



**NORTH SOUTH UNIVERSITY
SCHOOL OF BUSINESS
AND ECONOMICS**

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ENG-105

Advanced Composition

Research Paper on Radiation from Cell phone

Submitted to:

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Abstract

My research work mainly focused on the topic: “Radiation from cell phone”. The cell phone has become an integral part of our daily life. It was introduced with us for the purpose of telecommunication. But, nowadays we use the cell phone as a medium of telecommunication, texting, calculating, browsing internet, entertainment and so on. Being a theoretical approach, the purpose of this study is to identify the effects of the radiation emitted from the wireless devices on human health. These devices emit the harmful radiations which cause the physical disorder like hearing impairment, brain tumor, cancer, male fertility, etc. By conducting a survey, it has proven that the radiation emitted from cell phone network is liable for affecting the human health.



Table of Content

Title	Page Number
Introduction	1
Objective of Study	2
Participant Profiles	2
Research Methodology	2-3
Data Analysis	4-8
Recommendations	9
Conclusions	10

Introduction:

The effects of cell phone radiation on human health are a matter of concern worldwide, because of the enormous increasing number of cell phone user throughout the world. (World Health Organization, 2018). In recent years, mobile telecommunication system has grown significantly and as a result, more than a sixth of the world's population uses the cell phone now. The wireless technology was introduced by Alexander Graham Bell in 1880. (Anon, 2018). In the 1980s, first generation mobile phones technology allowed the transmission of sound only which is called the analogue phone. Digital transmission and the global system for mobile communication started in 1991 and include such new development as data and image transmission. Third generation mobile phones currently in the market offer additional services -such as fax, e-mail and internet access. (Euro.who.int, 2018). A cell phone is an instrument that allows wireless communication through radio waves. Every cell phone contains an antenna and a transmitter from which the radio waves get connected to the nearest base station. In terms of communication, base station and cell phone both emit the radiation into the environment. (Health.gov.il, 2018).

For both analogue and digital mobile phones, the signals transmitted and received are in the form of waves in the radio frequency through the microwave parts of the electromagnetic spectrum. Radio frequencies are the outcomes of electromagnetic radiation and these are non-ionized radiation with wave lengths of 3 KHz to 300 MHz and microwave's range are 300 MHz to 300GHz. The frequencies that cell phone networks use are 900 MHz to 1.8 GHz and up to 2.1GHz. This applies to both cell phones and their base stations which send and receive signals. (National Cancer Institute, 2018).

People have welcomed the technology as indicated by the widespread use of cell phone which recommends that they do not perceive it as a potential health hazard. The radiation from the cell phone network has become of extreme concern, as we are bound to expose them 24 hours of the day and one cannot do much if the tower antenna is mounted right to our home and workplaces. Common complains like sleep disruption, depression, Memory loss, headache, paralysis, numbness, brain cancer, brain tumor, sudden stroke is rapidly increasing in our society. (Anon, 2018). The researchers have indicates that these effects are the outcome of excessive healing of radiation around us. The radiation from cell phone network affects on human health.

Objective of the Study:

The main purpose of the study is to understand the long term effects on human health due to continuously absorption of radiation released from cell phone network around us.

Participant Profiles:

I set up a questionnaire and conducted a survey which was participated by 15 doctors and 5 psychologists of different hospitals in Dhaka city. Among the participants, 8 are females and 12 are males from different age groups. Besides, I have had a personal communication with Dr. Tahia Munait Pritha who is a well renowned Neurosurgeon in Popular Medical College Hospitals Ltd. and with Mr. Abdullah Al Noman who is psychologist of Lab Aid Hospitals Ltd. The others doctors and psychologists are from Delta Medical College Hospitals Ltd, Gonoshawastho Medical College Hospitals Ltd, Lubana General Hospitals Ltd, Crescent Hospitals Ltd and Cathersis Hospitals Ltd. They were asked to know about the effects of radiation on human health. Everyone said that radiation has a long term effects on our health.

