

The Effect of Electronic Device on Human Health

Selvarajah Krishnan^{1,*}, Aizat Zakaria², Faiz Khalil², Syahmi Jofree²

¹International University of Malaya-Wales, Kuala Lumpur, Malaysia

²University Kuala Lumpur, Malaysia

Abstract In the field of both mental as well as physical health, technology has proved to be a priceless asset to mankind. Electronic devices are becoming more widely used particularly by young people but little consideration is normally given to the health risks they pose. It also owns deep impact on implementation such as healthcare where it influences the health behaviors of adolescents and others, especially eyes. The radiation from the media would give bad impact to the health. Studies have shown that media can provide information about safe health practices and can foster social connectedness. This finding will eventually benefits those health care professionals, patients and the general public. They should consider mass media as one of the tools that may encourage the use of effective services and discourage those of unproven effectiveness.

Keywords Brightness, Radiation, Electronic Influence

1. Introduction

Electronics is the science of controlling electrical energy electrically, in which the electrons have a fundamental role. Electronics deals with electrical circuits that involve active electrical components such as vacuum tubes, transistors, diodes, integrated circuits, associated passive electrical components, and interconnection technologies. Commonly, electronic devices contain circuitry consisting primarily or exclusively of active semiconductors supplemented with passive elements; such a circuit is described as an electronic circuit.

Nowadays, electronic devices had been used by all country around the world. Electronic device had been one of the most important things that can help human going through their daily life. Almost every house in the world own an electronic device. There are a lot of advantages and disadvantages of using the electronic devices. Electronic devices can easily simplify human task everyday but however it also might give a bad impact towards human in terms of health.

There are several reasons and research written on why the electronic device are effecting the human body. It is the brightness of electronic device itself. Some electronic device already enter the market with a systems or good features where the users can control the brightness but some did not. The brightness eventually will affect the eyes. It would be more aggravating when human use electronic device at night. The brightness will affect the eyes as well as the focus points. It will also might affecting the blurred point of the eye.

Next is the radiation of electronic device. Almost all electronic devices have radiation either the radiation is high or low. The radiation will affecting human internal part like brain, nerves, eyes and ears. Many users do not realize, however, that they are increasingly surrounded by technologies that emit radiation in the same radiofrequency portion of the electromagnetic spectrum.

Last but not least is electronic device influencing healthcare. The meaning is electronic device can make human distract with the environment. So that, human will live with a bad surrounding. Not only that, electronic device also can make human did not care about their health. Human will always sit and playing with the gadgets and did not get an exercise. The result is, human are start feel lazy and starting to get sick.

2. Literature Review

2.1. Brightness of Electronic Device

Electronic device has various functions or use where it is important in human life nowadays. With various utilities it giving satisfaction in various angles to users. Electronic device offer musical instruments, screen display that is attractive, various design and so many screen display emit a bright light to further explain content display exist in device screen. With colour variation that explains vision towards device enable users have enjoyment in looking and use it. Nevertheless, behind enjoyment in use it, it also gave side effect that is bad to consumer health especially eye's health. This is because, with various color that attached with lighting that is bright give difficulty to eye in accepting display especially in long time period. Device usage at night give big effect towards eye's health since eye will be focused to bright screen display and with the glare that is strong discommode

* Corresponding author:

ksselvarajah@iumw.edu.my (Selvarajah Krishnan)

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further eye to resist with long time period. Eye will become smarting with such conditions.

The development of LE devices means that for many people, a “book at bedtime” is now often an “e-book.” Traditional paper books with dim incandescent bedside lighting reflected off the pages of the book expose the readers to a low-intensity tungsten light with a yellow–red spectrum that has little impact on sleep. In comparison, the same book read in electronic format will provide a very different light signal with biological effects. This is not an insignificant issue with over a quarter of the US population reading e-books in 2014. Furthermore, these same LE devices allow access to the Internet, social media, and games as well as reading, with evidence that multi-tasking is becoming the norm rather than the exception. (Paul, 2015)

2.2. Radiation of Electronic Device

Radiation namely power beam through one room or hot material shaped, particle, or magnetic electro wave or light (photon) from sources of radiation. Usually radiation is produced a lot by various electronic equipments or electrical appliances like TV, information light, microwave, computer, smartphone and so on. Technological change always results between benefit and harm, including laptop or mobile phone. Electronic devices offer computing functions, phone calls, internet connections, light up panels, and so many more capabilities. As a by-product of these functions operating, an electric current is generated that flows within and between components creating Electromagnetic Fields (EMFs). These fields are also known as Extremely Low Frequency (ELF) Electromagnetic Radiation (EMF). Some of the most common risks that we might encounter are exposure to electromagnetic radiation or the risk of electric shocks. In recent years, there has been much debate about additional health risks that these devices could cause. For example, rumors abound regarding cell phones and their link to brain cancer. In this case, scientists have yet to find any conclusive evidence.

