Impact of Internet and Smartphone Usage Among Children In Bangladesh

Mohammad Asad Bin Yousuf

Researcher & Writer

Soft skills Facilitator, HR and Employee Development Consultant

2nd MBA, University of Dhaka; 1st MBA, Stamford University of Bangladesh;

PGDHRM, Bangladesh Institute of Management; BBA, independent university of Bangladesh

Abstract

All living organ on earth required certain level of care and guidance in their development stages. Children has no exception to that. Appropriate parenting and child development goes hand in hand. Unfortunately, due to the impact of globalization, technological advancement, and hardship of life many parents are forced to share less concern and time for their children. The Internet and Smartphone, the two most handy inventions of science have slowly replaced and reduced total amount of interaction time and care giving moments of parents with their kids. Starting from a toddler to teenager majority of these group are often found occupied using Smartphone and surfing over the Internet instead of interacting with parents, playing with friends, and spending time with relatives. It is somewhat unfortunate but true that the Internet and Smartphone have become an inevitable part of life and living of people of all ages. This study explores current status of the Internet and adoptability rate of Smartphone across Bangladesh especially among children. Different data on Internet and Smartphone usage across the globe is also portrait here. This study explored whether it is healthy for children to spend best moments of their life over the Internet and Smartphone instead of enjoying all the adventures and astonishing moments of childhood and parental care. Through questionnaire survey author tried to explore respondent's opinion on the impact of Internet and Smartphone usage among children in Bangladesh and how much essential it is for children to spend time over the Internet and Smartphone.

Keywords: Internet and Smartphone, Smartphone in Childhood, Internet in Childhood, Internet and Smartphone Usage among Children in Bangladesh, Impact of Smartphone and Internet on Children, Global Internet Penetration and Smartphone Adoptability Rate

1.0 Introduction

Mr. Nelson Mandela, quoted "*History will judge us by the difference we make in the everyday lives of children*". It clearly shows how much responsible societies are for the proper development of its youngster. Every child is special, they are the future of a nation. The future and fortune of every nation largely depends on proper development of its youngster. Today's children are tomorrow's leaders so societies play a very important role to develop future of a nation in the right direction. In the modern era of civilization, human race is more conscious regarding significant role children plays for a nation. Societies are becoming curious to explore all possible ways to protect and develop its youth. According to Bob Keeshan, "*Parents are the ultimate role models for children. Every word, movement and action have an effect. No other*

person or outside force has a greater influence on a child than the parent." All living organ on earth required certain level of care in development stage. Children has no exception to that. Appropriate parenting and child development goes hand in hand. Unfortunately, due to the impact of globalization, technological advancement, and hardship of life many parents are forced to share less concern and time for the sound development of their children. Therefore, the Internet and Smartphone has taken huge volume of childhood time replacing parental care and interaction time. It is a nature rule that an apple can never fall far from the tree, and a branch of a tree grows just like the twig. These two phases can well explain different parenting effects on a child development. Every nation now admits the undeniable truth that only through right parenting, right child development is possible. After exploring three thousand eight hundred and fourteen distinct cultures across the globe by moving more than five hundred million (510.072 million) square kilometers people might find many similarities among human and animal kingdom but the most amazing one is no matter whether it is animal or human life, parents are the most adjacent and dearest one for all living organ or infants. Parents arms is believed to be the safest, warmest, heartening, and soothing place for children. According to Victor Hugo, *"A mother's arms are made of tenderness and children sleep soundly in them"*. Every child is special so since birth, a child needs appropriate level of parental care and guidance to reach grownup stage. Irrespective of child age, parental care and guidance always works as a blessing. Use of the Internet and Smartphone has reduced parental care time worldwide. Therefore, it is obvious for societies to identify the impact of Internet and Smartphone usage among children.

2.0 Description of the Problem

World's famous politician and third prime minister of India Mrs. Indira Gandhi quoted, "*We must protect families, we must protect children, who have inalienable rights and should be loved, should be taken care of physically and mentally, and should not be brought into the world only to suffer*". In early age of human civilization, parents used to be the most curious and concern one to ensure right care and guidance for proper development of their children. Only three decades back parents across globe used to spend as much time as possible with their children to give proper care, assistance, guidance, and knowledge. Unfortunately, with time hardship of life, in search of better standard of living and to secure maximum earning, parents in different parts of the world started to spend less time with their children. As a result, human race has witnesses dramatic changes in family relation, family structure and culture in the name and sake of modernization. In last two decade it has been observed there has been a significant rise in percentage of working women, increasing number of single parentings and emerging percentage of people moving towards cities in search of livelihood. Such societal changes have been recorded in all almost all parts of the world. These dramatic changes have influence health condition, mental development, and behavioral pattern of every child of different age level starting from infants to teenager. Social scientist and visionary across globe see such changes as an alarm issue human race is heading towards. Addressing such challenging issue ahead Mr. A. P. J. Abdul Kalam quoted "*Let us sacrifice our today so that our children can have a better tomorrow"*. In the 20th century when technology advancement hits civilization, parental care, guidance slowly replaced by variety of technological innovations among which Internet and Smartphone are the major. Internet and Smartphone are two finest inventions that captured a major portion of a child's life as toy, entertainment source, learning medium and mode of interaction. Number of internet user is increasing in a tremendous manner which is putting an adverse impact on child's overall development. As of January 2023, there are more than five (5.16) billion Internet users across globe which

is more than sixty-four (64.4%) percent of world's population. Mr. John F. Kennedy quoted, *"Children are the world's most valuable resources and the best hope for future"*. Societies are responsible to establish a child friendly social environment and implement laws that can prevent technologies to disrupt child's proper development in the name of modernization. This study explores the impact of Internet and Smartphone usage among children in Bangladesh while comparing with world's scenario.

2.1 Objective
The main objective of this article can be divided into two broad classes. One is primary or core objective and another one is secondary objective or supportive objective. This study mainly aims to explore the Impact of Internet and Smartphone usage among children in Bangladesh.

2.1.1 Primary Objective
➢ Current status of Internet and Smartphone usage across Bangladesh.
➢ Explore the Impact of the Internet and Smartphone usage among Children in Bangladesh.

2.1.2 Secondary Objective
➢ Current status of the Internet and Smartphone usage across the Globe.

2.2 Methodology
This article is written based on the descriptive exploration of the subject area which is backed by different published articles, journals, and online verified data. Different types and sources of data have been collected, analyse, and formulated in the right way to draw meaningful information and possible recommendation for the study problem. Details methodology of the article is mentioned below:

2.2.1 Data Collection
Two broad sources had been used to collect data for supporting this article. Both primary and secondary data have been used to address the study problem. Primary data was extracted from real-life experience sharing that is through field surveys whereas secondary data was extracted from different published statistical reports and databases.
1. Primary data were collected from questionnaire survey
2. Secondary data were collected from published data, reports, and journals.

2.2.1.1 Primary Data Collection
This article mainly focuses on the subject matter of the study area which is Bangladesh. Questionnaire survey is conducted upon a randomly selected population. While collecting primary data through questionnaire survey several important elements were considered. Primary data has been collected in a very careful manner while keeping social distance, occupancy level of the respondents and time-resource constraints in mind.

2.2.1.2 Secondary Data Collection
To support the findings of primary data different secondary data have been used to write this article. Secondary data for this article has been extracted from different newspaper writings, online journals and

blogs of the authors, published online articles, newspaper news, research report, statistical reports, and other available databases.

2.2.2 Study Area

The study area of this article is Bangladesh. The study area is mainly limited to Dhaka, the capital city of Bangladesh. Dhaka has the largest and most diversified population size compared to all other cities of Bangladesh. Therefore, selecting Dhaka as the study area has expanded the door of opportunities. As a result, respondents from different backgrounds, locations, cultures, religions, and income level participated at questionnaire survey.
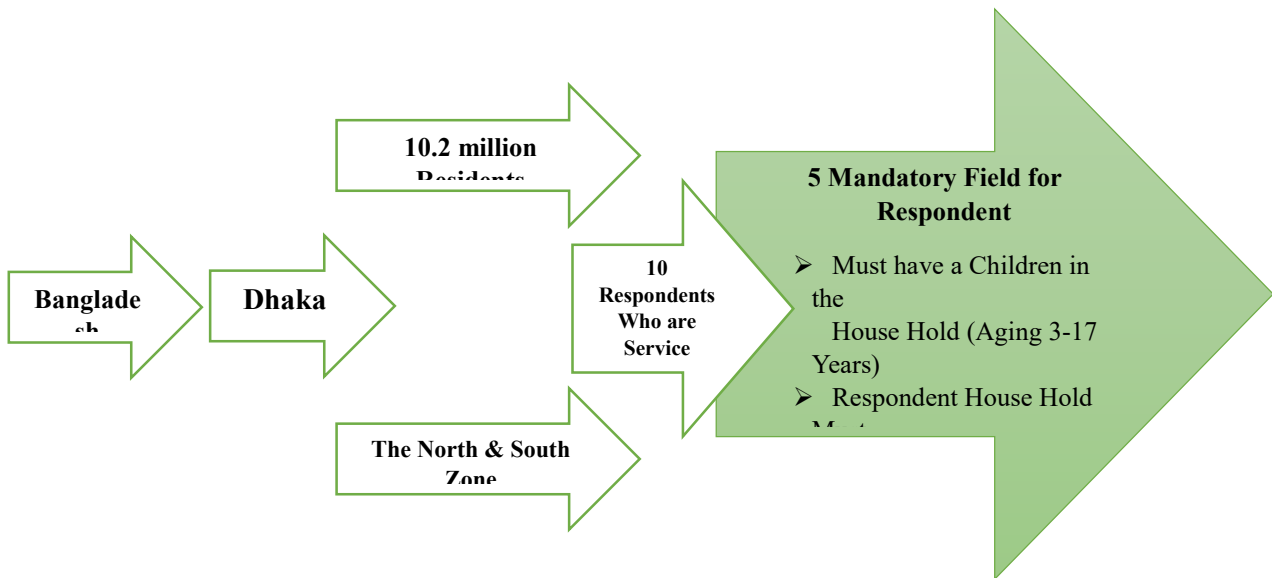
Figure 01: Study Area and Mandatory Filed for Study Result

2.2.3 Sample Population Size & Selection Process

Dhaka the capital of Bangladesh is a mega city residing around 10.2 million population as of 2022. Due to time and resource limitations this study is limited to a specific sample size. The population size of this study is limited to ten (10) respondents residing across Dhaka city, who are cleverly selected based on their diversified professions and level of monthly income. 0.0001% of total residence of Dhaka city (102,00,000 persons), is 10.2, which is the sample size of this study. While choosing the population size only five mandatory fields were placed so that findings can answer the problem statement. Mandatory fields of the questionnaire are respondent must have a child aging in between three to seventeen years. Family or household of the respondent must have an Internet connection and Smartphone, respondent must answer how internet is hampering or benefits their kids and their interaction time with their kids.

2.2.4 Study Approach

This study is a self-funded work. As a result, due to time and resource limitations population size of this study is limited to ten (10) person or respondents. Primarily quantitative approach has been used for collecting data to formulate this article. Through a quantitative approach numerical data has been collected which are quantified later. A very limited portion of qualitative approach has been used to identify non-numerical data which is mainly related to emotional state of the respondents. To draw conclusion and recommendation both qualitative and quantitative finding result has been used.

2.2.5 Techniques of Data Collection

Data has been collected through questionnaire survey conducted on a specific population size of ten (10) respondents residing across Dhaka, the capital city of Bangladesh.

2.2.6 Questionnaire Survey

The questionnaire is developed in a very simple easy language with multiple choices. This unique arrangement makes it easier for respondents to understand all the question well and answer them in the shortage possible of time. In conversation with respondents before conducting the questionnaire survey a brief detail of the whole problem statement is shared with them using both verbal and non-verbal communication. Different aspects of emotional intelligence have been used to identified respondent's justification towards any choice of answer to any question.

A questionnaire of fifteen (15) questions has been develop to conduct the survey. Questions are limited to fifteen questions so that respondents do not have to invest much of his or her precious time participating at the survey. As the number of questions are limited to fifteen questions therefore questions are carefully selected and designed so that it can draw a concrete conclusion.

Table 01: Summary of the Questionnaire

Summary of the Questionnaire Survey				
SL	Method of Study	Study Area	Questions	Respondent Number
1	Questionnaire Survey	Dhaka City	15 Questions (5 Mandatory, 10 Optional)	10 Respondents (5 Male & 5 Female)

2.2.7 Reliability and Data Validity

All secondary data are collected from published journals, statistical reports, and articles, whereas primary data are collected through questionnaire survey of the respondents involving different professions so chances of respondent giving false information is very low.

2.2.8 Maintaining Confidentiality of the Respondents

As the problem statement is related to extract data from respondents who will mainly discuss and share information about their children who is a minor. Therefore, high level of confidentiality is maintained throughout the survey for safeguarding minors best interest.

➢ Every respondent was aware of the study work and problem statement.
➢ Every respondent willingly participated at the questionnaire survey.
➢ Name and Contact details of all the respondents were kept private and confidential.
➢ Name of Respondent's children were kept confidential and private.

2.2.9 Study Constraints & Limitation

Like all other study or research work this study also has some limitation and had to gone through several challenges. This study work is self-funded so budget constraint was the greatest challenge. Time constraint was another big challenge as many of the respondents are too occupied to allocate much time what is needed for a detail discussion on every answer they have chosen. A few parents were not willing to share

any information about their children due to fear of mistreatment. Keeping all constraint aside hardest try has been given to get a desired outcome.

Main limitations of the study are mentioned highlighted below:

➢ **Financial Constraint:** Financial constraint was one of the major challenges of the study. Self-funded budget was the main constraint that give rise to many challenges like resource limitation, area coverage limitation, respondent number limitation etc.

➢ **Time Constraint:** Time limitation was another major challenge of the study. Time limitation of the respondents and time constraint of the study work, force study questionnaire to be limited by fifteen questions only. One page questionnaire with fifteen question was set so that respondents did not have to invest much of their precious time.

