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EFFECT OF INTERNET ADDICTION ON SCHOOL GOING CHILDREN

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Abstract

Internet plays a fundamental role in society. It is an easy access for information exchange and academic research. Prolonged use of internet can lead to internet addiction resulting in marked distress and/or functional impairment in psychological, physical and social daily life activities.

OBJECTIVE: To assess the nutritional status of school going children linked with internet addiction residing in the vicinity of Bani Gala, Islamabad and to reconnoitre the changes in dietary habits among school going students located in Bani Gala, Islamabad.

STUDY DESIGN: The study was designed as descriptive, cross-sectional and correlational research study on school going children linked with internet addiction residing in the vicinity of Banigala, Islamabad. Three questionnaires were used to collect data, a basic demographic questionnaire, a validated semi-quantitative FFQ, and a 24 hours recall. Anthropometric measurements were done, which include weight, height, and BMI. Their Body Mass Index (BMI) for age was calculated with the help of their height and weight measurements and compared with WHO standards. Dietary practices were assessed with the help of a semi-quantitative food frequency questionnaire. Actual energy intake per day was computed from 24 hours recall.

SUBJECTS/SETTINGS: Total estimated population of school going children was 7,173 at the time of data gathering in the selected vicinity of Islamabad. A sample of 500 (273 (54.6 %) male and 227 (43.4 %) of school going children was selected through simple random sampling for selection of school and then systematic random sampling was adopted for selection of sample.

STATISTICAL ANALYSIS: Socio-demographic, anthropometric and dietary intake data were entered on SPSS version 22 and subjected to statistical analysis. The Nutri-survey software was

used to determine the intake of various nutrients from 24 hours recall. AMoS was also applied for analysis of confirmatory factor analysis. Descriptive statistics like frequencies and percentages were subjected to test like Pearson's correlation and regression was used to test relationship between internet addiction and nutritional status of school going children and testing of hypothesis.

RESULTS: The results shows that internet addiction have negative impact on nutritional status of school going children in Bani Gala, Islamabad. BMI of the school going children are high due to lack of physical activities and higher calories intake, hoteling and excessive use of snacks.

CONCLUSIONS: The nutritional statuses of school going children is not properly satisfactory in terms of meal pattern and foods consumption from various schools due to excessive use of internet. The low consumption of vegetables and high intake of fast food and snakes can effects their health in future.

RECOMMENDATIONS: Implement a focused awareness programs targeting school specialists and parents, and various workshops for school going children on the physical, psychological and social risks of excessive use of Internet. Parents and guardians should take care of their children regarding use of internet by their children or wards.

1. INTRODUCTION

1.1 Background

Eating habits and nutritional status both are inter-connected with each other; as both have great deal of importance in public health and impart an important preventive protagonist in non-communicable diseases (Eyre, et. al., 2004). Eating habits and patterns especially in adolescents are mainly affected by physiological, traditional, cultural, and psychosocial dynamics. Students, during the period of adolescence, are injected into a completely new environment that affects and completely change their lifestyle and eating habits. In addition to the fact that metabolic processes are also get modified and if eating habits are not as healthy as it should be, it would be the main cause of malnutrition (Akhtar, Zareen, & Sarmad, 2018; Kerstetter, Holthausen, & Fitz, 1993).

In recent decades, the use of the internet has increased histrionically and clinical observations indicate that some people become "addicted" and develop an Internet addiction (IA) (Griffiths, Kuss, Billieux, & Pontes, 2016). The Internet Dependence Test (1998a) explored that 8% of adolescents in China (Cao, Sun, Wan, Hao, & Tao, 2011) and 10.7% of South Korean adolescents (Park, Kim, & Cho, 2008), adolescents, the assessment of Internet dependence varies from country to country.

Addiction Test (1999), 1.5% of Greeks and 1.6% of Finnish adolescents were Internet dependent. Using a tailored version of the Minnesota Inventory for Impulsive Interference, 4% of US universities were identified as being dependent on Internet. In Southeast Asian countries, (Taiwan, Singapore, South Korea, and China) higher prevalence rates of internet usage have been identified. For example, the use of the Youth Internet Search Test found that 8% of the youth in China and 10.7% of the youth in South Korea were dependent on Internet usage. The incidence of Internet addiction in adolescents was estimated to be approximately 11% in China, 8% in Greece and 18.4% in Korea (Kuss, Van Rooij, Shorter, Griffiths, & van de Mheen, 2013). This shows that IA is prevailing at very high pace.

Adolescence is more dangerous than adult internet addiction. Internet addiction can influence social performance, human psychology, and lifestyle. Many cross-sectional studies have shown that internet dependency affects many lifestyle factors in adolescents (Cheung, Chan, Lui, Tsui, & Chan, 2018; Miskulin et al., 2022; Xiao et al., 2019). This can lead to irregular eating habits, prolonged internet periods, physical inactivity, short sleep and increased alcohol and tobacco consumption.

Some studies have shown that changing lifestyle factors caused by the heavy use of the Internet could affect the growth and development of Internet addicts (Y. Kim et al., 2010). Internet addiction is generally attributed to signs such as overuse and uncontrolled use results in low tolerance level, emotional problems and social disability, resulting in personal, educational, financial and professional consequences (Kamran, Afreen, & Ahmed, 2018).

Internet addiction (IA) has several detrimental effects on school age children, including physical inactivity, irregular eating habits, lack of sleep, depression, loneliness, and social anxiety. However, very few people in this region have investigated the association between excessive internet use and nutritional status (Lin, Wang, Sun, Ko, & Chiu, 2019). The aim of this study is therefore to determine the relationship between internet addiction and Nutritional Status.

1.2 Statement of the Problem

Present study will reveal and unfold frequent misuse or abuse of internet among school students. Several studies have suggested some prevention techniques for children, their families, and health professionals. The use of Internet should change, as the Internet becomes a gold mine for information and communication. The fact that several students and their families are not aware of these adverse effects of IA on health, time management, social life, finances, current and future

school results and nutritional status (Singh & Nagar, 2019). Unfortunately, the lack of Internet education in the school curriculum is a gap and needs to be filled (Bener, 2017).

Keeping in view of the above discussion, problem statement of the study in hand is; "does internet addiction effect the nutritional status of school going children in Bani Gala, Islamabad?".

1.3 Rationale of the Study

Most of the restaurants and cafes providing eatables in schools, colleges, institutes, and universities are not termed as healthy foods and they are low-priced to counter the students' needs and their affordability (DS, Deen, & Khuluse; O'Hara & Toussaint, 2021).

1.4 Significance of the Study

Motivation behind this topic is growing evidence of uncontrolled internet use among young individuals for information and entertainment purposes and its adverse effects on daily routine and dietary habits. In Pakistan university students may be at higher risk of developing addictive patterns of internet use as they spend hours online for assignments and projects, for entertainment as playing online games, reading and writing emails, and social networking like using Facebook and Twitter (social networking websites). In addition, most of these students live away from home with little or no parental control; they are more prone to internet addiction disorder.

Being addicted to the Internet may be the main cause of physical problems in recent generation such as dry eyes, red eyes, backaches, severe headaches, eating irregularities such as skipping meal, more snacking, failure to attend to personal hygiene, and routine sleep disturbance. This study will help to investigate the effect of excessive internet use on lifestyle and dietary behavior and consequently on health status of school, college and university students.

1.5 Objectives of the Study

The objectives of the study were as follows:

- To assess the strength of internet addiction among school going children.
- To examine the effect of internet addiction on nutritional status among school going students in Islamabad.

1.6 Operational Definitions

There are two main variables of the study. Internet Addiction and Nutritional Status. The operational definitions of the variables used in the study are as under:

Operationally IA was defined by (M. Shaw & D. W. Black, 2008) as *"Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviours regarding computer use and internet access that lead to impairment or distress".*

Operationally Nutritional Status was defined by (Jeejeebhoy, Detsky, & Baker, 1990) as *"Intake of a diet sufficient to meet or exceed the needs of the individual will keep the composition and function of the otherwise healthy individuals within the normal range. Three processes disturb this equilibrium: decreased intake, increased requirements, and altered utilization. When this disequilibrium occurs, then loss of body tissue ensues."*

1.7 Study Gap

Mainly there are seven different types of research gaps, for fulfilling those gaps either one or multiple in a study, researchers conduct different research studies. These gaps are, i. Evidence gap, ii. Knowledge gap, iii. Practical knowledge-gap, iv. Methodological gap, v. empirical gap, vi. Theoretical gap, and vii. Population gap (Miles, 2017; Müller-Bloch & Kranz, 2015)

This study has filled three different types of gaps. Evidence gap, population gap, and empirical gap. This research study is providing evidence in the support of theory that internet addiction is not good for nutritional status of any person. This study has also fulfilled the population gap, as no such study is available in the recent years that is using Bani Gala, Islamabad population for conducting an exploratory research to study the relationship between nutritional status and internet addiction in school going children. An empirical gap fulfillment, this study is containing a data and using it in exploratory and descriptive research perspectives.

1.8 Theoretical Framework

By concluding the above discussion and in the light of previous literature this research study have the following theoretical framework.