Research Methodology:

For my primary research, firstly I have conducted a survey of a representative sampling of the doctors and psychologists on the basis of their knowledge about the effects of the radiation on human health which is releases from the cell phone network. For the purpose, I have designed a questionnaire with different types of questions that needed to test my thesis and to get the answers to my research questions. The questionnaire belonged to several age groups of the male and female which helped me to get the all ideas and viewpoints of different aged people on its appliance. Along with the survey, I took some interview of some specialist of Neurology and Cardiology.

After that, for my secondary research, I have used the resources of the library and the web-standard reference sources like newspapers, journals, articles, books, magazines, etc. to find the topics related to the radiation of cell phone network. Along with that, I have gone through the works on this topic by other fellow and their findings. On the web, I utilized the Google, Facebook and Yahoo platform to collect more information.

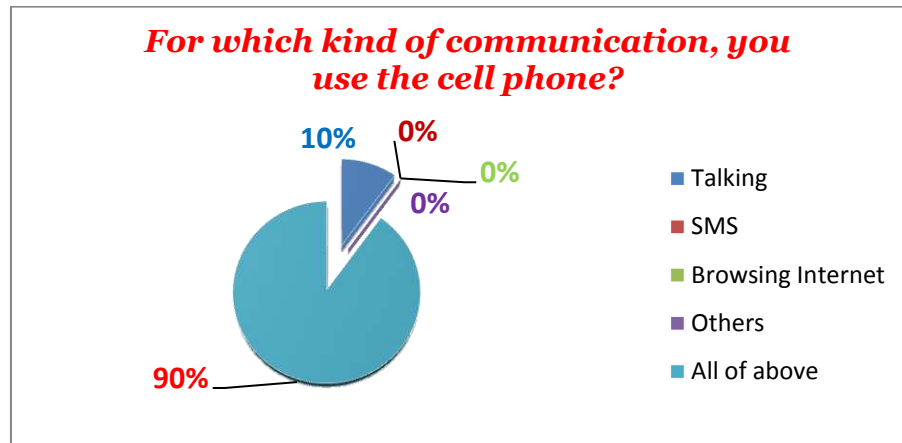
The designed questionnaire for the survey is as follow:

1. For which kind of communication, you use the cell phone?
2. How long time you use your cell phone, in a day?
3. Where do you prefer to carry the cell phone?
4. In which medium, you converse with the cell phone mostly?
5. When do you switch off your cell phone?
6. Have you ever felt any kind of pain/headache, after the long time use of cell phone?
7. In which stage, the cell phone release the radiation more?
8. Do you prefer to place the cell phone just next to your head?
9. According to your opinion, which part of our body becomes affected mostly due to the radiation of cell network?
10. What attempts we should take to decrease the effects of radiation from the cell network?



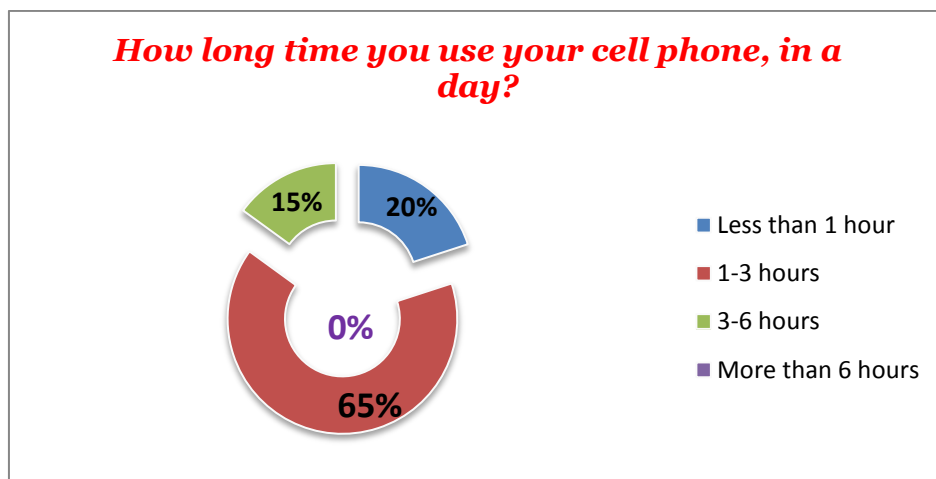
Data Analysis:

1. For which kind of communication, you use the cell phone?



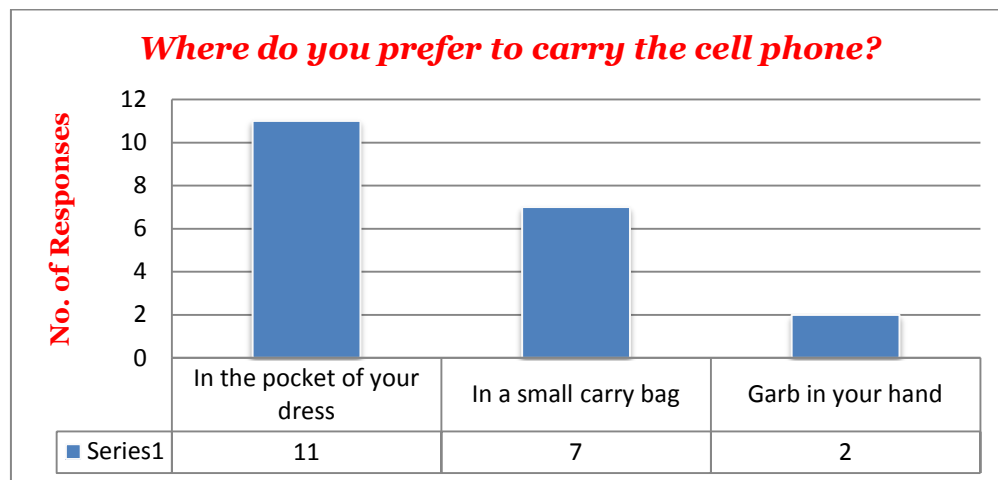
This pie-chart shows the necessity of the cell phone among the people for what they use that. Here, only 10 percent people use cell phone for talking purpose. On the other hand, 90 percent people use the cell phone for talking, SMS (Short Message Service), Browsing internet and other purposes.

2. How long time you use your cell phone, in a day?



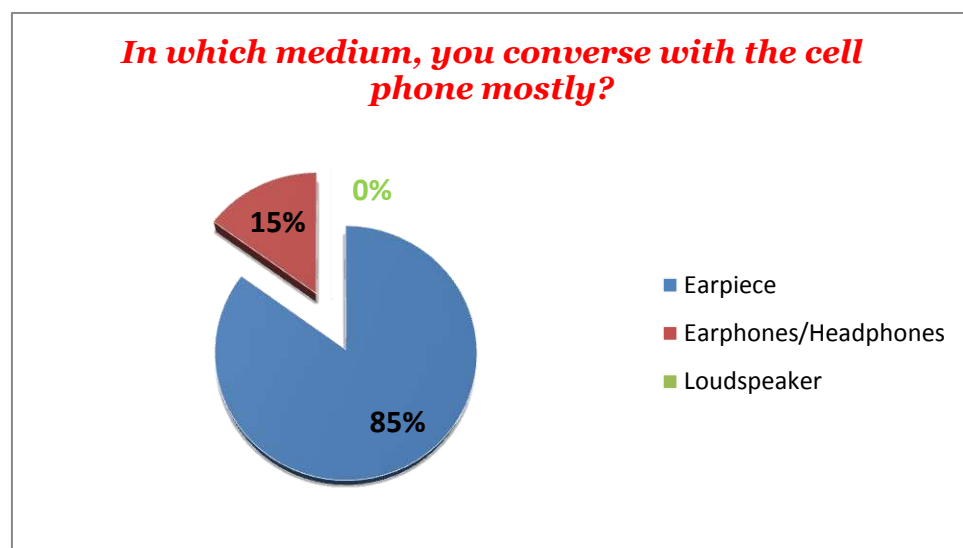
This diagram shows the duration of the usage of cell phone per day. Among the 20 people, 20 percent people use for less than one hour and 15 percent people use for 3-6 hours. But 65 percent among them use the cell phone for 1-3 hours.