➢ **Resource Constraint:** Resource constraint give rise to challenges like inadequate number of surveyors, limited respondents number and partial statistical analysis.

➢ **Privacy Maintain:** As this study mainly focus on the Impact of children, i.e. a minor so high level of confidentiality have to be maintained which limits study findings.

3.0 Defining the Internet

According to Webopedia, *"the Internet is a worldwide system of connected networks. Each network consists of millions of computers, servers, routers, and printers".* To define Internet, Mr. Andrew Brown said Internet comprise of a vast network which connects computers across globe to share information and communicate with one another from any place. Internet typically known as "net" is a global network of billions of communication devices like computer, laptops, smart devices, and smartphones. The net is a global system of communication networks. With proper permission using internet anyone can get any sort of information. Instead of using the term the Internet people especially younger generation likes to termed it as "going online" or "surfing over net". Internet works to establish and facilitate worldwide communication system through a globally connected networking system. Mr. Stephen Hawking quoted that *"We are all now connected by the Internet, like neurons in a giant brain".* Internet in a large sense refers to a global system of connected networks which consists of millions of laptops, computers, smart devices, smartphones, servers, routers, and printers on every network across globe. Internet Assigned Number Authority (IANA) usually control and govern Internet across globe. Internet give human race access to different segments of data and information. Now a days different types of networks like private, public, business, academic and governmental bodies is being used to run Internet. Many scholars also claimed that Internet is a system architecture which has revolutionized communications system of human race. By using Internet in various computer networks across globe, human race can interconnect with one other to communicate, share information, or send and receive messages. By the term Internet means the process of connecting publicly accessible computer network with many tiny private and public networks surrounding universe. Internet comprise of a global computer network that use standard communication protocol to exchange variety of information and communication facilities to flow within an interconnected network. In a simpler term the word Internet typically means interconnected network. Internet consists of a network system that connects millions of web servers. In more common language Internet is a large system of connected smart devices, smartphone and computers across globe which mainly use by human being for information sharing and communicating with each other.

3.1 Brief History of the Internet

Today's Internet is the research outcome of different research networks across United States and Europe. Evolution of the Internet mainly aims to support government projects and defense system of USA. Computer science had evolved in a tremendous manner in 1960s when idea of time sharing between computer users were invented. Internet journey started in the same period to support flow of information considering government research projects in mind. In a very limited volume E-mail has been introduced in 1960s and typical file sharing started in 1970. In the year 1965 for the first time in human history Mr. Lawrence Roberts initiated two separate computers at different places talking to each other using a telephone line with an acoustically coupled modem. This system transferred digital data using packets which in later time transformed to wide area networks. Later the Internet Work Protocol or in short IP was established as a communication protocol which is also known as Transfer Control Protocol (TCP). Through TCP multiple computer users of different networks can talk or communicate with each other. According to ICT history Mr. J.C.R Licklider came up with the idea of universal network at the Information Processing Techniques Office (IPTO) of Advance research Projects Agency (ARPA) of Department of Defense (DoD) of USA. Soon after evolving of networking technology, several scientists and engineers brought their research work together to create the ARPANET which is the combined name of APRA and DoD. However, emerged of the Internet is first recorded in the United States in between 1960 to 1970. ARPANET established the first host-to-host network connection in 29th October 1969. Soon after that universal language was established. By the year 1982 The Internet protocol suite was invented, commonly known as TCP/IP. The official birth of the Internet started on 1st January 1983, as before it, information sharing between computer users do not have a standard communication system. Massive commercial use of Internet came into existence soon after the evolution of Personal Computer (PC) and workstation. In 1989 through the invention of the World Wide Web British scientist Mr. Tim. Berners-Lee created a system to share information through a network of computers that revolutionized communication history. Later Ethernet and Local Area Networks (LAN) join the Internet evolution journey. Since than several new attributes were evolve keeping Internet in mind among which invention of modern e-mail system and browser played most significant role in the evolution of the Internet. In 1990 Internet for first time become reachable for mass people. Now-a-days internet has become finest and fastest means of communication, exchanging information and data between two or many sources across globe. Developed nations adopted Internet faster and in a much wider range comparing to developing nations. At the end of 2000 Internet had a very limited influence in major parts of the world. Till 2000, ninety three percent (93%) of East Asia and Pacific Region and around ninety nine percent (99%) in South Asia and Sub Sharan Africa were offline whereas half of the United State population were using the Internet. In 2016 things changes dramatically as different nations across globe started to use the Internet in a more mass level. List of top Internet users across globe in comparing of size of population is showed below:

Table 02: Percentage of Internet User Among Different Nations Population in 2016

SL	Country	% of the Internet Users Among Population
1	Iceland	98% of entire population were Inter user
2	Denmark and Norway	97% of entire population were Inter user
3	South Korea and Japan	93% of entire population were Inter user
4	France	86% of entire population were Inter user
5	Spain and Singapore	81% of entire population were Inter user

6	Malaysia	79% of entire population were Inter user
7	United State of America	76% of entire population were Inter user

As the time rolls on people across globe get more prone to Internet and Smartphone uses due to declining expense of communication and availability of technology. Till 2020, approximately four and half billion people across globe goes online using Internet. This clearly stated that in the year 2020 almost half of the entire world's population were Internet user.

4.0 Defining Smartphone

Smartphone typically indicates a communication device which is smart by nature. Smartphone refers to any mobile phone which can perform many of the computer functions. Continuous development and innovation of science and technology has transformed mobile phone into a smart device which has become one of the most inevitable parts of human life of all ages. Smartphone usually have touchscreen interface, Internet access, and operating system which allows users to run and download different application software in short apps. Therefore, in a smart term Smartphone can be described as a portable computer which combines mobile telephone functions and computing functions as well in a single unit. Smartphone is emerging in every single eye blink. According to Md. Abu Siyam "*A smartphone is not smart if you don't know it's smart uses.*"

4.1 Smartphone Evolution

According to Mr. Steven Spielberg, "*Technology can be our best friend, and technology can also be the biggest party pooper of our lives. It interrupts our own story, interrupts our ability to have a thought or a daydream, to imagine something wonderful, because we are too busy bridging the walk from the cafeteria back to the office on the cell phone*". In the year 1908, Professor Albert Jahn and the Oakland Transcontinental Aerial Telephone and Power Company claimed to have the idea of developing a wireless telephone which never seem to have proceeded with production. Later in 1917 the Finnish inventor Eric Tigerstedt successfully filed a patent for a "*pocket-size folding telephone with a very thin carbon microphone*". For the first time in human history at the beginning of 1918, the German railroad system tested wireless telephony on military trains between Berlin and Zossen. Soon after that in 1924 public trials started on telephone connection on trains from between Berlin to Hamburg. Cell phones have evolved immensely since 1983, both in design and function. As recorded in the year 1983 for the first time in human evolution Motorola gave human race the first ever portable communication device which is termed as mobile phone with the DynaTAC 8000X popularly known as The Brick. Since than several features phone have been designed and marketed across globe. Later, ten years later in the year 1992, IBM introduced the very first Smartphone. IBM released Simon Personal Communicator (SPC) for commercial use in 1994. SPC was the first touchscreen mobile phone or Smartphone which had attributes like send and receive emails and faxes, use calendar, address book, and schedule appointment as well. With all such features SPC is considered as the world's first Smartphone. With time more features and attributes are added to Smartphones by different manufacturer across globe. Now almost half of the mobile phone users own a Smartphones.

5.0 Internet Usage across the Globe

Mr. Stephen Hawking quoted that "*We are all now connected by the Internet, like neurons in a giant brain*". Today internet has slowly pushed itself up into the human basic need list. Some schoolers also

argue that if education is considered as one of the top five basic needs of human race than internet must go side by side of with education as today's education system largely dependents on internet. Below table shows worldwide Internet usage and population statistics.

Table 03: Worldwide Internet usage and population statistics

World Regions	Population (2022 Est.)	Population % of World	Internet Users 31 Dec 2021	Penetration Rate (% Pop.)	Growth 2000-2023	Internet World %
Africa	1,394,588,547	17.6 %	601,940,784	43.2 %	13,233 %	11.2 %
Asia	4,352,169,960	54.9 %	2,916,890,209	67.0 %	2,452 %	54.2 %
Europe	837,472,045	10.6 %	747,214,734	89.2 %	611 %	13.9 %
Latin America / Carib.	664,099,841	8.4 %	534,526,057	80.5 %	2,858 %	9.9 %
North America	372,555,585	4.7 %	347,916,694	93.4 %	222 %	6.5 %
Middle East	268,302,801	3.4 %	206,760,743	77.1 %	6,194 %	3.8 %
Oceania / Australia	43,602,955	0.5 %	30,549,185	70.1 %	301 %	0.6 %
Worldwide Total	7,932,791,73					
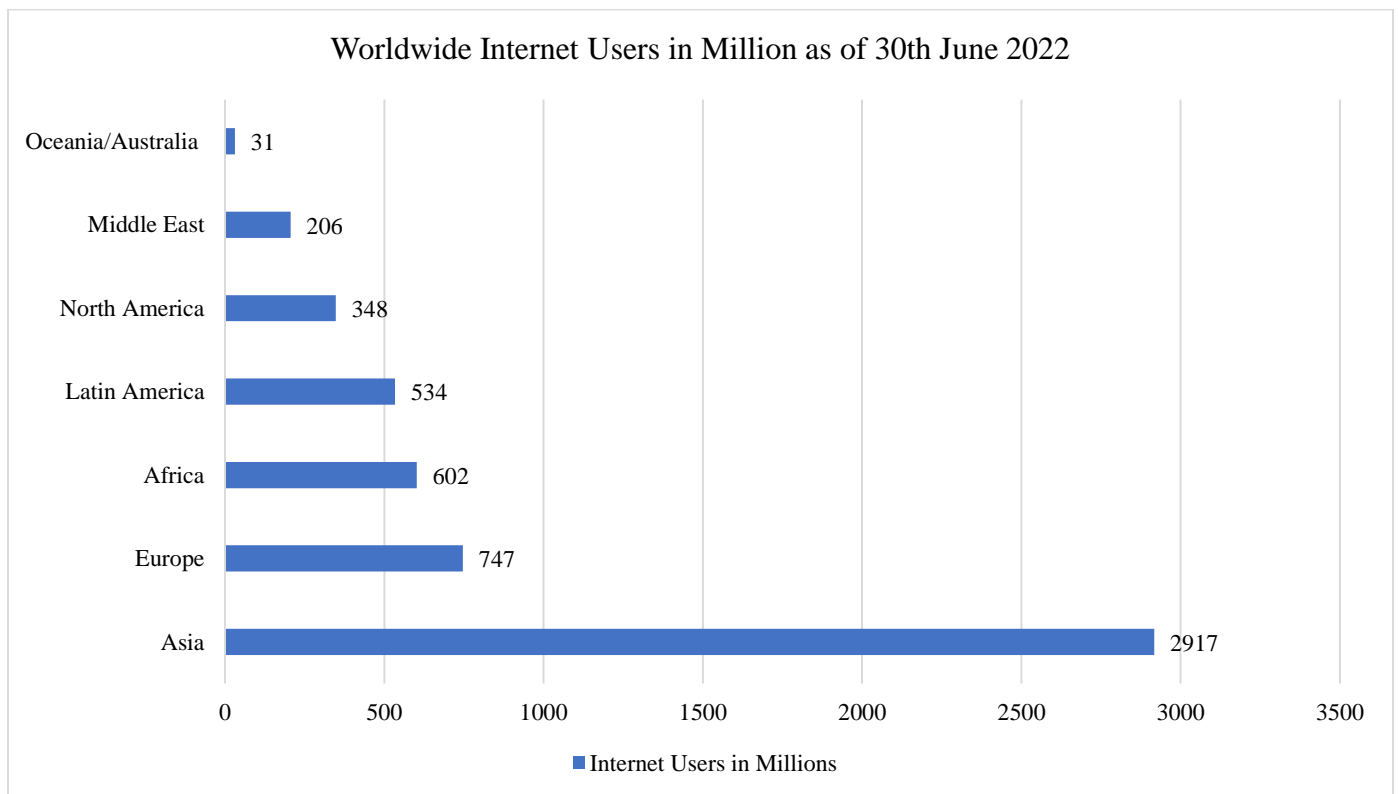
Figure 02: Worldwide Internet Users in Million as of 30th June 2022

Above graph shows Miniwatts Marketing Group estimated figure of 5,385,798,406 Internet User across the globe in June 2022. After getting across data and reports of well-known statistical sites and data

sources it is summarized that the total number of active Internet users in 2021 is between 4.3 billion to 5 billion. A table showing percentage of Internet user comparing population size is drawn below to understand Internet usage across the world.

Table 04: Data from Statista and Internet World Stats estimates.