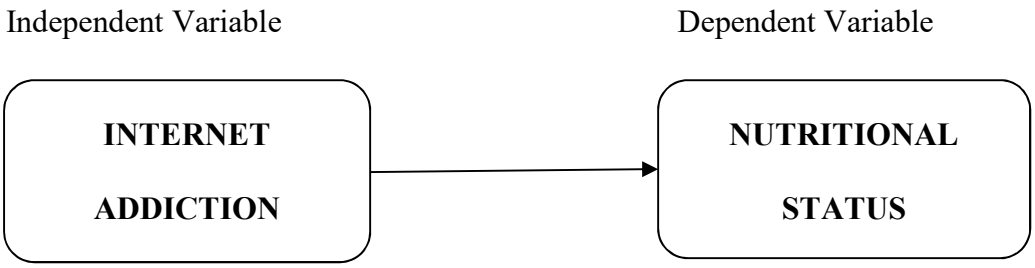

Figure 1 Theoretical Framework

2. LITERATURE REVIEW

2.1 Background

Now a day, human race is breathing in an era of information technology, which is transforming the whole living pattern day by day progressively. Internet is the one of the most important part of this technology. Therefore, internet has become a vital mean for information, education, social interaction, and entertainment as well (Tsitsika et al., 2009). Tools to access the internet are smartphones, tablets, and different types of computers including desktops, laptops, and palm tops. Internet has become the most important part of our lives these days, but the problems for using these tools have negative impact on user's life and health (Örnek & Gündoğmuş, 2022).

As the Internet access has been, become established in our institutes, including schools, housing and businesses, the prevalence of Internet Addiction (IA) has increased over time (Tateno et al., 2019). Internet addiction has considered poorly controlled Internet use and can lead to impulse control disorders (Y. Kim et al., 2010). Internet addiction, especially among adolescents, has recently been identified as a major social problem in many countries due to the high prevalence of depression, aggressive behavior, psychiatric symptoms, and interpersonal problems related to this addiction (Ko, Yen, Liu, Huang, & Yen, 2009; Seo, Kang, & Yom, 2009).

Due to spread of current pandemic, COVID-19, internet usage has drastically increased in every walk of life. Instead of physical class, online classes trend has started in almost every institute either they are school, college or university. Even though international degree programs has started online and online examination concept was also increased during current pandemic. This pandemic has increased the internet addiction in children and adults. Due to lack of socialization, public gatherings, access to public places and parks, and restricted movement of

general public, mostly children and adults started using internet for fun, study and socialization (Sun et al., 2020).

Young, 1998 defined Internet Addiction in words as "use of the internet by more than 38 hours per week", but it is also been defined as "a maladaptive pattern of internet use leading to clinically significant impairment or distress".(Flisher, 2010) explored that high internet and information technology users eat smaller meals, have less appetite, skip meals and do snacking more often than their internet counterparts with potential risk and normal risk. In addition, the nutritional quality of high-risk Internet users is lower than that of vulnerable Internet users and risk-free Internet users.

Frequently skipping lunch or dinner in high-risk internet users was momentously higher than that in no risk Internet users. This finding is very much consistent and unswerving with a study by (M. Kim & Chun, 2005) that reported a high incidence of meal skipping in Internet addicts. The high frequency of skipping dinner could be related to snacking; more frequent snacking was observed in high-risk Internet users than no risk Internet users. Adolescent heavy snacks skipped dinner more frequently than their non- or light-snacker adolescent counterparts did (Agaronov, Entwistle, & Leung, 2019; Chun, Shim, & Kim, 2017; Kabir, Miah, & Islam, 2018).

The most popular snacks of the participants were also confectionery and fast foods, which are nutritionally poor foods, high in calories from fat to simple sugars, but low in other nutrients such as vitamins and minerals. As a result, high Internet users have inappropriate eating habits that could affect their growth and development (Chun, Shim, Kim, & Networking, 2017; Y. Kim et al., 2010). Internet is so big, so vast, so powerful, and full of meanings in every walk of life that it is a complete auxiliary and substitute for some people in their lives (Wallace, 2015).

Many efforts are being made to cut back on computer use or stop and but these efforts are failing repeatedly (Stroud, 2019). Feelings of emptiness, blankness, depression, misery, and irritation when not at the computer or when attempting to cut down is very common in children. Staying online longer than originally intended. Jeopardizing or risks losing significant relationships, job, career or education because of the excessive use of internet. Hiding the extent of computer and internet use to family and friends. Use of the computer or internet as a way of escaping from different problems or of relieving a dysphoric mood (e.g. feelings of helplessness, guilt, anxiety and depression) (Flisher, 2010).

In a meta-analysis study conducted by (Chun, Shim, Kim, et al., 2017) revealed that the relationship between smartphone addiction and eating attitudes, and obesity are highly significant.

Smartphone addiction may lead to an increase in body weight, by affecting eating habits and attitudes. Therefore, the effect of eating behavior disorders in the emergence of the smartphone addiction should be considered. Multi-disciplinary and dynamic solutions are required on urgent basis to prevent this smartphone addiction and internet addiction that may increase over time in new generation.

Many parents are hesitant about how much time their children spend online, or on their digital devices in general because of how time consuming it can be and because of the time, they are not spending doing other activities, like homework, outdoor activities, and even spending quality time with their families.

2.2 Internet Addiction

In this current study, internet addiction is defined by (M. Shaw & D. W. J. C. d. Black, 2008) as *"Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviours regarding computer use and internet access that lead to impairment or distress"*.

Internet addiction is excessive use and urges of using computer and internet enables devices, which leads to distress and keep away from other assignments of life, and routine matters. This situation has attracted growing attention from the prevalent media and researchers, and this attention has paralleled the growth in access to computers and Internet access.

Estimations of estimates vary widely from different perspectives, although a recent random telephone survey of the general American population estimates 0.3-0.7%. This disorder is found worldwide, but mainly in countries where computer access and information technology are widespread. Clinical patterns and most related surveys report male dominance in internet addiction (Su, Han, Yu, Wu, & Potenza, 2020). It is reported to have started in the late 20's or early 30's, and a decade or more (M. Shaw & D. W. J. C. d. Black, 2008), often delay the initial use of computer. Internet addiction is also associated with a measure of depression, anxiety and social isolation.

There is no such evidence-based treatment and management for internet addiction is available. Cognitive behavioral approaches may be helpful for treating internet addiction. Psychotropic drugs have no proven role in treating internet addiction. Family and some close friends therapy may be supportive in some selected issues or cases. In some cases, self-imposed or family imposed restrictions on computer use and Internet access may be necessary (M. Shaw & D. W. J. C. d. Black, 2008).

2.3 Nutritional Status

In this current study, the definition of nutritional has taken as *"nutritional status has been defined as an individual's health condition as it is influenced by the intake and utilization of nutrients"* (Todhunter & retrieval., 1970)

Nutritional status is the balance between the total amounts of nutrients intake for an organism or living thing and its expenditure in the process of growth, reproduction, movement and health care because the process is so complex and quite individualized in nature, so estimates of nutritional status may be varied from different aspects (Gillette, Tennessen, & Reis, 2021). This assessment can be done according to types of nutrients and different aspects of nutrients. These range from the level of nutrients in the body to the products of their metabolism, and their functional function. Nutritional status can be measured for individuals as well as for the population.

Medical practice requires accurate measurement of individual's nutritional status (Andreoli, Garaci, Cafarelli, & Guglielmi, 2016). Population measures are more important in research and development studies of public health. They can be used to describe the nutritional status of the group, to identify populations or parts of the population at risk of nutritional health consequences, and to review interventions (Andreoli et al., 2016; Gillette et al., 2021).

2.5 Hypothesis Development

From the above discussion and keeping in view of theoretical framework, the current study have following hypotheses.

NULL HYPOTHESIS: Excessive use of internet does not affect the nutritional status of school going children.

ALTERNATE HYPOTHESIS: Excessive use of internet affects the nutritional status of school going children.

3. RESEARCH METHODOLOGY

3.1 Study Locale

Islamabad is the capital city of Pakistan which governed by the federal government and Capital Develop Authority (CDA). The two provinces surround this city and it is situated in at the junction

of Punjab and Khyber Pakhtoon Khawa (KPK) provinces of Pakistan. Islamabad is one of the planned city in the world and a Greek architect "Constantinos Apostolou Doxiadis" and his team designed it in 1960s. Islamabad has highest cost of living as compared to all other cities in Pakistan. Therefore, population of Islamabad is mainly belongs to middle and upper middle class.

Islamabad is one of the safest city of Pakistan and has very low crime rate as compared to other cities in Pakistan and worldwide as well. Therefore, this city attracts many of the people from all over Pakistan and it is one of the most cosmopolitan and urbanized cities of Pakistan. This city had spacious avenues in a forest-like setting. People living is Islamabad belongs to every corner of Pakistan. This city has largest growth rate in expansion, growth, and development. Almost every house has internet access, to conduct and study about internet addiction would have higher chances to present in the school-going children, and this internet addiction might have their nutritional status.

This city has more than twenty universities and thousands of public and private colleges and schools. The current study includes only private and public schools for data gathering located in the vicinity of Bani Gala, Islamabad. Public or government schools in Islamabad have higher number of students as compared to private schools. Bani Gala is a residential area located in Islamabad at the eastern bank of Rawal Lake. It was established in late 90's and early 2000's. Some famous personalities of the country also lives their due to its greenery and Rawal Lake.

