

The Impact of Mobile Phones on Health among Adolescents

Thesis

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The Impact of Mobile Phones on Health among Adolescents

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LIST OF ABBREVIATIONS

<i>ANSI/IEEE</i>	<i>American National Standards Institute and the Institute of Electrical and Electronics Engineers.</i>
<i>CDMA</i>	<i>Code division multiple accesses.</i>
<i>ECG</i>	<i>Electrocardiogram</i>
<i>EMF</i>	<i>Electromagnetic Fields.</i>
<i>EHTS</i>	<i>Environmental Health Trust, Scotland.</i>
<i>GSMA</i>	<i>Global System for Mobile Association.</i>
<i>GSMC</i>	<i>Global system for mobile communication.</i>
<i>ISGI</i>	<i>Internet Safety group International</i>
<i>MHZ</i>	<i>megahertz</i>
<i>NCPC</i>	<i>National Crime Prevention Council.</i>

<i>NRC</i>	<i>National Research Council.</i>
<i>RF:</i>	<i>Radio frequency fields from sources used for mobile telecommunications.</i>
<i>RFR</i>	<i>Radio frequency radiation.</i>
<i>RNCN-IRP</i>	<i>Russian National Committee on Non-Ionizing Radiation Protection.</i>
<i>S.A.R</i>	<i>Specific absorption rates.</i>
<i>SMS</i>	<i>Short message services.</i>
<i>UK</i>	<i>United Kingdom</i>
<i>WHO</i>	<i>World Health organization.</i>
<i>WWW:</i>	<i>Worldwide Web.</i>

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ABSTRACT

The aims of the current descriptive study were to assess adolescent's knowledge about the use of mobile phones, determine hazards from using mobile phones and propose an electronic and printed media, to decrease hazards of mobiles electromagnetic waves. A convenient sample consisted of ٣٥٦ students in ١st year in following settings: Faculty of Social Service, Faculty of Specific Education affiliated to kafr El-Sheikh University and Technical Nursing Institute affiliated to kafr El-Sheikh Governate and Faculty of Nursing affiliated to Ain Shams University. Questionnaire format were the study tool that used in collecting data by the researcher to assess student's knowledge, effect from using mobile phones. The results of the study revealed that there was statistical significant difference between the study and control group as regards their knowledge about effects of using of mobile phones on memory, vision, ears, may cause cancer, headache, sleep disturbances, feeling anxious and tense, fertility, also on social life and behavior. There was no statistical significant difference between the study and control group as regards their knowledge about risks associated with mobile use on immune system, heart, children's health and pregnancy. The study recommended increasing awareness of who using mobile phones about electromagnetic waves of mobile phones, educating people to avoid disease to make life style change and to improve their health and of their families, the environment, and the community, to help them to limit uses of mobile phones.

Keyword: Mobile phones, hazards of mobile, children.

INTRODUCTION

Wireless communication technology is diffusing around the planet faster than any other communication technology to date. Because communication is at the heart of human activity on all domains, the advent of this technology allowing multinomial communication from anywhere to anywhere there is the appropriate infrastructure is supposed to have profound social effects (*Agar, 2003*).

The use of mobile phones has dramatically increased all over the world during the 1990s. Mobile phones have become amore and more widespread means of communication and they become apart of every day life with a growing number of people enjoying the services and extra freedom they provide. Mobile phone have three generation, the advent of third generation system will extend the use of most novel forms of communication technologies including: fax; e-mail; and the internet access. Mobil phones are low power radio devices that transmit and receive radio frequency radiation at frequencies in the microwave range of 900-1800 megahertz (MHZ) (*Hardell et al., 1999*).

The extensive use of mobile phones has been accompanied by public debates on their possible adverse effects on the adolescent health. The main concerns are about emissions of radio frequency (RF) radiation from mobile phones and base stations that receive and transmit signals. There are two direct ways by which health could be affected as a result of exposure to RF radiation, the first is heating effects caused mainly by holding mobile phones close to the body and the second one is thermal effects (*Hyland, 2000; Glaser, 2005*).

Among mobile phone users of adolescents the following health problems may be noted, headache, sleep disturbances, lack of concentration, impairment of short-term memory, dizziness, getting a wormear, burning skin, brain tumors and high blood pressure (*Michael et al., 2000*). In addition, mobile phones can cause discomfort, fatigue, general ill-being, nausea and muscular pain (*Bortkiewicz., 2001*).

On the other hand, there are psychological predictors of problem regarding using of mobile phones, also mobile phone are banned in a variety of setting including hospitals, planes and petrol stations. Driving simulation studies indicate that dual tasking, such as using a mobile phone while driving, can be detrimental to driving performance and there are correctional studies comparing crash data and the use of mobile phones while driving (*Consigliow et al., 2003*).

The use of mobile phone is a health risk factor, so it is suggested that excessive use of mobile phones should be avoided and social awareness increased through health promotion activities, such as group discussion or public presentation and via electronic and printed media. Consequently, part of nurse role in community is health education and increase public awareness toward any dangerous threat in any section of the community, and increase public awareness for electromagnetic waves (*Meo and Al-Dress, 2005*).

AIM OF THE STUDY

This study aimed to:

- Assess adolescent's knowledge about the use of mobile phones.
- Determine hazards from using mobile phones.
- Propose an electronic and printed media to decrease hazards of mobiles electromagnetic waves.

Review of Literature

Short Notes about Mobile Phone:

Mobile phone (also called mobile, cellular phone, cell phone or hand phone) (*Ulyseas, 2008*) is an electronic device used for full duplex two-way radio telecommunications over a cellular network of base stations known as cell sites. Mobile phones differ from cordless telephones, which only offer telephone service within limited range through a single base station attached to a fixed land line, for example within a home or an office (*Sánchez-Martínez and Otero, 2009*).

A mobile phone allows its user to make and receive telephone calls to and from the public telephone network which includes other mobiles and fixed line phones across the world. It does this by connecting to a cellular network owned by a mobile network operator. A key feature of the cellular network is that it enables seamless telephone calls even when the user is moving around wide areas via a process known as handoff or handover (*Encyclopedia, 2010*).