Worldwide Internet users					
Users / Year	**2005**	**2010**	**2017**	**2019**	**2021**
World population	6.5 billion	6.9 billion	7.4 billion	7.75 billion	7.9 billion
Worldwide	16%	30%	48%	53.6%	63%
In developing world	8%	21%	41.3%	47%	57%
In developed world	51%	67%	81%	86.6%	90%

In 2021 there were almost more than four (4.9) billion the Internet users across globe. In the year 2022 the estimated number climbed up dramatically and reach to above five (5.3) billion which is more than 66% (sixty-six percent) of world's population. Although worldwide the Internet growth rate has been over 300% (three hundred percent) still more than two billion (2.7) people do not have any Internet access.
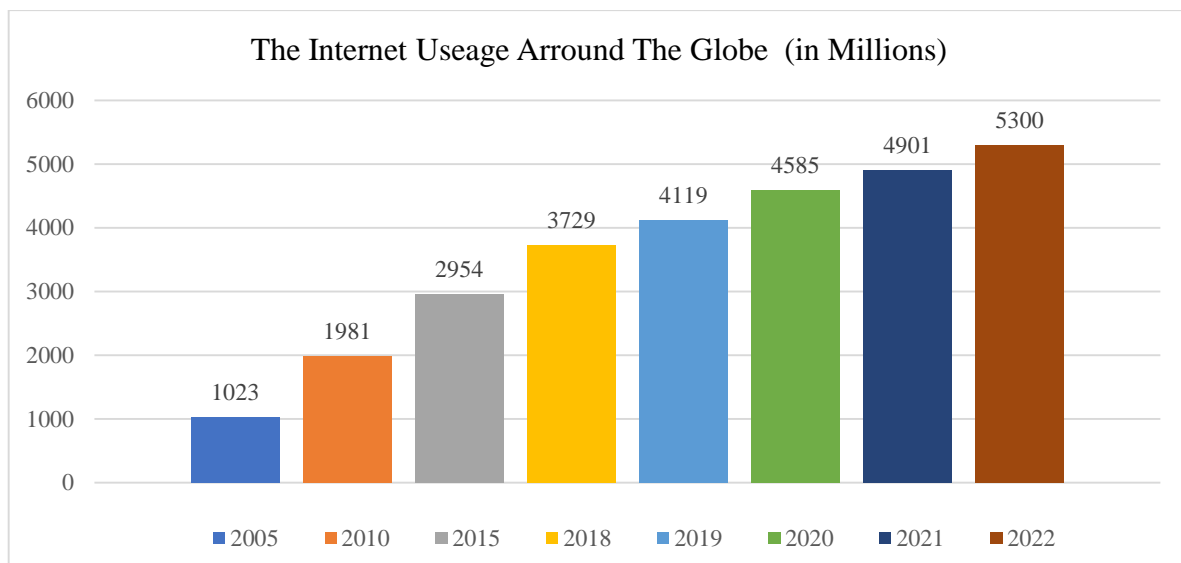
Figure 03: Total Internet User Across Globe (in Millions)

6.0 Smartphone Usage across the Globe

Well known businessman Mr. Thorsten Heins quoted, "*Future is mobile computing - smartphones and tablets are just elements of it. The industry is on the verge of a whole new paradigm*". Mr. Tim Cook quoted, *"anything can change, because the smartphone revolution is still in the early stages"*. At the end of 1996 the first access to the mobile web was commercially offered in Finland. Nokia 9000 Communicator phone had the first real access to mobile web via the Sonera and Radiolinja networks. Later in the year 1999 mobile-specific browser-based web service was first commercially launch in Japan when i-mode was launched by NTT DoCoMo. From the year 2000 onwards human race witness remarkable evolution of Smartphones. Emerging of Internet into Smartphone technology is considered as the finest attributes of any Smartphone. Till 10th March 2023, there are approximately 7.33 billion smartphone and featurephone users across globe. This amount clearly shows that more than ninety one percent (91.40%)

of world population are now cell phone users. In between 2017 to 2022 smartphone users increased rapidly by almost fifty percent (49.89%) globally. Till 2022 above seventy three percent (73.47%) of the people living in top ten (10) developed countries of the world own a smartphone.

After years of research of buying and using pattern of mobile users across world Ericsson and Radicati Group have accumulated data on both smartphone and feature phone users. Based on the data they have collected they have forecasted future trend and user number of both feature phone and smart phone across globe. Based on the data received it clearly shows that percentage of mobile use in terms of both smart phone and feature phone will increase in all parts of the world. Exploring years of data of smartphone and mobile phone users Ericsson and Radicati Group forecasted future trend mobile users:

Table 05: Smartphone & Feature Phone users Worldwide from 2017 to 2025, Source: Statista.

Worldwide Number of Smartphone and Mobile Phone Users (Feature Phone Users) in Billions					
Year	Smartphone	Mobile phone	Year	Smartphone	Mobile phone
1	2025	7.33	7.49	4	2022	6.64	7.26
2	2024	7.13	7.41	5	2021	6.37	7.10
3	2023	6.92	7.33	6	2020	6.05	6.95
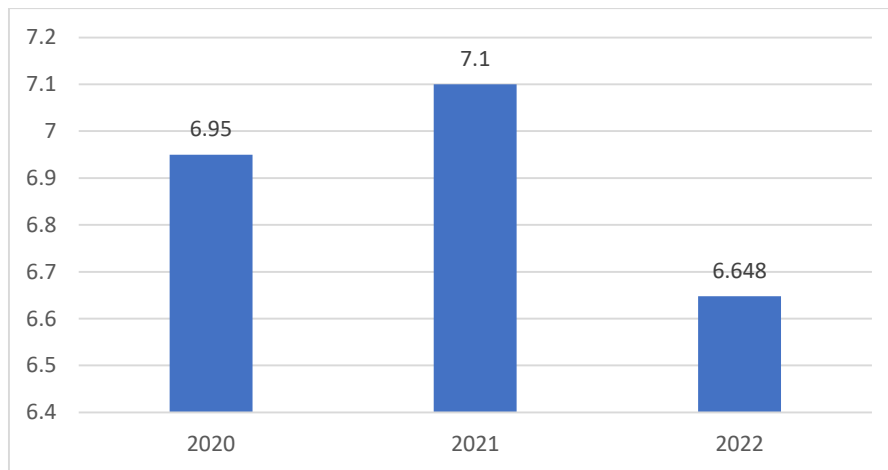
Figure 04: World Wide Feature Phone / Mobile Users in Billion from the year 2020 to 2022, Source: Statista
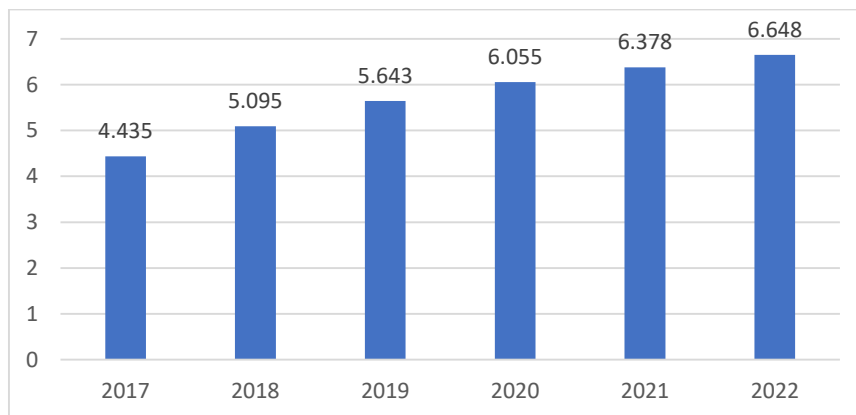
Figure 05: World Wide Smartphone Users in Billion from the year 2017 to 2022, Source: Statista

7.0 Smartphone Usage in Bangladesh

In the month of October, 1990 for the first-time people of Bangladesh taste the flavour of mobile phone. Pacific Bangladesh Telephone Limited popularly known as Citycell was the first company to introduce mobile phone as a communication device in Bangladesh. Seven years later in the year 1997, 26th March mobile phone industry revolution started due to introduction of the Grameen Telecom Services in Bangladesh. Since than mobile phone industry is one of the fastest growing and developing sector of Bangladesh. Till November 2022 the total number of mobile phone users across Bangladesh has reached more than one hundred and eighty (180.87) million. Reference to the report of "The Mobile Economy Asia Pacific 2022, Bangladesh mobile user penetration rate was fifty-five percent (55%) in 2021, which is expected to reach fifty-nine percent (59%) by 2025.

Table 06: Mobile Phone Operators and User Number Till November 2022.

Mobile Connection Operation	Users in Millions
Grameenphone Ltd. (GP)	80.34
Robi Axiata Limited (Robi)	54.34
Banglalink Digital Communications Ltd	39.46
Teletalk Bangladesh Ltd. (Teletalk)	6.73
Total Users till November 2022	**180.87**
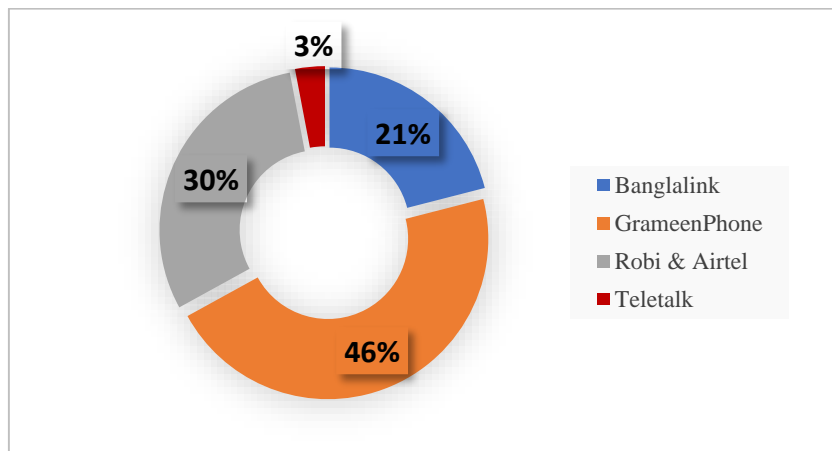
Figure 06: Market share of Bangladesh Mobile Operator, 30th Nov 2022, (Subscribers in Million)

With time people of Bangladesh adopted mobile phones with different features and attributes. Availability of smartphone across South Asian subcontinent attracts people of Bangladesh like all neighbouring countries to adopt and use Smartphone in a great number replacing feature phones in a rapid manner. With time people of Bangladesh of all shape and age are becoming smartphone dependent. Newzoo well-known market analysis and consulting firm reveals a list of top twenty countries across globe in terms of smartphone users.

Table 07: Country wise Mobile Phone Operators and Population size.

SL	Country	Population	Smartphone Penetration	Smartphone Users
1.	China	1.43B	68.4%	974.69M
2.	India	1.42B	46.5%	659.00M
3.	United States	338.29M	81.6%	276.14M
4.	Indonesia	275.50M	68.1%	187.70M
5.	Brazil	215.31M	66.6%	143.43M
6.	Russia	144.71M	73.6%	106.44M
7.	Japan	123.95M	78.6%	97.44M
8.	Nigeria	218.54M	38.1%	83.34M
9.	Mexico	127.50M	61.5%	78.37M
10.	Pakistan	235.82M	31%	72.99M
11.	Egypt	110.99M	64.2%	71.24M
12.	Philippines	115.56M	60.3%	69.70M
13.	Germany	83.37M	81.9%	68.25M
14.	Iran	88.55M	74.4%	65.91M
15.	Vietnam	98.19M	66.7%	65.48M
16.	Turkey	85.34M	75%	64.00M
17.	United Kingdom	67.51M	82.2%	55.46M
18.	France	64.63M	82.6%	53.37M
19.	Thailand	71.70M	73.4%	52.63M
20.	**Bangladesh**	**171.19M**	**30.4%**	**52.03M**

Research data from above table clearly shows as of 2022, there were more than fifty-two million Smartphone users across Bangladesh. Here Smartphone user is indicating a person using any smartphone at least once in a month. It is clearly visible that the significant role Smartphone is playing in every day's life and living of Bangladeshi people. Bangladesh mobile network operators registered eighteen (18) million new internet users, which push total number of subscribers to almost one hundred and fourteen million (113.9 million). Among the four key mobile operators of the country approximately fifty percent (50%) Banglalink's thirty-eight (38.70) million subscribers use smart devices which accounted for more than nineteen (19) million smart device users. On the other hand, forty two percent (42%) entire Grameenphone users use Smartphone which means out of eighty-three (83.87) million users of Grameenphone approximately thirty-five (35.22) million users use Smartphone. The sales volume of Smartphones across country observed a significant growth even during the pandemic time from 2020 to 2021 when country's economy was shattered. With reference of such data, it is found that before (in 2018-2020) pandemic hits Bangladesh around thirty eight percent (38%) of mobile phone consumer across country owns a smart device whereas after pandemic this user number increase by almost ten percent. In 2020-2022 around forty-eight percent (48%) of Bangladeshi mobile phone users have a smartphone. Therefore, it is essential to determine the true impact of smart phone on people especially on the children of Bangladesh.
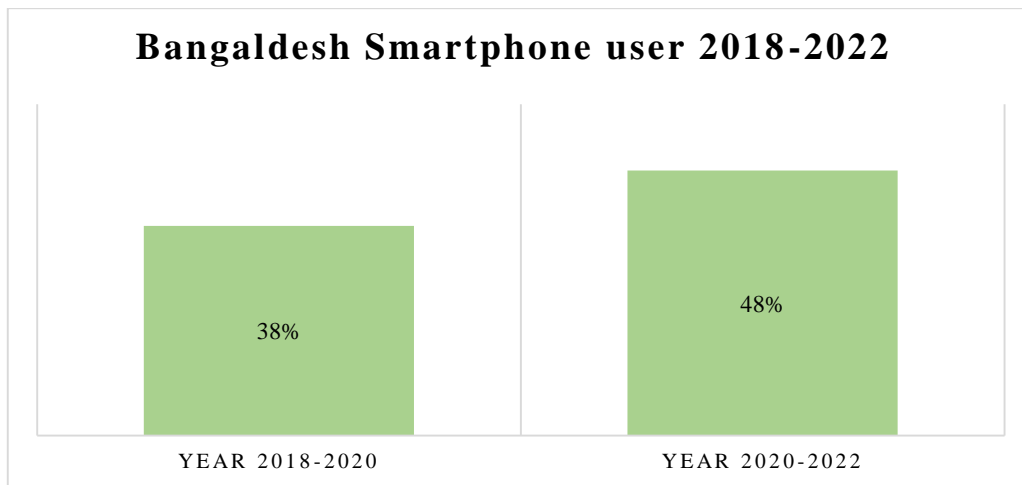
Figure 07: Bangladesh Smartphone User 2018-2022

As per the primary data of the Population and Housing Census 2022, 55.89% of Bangladeshi people uses mobile phone. According to a Daily Star news, approximately 48% mobile phone users in Bangladesh have a smartphone. Based on the ongoing trends smartphone user number is expected to reach 63% by 2025 as per report of the Global System for Mobile Communications Association (GSMA).