3.2 Study Design

This research study was a institutional based observational and data was gathered once from school going students of class six (6) to class ten (10) with the help of their teachers and parents to cope with the time and resources limitations of researcher.

3.3 Population of Study

The target population of the study was school going students or children enrolled in class six (6) to class ten (10) in both public schools, private schools, and those institutes which are giving education from grade six to grade 10 located in the vicinity of Bani Gala, Islamabad.

3.4 Inclusion Criteria

Inclusion criteria for the current study was as under:

- All school going students having access to internet at home.

- Students studying in class six (6) to class ten (10).
- Apparently healthy and able to use internet.

3.5 Exclusion Criteria

Exclusion criteria for the current study was as under:

- School going students but they do not having any internet access in their school or at home.
- All school going students of selected classes who are suffering from any chronic or protracted disease.
- All those students who are absent from school due to any reason on day or time of data collection.
- All other students who do not belong or studying to the class six (6) to class ten (10) of any school.

3.6 Sampling

Two stage sampling procedure was followed by the researcher for data gathering to carry out this research study.

- At first stage, different schools was selected by using simple random sampling technique.
- At second stage, systematic random sampling procedure was adopted for selection of students from different classes enrolled in 6 to 10 standards.

3.7 Sample Size

Sample size is one of the basic pre-requisite of the research. The total sample size in this study was estimated keeping in view following facts.

Significance level or power of the study was taken 5%.

Confidence/probability level was taken 95%.

The incidence of the disease was taken as 30%.

The formula for such cross sectional studies as described is as under,(Young, 1998)

$$n= [(Z \times (1-\alpha/2))^2 \times p \times (1-P)]/d^2.$$

In this study, p was equal to 0.3.

Moreover, d=5 percentage points=0.05.

Probability level or confidence level (1-α) =95%.

At this level Z (1-α/2) =1.96.

Therefore, the exact sample size was

$$n = [(1.96)^2 \times (0.3) \times (0.7)]/ (0.05)^2$$

$$= 332.69$$

For keeping in view of reliability and validity of the collected data and its analysis perspective, researcher collected data from five hundreds (500) respondents which were school going children or students in the vicinity of Islamabad.

3.8 Data Collection

School going children studying in different classes and different schools briefed about the self-administered questionnaire**.** They have monitored through researcher while giving their responses in questionnaires and help was provided where and when needed. Their questionnaire will have four parts:

a. Demographic information

The basic information based on demographic data such as gender, age, family income, hometown, parents' qualification and type of living was taken.

b. Anthropometric Measurements.

Anthropometric measurements will also be taken while data collection through self-administered questionnaire by measuring height and weight of school going children. Finally, the anthropometric measurements have compared with WHO standards for growth charts of BMI for age. (Attached as Annexure-A)

c. Internet Addiction Test (IAT).

In the year 1998, Young introduced a 20-item questionnaire on which respondents are asked to rate items on a five-point Likert scale, covering the degree to which their Internet use affects their

daily routine, social life, productivity, sleeping pattern, and feelings. The minimum score is 20, and the maximum is 100; the higher the score, the greater the problems Internet use causes. Young (1998) suggests that a score of 20–39 points is an average online user who has complete control over his/her usage; a score of 40–69 signifies frequent problems due to Internet usage; and a score of 70–100 means that the Internet is causing significant problem (Widyanto & McMurran, 2004). Questionnaire is attached as annexure "C".

d. Nutrient intake

The nutrient intake of the school-going children was assessed through 24-hour recall (two-week days and one weekend) which is attached as Annexure-C. Finally, intake was calculated through Nutri-survey software Version 15.

3.9 Pilot Testing

The collected data belong to Internet addiction and nutritional status was tested through Pearson's correlation testing through SPSS with a smaller sample to check either some correlation exits between the variables or otherwise. Their results are as under:

Table 1 Pearson's Correlation

Correlation	IA	NS
Internet Addiction	1	
Nutritional Status	-0.589**	1

**p<0.01

The above correlation matrix shows that -0.589 correlation between the variables. This shows significant negative relationship between the variables. Researcher's collected data is ready for further analysis.

3.10 Ethical Considerations

The rudimentary purpose of primary data gathering was purely for educational and research purposes. Respondents were teenagers and needs proper guidance for filling the questionnaire. The responses of the respondents was kept confidential and would never disclose to anyone other than

researcher, concerned supervisor, educational or research purposes. The option was given to respondents to do not write their names on given questionnaire, if they wanted to hide their identity. Their responses would never be linked to their personality at any stage even after completion of this research study. Only the researchers involved in this study would see their responses.

3.11 Statistical analysis

Statistical Analysis was carried out with the help of Statistical Package for Social Sciences (SPSS) Version 22, Amos Version 22 and some descriptive analysis was carried out with the help of Microsoft Excel 2019. Nutri-survey software was also used for calculation of nutritional intake of the respondents.

3.12 Ethical approval

Written approval was taken from the concerned principal of the school for primary data collection from their students studying in class six (6) to class ten (10) under their kind control. Subjects and purpose of the study was briefed in details; their queries was addressed through personal communications. Written consent was taken from the subjects after explaining the purpose of study.

3.13 Analysis

Data analyses was performed by using the Statistical Package for Social Sciences (SPSS) software and the researcher using statistical tools did their interpretation. Relationships between levels of Internet addiction and socio-demographic characteristics, lifestyle patterns and nutritional status was analyzed using the statistical testing.

4. RESULTS & DISCUSSION

4.1 Introduction

The results and discussion is the most vital part of the study. In this portion of the study researcher would present the results, which were extracted from the rigorous analysis of data collected from school going children presented in the vicinity of the Bani Gala, Islamabad. This study is amalgamation of exploratory and descriptive in nature and explore the impact of internet addiction on school going children in Bani Gala, Islamabad. These are followed by the discussion on the results.

4.2 Data Filtration

A self-administrated questionnaire were distributed to collect the data. The total of seven hundred and fifty (750) questioners were distributed and out of 750, researcher gathered five hundred (500). Due to lack of time and resources, researcher was unable to collect all of them. Therefore, in this study, response rate is as under:

Total Questionnaires Distributed = 750

Collected Questionnaires = 500

Response Rate = (500/750) *100 = **66.67 %**

From the above analysis, this study's response rate was 66.67 percent.

Univariate Data Normality Test

The univariate data normality test was performed to check the normality of the collected data and their results are as under:

Table 2 Univariate Normality Test

Items	Min	Max	Mean		SD	Skewness		Kurtosis	
	Stat	Stat	Stat	Std Error	Stat	Stat	Std Error	Stat	Std Error
1.	1	5	4.34	.033	.859	-1.596	.10	0.936	.22
2.	1	5	4.24	.035	.820	-1.051	.10	.758	.22
3.	1	5	4.24	.035	.832	-1.402	.11	1.767	.22
4.	1	5	4.14	.039	.902	-1.181	.11	1.468	.22
5.	1	5	4.14	.037	.861	-1.199	.11	1.902	.22
6.	1	5	4.17	.039	.916	-1.489	.11	1.733	.22
7.	1	5	4.19	.034	.795	-1.100	.11	1.838	.22
8.	1	5	4.20	.041	1.041	-1.070	.10	1.651	.22
9.	1	5	4.10	.045	.966	-1.052	.10	1.672	.22
10.	1	5	4.10	.042	.976	-1.083	.11	1.526	.22

11.	1	5	3.98	.042	.955	-1.060	.11	.995	.22
12.	1	5	3.97	.040	1.088	-1.251	.10	1.692	.22
13.	1	5	4.19	.051	1.159	-.659	.10	.042	.22
14.	1	5	3.99	.041	.972	-1.543	.11	1.591	.22
15.	1	5	4.08	.041	.927	-.86	.11	1.177	.22
16.	1	5	4.09	.045	1.121	-.88	.10	1.000	.22
17.	1	5	4.06	.035	.860	-1.29	.10	1.688	.22
18.	1	5	4.00	.040	1.078	-1.18	.11	1.267	.22
19.	1	5	4.17	.044	.987	-1.69	.11	1.692	.22
20.	1	5	3.52	.046	1.133	-.58	.10	.045	.22
21.	1	5	3.17	.043	1.044	-1.18	.10	1.471	.22
22.	1	5	3.96	.047	.950	-1.18	.11	1.603	.22
23.	1	5	3.78	.060	1.483	-.26	.11	-.905	.22
24.	1	5	4.00	.040	.984	-1.63	.10	0.051	.22
25.	1	5	4.01	.030	.895	-.27	.10	-.012	.22
26.	1	5	3.99	.031	.910	-.682	.11	.177	.22
27.	1	5	3.28	.032	.814	-1.480	.11	1.215	.22
28.	1	5	3.34	.033	.859	-1.596	.10	.936	.22
29.	2	5	4.24	.032	.820	-1.051	.10	.758	.22
30.	1	5	3.25	.05	1.313	-.112	.10	-1.256	.22
31.	1	5	4.03	.03	.878	-.559	.11	-.247	.22
32.	1	5	3.99	.032	.910	-.682	.11	.177	.22
33.	1	5	5.21	.047	1.041	-1.070	.11	1.651	.22

First twenty items belongs to the internet addiction and from twenty-one to thirty-three belongs to nutritional status. This test shows that our data is normal and researcher may proceed with this data. The values of skewness and kurtosis are acceptable range +2 to -2 (Asif, Khan, & Pasha, 2019; Aurangzeb, Asif, & Amin, 2021; Gao, Mokhtarian, & Johnston, 2008; Pasha, Ramzan, & Asif, 2019). Positive values of skewness shows that data is positively skewed and

negative values of skewness shows that data is negatively skewed. In the above data, our responses are mixture of positive and negative skewed but falling within the acceptable range.

