

Toxicology of Innovative Technology: The need for “Technotoxicology”

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The daily advancement in innovative technology is a neglected area of a source of serious hazards. The progress in information technology and communication is advancing so rapidly and despite the advantages it offers to adult population in their daily routine activity; it carries the risk of negatively impacting the health of children and adults alike. Use of mobile phones and hand-held devices greatly influenced the daily activity as well as behavior of users. The fear of cell phones causing cancer arose from the fact that these devices emit the radiofrequency radiation that is which can be absorbed from the devices in the nearest parts of the human's body. The radiation is unlike the ionized X-ray, it is non-ionized electromagnetic radiation with low frequency and energy. Several studies indicated that there is no direct evidence relating radiation of this type emitted from household microwaves or cell phones with cancer [1]. Only a few studies reported some observation relating cell phone use and brain tumors, however, even with these studies the investigators did not draw a conclusive evidence of their observation. The use of cell phone was classified by the expert group appointed by the International Agency for Research on Cancer Exit Disclaimer (IARC), a unit of the World health organization (WHO), as a possible carcinogenic. The World Health Organization's International Agency for Research on Cancer classified radiofrequency Fields as “Possibly Carcinogenic to Humans” [2]. Ironically, class Group 2B: “Possibly carcinogenic to humans” (WHO) also includes coffee [2].

Despite the endless debate on whether the frequent use of hand-held devices causes or increases the risk of developing tumors of brain and heart, there is an urgent need for a well-designed, controlled and unbiased research investigation. It has been suggested that since there is no scientifically recognized adverse effects on health, it is not possible to produce evidence-based recommendations; however, precautionary approaches to the use of hand-held devices must be adopted [3]. Innovative technology in communication is progressing at a rather fast pace and offering great deal of benefits. The use of smart phones, laptops, I pads, computers and smart screens enriched people's life as it facilitated communication, education, transparency, retrieval of information, e-commerce and other

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needs. It has also been advocated that use of smart devices enhances safety, roots out corruption and strengthens democracy while opponents focus on health problems and nature pollution [4]. It became very popular and the number of internet users in 2018 is 4.021 billion, up 7 percent year-on-year, the number of social media users in 2018 is 3.196 billion and the number of mobile phone users in 2018 is 5.135 billion [5].

There are numerous negative impacts on people's social behavior as even in family or social gatherings, people seem immersed in navigating the social media sites, texting messages, playing video games or running business. Moreover, back and shoulders are affected by improper setting while holding a cell phone or bending over a laptop or computer. Some people navigate through their cell phones and hand held devices while lying on a couch or in bed. Many children fall asleep with their devices in their hands emitting radiation. It has also been shown that long hours use of such devices causes stress that will consequently affect their heart function, induces headache and sleep disorders. Eyes are also strained by long hours of focusing on a game, images or videos with bright light and this will certainly negatively influence vision. The sedentary style of life by setting for long time leads to lack of exercise and outdoor activities which adds to health problems. Other serious health problem may hide in contamination of cell phones with fecal matter, E.coli and Methicillin-resistant Staphylococcus aureus (MRSA), as a result of not washing hands with soap after using the toilet [6]. Another serious problem is using the device while driving for calls or texting messages. Such use distracts drivers and makes them dangerous to themselves, their companions and other drivers and pedestrians. The latter can also be as dangerous as distracted drivers when they use the devices on road.

More attention to the problems to health and life is required through properly designed, conducted and unbiased investigations. Considering the progressive daily increase in smart device users as compared to chronically ill patients using medications, it may seem necessary to parallel the fast pace in innovation by establishing a “Technotoxicology” as a novel branch of toxicology embracing research on the impact of smart devices as well as household radiation emitting equipment on health and life of users.

References

1. Scientific Committee on Emerging and Newly Identified Health Risks. SCENIHR Opinion on potential health effects of exposure to electromagnetic fields (EMF). 2015: Potential health effects of exposure to electromagnetic fields (EMF).
2. International Agency for Research on Cancer Exit Disclaimer (IARC), World Health Organization (WHO), 2011.
3. Sanchez E (2006) What effects do mobile phones have on people's health? Copenhagen, WHO regional office for Europe (Health Evidence Network report).
4. Miakotko L (2019) The impact of smart phones and mobile devices on human health and life.
5. DIGITAL IN 2018: World's internet users pass the 4 billion mark.
6. Newnam J (2013) Health Risks of Using Mobile Phones by Jared Newnam.

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