8.0 Smartphone Usage among Children Across the Globe

Some scholars quoted that mobile phone usage is becoming too popular and absolute for people that it has been added secretly into the basic need list of people for survival. As per statement of world population review in 2017 there were six hundred and eighty-one (681) million children under five years of age. At present it is estimated that there are approximately two (2) billion children across globe aging between zero (0) to fourteen (14) years. Total number of children (aged 0 to 14) Worldwide from 1990 to 2020 (in billions).
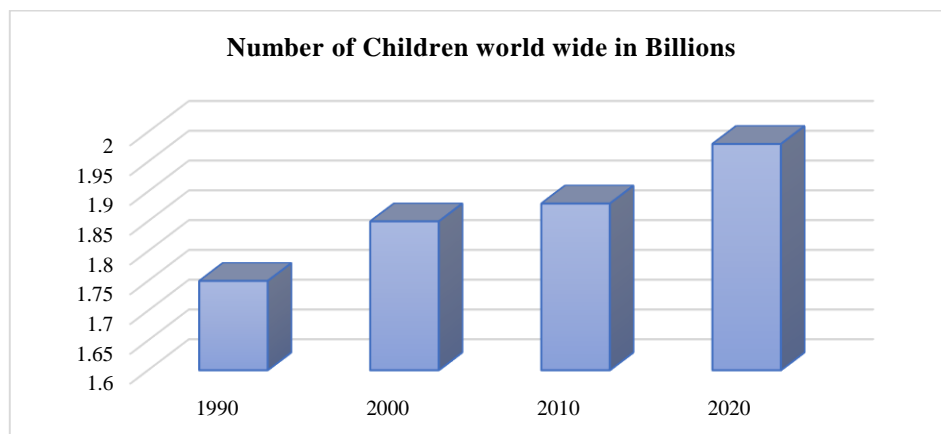
Figure 08: Number of Children in Billion

Ofcom report of 2022 clearly stated that approximately thirty-nine percent (39%) of the children aging in between three to four (3-4) years are using mobile to go online. It also stated that around fifty percent (50%) of the children aging from five to seven years use phone to go online. Lastly approximately fifty nine percent (59%) of children aging in between eight to eleven (8-11) years goes online via their phone. This data is sufficient to draw attention on the devastating disaster we are heading in our near future due to parent's helplessness in supervising kids going online and using smartphones.
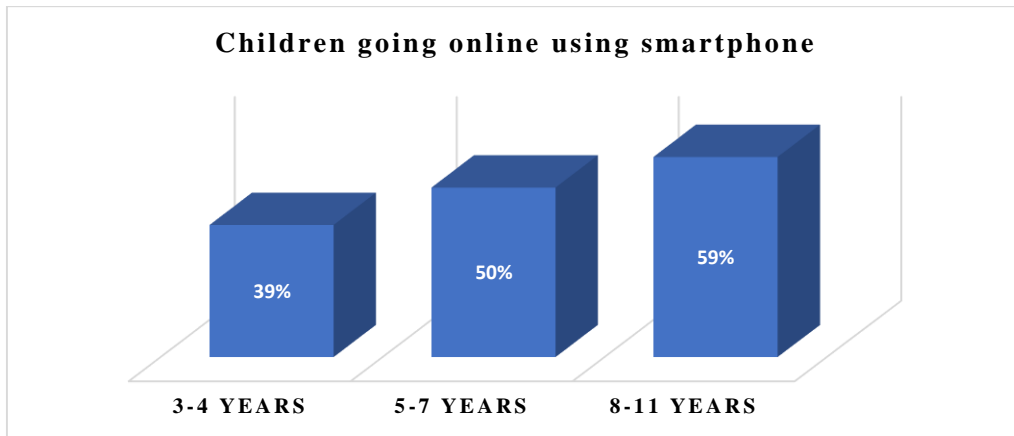
Figure 09: Children Age Group Going Online

9.0 Smartphone Usage among Children in Bangladesh

As per data of world population review in 2023 Bangladesh comprise of 17,29,54,319 human population among which 4,47,95,168 are children aging from zero (0) to fourteen (14) years, which represent 25.9% of the entire country's population. Bangladesh Bureau of Statistics (BBS)'s first digital "Population and Housing Census report 2022" reveals that more than fifty five percent of Bangladeshi children use mobile phone out of which more than sixty six percent are boys and forty five percent are girls. Approximately sixty two percent (62.07%) children living across capital city Dhaka, are mobile phone users whereas forty seven percent (47.55%) children living across Sylhet division are mobile phone users.

Table 08: Mobile Phone Users (%), Population & Housing Census 2022, Preliminary Report

SL	Division & National	Population 5 Years and Above			Population 18 Years and Above		
		Total %	Male %	Female%	Total %	Male%	Female%
1	National	55.89	66.53	45.53	72.31	86.72	58.83
2	Barisal	56.39	64.74	48.5	73.63	85.48	63.02
3	Chattogram	55.51	61.96	49.56	76.3	86.49	67.44
4	Dhaka	62.07	70.59	53.26	78.41	89.26	67.43
5	Khulna	55.91	68.76	43.36	69.35	85.97	53.72
6	Mymensingh	49.91	62.6	37.85	65.63	83.39	49.67
7	Rajshahi	54.3	68.99	39.96	67.57	86.65	49.75
8	Rangpur	51.84	66.86	37.17	66.02	86.05	47.35
9	Sylhet	47.55	59.68	36.09	65.48	82.96	49.78

Above data clearly state a significant number of children are mobile phone users across country. Approximately 2,50,36,019 number children living across Bangladesh uses mobile phone which represent almost 14.50% of entire country's current population. As the day passes by this extreme number of child smartphone users across country will increase in a rapid speed. It is undeniable fact that today human race is living in the era technological advancement where human of all ages is surrounded by gadgets and smartphones. People tend to use smartphones more than their factual need. So, it is crucial for researcher, social scientist, government, policy makers and parents to determine the impact of smartphone on overall development of youth.

10.0 Description of the Study

The study area of this article is mainly restricted to the capital city of Bangladesh, Dhaka. Dhaka has the largest and most diversified population compared to all other districts of Bangladesh. Therefore, selecting mega city Dhaka for the area of questionnaire survey has expanded the door of opportunities in many ways. Consequence to that action respondents from diversified backgrounds, locations, cultures, religions, and income level have participated at questionnaire survey. The population size of this study is ten (10) respondents who are randomly but cleverly selected from Dhaka city based on their diversified professions. A giant population of 10.2 million people lives across Dhaka city as of 2022. Due to time and resource limitations this study is limited to a specific sample size. The population size of this study is limited to ten (10) respondents who are residing across Dhaka city, who are cleverly selected based on their diversified professions and level of monthly income. 0.0001% of total residence of Dhaka city 102,00,000 persons, is 10, which is the sample size of this study. While choosing the population size five mandatory fields were placed so that findings can be related to the problem statement. Mandatory fields are respondent must have a child aging in between three to seventeen years. Family or household of the respondent must have an Internet connection and Smartphone. Keeping social distance, different educational background, occupancy level of the respondents and time-resource constraints in mind primary data has been collected in a very careful manner by a questionnaire with fifteen questions. Multiple choice question answer pattern helps respondent to have better understanding of the problem statemen and a guideline that assist them answering the questions. This article is written based on the descriptive exploration of the subject area which is backed by different published articles, journals, and online verified data. Different types and sources of data have been collected, analyse, and formulated in the right way to draw meaningful information and possible recommendation to address the problem statement. Through a quantitative approach numerical data has been collected which are quantified later. A very limited portion of qualitative approach has been used to identify non-numerical data which is mainly related to emotional state of the respondents. To support the findings of primary data different secondary data have been used to write this article. Secondary data for this article has been extracted from different published online journals, online articles, newspaper news, research report, statistical reports, and other available databases. As the study is related to extract data from respondents who will share information about their children who are minor so high level of confidentiality is maintained throughout the survey safeguarding minorities best interest.

Table 09: Brief Details of the Study

Brief Details of the Study		
Number of Respondents	10 Persons	05 Female and 05 Male
Number of Questions	15 Questions	5 Mandatory, 10 Optional
Number of Surveyor	2 Person	Principle Author & Co-Author
Method of Survey	In person	Questionnaire survey
Duration of Survey Program	10 Days	Two Respondents Per Day

All the fifteen questions which was placed in the questionnaire is provided below for better understanding of the problem statement and research findings.

Table 10: Sample of the Questionnaire used at Survey

SL	Questions (* are mandatory to answer)	Choose Your Answer / Possible Answer with Tick (√) Mark			
Questionnaire Survey on Impact of Inter and Smartphone among Children in Bangladesh				
1	Name of the Respondent:				**Date:**
2	Occupation	□ Service	□ Business	□ Unemployed	□ Home Maker
3	Marital Status of the Respondents	□ Single	□ Married	□ Separated	□ Confidential
4	Do You have or Your household any Children *	□ Yes		□ No	
	If yes, please specify the number	□ 1	□ 2	□ 3	□ 4
5	How older your children / house hold kids are?	□ 1-3 Years	□ 4-8 Years	□ 9-11 Years	□ 12-17 Years
6	Does Your House have an Internet Connection? *	□ Yes		□ No	
7	Does Your Child / household Child have a Smartphone?	□ Yes		□ No	
8	How Often Your Children Use Internet?	□ Always	□ Often	□ Sometimes	□ Never
9	How Often Your Children Use Smartphone?	□ Always	□ Often	□ Sometimes	□ Never
10	What Device your kid use for going online?	□ PC	□ Laptop	□ Smartphone	□ Smart Device
11	What is the reason for your kid for using Internet?	□ Games	□ Facebook	□ Youtube (video)	□ Class/Education
12	Does Internet & Smartphone is benefiting your child? *	□ Yes	□ No	□ Sometimes	□ Not Sure
	If Yes / Sometimes than please explain how? (Please Write a comment if your answer is not in the list)	□ Study	□ Explore	□ Tech Friendly	□ Communication
		Any Other Comment:			
13	Does Internet & Smartphone cause harm to your Kid?*	□ Yes	□ No	□ Sometimes	□ Not Sure
	If Yes / Sometimes than please explain how? (Please Write a comment if your answer is not in the list)	□ Addiction	□ Unsocial	□ Disobedient	□ Weak in study
		Any Other Comment:			
14	Does Internet and Smartphone hamper your daily interaction time with your kids? *	□ Yes	□ No	□ Sometimes	□ Not Sure
	If Yes / Sometimes than please explain how? (Please Write a	□ Hide/False	□ Distance	□ Less Discussion	□ Less Participation

15	comment if your answer is not in the list)	Any Other Comment:			
15	How often you monitor or control Internet & Smartphone usage time of your kids ?	□ Always	□ Often	□ Sometimes	□ Never
Thank You for giving your precious time and sharing your observation with us					

11.0 Study Findings

A questionnaire containing fifteen (15) questions were cleverly set and distributed among randomly selected ten respondents at Dhaka City. Several social issues have come up after analyzing all data received from questionnaire survey. It is clearly observed that few respondents found affirmative impact of the Internet and Smartphone usage among children whereas a few found adverse impact. Summary of the findings are provided below:

Table 11: Findings of the Questionnaire Survey

SL	Questions (* are mandatory to answer)	Choose Your Answer / Possible Answer with Tick (√) Mark			
Findings from the Questionnaire Survey on Impact of Inter and Smartphone among Children in Bangladesh				
1	Name of the Respondent:				Date:
2	Occupation	□ Service	□ Business	□ Unemployed	□ Home Maker
	Response	4	2	1	3
3	Marital Status of the Respondents	□ Single	□ Married	□ Separated	□ Confidential
	Response	0	8	1	1
4	Do You have or Your household any Children *	□ Yes		□ No	
	Response	10		0	
	If yes, please specify the number	□ 1	□ 2	□ 3	□ 4
	Response (14 Children in total)	7	2	1	0
5	How older your children / house hold kids are?	□ 1-3 Years	□ 4-8 Years	□ 9-11 Years	□ 12-17 Years
	Response (14 Children in total)	1	4	6	3
6	Does Your House have an Internet Connection? *	□ Yes		□ No	
	Response	10		0	
7	Does Your Child / household Child have a Smartphone?	□ Yes		□ No	
	Response	8		2	
8	How Often Your Children Use Internet?	□ Always	□ Often	□ Sometimes	□ Never
	Response	5	3	2	0

9	How Often Your Children Use Smartphone?	□ Always	□ Often	□ Sometimes	□ Never
	Response	6	2	1	1
10	What Device your kid use for going online?	□ PC	□ Laptop	□ Smartphone	□ Smart Device
	Response (14 Children in total)	2	3	8	1
11	What is the reason for your kid for using Internet?	□ Games	□ Facebook	□ Youtube (video)	□ Class/Education
	Response (14 Children in total)	3	4	2	5
12	Does Internet & Smartphone is benefiting your child? *	□ Yes	□ No	□ Sometimes	□ Not Sure
	Response	3	4	3	0
	If Yes / Sometimes than please explain how? (Please Write a comment if your answer is not in the list)	□ Study	□ Explore	□ Tech Friendly	□ Communication
		2	1	1	2
	Response Only Yes / Sometimes (3+3 =6)	Any Other Comment:		Enhancing Problem Solving Skills	
13	Does Internet & Smartphone cause harm to your Kid?*	□ Yes	□ No	□ Sometimes	□ Not Sure
	Response	4	3	2	1
	If Yes / Sometimes than please explain how? (Please Write a comment if your answer is not in the list)	□ Addiction	□ Unsocial	□ Disobedient	□ Weak in study
		1	1	1	3
	Response Only Yes / Sometimes (4+2 =6)	Any Other Comment:		Introverts, Overweight, Lazy	
14	Does Internet and Smartphone hamper your daily interaction time with your kids? *	□ Yes	□ No	□ Sometimes	□ Not Sure
	Response	4	3	3	0
	If Yes / Sometimes than please explain how? (Please Write a comment if your answer is not in the list)	□ Hide/False	□ Distance	□ Less Discussion	□ Less Participation
		1	3	2	1
	Response Only Yes / Sometimes (4+3 =7)	Any Other Comment:		Emotionally Disconnected	
15	How often you monitor or control Internet & Smartphone usage time of your kids ?	□ Always	□ Often	□ Sometimes	□ Never
	Response		1	7	2