4.3 Demographic Analysis

Demographic Analysis of current study, which includes Gender, School type, family background, father's education, and mother's education and their graphical presentations, are as under:

Table 3 Gender Descriptive Analysis

	Frequency	Percentage	Cumulative Percentage
Male	273	54.6	54.6
Female	227	45.4	100.0
Total	500	100.0	

The gender descriptive analysis tells that 54.6% are the male students and 45.4% are the female students. Graphical representation is as under:

Table 4 School Descriptive Analysis

	Frequency	Percentage	Cumulative Percentage
Private	13	72.2	72.2
Government	5	27.8	100.0
Total	18	100.0	

The school descriptive analysis tells that 72.2% are getting their middle and secondary education from private institute and 27.8% are getting their middle and secondary education from government schools. Graphical representation is as under:

Table 5 Frequency Distribution about Family Background of the Respondents

	Frequency	Percentage	Cumulative Percentage
Both Parents	471	94.2	94.2
Single	29	5.8	100.0
Total	500	100.0	

The family background descriptive analysis tells that 94.2% of students have both parents and 5.8% are having single parents. Graphical representation is as under:

Table 6 Father's Education Descriptive Analysis

	Frequency	Percentage	Cumulative Percentage
Undergraduate	382	76.4	76.4
Graduate	109	21.8	97.8
Postgraduate	9	1.8	100.0
Total	500	100.0	

Most of fathers of school going children belongs to undergraduate group which shows that 76.4% of whole sample. Graduates are 21.8% of the sample and only 1.8% of fathers of school going children are postgraduates.

Table 7 Mother's Education Descriptive Analysis

	Frequency	Percentage	Cumulative Percentage
Undergraduate	402	80.4	80.4
Graduate	94	18.8	99.2
Postgraduate	4	0.8	100.0
Total	500	100.0	

Most of fathers of school going children belongs to undergraduate group which shows that 76.4% of whole sample. Graduates are 21.8% of the sample and only 1.8% of fathers of school going children are postgraduates.

Table 8 Family's Monthly Income Descriptive Analysis

(In Pak Rupees)	Frequency	Percentage	Cumulative Percentage
≤ 15,000	68	13.6	13.6
15,001 to 50,000	183	36.6	50.2
50,001 to 1,00,000	152	30.4	80.6
≥1,00,000	97	19.4	100.0
Total	500	100.0	

As discussed earlier, most of the population living is Islamabad belongs to middle and upper middle class. In this analysis, 13.6% of families having less than or equal to 15,000 per month income. 36.6% of families have 15,001 to 50,000 per month income. 30.4 % of families have 50,001 to 1, 00,000 per month income and 19.4 % of families have more than 1, 00,000 per month income.

Table 9 Anthropometric Measurements

Measures	N	Minimum	Maximum	Mean	Standard
Age (Years)	500	10	17	13.43	2.4
Height (m)	500	1.37	1.81	1.51	1.7
Weight (Kg)	500	37	78	54	52
BMI (Kg/m^2)	500	16.2	36	26	18.5-24.9

Table 10 WHO Standard body mass index (BMI)

Classification	BMI (kg/m^2)	Risk of comorbidities
Underweight	<18.5	Low (but risk of other clinical problems increased)
Normal range	18.5–24.9	Average
Overweight (preobese)	25.0–29.9	Mildly increased
Obese	≥30.0	
Class 1	30.0–34.9	Moderate
Class 11	35.0–39.9	Severe
Class 111	≥40.0	Very severe

Source: "Classification of Overweight and Obesity by BMI, Waist Circumference, and Associated Disease Risks," 2012, http:// www.nhlbi.nih.gov/health/public/heart/obesity/lose wt/bmi dis.htm.

World Health Organization (WHO) recommends BMI the above table. As compared to the standards set by the WHO in regards of BMI, the above analysis shows that our whole population is little overweight and hitting the overweight category, which is also called pre-obese. BMI analysis of the selected sample is as under:

Table 11 BMI Analysis

(Classification of BMI)	**Frequency**	**Percentage**	**Cumulative Percentage**
Underweight ≤18.5	72	14.4	14.4
Normal 18.5-24.9	189	37.8	52.2
Overweight 25-29.9	169	33.8	86
Obese ≥30	70	14	100.0
Total	500	100.0	

The above table shows that 47.8 percent of school going children are overweight and obsessed. In underweight category 14.4% of children belongs to this category. 37.8% of the children belongs to normal category. 33.8% of school going children are overweight and 14% of

the selected sample is obsessed. Only 37.8% of school going children are normal and falls in the standard limit. 62.2% of children are either overweight, obsessed or underweight. Therefore, we can conclude that now a day's school going children are going to overweight.

4.4 Data Reliability

Data reliability of collected data was tested through Cronbach's alpha, the value of Cronbach's alpha for internet addiction items is 0.752 and nutritional status items is 0.695. As suggested by numerous researchers that reliability values more than 0.60 are acceptable for research and gathered data is reliable (Asif et al., 2019; Aurangzeb, Asif, et al., 2021; Quinlan, Babin, Carr, Griffin, & Zikmund, 2019; Sekaran & Bougie, 2016).

Table 12 Reliability Analysis

S. No.	Variables	Chronbach's alpha	No. of items	Acceptable Range
1	Internet Addiction	0.752	20	≥0.6
2	Nutritional Status	0.695	13	≥0.6

4.5 Correlation Analysis

The research tool for internet addiction and nutritional status was tested by applying Pearson's correlation analysis (Aurangzeb, Mushtaque, Tunio, Zia-ur-Rehman, & Asif, 2021; Benesty, Chen, Huang, & Cohen, 2009). Their results are as under:

Table 13 Pearson's Correlation

Correlation	Internet Addiction	Nutritional Status
Internet Addiction	1	
Nutritional Status	-0.631**	1

**p<0.01

The above correlation matrix shows that -0.631 correlation between internet addiction and nutritional status. This value of Pearson's correlation shows significant negative relationship between internet addiction and nutritional status. Form the above analysis, we can conclude that if a student is internet addicted, their health would be negatively associated with it.

4.6 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was through AMOS v18. The detailed analyses of internet addiction and nutritional status are given below:

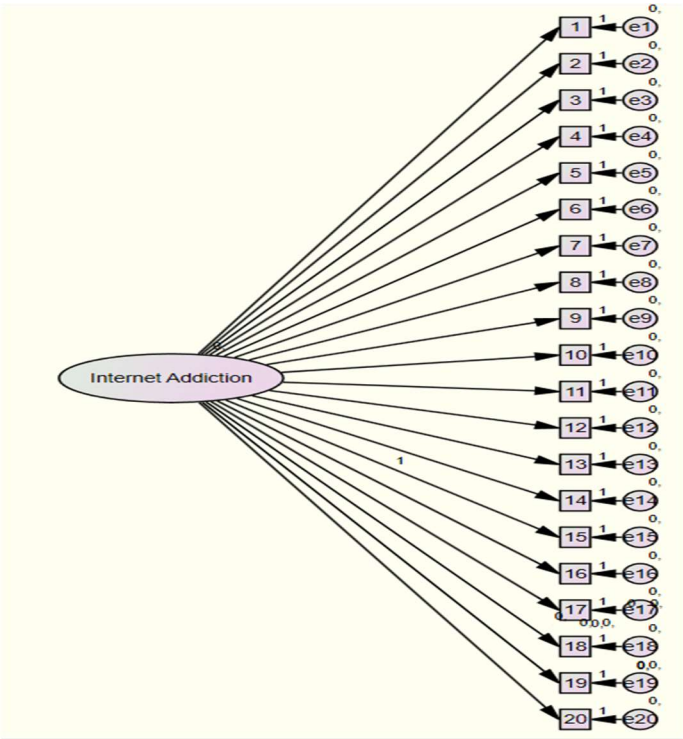

Figure 2 CFA of Internet Addiction

a. Internet Addiction.

Confirmatory factor analysis of internet addiction was conducted and portrays about all the items of internet addiction. In-depth analysis is given in Figure 11 and Table 14. Root Mean square Residual (RMR) value is 0.058, by (Hu & Bentler, 1999) suggested value should be less than 0.08. Root Mean Square Error of Approximation (RAMSEA) is 0.049. Hu and Bentler (1999) suggested

value for RAMSEA is less than 0.06. Normed χ2 (Chi-square), Comparative Fit Index (CFI), Normed Fitness Index (NFI), Bollen's Incremental Fit Index (IFI) and Turkey Lewis Index (TLI) are within the significant rage. Normed χ2 value is 6.321 for sample size which is greater than 200 than the Chi-square value would be significant. CMIN/df's value should be less than 3, as our analysis depicts that it is 2.107. As Hu and Bentler (1999) suggested that CFI, NFI, IFI and TLI's values must be greater than 0.95 and values gathered after analysis of data are 0.968 to 0.989. This Figure 11 and Table 14 shows accepted and model fit significant results.

