THE ROLE OF AGE, AGE OF INTERNET ACCESS INITIATION, AND TIME SPENT ONLINE IN THE ETIOLOGY OF INTERNET ADDICTION

Abstract

Background and Aims: A relatively large body of studies reported bivariate associations between sociodemographic variables (e.g., age), intensity of internet usage (e.g., hours spent online) and internet addiction (IA). However, only few actually employed more robust statistical approaches (e.g., path analysis) to understand these complex relationships and their possible causal pathways. In the present study, a full structural equation modelling (SEM) model using year of first use of the internet and hours of internet usage per week as mediators of the relationship between age and IA was devised. ***Methods***: A total of 1,105 internet users (M_{age}= 33; S.D. = 12.31), 36.7% (n = 405) from the US, 30.4% (n = 336) from India, 24.6% (n = 272) from the UK, and 8.3% (n = 92) from other countries were recruited online. In addition to collecting sociodemographic information, participants filled out a newly developed brief measure of IA based on the DSM-5 criteria. ***Results***: After analyzing the full SEM model, partial mediation presented the best overall fit for the data (Satorra-Bentler scaled $\Delta\chi^2$ = 114,62; $\Delta df = 1$; $p < .0001$), with year of first use of the internet and the hours per week spent surfing mediating the relationship between age and IA. Furthermore, the present model accounted for 18% of the variability in IA. ***Conclusions***: Although diagnosing IA on grounds of non-standardized criteria is not correct from a methodological standpoint, the variables here analyzed may play an important role in the development of IA.

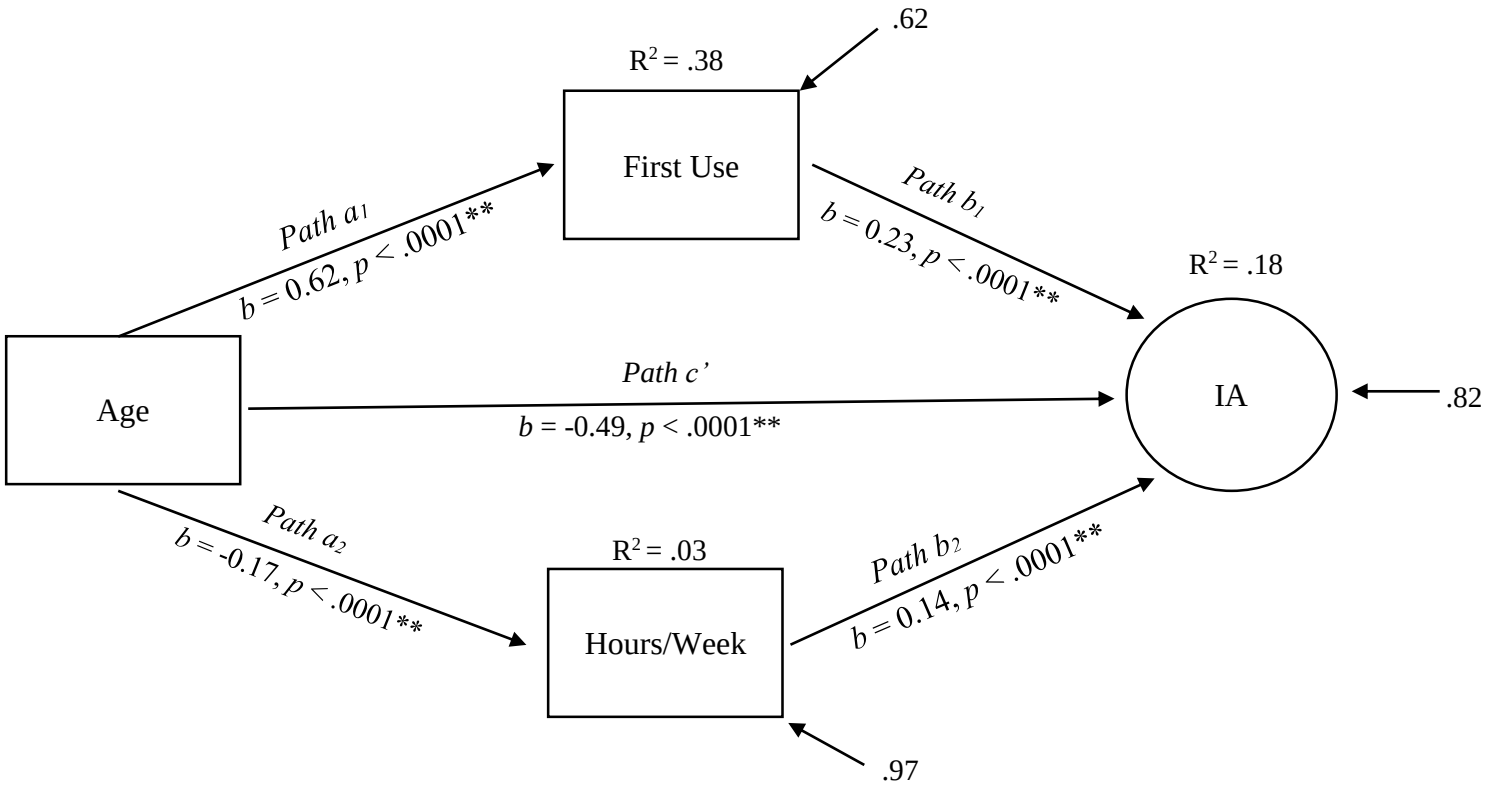

Figure 1. The full SEM MIMIC mediation model with standardized beta path coefficients and their explained variance (R^2) for the outcomes (N=1,105). *Note:* Mediation performed using BCa bootstrapped 95% confidence intervals based on 10,000 samples; All paths are statistically significant: * p<0.05; ** p<0.01.; The present model also includes an extra parameter related to the correlation coefficient between the variables First Use and Hours/week (r = -.16) which was omitted from the above diagram for the sake of clarity. **Total Indirect Effect**: b = 0.12; Boot SE = 0.03; p < .0001; BCa 95% CI [0.059, 0.179]; **Total Effect** (*Path c*): b = -0.37; Boot SE = 0.03; p < .0001; BCa 95% CI [-0.420, -0.319]; **Specific Indirect Effect via First Use** (a_1xb_1): b = -0.37; Boot SE = 0.03; p < .0001; BCa 95% CI [-0.420, -0.319]; **Specific Indirect Effect via Hours/Week** (a_2xb_2): b = -0.37; Boot SE = 0.03; p < .0001; BCa 95% CI [-0.420, -0.319].