3. Where do you prefer to carry the cell phone?



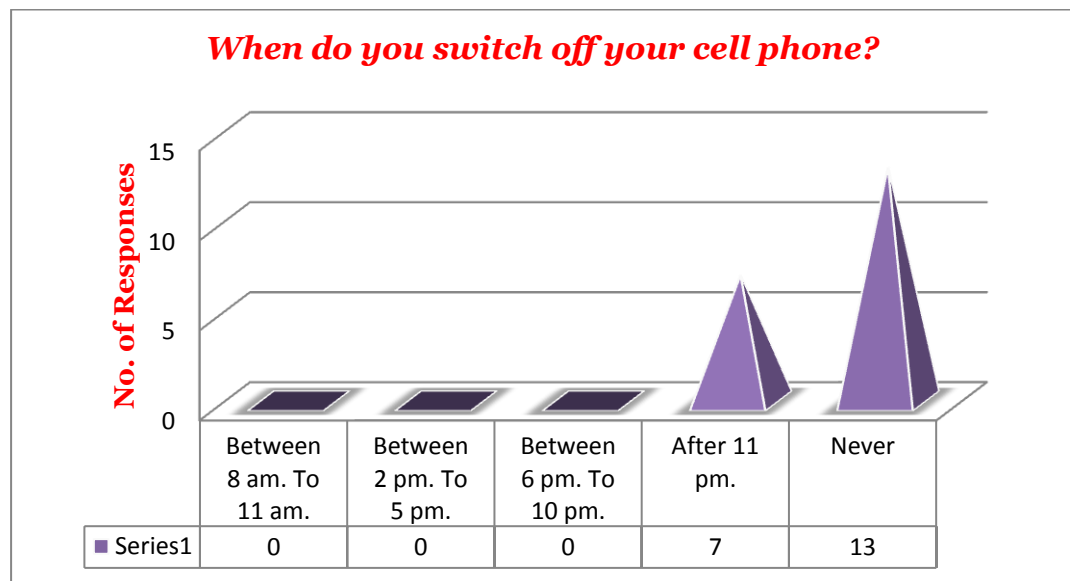
This graph shows the style of carrying the cell phone. Among the 20 respondents only 2 percent fell free to grab the devices in the hands whereas, 7 percent carry their devices in a small bag. But, 11 percent prefer to carry the devices inside the pocket of their dresses.

4. In which medium, you converse with the cell phone mostly?



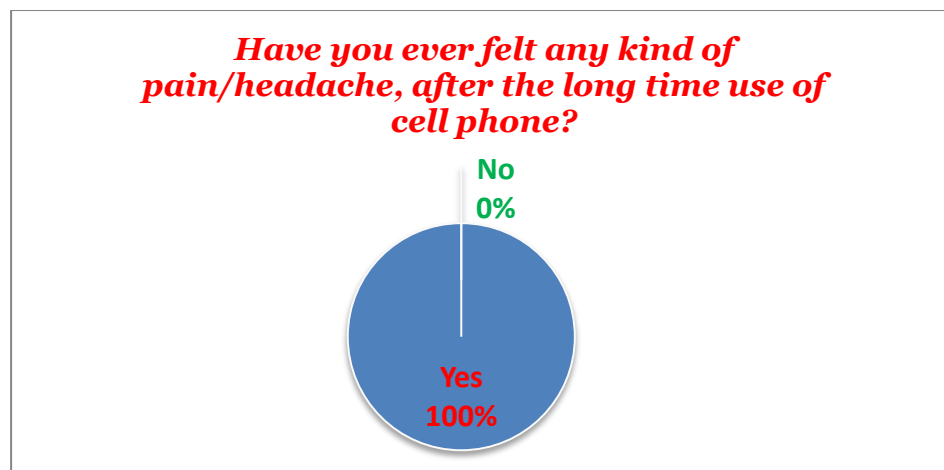
This chart shows the habit of usage style by how the people converse with cell phone. Among the 20 respondents, 15 percent use earphones/headphones whereas, 85 percent are depended directly to the earpiece of the devices.