Table 14. Model Fit Indices of Internet Addiction

Model Fit Indices	Values
RMR	0.058
RAMSEA	0.049
Normed χ2	6.321
df	3
p	.001*
CMIN/df	2.107
GFI	0.968
AGFI	0.969
CFI	0.983
NFI	0.969
IFI	0.981
TLI	0.989

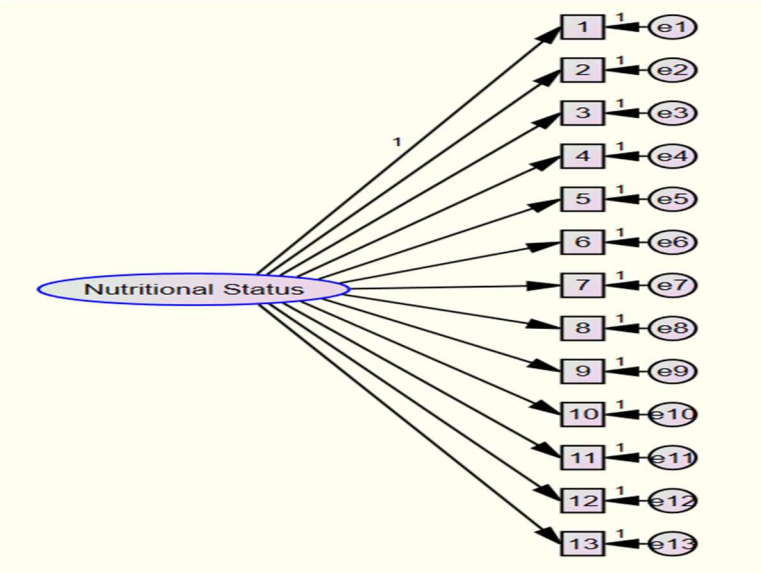

Figure 3 CFA for Nutritional Status

b. Nutritional Status.

Confirmatory factor analysis for nutritional status was conducted and portrays about all thirteen items of nutritional status. In-depth analysis has given in Figure 12 and Table 15. RMR value is 0.061, Hu and Bentler (1999) suggested that value should be less than 0.08. RAMSEA is 0.051, Hu and Bentler (1999) suggested value for RAMSEA is less than 0.06. Normed $\chi 2$ (Chi-square), CFI, NFI, IFI and TLI are within the significant rage. Normed $\chi 2$ value is 6.991 for sample size, which is greater than 200 than the Chi-square value would be significant. CMIN/df's value should be less than three, as our analysis depicts that it is 2.333. As Hu and Bentler (1999) suggested that CFI, NFI, IFI and TLI's values must be greater than 0.95 and values gathered after analysis of data are 0.962 to 0.986. This shows accepted and model fit significant results.

Table 15 Model Fit Indices of Nutritional Status

Model Fit Indices	Values
RMR	0.061
RAMSEA	0.051
Normed $\chi 2$	6.991
df	3

p	.001*
CMIN/df	2.333
GFI	0.971
AGFI	0.968
CFI	0.986
NFI	0.971
IFI	0.962
TLI	0.981

4.7 Regression Analysis

Regression analysis is a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent variables (Asif et al., 2019; Aurangzeb, Alizai, Asif, & Rind, 2021). In this research, our dependent variable is nutritional status and independent variable is internet addiction. The regression analysis was also done to estimate the impact of the internet addiction upon nutritional status.

Table 16 Regression Analysis

Variable	B	Standard Error	Beta	t	F	Sig
(Constant)	0.827	.146		9.349	434.107	.000
Nutritional Status	-0.528	.021	.642	20.835		.000
R=-0.642						
R^2 =.412						
Adjusted R^2=.411						

Regression Equation: $y = -0.582\,x + 0.827$

The regression analysis output shows numerous numerical values. The above analysis shows that 41.2% of variance in nutritional status in school going children are due to their internet

addiction. In the above equation, "y" is our dependent variable and "x" is our independent variable. 0.827 is the constant in analysis. The value of independent variable would be the multiple of 0.582.

From the above analysis, this research can conclude that **H_0** hypothesis is rejected and **H_1** is accepted. Hence, it may be concluded on the basis of data analysis and results of analysis that Internet addiction have significantly negative impact on the nutritional status of the school going children of class six (6) to class ten (10) in Bani Gala, Islamabad.

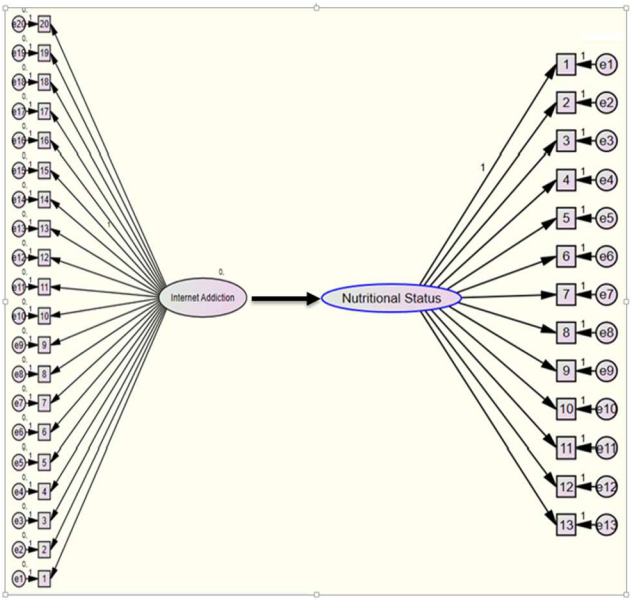

Figure 4 Model Summary

Table 17 Model Fit Indices for IA and NS.

Model Fit Indices	Values
RMR	0.051
RAMSEA	0.052
Normed $\chi 2$	6.995
df	3
p	.001*
CMIN/df	2.333

GFI	0.963
AGFI	0.982
CFI	0.976
NFI	0.966
IFI	0.979
TLI	0.968

4.8 Internet Addiction Test

Young (1998) internet addiction test comprising 20 items with 5 point Likert scale was carried which was a part of questionnaire (research tool). Their results are as under;

Table 18 Internet Addiction Test Results

Sr. No.	Category	Frequency	Percentage	Cumulative Percentage
1	20	12	2.4	2.4
2	20 - 39	75	15	17.4
3	40-69	289	57.8	75.2
4	70-100	124	24.8	100
	Total	500	100	

The above table 17 shows that in first category, only 2.4 percent of school going children are not using internet and not properly aware of internet due to some financial or family constraints. In the second category of internet addiction test shows that only 15 percent of school going children are moderate user of internet. They have internet but using in a limited manner due to some family restriction and limited availability from their parents or guardians. First and second category users are not addicted to internet addiction as per the test and data analysis.

In third category, 57.8% school going children are scoring from 40 to 69 in internet addiction test. Which is the highest category of the collected data. Most of the students belongs to this category. According to Young (1998), this category signifies frequent problems due to internet usage. 24.8% of school going students are falling in the maximum users category and mostly addicted with internet usage (Widyanto & McMurran, 2004).

4.9 Dietary Intake Analysis

Dietary intake analysis is about how many times and when students takes their breakfast, lunch and dinner. This analysis also describe that how many times students takes their meals when they are away from home and when they were doing snacking while using internet or while screening.

Table 19 Meal Pattern Analysis

Meal	Daily	6-5 times /week	4-3 times /week	1-3 times/ week	Never	Total
Breakfast	113	82	108	107	90	500
Lunch	95	155	97	101	52	500
Dinner	197	53	83	100	67	500

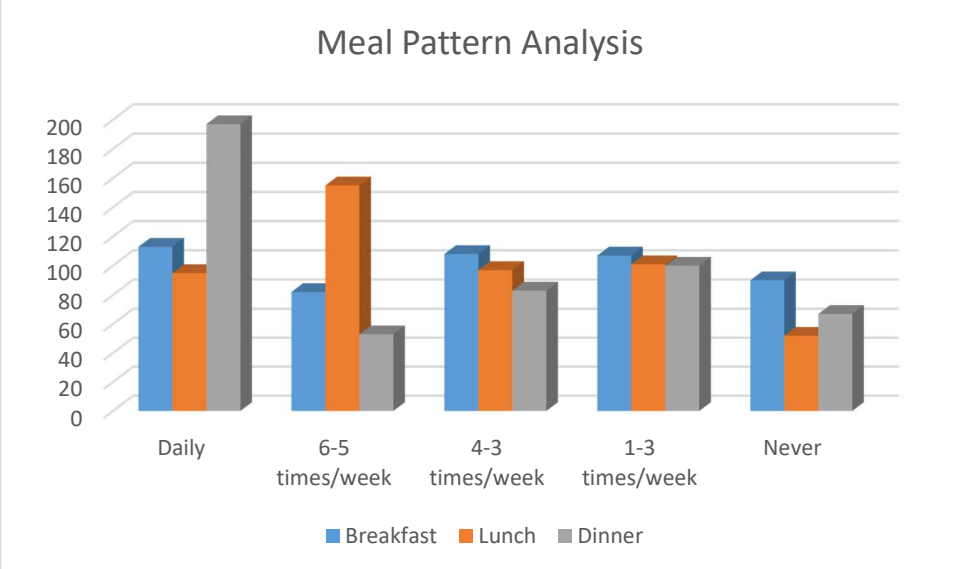

Figure 5 Meal Pattern Analysis

Table 20 Taking meal away from Home

Taking meal away from Home		
	Number of Respondents	**Percentage (%)**
1. Do you take any meal away from home?		
Yes	301	60.2
No	104	20.8
Occasionally	95	19
2. No. of meals taken outside the home?		
None	58	11.6
1	129	25.8
2	139	27.8
3	174	34.8
3. Do you do any snacking while using internet?		
Yes	345	69
No	155	31
4. At which time you usually take snacks?		
During Day time	217	43.4
During Night	124	24.8
Both	159	31.8

