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CELLULAR DESTRUCTION FROM ENVIRONMENTAL ENERGY EXPOSURE ESPECIALLY BY CELL PHONES AND MOBILE INTERNET

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Abstract:
Mobile phones have become ubiquitous due to their convenience. Mobile phones address social interaction and data transfer issues by introducing new modes of communication via a device small enough to fit in one hand. On the other hand, mobile phones may be hazardous to the environment and human health, and their radiation discharge may contribute to waste disposal issues. Recently, concerns have been expressed about the long-term viability of mobile phones and their impact on people's health and the environment. The current study investigates the negative consequences of mobile phone use and proposes long-term solutions.

Keywords: *Mobile phone health hazards, wifi health hazard, cellular destruction.*

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INTRODUCTION:

Mobile phones have become an integral part of most people's lives, enabling them to communicate with people worldwide. A mobile phone provides several advantages, including communicating with family, friends, and business associates anywhere there is a signal. Additionally, the 3G phone enables users to access data, listen to music, play games, send and receive simple text messages (SMS), multimedia messaging services (MMS), voice, and video, as well as connect to the internet via the wireless application protocol (WAP) (WAP). While mobile phones have a plethora of advantages, they also have several significant disadvantages. Among the toxic chemicals found in cell phones are arsenic, lithium, cadmium, copper, lead, mercury, and zinc. According to Bereketli et al. (2009) and Lincoln et al. (2012), mobile phones contain a variety of hazardous substances, including antimony, arsenic, beryllium, cadmium, copper, lead, nickel, and zinc, as well as this persistent, bioaccumulative toxins (PBTS), which have been linked to cancer and a variety of reproductive, neurological, and developmental disorders (2007). When mobile phones are discarded, these toxic substances may be released or exposed from decomposing waste in landfills, contaminating the soil and seeping into groundwater. Savvilotidou et al. (2014) examined the toxic metal content of liquid crystal displays recovered from various waste electrical and electronic equipment (WEEE), including mobile phones. According to Kang et al. (2013), lithium batteries can significantly contribute to environmental pollution and have negative health consequences due to the presence of potentially toxic materials. Plastic is the most frequently encountered chemical substance in mobile phones, followed by other small materials (Figure 1). Metals build up in the soil, enter the food chain and cause health problems if present in sufficient concentrations. Bharodiya and Kayasth (2012) and Lakshmi and Nagan (2013) discussed the health risks associated with manufacturing cell phone components, as well as the spirit in people's lives (2010). Cell phone use can be detrimental to the brain, and prolonged use has been linked to dizziness. Radiation emitted by the phone is also harmful to the eardrum. Furthermore, the World Health Organization (WHO, 2013) stated that exposure to radiofrequency (RF) fields emitted by mobile phones is 1000 times greater than exposure to RF fields emitted by base stations. That research has almost exclusively focused on the potential effects of mobile phones, including electromagnetic interference, road traffic accidents, cancer, and other health-related effects.

Mitigating or eliminating the risks mentioned above would require a shift toward a more sustainable mobile phone manufacturing and consumption system.

This article discusses the issues surrounding the use of mobile phones and the aspects of mobile phone sustainability that can be used to mitigate their negative consequences. Mobile phones may have a detrimental effect on both human health and the environment. The following are the primary concerns associated with mobile phone use:

- Lack of knowledge about the dangers to one's health.
- Lack of awareness of the impact on the environment.

This paper will begin by identifying the associated health and environmental risks. The current study's literature review focuses on the risks associated with mobile phones in terms of energy consumption, the environment, and health.

Discussion and Literature Review:

In terms of human health, the highly toxic substances emitted by mobile phones pose health risks. Cocosila (2007) investigated the effect of individuals' perceptions of the health risks associated with 3G phone use. Barnett et al. (2007) examined public awareness of and reactions to a piece of cautionary advice in a Department of Health (DoH) leaflet about mobile phone health risks. According to Lakshmi and Nagan (2010), cadmium is carcinogenic to the lungs and prostate and is toxic to the gastrointestinal tract, kidneys, respiratory, cardiovascular, and hormonal systems. Lead poisoning has a detrimental effect on the central and peripheral nervous systems and the blood and kidney systems. Brominated flame retardants have been linked to an increased risk of stomach and lymphatic cancer. Thomée et al. (2011) discovered that increased mobile phone use was associated with sleep disturbances and depression symptoms in both men and women after a one-year follow-up. Kleef et al. (2010) conducted a study on the health risks associated with cell phone use. There is scientific evidence that the radiations emitted by mobile phones are harmful to the human brain and cause serious health problems (Uddin & Ferdous, 2010). According to Aghav (2014), electromagnetic fields are undeniably harmful, and their adverse effects on the human body are proportional to the cell phone frequency's intensity. Davis (2010) stated that the European Union-funded REFLEX project discovered significant evidence of DNA damage caused by signals from modern 3G phones. Split samples of human sperm studied in six different national laboratories revealed decreased morphology,

motility, and pathology in cell phone-exposed samples. According to Acharya et al., many students suffered from frequent headaches, neck pains, limb pains, backaches, signs of redness in their eyes, and symptoms of ringing sensation or tinnitus in their ears as a result of continuous mobile usage on some days (2013). Depression, sadness, irritability, headaches, anxiety, memory loss, and sleep deprivation are all neurological symptoms associated with excessive mobile phone use. Electromagnetic radiation from mobile phones and listening to loud music can cause hearing loss. Additionally, Davis (2013) asserts that cell phone radiation may contribute to an increasing number of serious health problems, including attention and hearing impairments, autism, behavioural changes, insomnia, tinnitus, Parkinson's disease, and Alzheimer's disease, as well as a variety of nervous system disturbances. Numerous researchers have concluded the following regarding the health risks associated with mobile phones:

Sr #	Author	Conclusion
1	Salama et al. (2010)	The pulsed radio frequency energy emitted by a standard mobile phone in standby mode may have an effect on the rabbit's sexual behaviour.
2	Panda et al. (2010)	Inner ear damage can occur as a result of long-term and intensive mobile phone use.
3	Morgan et al. (2009)	The use of cell phones has been linked to the development of brain tumours, which could have a significant public health impact.
4	Meo et al. (2010)	Serum testosterone levels are decreased in Wistar albino rats exposed to mobile phone radiation for an extended period of time. Testosterone is the primary male hormone, and any deviation from normal levels can have serious implications for reproductive and general health.
5	Levis et al. (2011)	The results of meta-analyses revealed that long-term mobile phone use or latency almost doubled the risk of brain tumours.
6	Kwon et al. (2011)	The use of a mobile phone for a short period of time can cause a localised suppression of brain energy metabolism.
7	Kundi et al. (2011)	The data presented suggests that the rise in temporal lobe malignant brain tumours (and possibly, to a lesser extent, frontal lobe tumours) is partly due to mobile phone use.
8	Kesari et al. (2011)	The fertilising function of spermatozoa may be affected by RF electromagnetic waves from commercially available cell phones.
9	Divan et al. (2012)	Cell phone use was linked to behavioural problems in children as young as seven years old, and this link was not limited to early adopters of the technology.
10	Carrubba et al. (2010)	During normal use, mobile phones trigger EP at a frequency of 217 Hz. The reports of health hazards among mobile phone users could be related to the chronic production of changes in brain activity.
11	Cardis et al. (2011)	Long-term mobile phone users exposed to high levels of radiofrequency radiation have an increased risk of developing glioma, as well as a similar, but significantly lower, risk of developing another type of brain tumour (meningioma).
12	Agarwal et al. (2009)	The oxidative stress in human sperm may be caused by RF electromagnetic waves emitted by cell phones. We hypothesise that keeping a cell phone in a

		trouser pocket in talk mode may have an effect on spermatozoa and male fertility.
13	de Vocht et al. (2011)	A small but potentially significant increase in brain tumours in the temporal and frontal lobes – the brain regions most exposed to mobile phone radiation – has been discovered.
14	Hardell et al. (2011)	With the use of a mobile or cordless phone, there is a higher risk of developing a type of brain tumour (glioma). The risk increased with latency time and cumulative use in hours, with the risk being highest in subjects who started using before the age of 20.
15	Khurana et al. (2009)	There is enough epidemiologic evidence to suggest a link between long-term cell phone use and the development of a brain tumour on the same side or ipsilateral side.

Aghav (2014) was astounded to learn that most people were unaware of the health risks associated with chronic radiation exposure. Today, public concern about the potential health risks associated with this new technology is growing. Researchers have concentrated their efforts on the health effects of mobile phone radiation (Anvari et al., 2013).

This article discusses the health risks associated with mobile phone radiation and the dangers of mobile phone-related traffic accidents. Due to their lack of concentration, drivers and pedestrians who use their phones while driving or walking will cause road accidents. Distracted driving behaviours such as talking on the phone, texting, or surfing the web significantly increase the risk of an accident. Teenagers are the most likely to be involved in automobile accidents as a result of distracted driving. Almost nine out of ten teenage drivers admit to being distracted while driving, such as while texting or on the phone. According to Acharya et al. (2013), today's roads are littered with collisions caused by distracted driving. According to Khan et al. (2008), texting and driving account for 36% of all road accidents. Karger (2005) also discovered that conversing on a cell phone while driving a car increases the risk of a collision. The cell phone is the most frequently used hand-held device that has negative consequences. As a result, sustainability research is required to address these issues.

CONCLUSION:

As a result of the preceding discussions, sustainable strategies for guiding and developing proactive customer intentions to use mobile phones responsibly are required. Manufacturers should develop safe measures incorporating greenery quotes to influence customer purchasing behaviour and mobile phone retention while also increasing customer awareness of the risks associated with mobile phone use. Businesses should identify and refine the most effective long-term solutions for enhancing service quality and increasing user trust in the risks associated with mobile phone use. According to the study, governments and the mobile industry should collaborate to improve effective regulations and legislation governing the design, manufacture, energy consumption, recycling, and reuse of mobile phones to mitigate and reduce the study's various negative effects.

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