5. When do you switch off your cell phone?



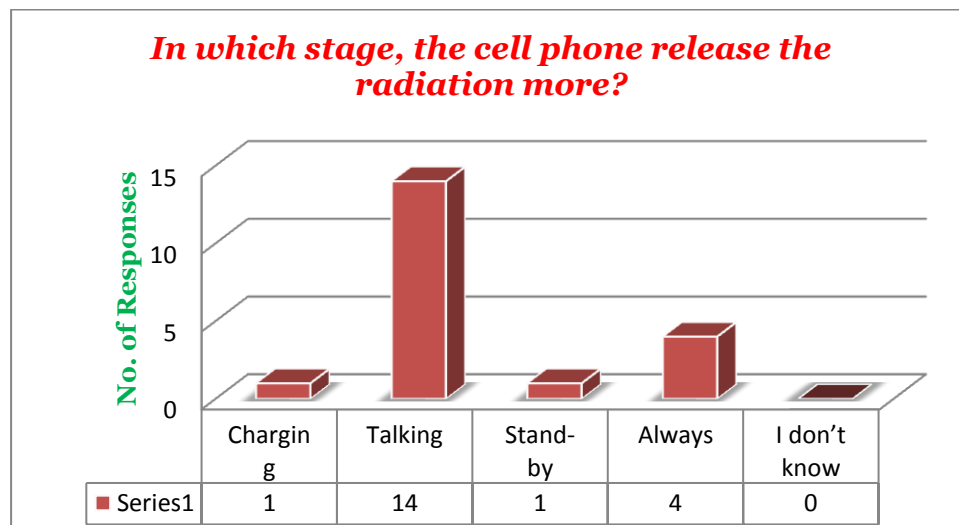
This diagram shows the habit of turning switch off the cell phone devices. Here 7 persons said that they switch off their devices at night after 11 o'clock. On the other hand, 13 persons never use to turn off their cell phone devices.

6. Have you ever felt any kind of pain/headache, after the long time use of cell phone?



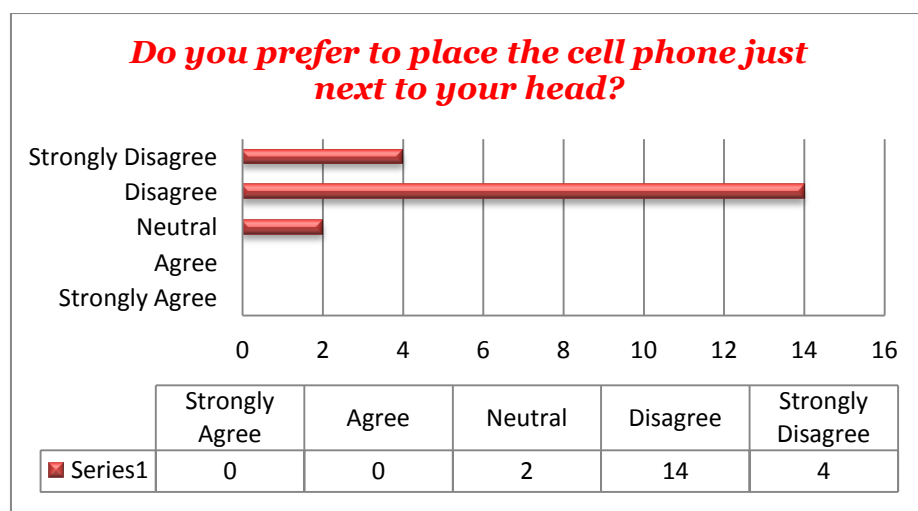
This chart shows the feelings of the users after performing a heavy use. Here, everybody says that they have felt pain/headache after the long time use at a glance.