The above table shows the recorded responses of the respondents while data gathering. In the response of the first question, 60.2 % students any meal away from home. 19% of the students occasionally takes any meal away from their and 20.8 % of students do not take any meal away from home. In the response of second question, 11.6% of respondents do not take any meal outside of their home. Most of the respondents takes one, two or three meals away from their home. 25.8% of students' takes only one meal, 27.8% of the respondents take two meals and 34.8% of students take three meals away from their home.

In the response of third question, 69% of the respondents do snacking while using internet or using any type of internet enabled machine. Only 31% do not do snacking while using internet. 43.4% of the respondents do snacking in day time, 24.8% of respondents do snacking only at night and 31.8 % of students do snacking during day time and as well as at night.

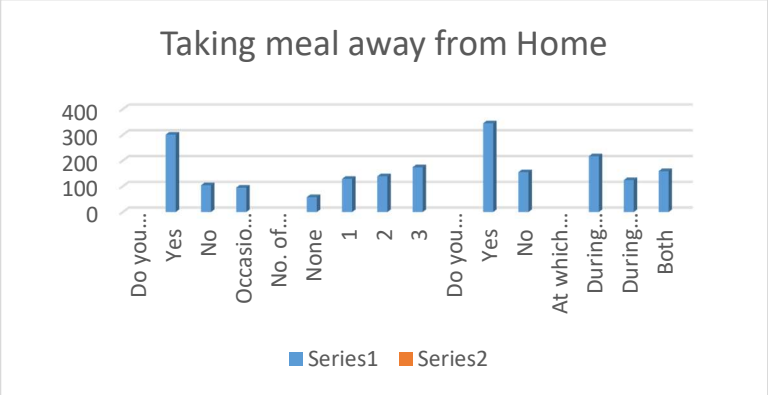

Figure 6 Taking meal away from Home

4.10 24 Hours Recall Survey

Recommended daily allowance (RDA) was firstly published during World War-II in 1943 with its primary objective and focus on "providing standards to serve as a goal for good nutrition". RDA was defined as "accordance with newer information, the recommended daily allowances for the various dietary essentials for people of different ages" (NRC, 1943).

A research study was conducted in a developing country of Africa (Ghana) by Fernandes et al. (2016), in this research study RDA was established using primary data for the school going children according to their ages. They made three groups according to their age. First was 3 to 6 years old, second was 6 to 12 years old, and third was 12 to 15 years old.

In this study, our primary focus of the study is the school-going children belonging to class six (6) to class (10) which mostly belongs twelve to fifteen years old as Table 9 shows that sample's mean age is 13.43 years with 2.4 years of standard deviation. Therefore, in the study in hand, researcher selected only one recommendation from the whole table, which is for twelve to fifteen years of age group. This recommended table is given below:

Table 21 Recommended RDA

		3-6 Years	6-12 Years	12-15 Years
1	**Energy and macronutrients**			
	Energy (kcal)	1300	1850	2600

	Protein (g)	41	57	66
	Fat (g)	32	48	81
2	**Micronutrients (minerals)**			
	Calcium, (mg)	600	700	1300
	Iron (mg)	12	17.8	29
	Zinc (mg)	9.6	11.2	14.4
	Iodine (mg)	90	120	150
3	**Micronutrients (vitamins)**			
	Vitamin A (mg)	450	500	600
	Niacin (mg)	8	12	14
	Riboflavin (mg)	0.6	0.9	1.1
	Thiamine (mg)	0.6	0.9	1.1

Source: Fernandes, Galloway, Gelli, Mumuni, Hamdani, Kiamba, ... & Drake (2016)

This study analyzed the collected data with the comparison of the recommended RDA as mention in Table 20 by Fernandes et al. (2016). In this table of RDA, male school going children should get 2600 kcal for and female school going children studying in class six (6) to class ten (10) should get 2400 kcal. It is the highest calories intake age. In this age bracket, every children requires more calories and more dietary intakes either he is male or female.

Table 22 24 Hour Recall Survey (N 500)

Gender	Where did you obtain the food?	Mean Total calories (kcal)	Standard Deviation	Max	Min	Recommended calories (kcal)
Breakfast						
Male	119 Outside	953	257	1273	721	800
N=273	154 Home	906	97	1108	801	800
Female	101 Outside	823	196	1056	654	700
N=227	126 Home	703	109	961	542	700
Lunch						

Gender	Where did you obtain the food?	Mean Total calories (kcal)	Standard Deviation	Max	Min	Recommended calories (kcal)
Male	104 Outside	1006	251	1306	802	800
N=273	169 Home	859	132	982	708	800
Female	103 Outside	1050	202	1287	856	700
N=227	124 Home	756	123	951	654	700
Dinner						
Male	185 Outside	1002	153	1122	722	800
N=273	88 Home	841	86	951	728	800
Female	113 Outside	826	149	978	674	700
N=227	114 Home	735	91	854	625	700
Snacks						
Male	202 Outside	402	235	635	109	200
N=273	71 Home	289	76	374	135	200
Female	159 Outside	204	89	310	116	150
N=227	68 Home	189	52	235	153	150
Total Daily Intake						
Male	Mean Outside	3363	224	1084	588.5	2600
	Mean Home	2895	97.75	853.75	593	2600
Female	Mean Outside	2903	159	907.75	575	2400
	Mean Home	2383	93.75	750.25	493.5	2400

Gender analysis of the data shows that 273 respondents were male and 227 respondents were females. At the time of breakfast, 119 male students got their food from outside from home

and 154 male students got their food from home. 101 female students got their food from outside from home and 126 female students got their food from home Standard deviation of outside food takers is high up to 257 and home eaters' standard deviation 97. Total recommended RDA intake for breakfast is 800 kcal. 953 and 906 kcal were calories in takes in breakfast, which is greater than RDA. In case of female, Standard deviation of outside food takers is high up to 196 and home eaters' standard deviation 109. In case of female students, 703 kcal in breakfast shows that they are taking calories according to the recommended RDA intake for breakfast, which is 700 kcal.

In lunch, male outside eaters students are taking 1006 kcal with 251 kcal of standard deviation and male home eaters are nearer to recommended RDA with 859 kcal with 132 kcal standard deviation. Female outside eaters students are taking 1050 kcal with 202 kcal of standard deviation, which is higher than recommended RDA, and female home eaters are nearer to recommended RDA with 756 kcal with 123 kcal standard deviation. Maximum and minimum intakes are also not high in case of female students.

In dinner, male outside eaters students are taking 1002 kcal with 153 kcal of standard deviation and male home eaters are nearer to recommended RDA with 841 kcal with 86 kcal standard deviation. Female outside eaters students are taking 826 kcal with 149 kcal of standard deviation, which is higher than recommended RDA, and female home eaters are nearer to recommended RDA with 735 kcal with 91 kcal standard deviation. Maximum and minimum intakes are also not high in case of female students.

Table 23 is the Caloric and Macronutrient Measurement of the collected data. Which shows that total recommended calories and estimated intake of the sample. Table 23 shows that male school going children are more nourished than female school going children. On the other hand, male school going children are more addicted and attracted to internet addiction. These results supports the findings of Guo et al. (2012), Ali, Hori, Kim, and Kunugi (2021).

Table 23 Caloric and Macronutrient Measurement

Gender of respondents		Total calories Intake (kcal)	Total proteins intake (g)	Total fats intake (g)	Total carbohydrates intake (g)
Male N=273	RDA	2600	66	81	130
	Mean	2520.33	172.06	136.59	584.6

Gender of respondents		Total calories Intake (kcal)	Total proteins intake (g)	Total fats intake (g)	Total carbohydrates intake (g)
	Std. Deviation	232.34	55.84	38.49	115.46
	Minimum	1948.9	74.46	46.62	357.96
	Maximum	3302.6	333.28	282.86	874.44
Female N=227	RDA	2400	56	60	130
	Mean	2076.47	167.17	124.81	603.93
	Std. Deviation	237.1371	34.4035	55.49419	128.03665
	Minimum	1498.5	110.82	17.86	395.68
	Maximum	2728.6	296.42	246.43	874.02

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary

This chapter of the study would explain about the results and conclusion on the basis of data analysis. This study is exploratory in nature for testing the relationship between internet addiction and nutritional status of school going children belonging to Bani Gala, Islamabad, descriptive in nutritional status and cross-sectional study design. The sample size for the study was five hundred, 273 were male school going children and 227 were female school going children.

