ANALYSIS OF PUBLIC PERCEPTIONS OF INCREASED RADIOFREQUENCY EXPOSURE FROM MOBILE PHONES IN SOUTHWESTERN NIGERIA

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ABSTRACT

Wireless communication devices have been increasingly used recently in Nigeria with a corresponding public perception of increased radiofrequency (RF) radiation. This perception has developed into public concerns, thus requiring verification. For the purpose of verification, a survey in form of an opinion poll was conducted by means of an interview using questionnaires. The survey shows that people actually experienced symptoms like headache, fatigue, dizziness, and heat sensation. However, out of the respondents that have experienced one symptoms or the other, 84% still believe it is safe to use mobile phones. Only 4% of those that claimed they experienced symptoms had consulted a doctor in connection with the symptoms.

Keywords: Telecommunication, mobile phones, symptoms, radiofrequency exposure, Public perceptions.

1. INTRODUCTION

The telecommunication industry is experiencing rapid growth on a global scale and more recently in Nigeria (Figure 1). This is a direct consequence of technological development and has in turn facilitated the application of new technologies and subsequently increase in economic activities. Within this sector, one of the greatest growth area of recent years has been the development of mobile telecommunications¹. Mobile phones are now integral part of telecommunications. The introduction of mobile phones began in the mid – 1980’s and rapidly attracted a small but significant number of subscribers². Development in the late 1990’s such as the introduction of digital network and the entering of additional service provider into the market fuelled increase in the number of subscribers³. It is predicted that mobile communication will become the dominant technology for telephony and other applications like internet access⁴. In Nigeria today, an estimated number of over 70 million active subscribers has been recorded⁵. This wide use of relatively new technology raises the question of whether there are any implication for human health. There are conflicting reports relating to possible adverse health effects and this has led to some concerns⁶. The aim of this work is to conduct a study in form of an opinion poll by means of an interview using questionnaire so as to obtain input from the public about their perceptions and concerns on the safety of mobile phone technology.

2. MATERIALS AND METHOD

As mobile phone is usually held close to the head when making calls with the exception of situation in which a hands-free set is used. This work on possible health effects focuses mainly on the head. A total of 3,000 questionnaires were administered in the district of Ibadan, Ogbomoso and Lagos

2.1 Study Population

A total of 3,000 questionnaires were administered in the district of Ibadan, Ogbomoso and Lagos in the southwestern part of Nigeria. 1,000 questionnaires were allocated to each districts. The respondents were elites mostly students and workers from the university of Ibadan, Ladoke Akintola University of Technology, Ogbomoso and University of Lagos for the districts of Ibadan, Ogbomoso and Lagos respectively. 80% of these questionnaires were administered to phone users (define as those using mobile phone on an average of once per day). The remaining 20% were administered to those without mobile phone to serve as control.

2.2 Questionnaires

The instrument used in the collection of data is by means of questionnaires. Questionnaires were presented along with instructions. There were series of data on phone users and their observations during calls. They include the
length of time used in making/receiving calls per day, the symptoms experienced during and after calls and their perceptions on the safety of the use of mobile phones. Of the 3,000 questionnaires administered, 2,160 were recovered and analyzed.

The symptoms investigated in this study were basically those related to the head which include symptoms such as headache, heat sensation fatigue and dizziness.

3. RESULT AND DISCUSSION

60.9% of the respondent were males while 39.1% were females. Out of the total questionnaires analyzed, 2,118 of the respondent have their own mobile phone while 42 were without mobile phones but make use of phone on an average of once per day. 2,034 of the respondents are used to phoning often while 126 are accustomed to texting.

While making calls, 5.09% experienced headache, 2.04% dizziness, 1.25% fatigue, 13.84% heat sensation and 77.41% experienced no symptoms (Figure 2). These symptoms sometimes began at the start of a phone call and sometimes later. The symptoms usually vanish within an hour and in few cases, persist longer.

Of the 20% of the questionnaires administered to non-phone users, 81.6% believed mobile phone is safe for use while 18.4% believed they have hazardous health effects.

Because of the design of this study, it does not show how frequently such symptoms occur. Also, this study does not show whether there is indeed a correlation with exposure to electromagnetic field from mobile phones. However, out of the respondent that have experienced some symptoms or the other, 84% still believed it is safe to use mobile phone. Only 4% of those that claimed they experienced a symptom or the other had consulted a doctor in connection with the symptoms.

Furthermore, 87.78% of those investigated believed mobile phones are safe for use. 12.22% associated the use of mobile phone with symptoms such as headache, heat sensation, dizziness or fatigue. 53% believed these symptoms are associated with long calls time and 27% are of the opinion that the symptoms are associated with the type of mobile phone used.

4. CONCLUSION

The analysis shows that the respondent genuinely experienced the symptoms, but the findings do not necessarily indicate that they pose a serious health problem. The investigator however, feel that the people with complaints experienced it as health problem. This justify the research on the cause of these symptoms. It is then of prime importance to determine whether they are caused by electromagnetic fields produced by mobile phones.

Figure 1. Growth of Mobile Phones Subscribers in Nigeria between 1999 and 2009
( Based on Subscriber Data from The Nigerian Communication Commissions’ Website)
5. REFERENCES