screen Time and Lower Psychosocial Well-Being among Preschool Children.” Archives de Pédiatrie, vol. 29, no. 1, Jan. 2022, pp. 61–66. DOI.org (Crossref), https://doi.org/10.1016/j.arcped.2021.10.003.
- “The Differential Impact of Screen Time on Children‟s Wellbeing.” International Journal of Environmental Research and Public Health, vol. 18, no. 17, Aug. 2021, p. 9143. DOI.org (Crossref), https://doi.org/10.3390/ijerph18179143.
- Twenge, Jean M., and W. Keith Campbell. “Associations between Screen Time and Lower Psychological Well-Being among Children and Adolescents: Evidence from a Population-Based Study.” Preventive Medicine Reports, vol. 12, Dec. 2018, pp. 271–83.DOI.org(Crossref),https://doi.org/10.1016/j.pmedr.2018.10.003.

APPENDICES

CHAPTER 8

APPENDIX - I

Questionnaire to elicit information on how screen time affects children‟s eating habit between the ages of 5 and 12.

1) കുട്ടിയുടെപ്രായം:

- 5-7 വയസ്സ്
- 8-10 വയസ്സ്
- 11-12 വയസ്സ്

2) കുട്ടിയുടെലിംഗം:

- ആൺകുട്ടി
- പെൺകുട്ടി

3) കുട്ടിയുടെഉയരം:

- 90 cm അിലെങ്കിൽകുറവ്
- 90 - 120 cm
- 120 - 150 cm
- 150 cm അിലെങ്കിൽകാെുതൽ

4) കുട്ടിയുടെഭാരം:

- 15 kg അിലെങ്കിൽകുറവ്
- 15 - 45 kg
- 45 - 75 kg

5) സ്കൂളിലു□ഗഡ് /ക്ലാസ്:

- പിെഴ്സ്
- 1- 4 ക്ലാസ്
- [illegible]

6) സുഹ‍ദരങ്ങളുീെഎണ്ണിം :

- ഒന്ന്യമ്ലെ
- 1
- 2
- 3 അീലെങ്കൽകാെ്യതൽ

7) തമസ്ക്ക്യന്ന□െുദശിം :

- െഗരിം
- □ഗമിം

8) □െത്മസവര്യമിം :

- 10,000 അീലെങ്കൽക്യറവ്
- ₹ 10,000 - ₹ 30,000
- ₹ 30,000 - ₹ 50,000
- ₹ 50,000 അീലെങ്കൽകാെ്യതൽ

9) ദ്വസവ്യിംക്യട്ടസ് □ക്െ്ൽഎ□തസമയിംചലവഴക്കറ്യണ്ട് ?

- 1 മണ്ക്കാറ്ൽക്യറവ്
- 1-3 മണ്ക്കാർ
- 3-5 മണ്ക്കാർ
- 5 മണ്ക്കാറ്ൽകാെ്യതൽ

10) തീഴെൽകയവയ്ൽക്യട്ടഏറ്റവ്യമധികിംസമയിംചലവഴക്ക്യ ന്നസ്□ക്ൻഏത്?

- െ്.വ
- െീെറ്റ്
- കമ്പ്ക്കോട്ടർ/ലപുെപ
- സ്മർട്ട്ുഫൺ

11) ക്യട്ടഏത്തരത്ത്ല്യള്ളവകണെണ്സ്സ്□ക് ൻളുെയഗ്ക്ക്യന്ന ത്

- വിദക്ഭക്സെർെെകൾ
- കർട്ടൂണ്യകൾ/ആ്ുമറ്റഡ്ുഷകൾ

- വ്ഡുയടീഗയ്മ്കശ്
- ുസടഷക്ൽമ്ഡയ
- മറ്റുള്ളവ

12) അവധ്ദെങ്ങള്ൽക്ട്ട്സ്□ക്ംെ്ൽചലവഴ്ക്ന്നസമയിം കാെ്തലടുുണ്ട ?