BMI analysis was also carried out which explained that our representative sample overweight due to lack of physical activity. Children are more active online than engaging themselves in some physical activity. Caloric and Macronutrient measurements shows that male school going children are more nourished than female school going children.

5.2 Conclusion

Some parents consider that their children are addicted to internet because their children do not ask on phone, tablet computer etc., they just believe that they spend on their business. Because of this, their children are addicted to the internet. It can be difficult for parents to force their children to do other hard work, such as going out, just working or working at home. However, others believe that the Internet is not required at all for their children in their study and in their lives as well.

Some parents believe that their children are addicted to the internet because of how much time their children spend on their phones, tablets, computers, etc. Not only do they believe this because of the time they waste on their digital devices, but also because of how difficult it can be for parents to try to force their kids to get involved in other activities, such as going outside, or simply doing chores or homework. However, other people believe that internet addiction is not real, because it does not require children to rely on their digital devices more and more in order to function.

An important way for parents to be able to balance technology in their children's life is to have boundaries (Muir & Joinson, 2020). An exploratory study into the negotiation of cyber-security within the family home. Since technology has become an important aspect in the everyday life of the individual either male or female, student, businessperson, householder or linked with any other trade, it is important to know the effective use of digital devices are used for everyday tasks, not just for children, but also for elders. For example, businesses use information technology as their everyday mode of communicating with their employees, clients and their customers. Even many of the teachers, now assign different types of assignments by using information technology, and society can even be found online more than in past years. For many teenagers, their peers are online, and sometimes that can be their only way of communication with their interested and knowledgeable communities.

Nevertheless, parents can find certain ways to find a balance in their children’s lives with technology. For instance, some of the boundaries parents can place are to set a technology curfew, so that their children will not overuse their digital devices. Some other boundaries they can adapt are to keep certain areas technology free (homework time, dining tables, etc.), and monitor the usage time and set limits for when they should stop using their phones.

Overall, if parents believe that technology is causing issues in their children’s lives, then they must understand that completely removing their digital devices from their lives is not the

smartest choice, considering how technology is used for everyday activities in the life of the individual. Since teenagers spend the majority of the time communicating with peers and developing communities online, it is necessary for them to have access to their digital devices, but with boundaries and limits, it can turn into a healthy activity.

Moreover, if parents find that social media and digital devices in general is a problem, then it would be an ideal thing for them to put boundaries, such as setting limits, and developing a curfew for their children to be able to balance technology in a healthy manner. However, it is important for parents and guardians to understand that sometimes their children grasp behavior from them because of the examples they are setting. If children notice that their parents, or even family in general, like siblings, are always using their digital devices, then that is the same behavior their children will develop in the near future. It is important for parents to realize that setting boundaries for their children is important, but they themselves have to set boundaries for their own online activities, so they will not set unhealthy behaviors.

Parents believe that the reason why digital devices are unhealthy is because of how much time their children spend online, and that concerns them because they believe the internet is a dangerous place for children. For example, many teenagers tend to be on Twitter, Instagram, and other social media applications because of the communities they have built within the app, but parents believe that spending too much time online is unfit for them. Since children and teenagers spend lots of time online, this causes them to stay indoors and not do any physical activities, which can later lead to obesity, and most of the time this is, why their parents believe it is unfit. On top of that, parents and others believe digital addiction is real because screen time on their digital devices releases dopamine, just like cocaine, alcohol, and sugar. Parents believe that because screen time releases dopamine, their children are going to want to spend more and more time online until they can get that dopamine ‘hit’ again.

Teenagers' use of digital devices is important to them because of the communities they have built within their social media, just how there are people that do the same exact things but offline. For example, teenagers use social media to socialize, explore personal interests, shop, do school work, and listen to music. For instance, Dr. David Anderson, a clinical psychologist and director of the Behavior Disorders Center at the Child Mind Institute states that, “But these kind of behaviors can be prompted by many pleasurable activities, and don’t constitute an addiction”.

Teenagers that enjoy spending their time online and show signs that they are online more and more, does not necessarily mean they are addicted, it can mean that they are getting pleasure

out of the activities they are doing online. More often than not, teenagers are using their online time to be engaged with their peers and the communities they have built. It is important for parents to understand that their children might not always be doing something inappropriate when they are online. The same activities that parents do offline, their children are doing online, like socializing and shopping. Most of the time parents have to trust that their children are doing developmental activities online, and not unhealthy addictive activities, like they believe.

Many times parents believe that their children are using social media too often, or that their digital devices are too time consuming, but what they do not realize is that they are showing their children these examples and behaviors. Therefore, they do not pay attention to the example they are giving their children by using their digital devices at inappropriate times, and because of this, they are setting an example for their children to be on their phones, even when they are not supposed to.

Often times, parents do not realize that they are addicted to their digital devices themselves, and that causes issues with their children because they believe it is appropriate behavior since their own parents are doing it. Many parents tend to use their devices when their children are trying to talk to them, or when they are driving, and that is what their children see as an example, and that type of behavior causes them to start to believe that this type of behavior is acceptable. When parents use their phones while they are spending time with their children, they are not present, and their kids take that same example, and do it.

5.3 Recommendations

The analysis of data and results of the current study in hand suggests that children should be more educated on taking a balanced diet and adding up an optimal physical activity in their daily routine to stay healthy and how this balance diet is important their growth and development in future.

In addition, the government must play a dynamic role in the design and evaluation of health intervention strategies related to Internet addiction. Highlighting the adverse effects of Internet addiction on school going children due to poor eating behavior is the need of time.

Government should raise awareness about Internet addiction and try to formulate those policies, which could stop internet addiction, and internet user must limit himself or herself. Awareness campaigns from the institutes and public authorities should be arranged for parents or guardian about internet addiction in their children and wards and its harmful effects on their children and ward.

Particular attention should be paid to school going children who are at risk of internet addiction, as well as those students who are low-risk students to prevent them from becoming addicted to the Internet. Addicted children are vulnerable to their own future and their families. They would not be the properly law-abiding citizens in future and their creativity, critical thinking, problem solving techniques and strategies would be effected negatively. The internet addicted young generation and society would not be able to play a vital role in this modern and faster changing technological world.

The internet addiction not only effect the mental health also physical health which includes; backache, headaches, weight gain or loss, disturbances in sleep, carpal tunnel syndrome, blurred or strained vision (Salarvand et al., 2022; Zhou, Zhu, Sun, & Huang, 2022). Defective young generation would not be the vital and productive generation of their country at any cost.

This research study was cross-sectional study design; therefore, causal extraction of knowledge cannot be extracted by using the gathered data.

Parents should give extra nutrients and different food supplements to the students who are internet addicted. In this way, their RDA would be achieved and impact of internet addiction would be less.

REFERENCES

Agaronov, A., Entwistle, T., & Leung, M. M. (2019). From the lunch table, to the family table: A grounded theory approach to understanding urban adolescents' experiences of food culture mismatch between school and home environments. *Ecology of food and nutrition, 58*(1), 23-44.

Akhtar, N., Zareen, H., & Sarmad, R. (2018). Eating habits and nutritional status of female students of a medical college of Lahore. *Annals of King Edward Medical University, 24*(1), 701-705.

Ali, A. M., Hori, H., Kim, Y., & Kunugi, H. J. F. i. P. (2021). Predictors of nutritional status, depression, internet addiction, Facebook addiction, and tobacco smoking among women with eating disorders in Spain. *12*.

Andreoli, A., Garaci, F., Cafarelli, F. P., & Guglielmi, G. J. E. j. o. r. (2016). Body composition in clinical practice. *85*(8), 1461-1468.

Asif, M., Khan, A., & Pasha, M. A. J. G. S. S. R., IV. (2019). Psychological Capital of Employees' Engagement: Moderating Impact of Conflict Management in the Financial Sector of Pakistan. 160-172.

Aurangzeb, Alizai, S. H., Asif, M., & Rind, Z. K. J. I. J. o. M. (2021). RELEVANCE OF MOTIVATIONAL THEORIES AND FIRM HEALTH. *12*(3), 1130-1137.

Aurangzeb, Asif, M., & Amin, M. K. (2021). RESOURCES MANAGEMENT AND SME'S PERFORMANCE. *Humanities & Social Sciences Reviews, 9*(3), 679-689. doi:10.18510/hssr.2021.9367

Aurangzeb, Mushtaque, T., Tunio, M. N., Zia-ur-Rehman, & Asif, M. J. I. J. o. M. (2021). INFLUENCE OF ADMINISTRATIVE EXPERTISE OF HUMAN RESOURCE PRACTITIONERS ON THE JOB PERFORMANCE: MEDIATING ROLE OF ACHIEVEMENT MOTIVATION. *12*(4), 408-421.

Bener, A. (2017). Lifestyle factors and internet addiction among school children. *European Psychiatry, 41*, S431.

Benesty, J., Chen, J., Huang, Y., & Cohen, I. (2009). Pearson correlation coefficient. In *Noise reduction in speech processing* (pp. 1-4): Springer.