7. In which stage, the cell phone release the radiation more?



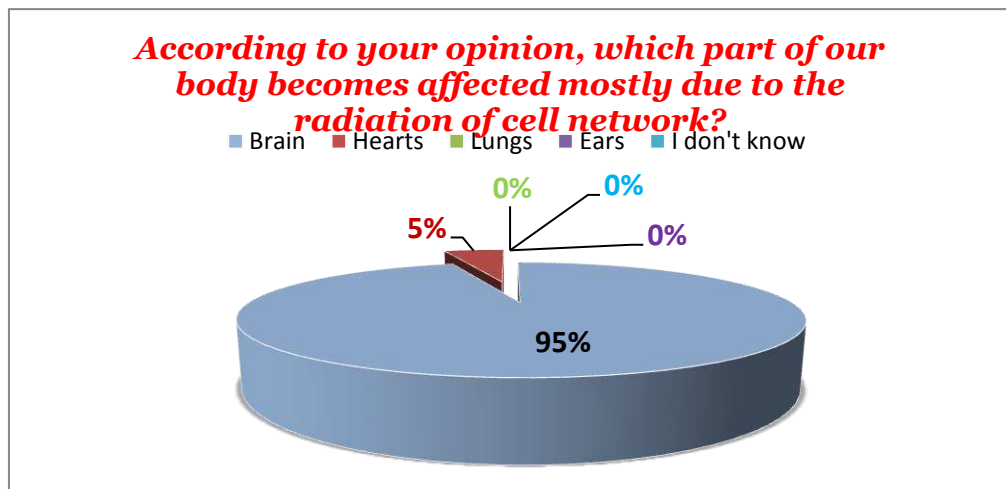
This statistics shows the situation of releasing the maximum level of radiation from the cell phone network. Here, 1 person said for charging mode, 1 person for stand-by mode and 4 persons said for always. But, 14 persons agreed that the cell phone network release the maximum level of radiation at call time for talking with other connecting devices of the network.

8. Do you prefer to place the cell phone just next to your head?



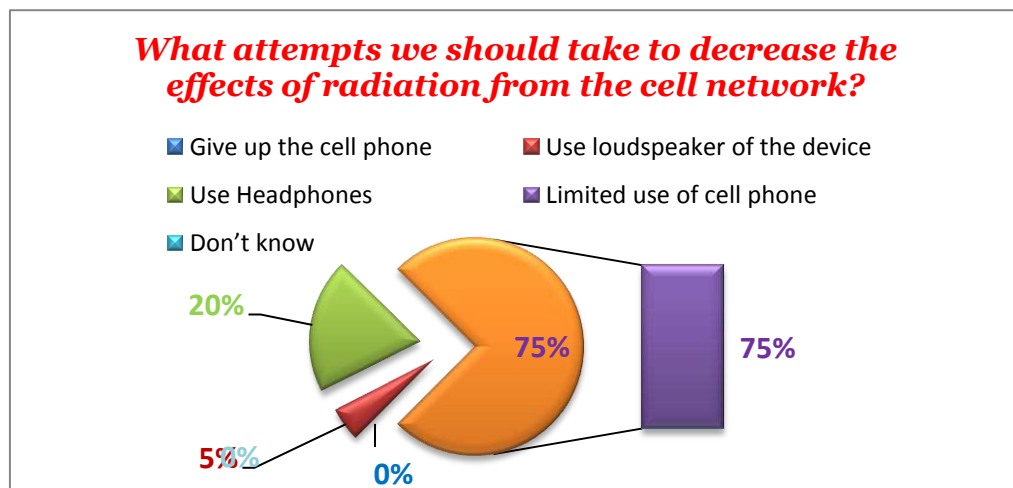
The statistics shows the result of acceptance about keeping the cell phone just next to our head. Here, no respondent is agree/strongly agreed for placing the cell devices just next to our head. Rather, 2 of them are neutral, 14 of them are disagreed and 4 of them are strongly disagreed for that.

9. According to your opinion, which part of our body becomes affected mostly due to the radiation of cell network?



This pie-chart shows the result of disorder in human health for the affect of radiation releases from the cell network. Here, 5 percent of the respondents said that hearts is mostly affected. On the contrary, 95 percent of them agreed that brain becomes affected seriously for the radiation.

