

## Abstract

**Background:** Depression onset rate increases sharply in adolescence. Identifying subthreshold depression (SD) manifestations in adolescents is thus important for intervention. Problematic internet gaming (PIG) is strongly associated with depression, while social support is a protective factor to both depression and PIG. This study investigates how PIG severity differs in adolescents with Major Depressive Disorder (MDD), SD and healthy control (HC), and explores whether social support moderates the effect of depression status on PIG severity.

**Method:** Data were drawn from the *Let's Work Heart* project, comprising 105 adolescents, with 35 in each of the MDD, SD and HC groups. Depression statuses were categorized with the Chinese version of Diagnostic Interview Schedule for Children (5th version) (DISC-5). Chinese versions of Internet Gaming Disorder Scale–Short-Form (IGDS9-SF) and KIDSCREEN-52 Friends module were administered to the adolescents. PIG severity among the three groups was compared with ANOVA. Relationship between PIG severity and social support was compared across the three groups to explore the moderating effect of social support to depression status on PIG severity. Post hoc tests were conducted to explore interaction effect of depression severity and social support on PIG severity.

**Results:** PIG severity difference among the MDD, SD and HC groups was insignificant. Moderation effect of social support was only found in HC but not SD and MDD groups. Regression analysis showed that depression severity and social support had a significant interaction effect on PIG severity.

**Discussion:** Possible reasons for insignificance, including score level, sample size, cultural differences, in-game social support and categorization method, were discussed.

*Key words: youth depression, subthreshold depression, Internet Gaming Disorder, problematic internet gaming, social support*