

**Abstract****Author:** Bc. Zita Matoušová**Supervisor:** Mgr. Kateřina Vondrová**Title:** The Influence of the Use of Modern Technologies on the Dexterity of the Hands of Healthy Czech Adult Population**Abstract:**

Manual dexterity is activity, which is based on the ability to control the movement and strength of the fingers. Many aspects impact dexterity, including the use of modern technologies. These have become part of our daily lives and have changed the way we perform many activities. Therefore, I consider it important to address this context within occupational therapy.

The main aim of this thesis is to determine whether there is a causal relationship between the use of modern technologies and manual dexterity in a healthy Czech adult population in the age range of 20 to 64 years. A secondary aim is to map the extent and pattern of modern technology use in the same research sample.

In this pilot study 208 probands participated. Each proband completed a questionnaire. They were asked how much time they spend using a computer, mobile phone, tablet and how they use these electronics. After that, they were tested with the Nine Hole Peg Test. The analysis of the study sample was done based on the questionnaire. Pearson chi-square test was used to determine the relationship between the phenomena under study.

At the set significance level  $\alpha = 0.05$  it was found that there is a relationship between time spent on the computer and dexterity of the non-dominant hand (P-value = 0.048583) and between the way of using mobile phone and the performance of the dominant hand (P-value = 0.006722). It showed that there is a relationship between the use of modern technologies and dexterity.

**Key words:**

Modern technologies, electronics, dexterity, Nine Hole Peg Test, occupational therapy