

Ocena oraz analiza uwarunkowania problemowego używania, nadużywania i uzależnienia od smartfonów przez pryzmat współczesnej psychiatrii

### **Abstract**

The assessment and analysis of smartphone problematic use, abuse and addiction through the prism of contemporary psychiatry.

### **Introduction**

Technology dependence, including smartphone addiction, has been a topic of discussion for about 10 years. Smartphone and/or the Internet addiction has semantics difficult to separate. In children and adolescents under the age of 18, the addiction varied from 6,3 to 16%. The criteria were met in the 18-30 age group at 38,9 %. In Poland, approximately 35,3% of population aged between 13 and 24 fulfilled the criteria for the risk of Internet addiction, even though there is no research data on the problematic use of this technology or the confirmation of diagnostic criteria and variables that may disturb these criteria.

### **Research Material and Methods**

484 subjects were evaluated: 82,9 percent of women and 17,9 percent of men. The study was carried out using the indirect measurement method, which is a questionnaire. The following were evaluated: depression (Beck Depression Inventory), mobile phone problematic use and addiction: Mobile Phone Problem Use Scale -9 (MPPUS-9), internet addiction assessed by means of Internet Addiction Test (IAT), reaction time evaluated with the use of Stop Signal Test (SST), and a questionnaire prepared by the author of this research. Beck Depression Inventory, MPPUS-9 and IAT were conducted online under psychiatrist supervision. The author's questionnaire, using the ZOOM platform, was also carried out. The respondents were asked to perform the Stop Signal Task after sharing a link to the website containing the online version of the test. This phase lasted three months. The study was conducted by the researcher during a psychiatric specialist training. Statistical analysis was carried out with the use of IBM SPSS v23.

### **Results**

The results obtained on the Beck scale indicated "moderate depression" according to the criteria described in the literature on the subject. The IAT result suggested a moderate addiction to the Internet, according to Young. Ca. 24,5% of respondents were diagnosed as problematic smartphone users according to the criteria for MPPUS - 10 (> 53 points). The author's standards for the problematic smartphone use were below or equal to MPPUS-9 70th centile, considering the subjects without depressive symptoms (Beck <9 pts.) and normal reaction time (26-70 points). The cut-off point for separating normal from problematic use results was 26 for MPPUS-9. The addiction was observed above the 90th centile. For the subjects who had depression and a high SST score (they reacted slowly in the Stop Signal Test), the cut-off point was 36.11 points. The results of the MPPUS-9 questionnaire categorized according to Wojnar's ranges considerably modified the Stop Signal Task outcome. These ranges significantly differed in the reaction time in the case of smartphone normal use and addiction ( $p = 0.013$ ).

## **Conclusions**

1. The criteria for smartphone addiction and problem use of the device have been met by 10% and 62,4% of respondents, respectively.
2. SST draws a distinction between the subjects addicted to a smartphone and those who manifest problematic use. Smartphone addicts respond faster to SST than problematic smartphone users or people who are normal users.
3. The severity of depression symptoms is higher in the group classified as problematic and addicted smartphone users than in the group of people who are normal users. A correlation between smartphone addiction and severity of depression symptoms was established ( $s = 0.45$   $p = 0.031$ ).
4. Problematic and addicted smartphone users had faster reaction time (lower result in ms) compared to the group of normal users. The response time correlated with the scale of smartphone addiction ( $r_s = -0.251$ ,  $p = 0.029$ ).
5. Broadening diagnostic criteria for normal values on the MPPUS to Beck and SST results reduces the number of subjects presenting normal values and increases the number of problematic smartphone users. The number of problematic smartphone users increases with worsening depressive symptoms and decreasing response inhibition time.