



The Impact of Daily Habits on Internet Addiction Among Primary and Secondary School Students in Jingzhou City

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Abstract: Objective: To examine the prevalence of internet addiction among primary and secondary school students in Jingzhou City and its association with daily lifestyle habits. Methods: A cross-sectional survey was conducted from March to April 2024 among students from 53 schools using a general questionnaire and Young's Internet Addiction Test (IAT). Binary logistic regression was applied. Results: Among 20,547 valid questionnaires, the prevalence of internet addiction was 17.8%. Male gender, higher educational stage, insufficient physical activity, low participation in group activities, unhealthy dietary habits, unrestricted access to electronic devices during holidays, and prolonged holiday internet use were significant risk factors. Conclusion: Internet addiction among students in Jingzhou City is prevalent and closely related to multiple lifestyle factors, indicating the need for comprehensive lifestyle-based interventions.

Keywords: Internet addiction; Lifestyle habits; Adolescents; Cross-sectional study

1. Introduction

With the widespread use of the internet, internet addiction among adolescents has become a major public health concern. Primary and secondary school students are at a critical developmental stage and often lack sufficient self-regulation, making them particularly vulnerable to excessive internet use. Previous studies indicate that lifestyle factors such as physical activity, dietary habits, and social participation are associated with internet addiction. However, evidence based on large-scale school-aged populations remains limited. This study investigates the relationship between daily habits and internet addiction among primary and secondary school students in Jingzhou City, aiming to provide evidence for targeted prevention strategies.

2. Methods

2.1 Participants

A cross-sectional survey was conducted from March to April 2024 among students from 53 primary and secondary schools in Jingzhou City. Students absent due to illness or personal leave were excluded. Participation was voluntary.

2.2 Data Collection

Questionnaires were completed either in school computer rooms under teacher supervision or at home via parents' mobile devices. Of 24,255 collected questionnaires, 3,708 were excluded due to incomplete responses, duplication, abnormal completion time, or illogical answers, resulting in 20,547 valid questionnaires (effective rate: 84.71%).

2.3 Instruments

A self-designed questionnaire collected demographic and lifestyle information. Internet addiction was assessed using the Chinese version of Young's Internet Addiction Test (IAT), which contains 20 items scored on a five-point Likert scale. Total scores ≥ 45 indicated internet addiction. The scale showed good reliability (Cronbach's $\alpha = 0.93$).

2.4 Statistical Analysis

SPSS 27.0 was used for data analysis. Categorical variables were expressed as frequencies and percentages. Group comparisons were conducted using chi-square tests. Binary logistic regression was applied to identify factors associated with internet addiction. A two-sided $P < 0.05$ was considered statistically significant.

3. Results

3.1 General Characteristics

Among 20,547 students, 3,657 met the criteria for internet addiction, with a prevalence of 17.8%. The sample included 9,782 males (47.6%) and 10,765 females (52.4%), with a mean age of 13.39 ± 1.64 years. Elementary, junior high, and senior high school students accounted for 35.2%, 53.5%, and 11.3% of the sample, respectively.

3.2 Univariate Analysis

Significant differences in internet addiction prevalence were observed across gender, educational stage, exercise duration and frequency, group activity participation, dietary habits, late-night snacking, dietary balance, freedom to use electronic devices during holidays, and holiday internet usage time (all $P < 0.05$). Internet addiction prevalence increased with higher educational stage, reduced physical activity, poorer dietary behaviors, unrestricted device access, and longer holiday internet use.

3.3 Binary Logistic Regression Analysis

Binary logistic regression identified male gender, junior and senior high school enrollment, weekly exercise time <30 minutes, low exercise frequency, low participation in group activities, irregular eating habits, late-night snacking, lack of dietary balance, unrestricted access to mobile phones and computers during holidays, and longer holiday internet use as significant risk factors for internet addiction. Holiday internet use ≥ 4 hours per day showed the strongest association with internet addiction.

4. Discussion

This study revealed a relatively high prevalence of internet addiction (17.8%) among primary and secondary school students in Jingzhou City, indicating that problematic internet use remains a prominent issue in this population. The detection rate was higher than that reported in some previous regional studies, which may be attributed to differences in sample size, assessment tools, diagnostic criteria, and regional characteristics [1].

Consistent with prior research, male students showed a higher risk of internet addiction than females [2]. This difference may be related to gender disparities in online behavior preferences, impulse control, and engagement in online gaming. In addition, internet addiction risk increased with educational stage, which is in line with findings among junior and senior high school students.

Physical activity and social participation were identified as important protective factors. Students with insufficient exercise duration or frequency and those with low participation in group activities were more likely to develop internet addiction. Regular physical activity may reduce addiction risk by improving emotional regulation and self-control, while group activities provide real-life social support that decreases reliance on virtual interactions[3][4].

Dietary behaviors were also significantly associated with internet addiction. Irregular eating patterns, late-night snacking, and lack of dietary balance were linked to higher addiction risk. Poor dietary habits may disrupt physiological rhythms and negatively affect cognitive and emotional functioning, thereby increasing vulnerability to addictive behaviors[5].

Moreover, unrestricted access to electronic devices during holidays and prolonged holiday internet use were strongly associated with internet addiction, with extended usage time showing the strongest effect. Similar patterns have been reported in national surveys and related studies [6]. Adolescents' limited self-regulation, combined with increased leisure time during holidays, may amplify exposure to addictive online content.

Overall, internet addiction among students is influenced by multiple lifestyle-related factors. The interpretation of internet addiction in this study is based on Young's theoretical framework, which remains widely used in adolescent addiction research[7].

5. Conclusion

Internet addiction among primary and secondary school students in Jingzhou City is prevalent and closely associated with daily lifestyle habits. Insufficient physical activity, limited social participation, unhealthy dietary behaviors, and excessive internet use during holidays significantly increase addiction risk. Schools and families should jointly promote healthy lifestyles, encourage regular exercise and group activities, strengthen dietary management, and implement appropriate supervision of electronic device use to reduce the risk of internet addiction.

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