Cao, H., Sun, Y., Wan, Y., Hao, J., & Tao, F. (2011). Problematic Internet use in Chinese adolescents and its relation to psychosomatic symptoms and life satisfaction. *BMC public health, 11*(1), 1-8.

Cheung, J. C.-S., Chan, K. H.-W., Lui, Y.-W., Tsui, M.-S., & Chan, C. (2018). Psychological well-being and adolescents' internet addiction: A school-based cross-sectional study in Hong Kong. *Child and Adolescent Social Work Journal, 35*(5), 477-487.

Chun, J., Shim, H., & Kim, S. (2017). A meta-analysis of treatment interventions for internet addiction among Korean adolescents. *Cyberpsychology, Behavior, and Social Networking, 20*(4), 225-231.

Chun, J., Shim, H., Kim, S. J. C., Behavior,, & Networking, S. (2017). A meta-analysis of treatment interventions for internet addiction among Korean adolescents. *20*(4), 225-231.

DS, K., Deen, A., & Khuluse, D. S. THE NUTRITIONAL CONTENT OF THE FOOD SUPPLIED BY FOOD VENDORS TO STUDENTS IN A SOUTH AFRICAN UNIVERSITY.

Fernandes, M., Galloway, R., Gelli, A., Mumuni, D., Hamdani, S., Kiamba, J., . . . bulletin, n. (2016). Enhancing linkages between healthy diets, local agriculture, and sustainable food systems: the school meals planner package in Ghana. *37*(4), 571-584.

Flisher, C. (2010). Getting plugged in: an overview of internet addiction. *Journal of paediatrics and child health, 46*(10), 557-559.

Gao, S., Mokhtarian, P. L., & Johnston, R. A. J. T. R. R. (2008). Nonnormality of data in structural equation models. *2082*(1), 116-124.

Gillette, C. M., Tennessen, J. M., & Reis, T. J. D. b. (2021). Balancing energy expenditure and storage with growth and biosynthesis during Drosophila development. *475*, 234-244.

Griffiths, M. D., Kuss, D. J., Billieux, J., & Pontes, H. M. (2016). The evolution of Internet addiction: A global perspective. *Addictive Behaviors, 53*, 193-195.

Guo, J., Chen, L., Wang, X., Liu, Y., Chui, C. H. K., He, H., . . . Networking, S. (2012). The relationship between Internet addiction and depression among migrant children and left-behind children in China. *15*(11), 585-590.

Hu, L. t., & Bentler, P. M. J. S. e. m. a. m. j. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *6*(1), 1-55.

Jeejeebhoy, K., Detsky, A., & Baker, J. (1990). Assessment of nutritional status. *Journal of Parenteral and Enteral Nutrition, 14*(5, Supplement).

Kabir, A., Miah, S., & Islam, A. (2018). Factors influencing eating behavior and dietary intake among resident students in a public university in Bangladesh: A qualitative study. *PloS one, 13*(6), e0198801.

Kamran, H., Afreen, A., & Ahmed, Z. (2018). Effect of Internet Addiction on Dietary Behavior and Lifestyle Characteristics among University Students. *Annals of King Edward Medical University, 24*(S), 836-841.

Kerstetter, J. E., Holthausen, B. A., & Fitz, P. A. (1993). Nutrition and nutritional requirements for the older adult. *Dysphagia, 8*(1), 51-58.

Kim, M., & Chun, J. J. I. j. o. f. m. (2005). Bacterial community structure in kimchi, a Korean fermented vegetable food, as revealed by 16S rRNA gene analysis. *103*(1), 91-96.

Kim, Y., Park, J. Y., Kim, S. B., Jung, I.-K., Lim, Y. S., & Kim, J.-H. (2010). The effects of Internet addiction on the lifestyle and dietary behavior of Korean adolescents. *Nutrition research and practice, 4*(1), 51-57.

Ko, C.-H., Yen, J.-Y., Liu, S.-C., Huang, C.-F., & Yen, C.-F. (2009). The associations between aggressive behaviors and Internet addiction and online activities in adolescents. *Journal of Adolescent Health, 44*(6), 598-605.

Kuss, D. J., Van Rooij, A. J., Shorter, G. W., Griffiths, M. D., & van de Mheen, D. (2013). Internet addiction in adolescents: Prevalence and risk factors. *Computers in Human Behavior, 29*(5), 1987-1996.

Lin, C.-H., Wang, C.-C., Sun, J.-H., Ko, C.-H., & Chiu, Y.-C. (2019). Is the clinical version of the Iowa Gambling Task relevant for assessing choice behavior in cases of Internet addiction? *Frontiers in psychiatry, 10*, 232.

Miles, S. (2017). Stakeholder theory classification: A theoretical and empirical evaluation of definitions. *Journal of Business Ethics, 142*(3), 437-459.

Miskulin, I., Simic, I., Pavlovic, N., Kovacevic, J., Fotez, I., Kondza, G., . . . Miskulin, M. (2022). Personality Traits of Croatian University Students with Internet Addiction. *Behavioral Sciences, 12*(6), 173.

Muir, K., & Joinson, A. J. F. i. p. (2020). An exploratory study into the negotiation of cyber-security within the family home. *11*, 424.

Müller-Bloch, C., & Kranz, J. (2015). A framework for rigorously identifying research gaps in qualitative literature reviews.

O'Hara, S., & Toussaint, E. C. (2021). Food access in crisis: Food security and COVID-19. *Ecological Economics, 180*, 106859.

Örnek, B. Y., & Gündoğmuş, İ. (2022). The Effects of Smartphone and Internet Gaming Addiction on Eating Attitudes Among University Students. *Psychiatry Investigation, 19*(1), 1.

Park, S. K., Kim, J. Y., & Cho, C. B. (2008). Prevalence of Internet addiction and correlations with family factors among South Korean adolescents. *Adolescence, 43*(172).

Pasha, M. A., Ramzan, M., & Asif, M. J. G. S. S. R. (2019). Impact of Economic Value Added Dynamics on Stock Prices Fact or Fallacy: New Evidence from Nested Panel Analysis. *4*(3), 135-147.

Quinlan, C., Babin, B., Carr, J., Griffin, M., & Zikmund, W. J. A. C. (2019). Business Research Methods (Second).

Salarvand, S., N. Albatineh, A., Dalvand, S., Baghban Karimi, E., Ghanei Gheshlagh, R. J. C., Behavior,, & Networking, S. (2022). Prevalence of internet addiction among iranian university students: a systematic review and meta-analysis. *25*(4), 213-222.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: john wiley & sons.

Seo, M., Kang, H. S., & Yom, Y.-H. (2009). Internet addiction and interpersonal problems in Korean adolescents. *CIN: Computers, Informatics, Nursing, 27*(4), 226-233.

Shaw, M., & Black, D. W. (2008). Internet addiction. *CNS drugs, 22*(5), 353-365.

Shaw, M., & Black, D. W. J. C. d. (2008). Internet addiction. *22*(5), 353-365.

Singh, N., & Nagar, D. (2019). Relationship between internet addiction with emotional maturity: A study on high school students. *International Journal of Indian Psychology, 7*(1), 21.

Stroud, B. (2019). Understanding human knowledge in general. In *Knowledge and skepticism* (pp. 31-50): Routledge.

Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. J. C. i. H. B. (2020). Do men become addicted to internet gaming and women to social media? A meta-analysis examining gender-related differences in specific internet addiction. *113*, 106480.

Sun, Y., Li, Y., Bao, Y., Meng, S., Sun, Y., Schumann, G., . . . Shi, J. (2020). Brief report: increased addictive internet and substance use behavior during the COVID-19 pandemic in China. *The American journal on addictions, 29*(4), 268-270.

Tateno, M., Kim, D.-J., Teo, A. R., Skokauskas, N., Guerrero, A. P., & Kato, T. A. (2019). Smartphone addiction in Japanese college students: usefulness of the Japanese version of the smartphone addiction scale as a screening tool for a new form of internet addiction. *Psychiatry Investigation, 16*(2), 115.

Todhunter, E. N. J. A. g. t. n. t. f. i., & retrieval. (1970). A guide to nutrition terminology for indexing and retrieval. (July).

Tsitsika, A., Critselis, E., Kormas, G., Konstantoulaki, E., Constantopoulos, A., & Kafetzis, D. (2009). Adolescent pornographic internet site use: a multivariate regression analysis of the predictive factors of use and psychosocial implications. *Cyberpsychology & behavior, 12*(5), 545-550.

Wallace, P. (2015). *The psychology of the Internet*: Cambridge University Press.

Widyanto, L., & McMurran, M. (2004). The psychometric properties of the internet addiction test. *Cyberpsychology & behavior, 7*(4), 443-450.

Xiao, J., Li, D., Jia, J., Wang, Y., Sun, W., & Li, D. (2019). The role of stressful life events and the Big Five personality traits in adolescent trajectories of problematic Internet use. *Psychology of addictive behaviors, 33*(4), 360.

Young, K. S. (1998). *Caught in the net: How to recognize the signs of internet addiction--and a winning strategy for recovery*: John Wiley & Sons.

Zhou, M., Zhu, W., Sun, X., & Huang, L. J. J. o. A. D. (2022). Internet addiction and child physical and mental health: Evidence from panel dataset in China. *309*, 52-62.