11.1 Specific Findings from Questionnaire Survey

At the beginning of the questionnaire very specific questions have been set related to respondent personal information including their kids. Such preliminary questions work as an ice breaker for respondents while participating at a questionnaire survey. This questions also works help author to understand respondents background along with the status of their kids. Question number 1 to 5 mainly answer information related to respondent and their children. 1st Question were placed to identify respondent name. 2nd question tries to identify respondent occupation. From the respondent's population around 40% percent of them are service holder, whereas 30% are home makers. Among rest thirty percent of the respondent twenty percent were business owner and ten percent were unemployed (do not have any specific / permanent income source) during survey period.
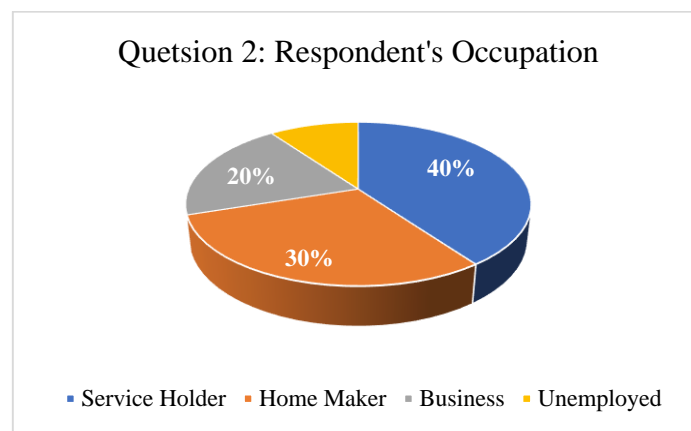

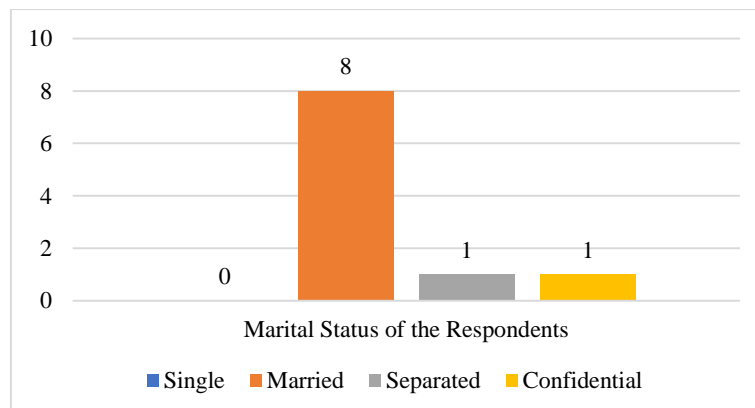**Figure 10: Question 2: Occupation of the Respondent**

Figure 11: Question 3: Marital Status of the Respondents

80% percent of respondents are married and 10% are separated. Rest 10% of the respondents preferred not to say anything and keep this information confidential.

Question 4 is divided into two parts related to one another. First part of question tells whether respondent have any children or not. Second part of the question described about the total number of the children respondent or house hold have. In the part of question three it is found that all of the respondent i.e. 100 % of the respondent have children either of their own or at their household. The second part of the question show children number of the respondent or their household. In total all the respondent and respondent's house hold had 14 children.

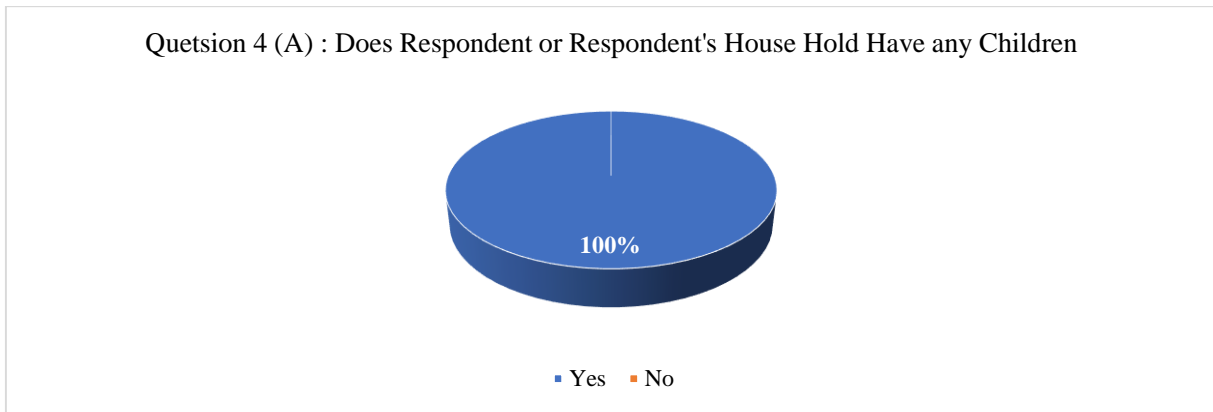Quetsion 4 (A) : Does Respondent or Respondent's House Hold Have any Children

100%

■ Yes ■ No

Figure 12: Question 4 (Part A) Number of Respondents or Respondent House Hold with Children

Question 4 (B): Total Number of Children of the Respondent or Respondent Household
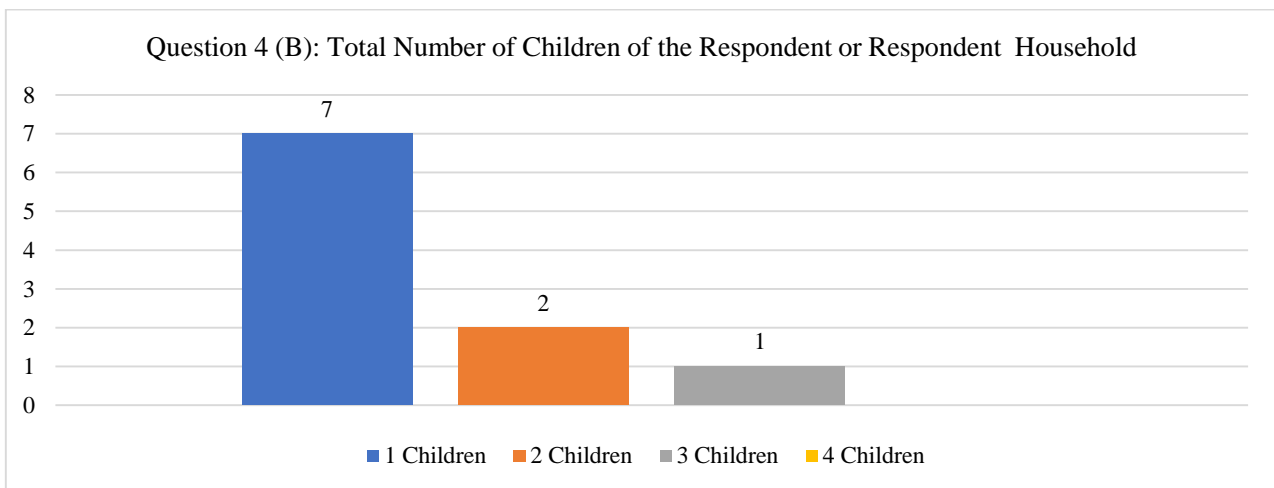
7

2

1

■ 1 Children ■ 2 Children ■ 3 Children ■ 4 Children

Figure 13: Question 4 (B) Total Number of Children of the Respondent or Respondent Household have

Question 5 of the questionnaire survey shows different age group of the children belongs to respondent or respondent's house hold. In total four children of different age segments. Approximately 42.9% of the respondent children falls within 9 to 11 years age segments whereas 21.45% of the respondent children falls within 12 to 17 years age segments. Around 28.58% of the children falls within 4 to 8 years age segments whereas only 7.2% of the respondent's children falls within 1 to 3 years of age segments.
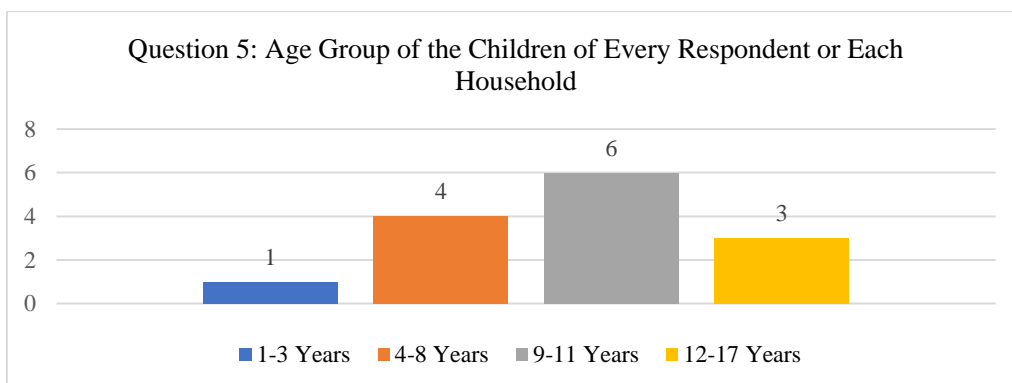
Question 5: Age Group of the Children of Every Respondent or Each Household

1

4

6

3

■ 1-3 Years ■ 4-8 Years ■ 9-11 Years ■ 12-17 Years

Figure 14: Question 5 Total Number of Children of the Respondent or Respondent Household have

Question 6 and 7 tried to identify number of respondents household having Internet connection and Smartphone. It is found that 100% of the respondent have Internet connection and 80% of them have Smartphone.
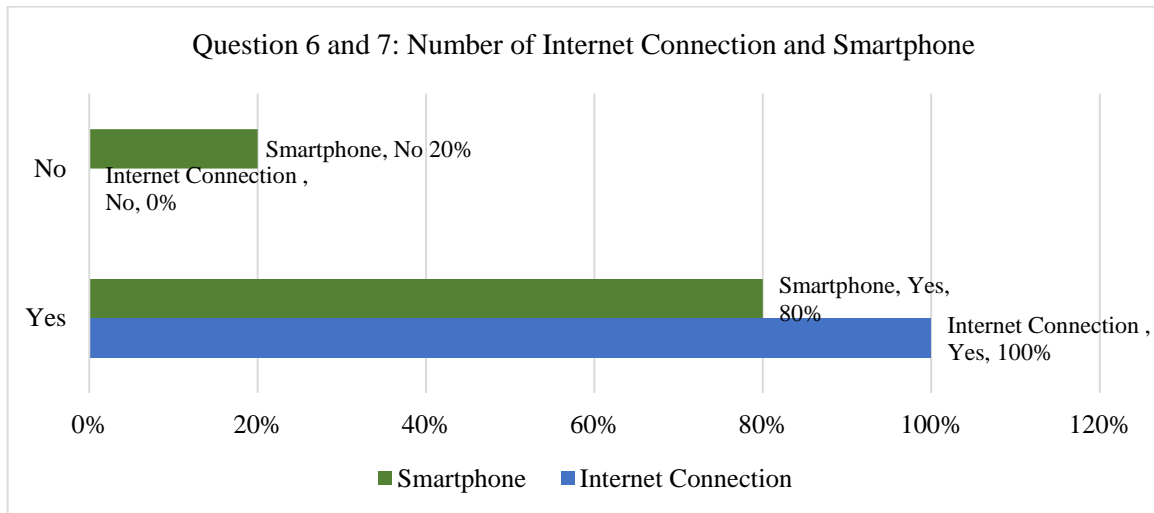

Figure 15: Question 6 & 7 Total Number of Respondents Having Internet Connection and Smartphone

Question 8 and 9 tries to identify how often a respondent's child or respondent's house hold children use Internet and Smartphone. It is found that 50% of the respondent child always use Internet whereas 60% of the respondent stated their child always use Smartphone. 30% of the respondent child often use Internet whereas 20% of the respondent stated their child often but not always use Smartphone. Only 10% of the respondent child sometimes use Smartphone whereas 20% of the respondent stated their child sometimes use Internet. 10% of respondent quoted that their child does not use Smartphone at all.
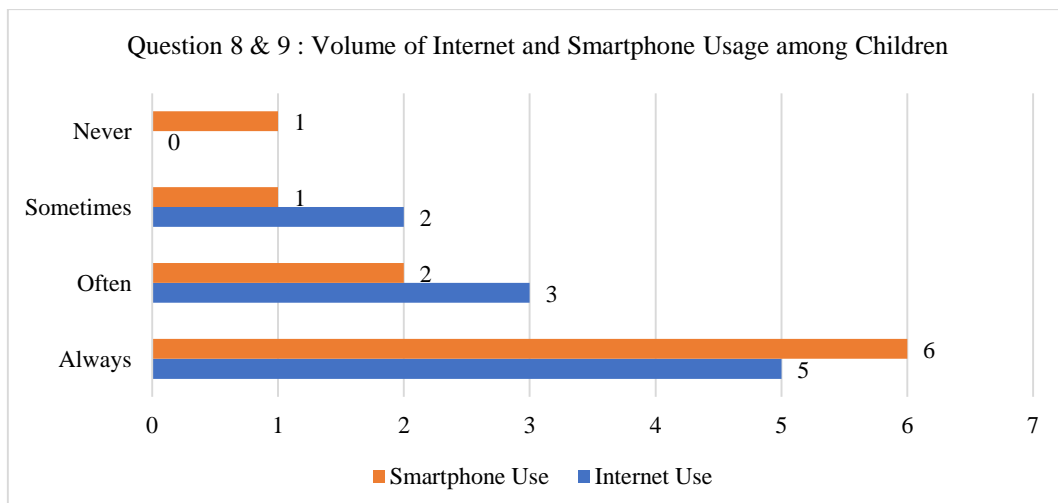