- അീത
- അല്ല

13) അവധ്ദെങ്ങള്ൽ ക്ട്ടഎ□ത സമയിംസ്□ക്ംെ്ൽചലവഴ്ക്കുറ്ു ണ്ട്? :*

- 1 മണ്ക്കാറ്ൽക്ുറവ്
- 1-3 മണ്ക്കാർ
- 3-5 മണ്ക്കാർ
- 5 മണ്ക്കാറ്ൽകാെ്തൽ

14) സ്□ക്ൻളുയടഗിംെ്ങ്ങളുീെക്ട്ടയ്ീെ്ീമടത്തത്ൽള്ളഭക്ഷണശ് ലങ്ങീളഎ□തുത്തടളിംസവടധ്ംെ്ക്ുന്നുണ്ട്?

*

- ഗണക്മടയ്സവടധ്ംെ്ക്ുന്ന
- മ്തമടയ്സവടധ്ംെ്ക്ുന്ന
- ക്ുറച്ച്ംസവടധ്ംെ്ക്ുന്ന
- സവടധ്ംെ്ക്ുന്ൽല

15) സ്□ക്ൻകടണ്ുന്നസമയത്ത്ംെ്ങ്ങളുീെക്ട്ടഇയ്ക്ക്ംീെഭക്ഷണിംകഴ ക്കടെ്ുള്ള□െവണതകടൺക്കുറ്ുുണ്ടട? :

- ഉണ്ട്
- ഇല്ല

16) അമ്മതമടയസ്□കൻസമയിംമാലിംകഴ്ട്ടഭക്ഷണിം (□ൊടുതൽ, ഊഞ്ഞഴതലടുയവ) ഒഴവടുക്കടറഴുണ്ടട? :

- ഉണ്ട്
- ഇല്ല

17) ഊീണ്ടന്നടുണ്സ്മരീിൊഴത്തീതങ്കൽ, തടുീഴീകടെഴത്തർർക്കഴന്നവയ ൽഏതടുണ്സ്ൊൽവടുയ്ഒഴവടുക്കഴന്നത്? :

- □ൊടുതൽ
- ഊണ്സ്
- അത്തടുഴിം

18) കഴ്ട്ടസ്□കംൊൽചലവഴ്ക്കഴന്നസമയവഴിം, കഴ്ട്ടയ്ക്ക്ക്ആുരടുഗക്കരമടുയഭക്ഷണുത്തടെഴള്ളതടുത്ൊരക്കിംതമ്മൽഎീിൊ ങ്കലഴിംബന്ധിംൊങ്ങൾ□ശദ്ധച്ച്ട്ടുണ്ടട? :

- □ൊൽകാലമടുയഴള്ളബന്ധമഴണ്ട്
- ആഴകാലമടുയഴള്ളബന്ധമഴണ്ട്
- ബന്ധമ്മലെ

19) സ്□കൻകടുണഴന്നസമയത്ത്കഴ്ട്ടതടുൻകഴ്ക്കഴന്നഭക്ഷണത്ൻ്റ്റീറ അളവ്എ□തുത്തടുളമഴിീണ്ടന്ന് □ശദ്ധിക്കടുറഴുണ്ടട? :

- ഉണ്ട്
- ഇല്ല

20) സ്□കൻകടുണഴുമ്പ്ടുൾകഴ്ട്ടഎ□തതവണഭക്ഷണിംകഴ്ക്കടുറഴണ്ട്?

- എുപടുഴഴിംകഴ്ക്കടുറഴണ്ട്
- ഇയ്ക്ക്കീിൊകഴ്ക്കടുറഴണ്ട്
- ആൊർവ്വമടുയ്കഴ്ക്കടുറഴണ്ട്
- ഒർക്കലഴ്മലെ

21) സ്കൻകട്ടയിെഭക്ഷണതടത്തിരീത്തസവടധ്ംക്രന്രണ്ടട?
അതടയത്കംൽകടണ്രന്നഭക്ഷണിംുവണീമന്കട്ടവടശ്ംക്കടറ്
ുണ്ടട? :

- എുപടഴ്ിംവടശ്ംക്കടറ്ണ്ട്
- ഇയ്ക്കംീവടശ്ംക്കടറ്ണ്ട്
- ഞാർവ്വമടയ്വടശ്ംക്കടറ്ണ്ട്
- ഒർക്കല്മ്മലെ

