

A Quantitative Analysis of the Association Between Problematic Internet Use, Cognitive Ability, and Movement Proficiency Among Adolescents in Pakistan

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Purpose: This study aimed to explore a comprehensive analysis of the association between problematic internet use (PIU), cognitive ability (CA), and movement proficiency (MP) among adolescents aged 10 to 18 years. This is the first study in Pakistan to simultaneously examine the association between problematic internet use, cognitive ability, and movement proficiency.

Methods: The study included 150 adolescents (mean age = 12.27 years, standard deviation (SD) = 1.85). Of these, 70 (46.7%) were girls and 80 (53.3%) were boys from Pakistan. To assess the association, MP was assessed using the Bruiniks–Oseretsky test (BOT-2). To assess PIU, the Problematic and Risky Internet Use Screening Scale (PRIUS) was used. Raven Standard Progressive Matrices were used to measure CA. The HBSC questionnaire was used to assess lifestyle, behaviour, intensity and duration of physical activity.

Results: The study outcomes showed a mean PIU score of 24.60 (SD = 11.54), a mean CA score of 5.18 (SD = 2.73), and a mean MP score of 136.95 (SD = 9.83), with $r = 0.111$ and $p = 0.175$. Boys scored slightly higher in movement proficiency and cognitive ability, while girls scored better in PIU. Boys showed more problematic internet use, with an average of 26.19, indicating higher internet usage.

Conclusion: There was a positive and significant correlation between problematic internet use and movement proficiency in the at-risk girls group ($r = 0.424$, $p = 0.018$). Also, there was a strong and positive correlation between movement proficiency and cognitive ability in the not-at-risk boys group ($r = 0.355$, $p = 0.042$). There was no statistically significant correlation in the not-at-risk boys group. Given this research, parents, educational institutions, and policymakers may develop designs that not only promote digital health but also promote physical activity intervention.