Figure 16: Question 8 & 9: Volume of Internet and Smartphone Usage among Children

Question 10 tries to identify which device respondent's children use to go online or for surfing over the net. It is found that around 7.2% of the respondent's children use smart devices whereas above fifty seven percent (57.15%) of the respondent's children use Smartphone to go online. Around 21.45% of the

respondent's children use laptop to go online whereas 14.3% of the respondent child use PC (desktop computer) to go online.
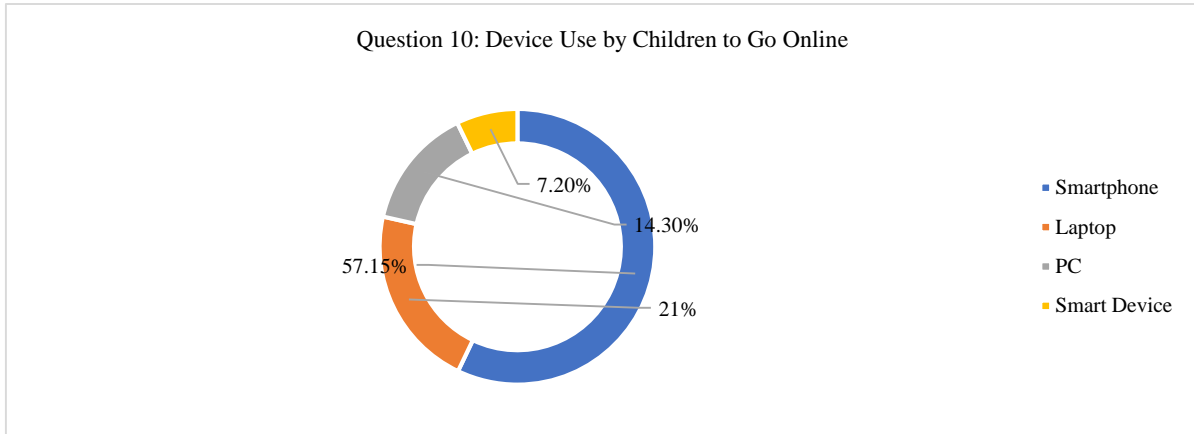

Figure 17: Question 10: Device Use by Children to Go Online

Question 11 of the questionnaire tries to identify the main purpose of children for going online. It is found that 21.45% of the respondent's children tend use Internet for playing games whereas 14.3% of the respondent children tend to spend time on youtube. Around 29% of the respondent children use Internet to browse facebook whereas almost 36% of the respondent's children (35.8%) use Internet for class or Education purpose.
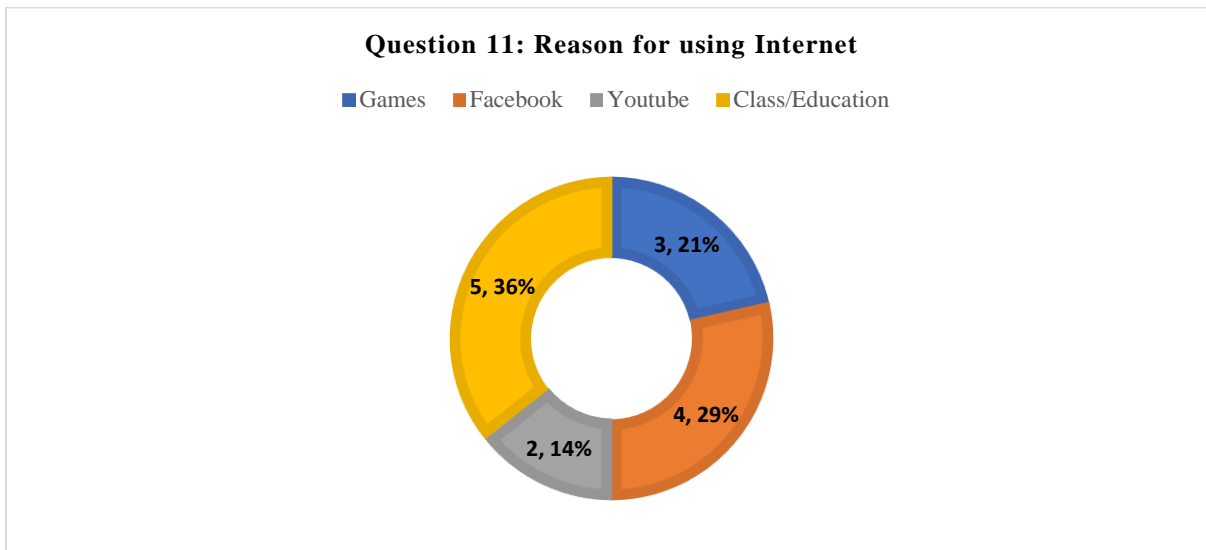

Figure 18: Question 11: Reason for Using Internet by a Children

Question 12 is divided into two parts. Part A tries to identify respondent opinion on whether Smartphone and Internet are benefits their children or not. If it is benefiting than also tries to explore how. 30% of the respondent find it is benefiting whereas 40% of the respondent stated Internet and Smartphone is not benefiting their children. Rest 30% of the respondent finds sometimes it is benefiting and sometimes it is not. Part B identified among the 60% of the respondent who finds Internet and Smartphone are benefiting children (Yes and Sometimes) stated study and communication are the two main areas where their children

are getting benefited from using Internet and Smartphone. One respondent also commented that Internet and Smartphone is helping their children in enhancing problem solving skills.
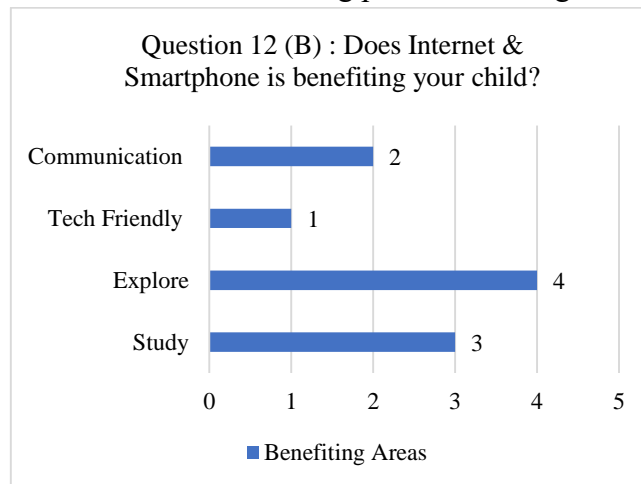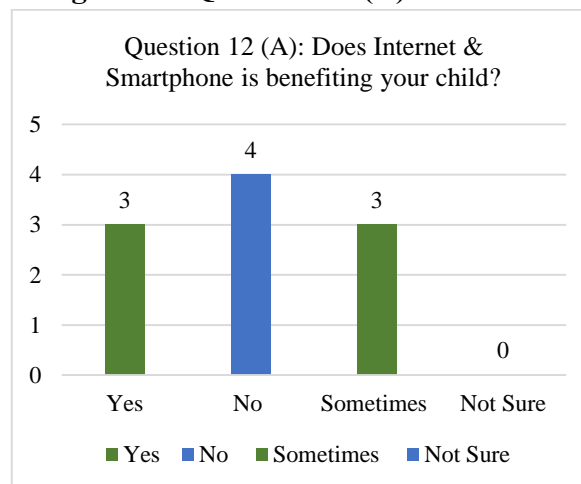

Figure 19: Question 12 (A) Benefits

Figure 20: Question 12 (B) Benefiting Yes & Sometimes

Question 13 is divided into two parts. Part A tries to identify respondent opinion on whether Smartphone and Internet are harming their children by any means or not. If it is than which are the possible arears where Internet and Smartphone are harming their children. It is found that 40% of the respondent finds Internet and Smartphone is causing harm to their children whereas 30% finds it is not causing any harm. 10% of the respondents find themselves in a fix as they failed to identify whether Internet and Smartphone is harming their children or not whereas 20% of the respondent stated sometimes it cause harm and sometimes it not. Part B of question 13 tries to identified among the 60% of the respondent who finds Internet and Smartphone are causing harm to their children (Yes and Sometimes) stated low academic performance is the greatest harm Internet and Smartphone is causing to their children. One respondent also commented due to seating ideal and using Smartphone his child turns lazy and has gain extra weight or obesity.
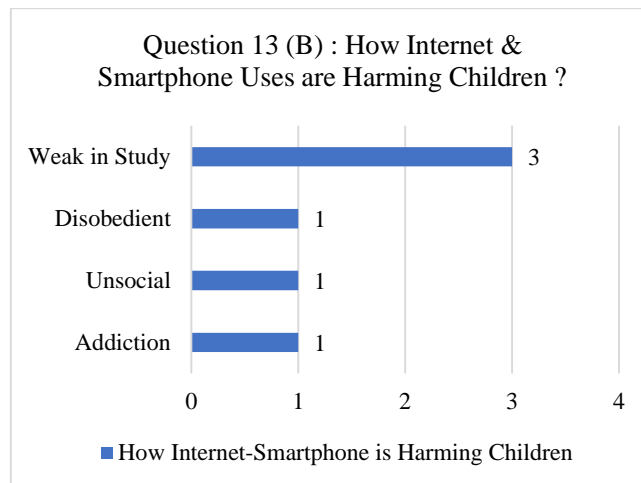
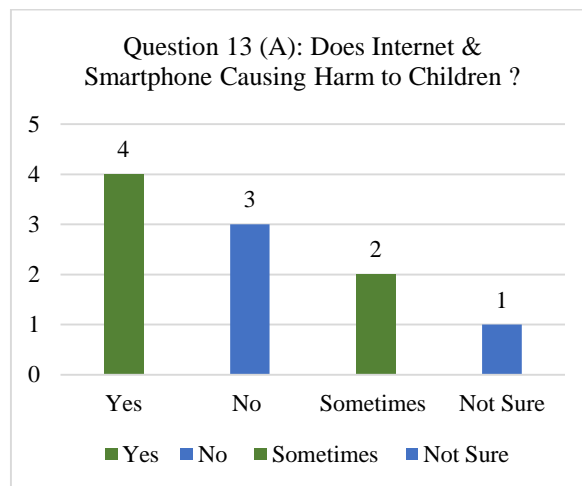**Figure 21: Question 13 (A) Harming or not**

Figure 22: Question 13 (B) Harming (Yes & Sometimes)

Question 14 is also divided into two parts. Part A tries to identify respondent opinion on does Internet and Smartphone usage hamper their daily interaction time with their children or not. Part B tries to identify if it does hamper their interaction time than how. 40% of the respondent stated that Internet and Smartphone did hamper your daily interaction time with your kids whereas 30% of respondents finds it sometimes. Rest 30% of the respondent denied the fact. Among the 70% (Yes and Sometimes) of respondent who stated Internet and Smartphone did hamper your daily interaction time with your kids sated that a distance has been created between them and their kids. One respondent also commented that his children is slowly becoming emotionally discounted from the family due to extensive time spending on social media using his Smartphone and Internet.
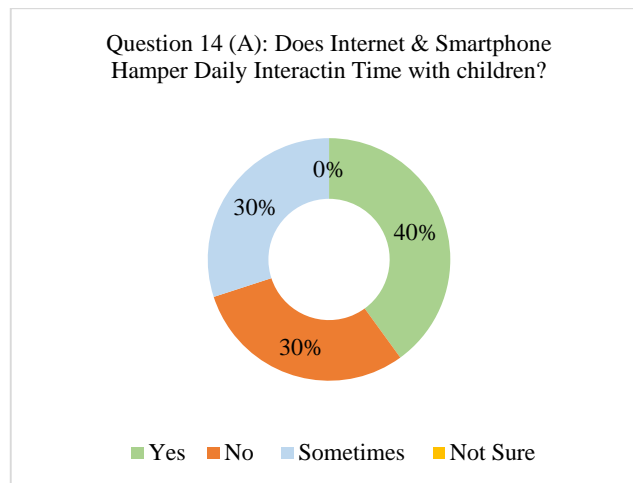
Figure 23: Question 14 (A) Hampering Interaction Time
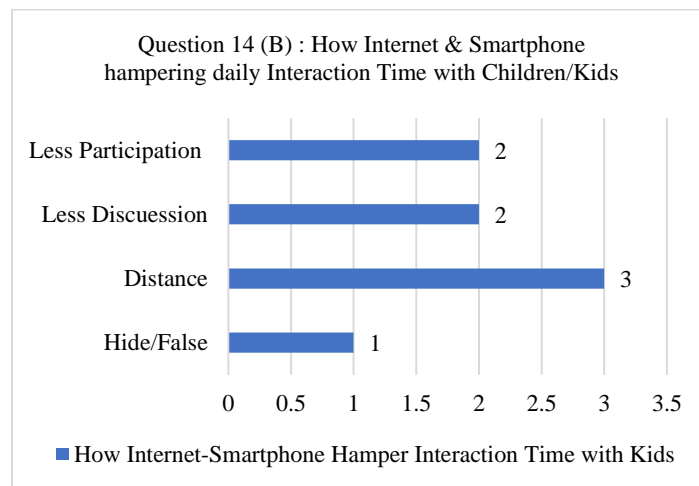
Figure 24: Question 14 (B) How Hampering

Question 15 tries to identify respondent nature of controlling or monitoring Internet and Smartphone usage of their children. It is found that 70% of the respondents sometimes tries to control or monitor Internet and Smartphone usage of their children whereas 20% stated they never controlled or monitor anything. 10% of the respondent stated that she often controls and monitor usage of Internet and Smartphone of her child.