10. What attempts we should take to decrease the effects of radiation from the cell network?



This diagram shows some initiatives which may be take to decrease the radiation level around us. Here, 5 percent agreed to use the loudspeaker of the cell phone, 20 percent agreed for using headphones and 75 percent recommend to use the cell phone on limited extend. Moreover, no one suggests for giving up the cell phone or even said that they don't know about the solutions.

Recommendations:

We cannot get rid of the radiation due to make the cell phone as a part and parcel of our daily life. But, we can take the following steps to reduce the exposure of radiation level around us.

1. People can reduce their exposure by limiting the use of cell phone when the network signal is weak. (Time, 2018)
2. People should use the loudspeaker rather than holding the devices to their heads. (Health.gov.il, 2018).
3. They can send text message instead of making a phone call. (Schlangar, 2018)
4. They should carry the cell phone in a backpack, briefcase, or purse; not in the pocket of their dresses, or belt holster. (Schlangar, 2018)
5. They should avoid the long time phone call. (Health.gov.il, 2018).
6. They should not install any wireless based antenna in their bedrooms or, where they spend more time. (National Cancer Institute, 2018).
7. They should prohibit the habit of placing the cell phone just next to their head at sleeping time. (Environmental Health Trust, 2018).
8. They should use weird headphones instead of wireless earphones. (World Health Organization, 2018).
9. They should take off the headset when they are not on a call. (National Cancer Institute, 2018).
10. They should use the Airplane mode during the travel of any fast moving vehicles. (World Health Organization, 2018).



Conclusion:

Cell phone is a complementary device of our life. We are being dependent on the cell phone day by day due to the immense service of that. Though it has an adverse effect on human health, we cannot give up using the cell phone. The most modern cell phones on the market can not only send one's voice across the country in a second, but also send messages, e-mails, pictures, videos, and stream data from the internet and even function as a wireless modem to connect other appliances to the internet. In many countries, over half of the population uses cell phones and the number of user is increasing rapidly. The continuous radiation from the cell devices is hampering our health condition. Researchers have said that radiation is liable for sleep disruption, depression, Memory loss, headache, paralysis, numbness, brain cancer, brain tumor, sudden stroke and many of the diseases. So, one should avoid the use of wireless devices or to minimize the timing as possible to save the human health.



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Survey Questionnaire for ENG-105

Research Topic: The radiation from cell phone network, effects on human health

*****Please, read the questions and give your opinions by choosing the best options.**

Name:

Gender: a. Male. b. Female.

Age: a. Between 15-25. b. Between 26-35. c. Between 36-40. d. Above 40.

1. For which kind of communication, you use the cell phone?
 - a. Talking
 - b. SMS
 - c. Browsing Internet
 - d. Others
 - e. All of above
2. How long time you use your cell phone, in a day?
 - a. Less than 1 hour
 - b. 1-3 hours
 - c. 3-6 hours
 - d. More than 6 hours
3. Where do you prefer to carry the cell phone?
 - a. In the pocket of your dress
 - b. In a small carry bag
 - c. Garb in your hand.
4. In which medium, you converse with the cell phone mostly?
 - a. Earpiece
 - b. Earphones/Headphones
 - c. Loudspeaker
5. When do you switch off your cell phone?
 - a. Between 8 am. To 11 am.
 - b. Between 2 pm. To 5 pm.
 - c. Between 6 pm. To 10 pm.
 - d. After 11 pm.
 - e. Never
6. Have you ever felt any kind of pain/headache, after the long time use of cell phone?
 - a. Yes
 - b. No
7. In which stage, the cell phone release the radiation more?
 - a. Charging
 - b. Talking
 - c. Stand-by
 - d. Always
 - e. I don't know
8. Do you prefer to place the cell phone just next to your head?
 - a. Strongly Agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly Disagree
9. According to your opinion, which part of our body becomes affected mostly due to the radiation of cell network?
 - a. Brain
 - b. Hearts
 - c. Lungs
 - d. Ears
 - e. I don't know
10. What attempts we should take to decrease the effects of radiation from the cell network?
 - a. Give up the cell phone
 - b. Use loudspeaker of the device
 - c. Use Headphones
 - d. Limited use of cell phone
 - e. Don't know

---Thanks for your participation---