The effects of radiation damage on GaN materials and devices such as light-emitting diodes and high electron mobility transistors. Protons, electrons and gamma rays typically produce point defects in GaN, in contrast to neutron damage which is dominated by more extended disordered regions. Regardless of the type of radiation, the electrical conductivity of the GaN is reduced through the introduction of trap states with thermal ionization energies deep in the forbidden bandgap. An important practical parameter is the carrier removal rate for each type of radiation since this determines the dose at which device degradation will occur. Many studies have shown that GaN is several orders of magnitude more resistant to radiation damage than GaAs, i.e. it can withstand radiation doses of at least two orders of magnitude higher than those degrading GaAs with a similar doping level. Many issues still have to be addressed. Among them are the strong asymmetry in carrier removal rates in n- and p-type GaN and interaction of radiation defects with Mg

acceptors and the poor understanding of interaction of radiation defects in doped nitrides with the dislocations always present. (J. Mater. Chem. C, 2013)

2.3. Electronics Influenced

Electronic is something important in present world's modernity where it is influenced by technology that increasingly change for easier and better matter. When someone seems glued to their electronic device, people may call it an internet addiction and they already have been influenced. According to one local addiction and recovery program which treats problematic use, too much digital technology use can lead to a disinterest in physical fitness, poor nutrition and hygiene, sleep deprivation and chronic fatigue, emotional distress, depression and anxiety, and relationship difficulties. We don't yet know how much these symptoms are a consequence of problematic Internet use, or whether people who are prone to depression, anxiety, and impulse control disorders are more likely to have difficulty controlling their Internet use. Both theory and empirical evidence indicate that media exposure contributes to the construction and perpetuation of these perceptions by disproportionately depicting racial/ethnic minorities as criminal suspects and Whites as victims in television news (Dixon, 2007).

3. Methodology

Quantitative research is the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect. When respondent are asked to complete a self- administered questionnaire, they are being asked to perform a task that from their perspective may be different from the task we wish them to perform. From the respondent perspectives, the task may be similar to asking them to view a picture, in which they are free to start anywhere and to make their own decisions as to which parts of the picture to examine in what order.

The target population is the group of people to whom we want our research results to apply accordingly to their needs, wants, satisfaction and other criteria and developing answer based on our research to satisfy need and wants of their particular group. We target in population mostly to electronic device users, and public people who concern about the new technology especially electronics device. Then, people who are already working. We think they are best population to help in our research.

Sampling method refers to the way that observations are selected from a population to be in the sample for a sample questionnaire are made by us. So, we use non-probability sampling that relies on the personal judgment on the research. In addition, these sampling techniques where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected. This is because we found convenience sampling in our researcher.

Often the respondents are selected because they happen to be in the right place at the right time. Examples: use of people in a company, people on the street, and people in a shopping mall.

4. Finding

On the basis of results that we achieve from data base that we did such as questionnaire, observation and survey, overall results agree with negative effect from electronic device usage. All of the questions that send to public are based on problem that we study where it is from electronic device usage. Consumer gave their answer for each question and their response to the questions that have been ask is quite unexpected and revealing. Somehow they seems to be agree with the current issue. Therefore, with decision achieved method to reduce the effect needs to be done immediately by suing method that is wise in electronic device. From there, consumer health can be enhanced as soon as possible while enjoying interest features and fun offered by various electronic devices in market.

5. Conclusions

As the electronic technology is developing faster and faster, many electronic products appear with advanced functions to facilitate, improve and even change the life of the whole society. Among all these electronic products, the computer and smartphone are thought to be most common because of a lot of benefits brought by them and seem to become the necessity in daily life. However each individual has to be more responsible regarding the usage of electronic device so that nobody will be effected including themselves. The electronic technology itself is neutral. Whether it is good or not all depends on how people use it. We said major focus in this study where it include three item. In obtaining effect and decision for our future study choose electronic influence as priority in determining results of a study later. This include positive impact that will be obtained by consumer after using the device. Based on electronic influence that mostly users used with various purposes, it unperceived as lead to effect that is bad. Consumer may be aware will interest from technology enhancement from the electronic device and can be practiced or use it outside with right purpose. Relationship aspects between people can in tighten with the existence of device which could link among them. Then, value and communication level that extensive and good can be obtained with the existence of alternative like this. Electronic influence can also giving added value that is good to users with knowledge supply and knowledge with no limitation can be obtained through device combination with internet. Society would be blooming with various aspects due to too widespread exposure with various things. Personal development also easy felt and there life's principle can be well-made based on guide that is correct.

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