Figure 25: Question 15 Control use of Internet and Smartphone

11.2 Affirmative Impact of Internet and Smartphone usage among children in Bangladesh

Through the questionnaire survey it is observed that thirty percent (30%) of the respondents clearly stated that the Internet and Smartphone usage is beneficial for their children, whereas other thirty percent (30%) stated sometimes they found usage of Internet and Smartphone are benefiting their children. Six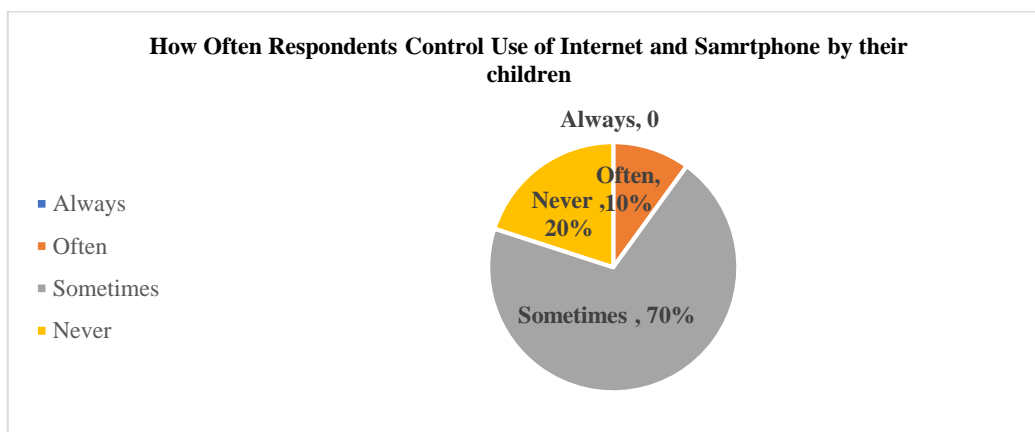ty percent (60%) of the respondent stated positive impact of the usage of Internet and Smartphone on their kids. The major benefits of the Internet and Smartphone are explored below:
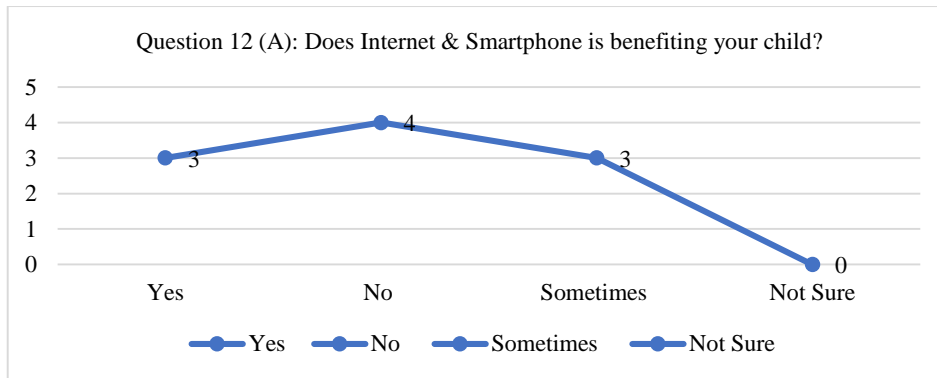

Figure 26: Question 12 (A) Does Internet Benefiting a Child

i.   Opportunity to Explore New Things

According to Mr. John Allen Paulos, "*The Internet is the world's largest library, its just that all books are on the floor*". The Internet opens the door of exploring new things for human race of all ages. Children of different age background can explore as many new things as they want through the Internet. Smartphone has opened doors for children of all ages to have Internet access in the easiest and cheapest manner. Children across the globe use Smartphone to get access to Internet to explore history, solve mystery and gather on hand experience. Like all other nation, a good number of children of Bangladesh explore new things through the Internet and Smartphone. Above thirty percent of total child (five years and above) population across country use the Internet. A major portion of such child user use Smartphone to get such access.

Study Findings: In the questionnaire survey, it is clearly observed that ten percent (10%) of the respondents clearly state that the Internet helps their children to explore new things, ideas and creativity which is the most beneficial part of having an Internet and Smartphone at home. One respondent also added good number of teenagers across country use the Internet-Smartphone as a source to establish different startup business. In pandemic Due to Smartphone many children across country were able to continue their study with their schools and colleges through online classes. Smartphone is one of the finest tools of eLearning which is already been adopted and used thousands of children across country.

ii.   Learning & Development Opportunity

On a press conference on September 2, 2022, Bangladesh education Minister Mrs. Dipu Moni quoted that Bangladesh have already converged one hundred percent electricity in all educational institutions, now all of them will be given the Internet coverage. All educational institutes will have the Internet access so that students across country can learn through experience and experiment.

Study Findings: Twenty percent of the respondents clearly stated that Internet and Smartphone are helping their kids in study, learning new things, and attending online classes. Most parents agreed to the fact that the Internet has opened new doors of opportunities to learn and adopt new skills for children and adults as well. One of respondent clearly stated that her child uses the Internet to go through math problem solving tutorial that directly puts an affirmative impact on her children academic result. One of respondent describe that the Internet gives children to showcase creativity, self-expression, and exposure. As a parent they find the Internet is the easiest way to express hidden talent of any children. A mother expressed with full emotion that the Internet has open new doors and opportunities for children especially for girls. Now girls have the right amount of access to express their opinion and feedback. One of respondent who finds Internet as a blessing for their kids also quoted that Internet is increasing their kid's problem solving and organizing Skills. He believes now children are capable to adopt smart ways to solve any problem.

iii. Enhance ICT Skills

Children needs to have minimum ICT skill to use the Internet. Therefore, the Internet and Smartphone usage has opened a new window for every child to enhance their ICT skills. For developing nations like Bangladesh children of all ages are slowly becoming technologically sound and thus promotes tech friendly society. Sound ICT knowledge also enhance career development opportunities in the long run.

Study Findings: Ten percent (10%) of the respondent stated that the Internet and Smartphone are helping their kids to become more tech friendly by enhancing their ICT skills. He also added to some context of information technology their kid is more technological sound comparing to them.

iv. Excel Communication Skills

Communication skills of the children of Bangladesh are becoming more effective due to usage of the Internet. Children, living in cities and urban areas of Bangladesh tend to adopt good communication skill due to their easy access to the Internet comparing to children of rural areas who comparatively use less amount of Internet. The Internet enhance chances of increasing self-confidence of children. Now-a-days children of all ages becoming more self-confidence by gather more knowledge and ICT skills using the Internet. The Internet exposed easiest learning and career development opportunities for children.

Study Findings: Twenty percent of the respondents, found that the Internet and Smartphone has increased communication skills of their child in a great manner. Children are becoming more vocal in respect of expressing their rights and necessity. Besides this one respondent stated that Internet and Smartphone always helped them to communicate with their children at any time at any place at the most minimum expanse.
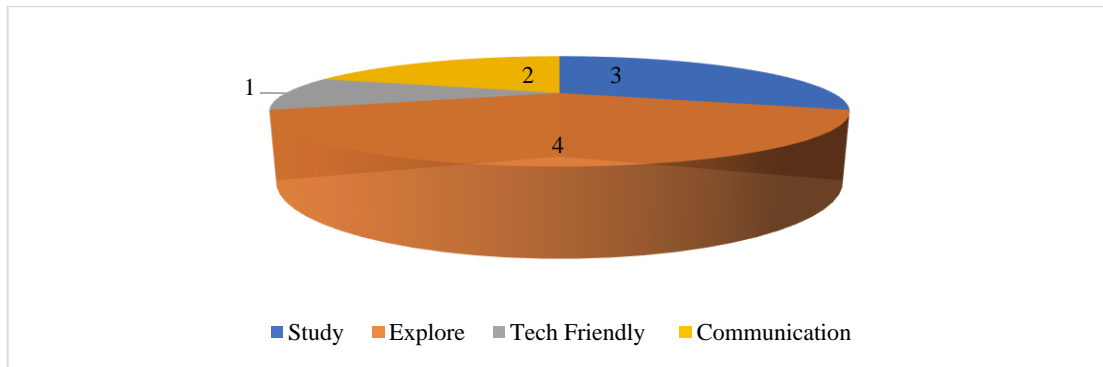
Figure 27: Question 12 (B) Does Internet Benefiting a Child

Smartphone are the easiest, finest, and cheapest way of communication for people of all ages. One of the most positive uses of Smartphone for the children of Bangladesh is communication with parents, friends, and relatives.

11.3 Adverse Impact of Internet and Smartphone Usage among children in Bangladesh

Forty (40%) percent of the respondent finds Internet and Smartphone usage have affected adversely to their children whereas twenty percent (20%) has partially agreed that. Major adverse impact of the Internet and Smartphone usage among children in Bangladesh is mentioned below:

I.   **Health Hazards**

In the era of globalization individuals across generation must use and rely on the Internet willingly or unwillingly. Excessive usage of the Internet (EIU) especially by any child is causing many health-related hazards in the long run. As per Population & Housing Census 2022 report by Bangladesh Statistics Bureau, above thirty percent of country's entire child population use the Internet, among which above thirty eight percent are boys and twenty three percent are girls. Smartphone plays the most significant role in giving Internet access to children. According to a research report of Bangabandhu Sheikh Mujib Medical University (BSMMU) quoted that around 16% of children ageing in between 13 to 18 years suffers from high blood pressure due to their obesity. Extensive use of the Internet, increasing amount of total sedentary time and negligence to play outdoor sports and physical activity are the main reason working behind it.

Study Findings: Ten percent of the respondents stated that spending extensive time over Internet and Smartphone have slowly turning his child addicted towards it. As a result, his child likes to stay indoors, isolated, and slowly becoming unsocial. Staying at home, playing online games by seating at one place have deteriorate child's health condition. Obesity and weak eye sight are major adverse impact of extensive use of Internet and Smartphone. A respondent who is a businessman and father of two child clearly stated that due to spending excessive time over Internet via Smartphone at early age of life his elder child has grown up with disturbed brain activity as a result she does not response or talk frequently with anyone not even with her parents. Doctor advises them to have long term treatment and special education system for her which will excel her brain activity. Mostly Children adopted a trend of using Internet and Smartphone while keep seating in the same position for long time. Constantly seating in a same position force children to develop bad posture over time. As a result, many children at early age gain

extra weight and physical constraints what they need to carry for rest of their life. Research finds that kids who use the Internet extensively are fifty three percent more likely to extra weight.

II. Unsocial

A major portion of Bangladesh child population now-a-days spend a good amount of time on their Smartphone or laptops usually surfing net or using social media platform. As a result, younger generation of Bangladesh is becoming more unsocial and tend to have less physical communication with friends, relatives, and neighbours. Spending more time online deprive children from many opportunities of socializing, playing, enjoying, entertaining and networking in person. As a result, distance has been creating among children and society, children and parents, children and teachers and children with real life friend. Many children across country give more priority to virtual life instead of real life. Spending time alone is giving ruse chances of many demotivation and suiciding tendency.

Study Findings: Ten percent (10%) of the respondents found that the Internet and Smartphone have turn their kid unsocial. Respondent find that their kid tends to escape from family gathering and loves to stay isolated and spend time on social media platform. One of the respondents also comment that children now are more introverts or taciturn due to extensive use of the Internet and Smartphone and spending less time in physical communication and spending time with friends.

III. Disobedient

Still now the Internet and Smartphone users of Bangladesh are not mature enough. It can be said that Bangladesh is running on its first-generation of the Internet and Smartphone users who needs to learn a lot about norms and customs of virtual world. Lack of parent's knowledge about the Internet is increasing chances of negative influence of the Internet on children. Extensive use of the Internet and Smartphone can result in a range of harmful behaviours of children which needs to be address and monitor immediately for countering it. Many children across country tend to develop many harmful behaviours like unlawful use of social media, impulsive online buying, addiction of TikTok, and playing game. All such unsocial behaviour is called problematic use of the Internet (PUI).

Study Findings: One respondent out of ten found that his child has become more arrogant and disobedient due to excessive use of the Internet. As parents they had no option left to adopt very strong monitoring and control mechanism to prevent their children from using Internet. One of the respondents also comment that the Internet is slowly turning younger generation more stubborn which is clearly visible in their behavior and body language.

IV. Weak in Study

Excessive use of the Internet use (EIU) and Smartphone usually forces a child to adopt the Internet addiction which is also termed as compulsive Internet use (CIU) may result in several adverse impact. Spending more time online is reducing children productive hour for education and learning. In most cases children spending more time on social media platform is performing poorly in the academic results and turns to become slower in gaining new knowledge and education insights.

Study Findings: thirty percent (30%) of the respondent found that spending more time online reduce child's education time and learning opportunities. Children now tend to like spending more time online seating at home and playing games at Smartphone comparing to attending class physically at school. More interest in online activity has reduced academic performance level of children in a huge volume across country.

V. Less Interaction time:

It is undeniable that Bangladesh has entered in the era of technological advancement where communication has been easiest of all time. Smartphone penetration in Bangladesh is rapidly heading towards fifty percent (50%) since coronavirus pandemic has enhanced the adoption of all digital technologies specially smartphone to support daily personal and professional work, education, study and have entertainment. As per last updated data from March 2020 to 2022, Bangladesh mobile network operators registered eighteen (18) million new internet users, which push total number of subscribers to almost one hundred and fourteen million (113.9 million).

Study Findings: Forty (40%) percent of the respondents found that due to Internet and Smartphone adaptation in their life total interaction time between parents and children has reduced in a tremendous volume. One respondent believed that less interaction time with her kid has created an emotional distance between them. Consequence to that have created a distance in between. One of the of respondents also quoted that his boy tends to give him false information about his study due to spending more time Internet and Smartphone.

12.0 Possible Counter Measures

The Internet and Smartphone are the two most remarkable invention of science and technology that has shaken the world. One of the most massive impacts of these two inventions is, it has speed up the globalization process through major integration of economies and cultures. In Bangladesh all segments of human life and living is slowly captured by the Internet as the time passes by. It is being observed that comparing to adult, adoptability rate of the Internet among different age segments of Bangladeshi people, children (aging above 5 to 17 years) hold the peck percentage. In these circumstances when the Internet has become every day's necessity, Smartphone have become part and parcel of daily life, it is impossible to keep children away from the impact and influence of Internet and Smartphone. As a result, counter measures must be taken to minimize the adverse impact of the Internet and Smartphone usage among children in Bangladesh.

