

Association between Discomfort and Fatigue around Neck Area due to Portable Electronic Devices in College Students

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Abstract

Aim: To determine the correlation between portable electronic devices (smartphone, laptop and tablet) usage and pain, neck disability, fatigue among collegiate population. **Method:** one hundred (N=100) students as subjects within age group of 18 to 26 years both males and females from Amity Institute of Physiotherapy were participated. Students who were using portable electronic devices (smartphones, laptop and tablets) for more than 5 hours or more per day were included in the study. Students who were having any chronic medical illness and musculoskeletal disease or anomalies such as muscle strain, muscle sprain, any neck deformity (torticollis, cervical rib) and surgery were excluded. Numeric pain rating scale, neck disability index questionnaire and fatigue impact scale were used for assessment. **Results:** It was found that there was partially negative correlation between the numbers of hours of portable electronic device usage and fatigue impact that is ($r = -0.02$). Similarly, a partially negative correlation was noted between the number of hours of portable electronic device usage and neck pain i.e. ($r = -0.093$). Astonishingly a partially positive correlation was found between the number of hours of portable electronic device usage and neck disability ($r = 0.05$). **Conclusion:** longer hours of usage of portable electronic devices may not cause pain, neck disability and the impact of fatigue may be less when proper rest and recovery time is given to the subjects in between and after the working hours.

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Introduction

The digital revolution has sincerely influenced everyday living, evident in the ubiquity of mobile devices and the coherent integration of technology into common tasks such as shopping, reading, and finding directions (Abigail and Kari 2014). The utilization of computers, mobile devices, and the Internet is at the top level to date and is anticipated to continue to increase as the technology is becoming more accessible, especially for users in developing countries (Allan 2009). The utilization of new technology for a prolonged time is having a profound impact on general body posture. The utilization of computers is related with neck and wrist pain symptoms, however there