22) സ്കൻസമയിംമാലിംംങ്ങളുീെകട്ടകശ്ഭക്ഷണസമയത്ത്ംെയ
ല്ിംസ്ടക്ക്കഴക്കടെ്ള്ള്വെണതകടൺക്കടറ്ുണ്ടട? :

- ഉണ്ട്
- ഇല്ല

23) അമ്തമടയസ്കൻഇുയടഗിംകടരണിംംങ്ങളുീെകട്ടകളുീെഭക്ഷ
ണുത്തടെ്ളഇഷ്ടങ്ങൽഎീെങ്കല്ിംമടറ്ങ്ങശ്ിങ്ങശ്ിർക്ഷച്ച്ട്ടു
ുണ്ടട?:

- ഉണ്ട്
- ഇല്ല

24) ഏത്തരത്തൽല്ളഭക്ഷണെദടർത്ഥങ്ങളടൺസ്ക്ട്ടസ്കൻസമയത്ത്
അധികമടയ്കഴക്കടറ്ള്ളത്? :

- സ്ടക്കസ് (ചപസ്, ബസ്ക്കറ്റ്, ുെടപുകടൺ)
- എണ്ണയൽവറ്ത്തെലഹടരങ്ങശ്
- മധ്രെലഹടരങ്ങശ്
- ുസടഡമ്തലടയെടുയങ്ങശ്

25) സ്കൻസമയിംംങ്ങളുീെകട്ടയിെഭക്ഷണിംകഴക്ക്രന്നുവഗതീയ
സവടധ്ംക്രന്ര്ുണ്ടട? :

- ഉണ്ട്
- ഇല്ല

26) സ്□കൻൊയടഗ്ക്കടീതകൃട്ടകൃെൃിംബടിംഗങ്ങുളടീെടപിംശരടശർ എ□തതവണഭക്ഷണിംകഴ്ക്കടറൃണ്ട്? :

- എുപടഴൃിം
- ഇയ്ക്ക്ംീെ
- ഒാർവ്വമടയ്
- ഒർക്കലൃമലെ

27) വ്ട്ടിൽഭക്ഷണിംകഴ്ക്കൃുമ്പ്ടശ്സ്□കൻസമയിംസിംബന്ധച്ച്ംഎീെ ങ്കലൃിംംെ'യ□ൊണങ്ങശ്ൊുണ്ടട? :

- ആീത, കർശമടയ്യ□ൊണങ്ങശ്
- ആീത, ച്ലെയ□ൊണങ്ങശ്
- □ൊുതക്കെയ□ൊണങ്ങീളടന്നൃമലെ
- ഭക്ഷണസമയത്ത്സ്□കൻെഅൃവദ്യമലെ

28) സ്□കൻൊയടഗിംകൃട്ടയൽസ്ൊടക്സ്, മധൃരെലഹടരങ്ങശ്മൃതലടയവകഴ്ക്കൃന്നതവർധപച്ച്ട്ടുുണ്ടട? :

- ഒാർവ്വമടയ്
- ഇയ്ക്ക്ംീെ
- എുപടഴൃിം
- ഇ്ലെ

29) സ്□കൻസമയിംകൃട്ടയൃീൊീമടത്തത്തൽലൃള്ളഭക്ഷണസവഭടവീത്തഏ ീതങ്കലൃിംവധത്തൽബടധച്ച്ട്ടുുണ്ടട? :

- □ൊർകാലമടയ്ബടധച്ച്ട്ടുണ്ട്
- ഒൃകാലമടയ്ബടധച്ച്ട്ടുണ്ട്
- ബടധച്ച്ട്ടലെ

30) സ്□കൻസമയിംകൃറയ്ക്ക്കൃന്നത്ൊ'ങ്ങളുീെകൃട്ടയൃീെഭക്ഷണൂശല ീയഗൃണെരമടയ്ബടധക്കൃീമന്ന്ൊ'ങ്ങശ്വിശവസ്ക്കൃന്നൃുണ്ടട? :

- ഉണ്ട്
- ഇ്ലെ