- Parents should acquire adequate knowledge on best use of the Internet and Smartphone to safeguard a child best interest and privacy.
- Internet and Smartphone using time duration must be monitor and control in both home and school.
- Parents, teachers, and educational institute should encourage children of all ages to spend less time on the Internet and Smartphone and get maximum involvement in outdoor activities.
- Children using Smartphone or any other smart devices should be strongly monitored and controlled.
- Awareness rising program on Effective use of Internet and Smartphone should be given to students of all levels.
- Government should take necessary initiatives to ensure proper law are there to prohibiting people from doing cyber abuse and crimes especially with children.

- Government authorities should restrict different sites and digital platform which are not child friendly or which can put adverse impact on child mind and development.
- Parents should encourage their children to spend more time with friends, relatives, and outdoor spots instead of seating at home, playing online games, and browsing social media sites.

As both the Internet and Smartphone have become an inevitable for human race therefore parents cannot detach children from any of that easily. Therefore, parents must develop or set guideline of the Internet and Smartphone usage that can protect their most precious assets of life.

13.0 Conclusion

"It is okay to own a technology, what is not okay is to be owned by technology" quoted by Mr. Abhijit Naskar. It clearly shows the bright and dark side of technological advancement. Laurence Chandy, UNICEF Director of Data, Research and Policy quoted that *"every day, around 175,000 children go online for the first time, which opens them up to a flood of dangers".* This clearly means in half second a new child going online which means chances of abuse and addiction is getting much higher with time. Bangladesh digital transformation adaptation started a long ago, soon after millennium started. Just like rest of the world is witnessing the most powerful impact of massive globalization and enormous technological advancement especially in terms of communication technology. Internet and Smartphone have become inevitable part of life and living of Bangladeshi people. No matter how much adverse impact Internet and Smartphone have on society, exploring, problem solving and learning benefits of Internet and Smartphone usage cannot be ignored. Being a digital country, it is mandatory for society to teach and introduce its citizen of all ages with beneficially uses of Internet and Smartphone. Bangladeshi children using Smartphone tends to become more tech friendly than past times. Such introduction at early stage of life help children to adopt extraordinary digital skills in their adult life. Many school now offers Internet access to students where they expect children to develop a greater knowledge on the process of navigating resources online through their Smartphones and laptops. Through cleaver guidance and support, parents and teachers can help children learn how to self-regulate the time they spend on their Smartphone and Internet. Diverting unhealthy use of Internet and Smartphone to a healthy one can make children self-sufficient through solving small problems through searching solution online. This wonderful problem-solving habit in the long run will boost up confidence level of children and tend to develop self-sufficient mentality. Internet and Smartphone are the finest and easiest source of entertainment for children of all ages. From a kid to a grown-up person can find their respective types of entertainment in one single device. Internet and Smartphone now-a-days is a very handy source of Medicare or medical assistance as well especially in case of emergency. Children of all ages can learn and avail different types of services from Internet and Smartphone. Smartphone can be used to perform different kinds of daily utilities. Although many of such activities are not directly related to children but in most cases, children help their parents with performing different kinds of utilities using Internet on Smartphone. Utility bills, financial transaction, tuition fees and many more daily essential works can be conducted through Internet and Smartphone in a few seconds. Children in different parts of Bangladesh is slowing becoming addicted to the Internet and Smartphone usage due to lack of parental monitoring and easy access. This also enhances chances of adverse impact of Internet and Smartphone usage on children. According to a study conducted by Bangabandhu Sheikh Mujib Medical University (BSMMU) approximately 59% children Internet and Smartphone user face cyber abuse. Another research conducted over 456 students of nine and ten grade of

both urban and rural areas reveals that across Bangladesh in the year 2021, children of urban cities are more prone (1.5 time higher) cyber bullying comparing to children of rural areas. Approximately 56% of boys and 64% of the girls have witness sexually harassment while being online mostly via their Smartphone. Tremendously high adoption rate of the Internet and Smartphone have slowly adopted both of it as a necessity of daily life and living for more than half of human race living across the globe. Due to its wider scope of uses and huge volume penetration rate the Internet and Smartphone have influence human life in both positive and negative ways. But comparing to other inventions the Internet along with Smartphone have the deepest impact on human life in all age segments. Children (four to sixteen years) are the largest segments who uses most volume of the Internet via their Smartphone and spend most of their time online comparing to all other age group. Therefore, there is no doubt the Internet and Smartphone have influenced life and living of human race of different ages but it has influenced children of all ages in a great manner. With this reality of two sides of the Internet and Smartphone most important question arises whether the Internet and Smartphone usage are useful or not for the development of children. Therefore, every nation must analysis the impact of the Internet and Smartphone usage on the child development and its consequences as well. It is also becoming increasingly important for Bangladesh to understand the impact of the Internet and Smartphone usage among younger generation, who are going to lead the country in near future. This study tried to explore opinion and understanding of different parents and guardian about the impact of Internet and Smartphone usage among children in Bangladesh.

14.0 References

1. Abdul Kalam , A. P. J., 11th President of India (n.d.). Let us sacrifice our today so that our children can have a better tomorrow. Www.Brainyquote.com. Retrieved June 21, 2023, from https://www.brainyquote.com/quotes/a_p_j_abdul_kalam_178504?src=t_children
2. Ani Petrosyan (2023, February 23). *Global number of internet users 2005-2022*.
3. https://www.Statista.com. Retrieved June 10, 2023, from https://www.statista.com/statistics/273018/number-of-internet-users-worldwide/
4. Campbell , D., Health policy editor (2018, October 17). *Research finds link between time*
5. *online and obesity in children*. Www.Theguardian.com. Retrieved June 19, 2023, from https://www.theguardian.com/society/2018/oct/17/research-finds-link-between-time-online-and-obesity-in-children
6. Cain, N., & Gradisar, M. (2010). Electronic media use and sleep in school-aged children and adolescents: A review. *Sleep Medicine*, *11*(8), 735–742. https://doi.org/10.1016/j.sleep.2010.02.006
7. Cho, K. H., & Lee, J. S. (2017). Influence of smartphone addiction proneness of young children on problematic behaviors and emotional intelligence: Mediating self-assessment effects of parents using smartphones. *Computers in Human Behavior*, *66*, 303–311. https://doi.org/10.1016/j.chb.2016.09.063
8. Dhaka Tribune, (2022, September 2). All educational institutes will have internet access.
9. *Dhaka Tribune, Online Edition,* Retrieved June, 15, 2023 from www.dhakatribune.com/education/2022/09/02/dipumoni-all-educational-institutes-will-have-internet-access
10. Elizabeth Spooner (2021, September 14). *What is the Internet?* [Video]. Study.com. https://study.com/academy/lesson/what-is-the-internet-definition-lesson-quiz.html
11. Eric Tigerstedt. In *Wikipedia*. Retrieved June 2023 en.wikipedia.org/wiki/Eric_Tigerstedt
12. Federica Laricchia (2023, May 24). *Smartphone penetration worldwide as share of global*

13. *population 2016-2022*. Https://www.Statista.com. Retrieved June 10, 2023, from https://www.statista.com/statistics/203734/global-smartphone-penetration-per-capita-since-2005/

14. Gupte, P., Author (2011). Mother India: A Political Biography of Indira Gandhi (pp. 1-10).

15. Penguin Books Ltd. 3rd Edition published in 2011. https://books.google.com.bd/books?id=OOmK1lPWq80C&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

16. Hugo V., French Author,1990. *A mother's arms are made of tenderness and children sleep soundly in them.* Https://www.Brainyquote.com. Retrieved June 18, 2023, from https://www.brainyquote.com/quotes/victor_hugo_384365?src=t_children

17. Hawking, S. W., an English theoretical physicist (n.d.). *We are all now connected by the Internet,*

18. *like neurons in a giant brain.* Https://www.Brainyquote.com. Retrieved June 22, 2023, from https://www.brainyquote.com/quotes/stephen_hawking_696272?src=t_internet

19. Internet World Stats (2022, June 30). Miniwatts Marketing Group, *The Internet Big Picture*

20. *World Internet Users and 2023 Population Stats*. https://www.Internetworldstats.com. Retrieved June 21, 2023, from https://www.internetworldstats.com/stats.htm

21. John Allen Paulos (n.d.). *The Internet is the world's largest library. It's just that all the books are on the floor*. Www.Quotefancy.com. Retrieved June 27, 2023, from

22. https://quotefancy.com/quote/1615607/John-Allen-Paulos-The-Internet-is-the-world-s-largest-library-It-s-just-that-all-the

23. John F. Kennedy, 35th President of USA. Children are the world's most valuable resource and its best hope for the future. *Presidential Papers."July 1963: " JFK Library.*, *JFK Library, White House Central Files. Chronological File, Box 11*, 16-31. https://www.jfklibrary.org/learn/about-jfk/life-of-john-f-kennedy/john-f-kennedy-quotations

24. Keeshan, B. (n.d.). *Fiela's Child Analysis*. Https://www.Bartleby.com. *Parents are the ultimate role models for children. Every word, movement and action have an effect. No other person or outside force has a greater influence on a child than the parent*. Retrieved June 20, 2023, from https://www.bartleby.com/essay/Fielas-Child-Analysis-PJRQBBUK6LT

25. List of countries by number of Internet users. (2022, June 20). In *Wikipedia*. https://en.wikipedia.org/wiki/List_of_countries_by_number_of_Internet_users

26. Livingstone, S. (14 October 2022). *Children and the Internet*. Retrieved 18 June, 2023, from

27. https://www.perlego.com/book/1535279/children-and-the-internet-pdf

28. Mahmudul Hasan (2022, May 25). 48% mobile phone customers in Bangladesh have a

29. smartphone. *The Daily Star*, (Online Edition). Retrieved June, 17, 2023 from https://www.thedailystar.net/business/telecom/news/smartphone-penetration-fast-approaching-50pc-3031216

30. Mandela, N., First president of South Africa (2012, August 15). *History will judge us by the difference we make in the everyday lives of children*. Retrieved June 20, 2023, from www.nelsonmandelachildrensfund.com/news/nelson-mandela-quotes-about-children

31. Ministry of Planning (2022). *Population and Housing Census*. Bangladesh Bureau of Statistics. https://drive.google.com/file/d/1Vhn2t_PbEzo5-NDGBeoFJq4XCoSzOVKg/view

32. Ministry of Planning (2023). Statistical Yearbook Bangladesh 2022 (42nd ed., pp. 50-80).

33. Bangladesh Bureau of Statistics (BBS),. http://www.bbs.gov.bd/site/page/29855dc1-f2b4-4dc0-9073-f692361112da/Statistical-Yearbook

34. Online Library Learning Centre, University System of Georgia (n.d.). *A Brief History of the Internet*. www.usg.edu. Retrieved June 22, 2023, from https://www.usg.edu/galileo/skills/unit07/internet07_02.phtml

35. Petroc Taylor (2023, March 30). Statista Research Department, Smartphone mobile network subscriptions worldwide 2016-2028. Https://www.Statista.com. Retrieved May 30, 2023, https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/

36. Price , D. H., Author. *Atlas of World Cultures: A Geographical Guide to Ethnographic*

37. *Literature* (pp. 10-25). The Blackburn Press (November 1, 2004). books.google.com.bd/books?id=2mkYAAAAIAAJ&source=gbs_book_other_versions

38. Radesky, J., Schumacher, J. B., & Zuckerman, B. (2015). Mobile and Interactive Media Use by Young Children: The Good, the Bad, and the Unknown. *Pediatrics*, *135*(1), 1–3. https://doi.org/10.1542/peds.2014-2251

39. Ritchie, H., Mathieu, E., Roser , M., & Ortiz-Ospina, E. (n.d.). *Internet*. Ourworldindata.org. Retrieved June 22, 2023, from https://ourworldindata.org/internet Staff, W. D. (2009, May 22). *The Evolution of Cell Phone Design Between 1983 – 2009*.

40. https://www.Webdesignerdepot.com. Retrieved June 10, 2023, from https://www.webdesignerdepot.com/2009/05/the-evolution-of-cell-phone-design-between-1983-2009/

41. Study of the Bangabandhu Sheikh Mujib Medical University (BSMMU), The Business Standard, (2022, November 7). *59% internet-using children suffer cyber abuse: BSMMU study.* https://www.tbsnews.net/bangladesh/education/59-internet-using-children-suffer-cyber-abuse-bsmmu-study-533834

42. Statista Research Department (2022, August 30). *Children and parents: Media use and attitudes report 2022*. www.Ofcom.org. Retrieved June 5, 2023, from https://www.ofcom.org.uk/research-and-data/media-literacy-research/childrens/children-and-parents-media-use-and-attitudes-report-2022
Statista Research Department (2022, August 5). *Number of children aged 0-14 globally 1950- 2100*. https://www.Statista.com. Retrieved June 1, 2023, from https://www.statista.com/statistics/678737/total-number-of-children-worldwide/

a. TechTarget Contributor (n.d.). *Internet*. https://www.Techtarget.com. Retrieved June 22, 2023, from https://www.techtarget.com/whatis/definition/Internet

43. The Business Standard, Online Edition, (2022, July 27). *62.07% children in Dhaka are mobile phone users*. Retrieved on June 23, 2023 from https://www.tbsnews.net/bangladesh/6207-children-dhaka-are-mobile-phone-users-466210

44. Valcke, M., Bonte, S., De Wever, B., & Rots, I. (2010). Internet parenting styles and the impact on Internet use of primary school children. *Computers & Education*, *55*(2), 454–464. https://doi.org/10.1016/j.compedu.2010.02.009

45. World Population Review (n.d.). *Children in the World by Country 2023*. Retrieved June 2, 2023, worldpopulationreview.com/country-rankings/children-in-the-world-by-country