Abstract

Background: It has become increasingly common to use headphones in today's society for various purposes. Headphone use can affect hearing thresholds, but can headphones cause deteriorating ear status? There are few studies on this topic and further studies on headphone use and ear status should be carried out. The topic is important because many people use headphones, but they may not be aware that headphones can affect ear status.

Purpose: The purpose of the study is to investigate whether there is a relationship between headphone use and ear status and to investigate headphone habits. The purpose is investigated by the following questions: is there a connection between using headphones more hours per day and more ear status difficulties? Is there a connection between using headphones more often (several days per week) and more ear status difficulties? Does the effect on ear status differ if you use in-ear-headphones or over-ear/on-ear-headphones?

Material and method: A web-based survey was carried out in KI Survey and was published with a link and QR code on Facebook. The advertising material was printed out and posted on notice boards with a QR code. The participants in the study were 18 years of age and older and used headphones. In this study, the determination of ear status was subjective and included itching, irritation, increased earwax, and pain in the ear canal. The survey responses were analyzed by the Statistical Package for Social Sciences (SPSS).

Results: 130 participants participated in this study. The most common area of use was, among other things, when traveling by public transport (77%), listening to music (75%) and while taking a walk (72%). The results show that no significant relationship could be found between hours per day headphones were used and ear status. No significant relationship were found between the number of days a week, headphones were used and ear status, apart from two relationship for itching (r=0,26), p=0,003) and increased earwax (r=0,18, p=0,042). Of those experiencing ear status difficulties with in-ear-headphones, itching (90,20%) was the most common, followed by irritation (85,29%), increased earwax (76,19%) and pain in the ear canal (86,36%). In-ear-headphones were the headphone type that caused the most deterioration in ear status compared to over-ear/on-ear-headphones.

Conclusion: The conclusion of this study is that there is a relationship between ear status and the types of headphones used. The results indicate that in-ear-headphones have a stronger relationship with ear status difficulties compared to over-ear/on-ear-headphones. There were more participants that used in-ear-headphones in this study compared to over-ear/on-ear-headphones. There were significantly more participants who did not experience ear status difficulties compared to those who did experience it: itching (61% vs 39%), irritation (74% vs 26%), increased earwax (68% vs 32%) and pain in the ear canal (66% vs 34%). Further research needs to be done within this subject to closer investigate the relationship between headphone use and ear status.

Keywords: ear status, earphones, headphones, headphone use, in-ear-headphones, increased earwax, irritation in the ear canal, itching in the ear canal, over-ear-headphones, on-ear-headphones, pain in the ear canal