

# The Risk on Musculoskeletal System and Psychosocial Functions among Adolescents with Problematic Internet Use in Selected Schools of Udaipur, Rajasthan, India

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## Abstract

The use of the Internet has brought a variety of convenience to our modern life. Nonetheless, the negative impact is also created by addictive behaviors to the Internet pervasively on one is academic and working performance, family life, social relationships, physical health, and psychological well-being.

**Keywords:** Problematic internet use; Adolescents; Musculoskeletal symptoms; Psychosocial problem

## About the Study

The Internet is a fundamental part of modern society and provides a quick and easy way for communication, socialization, entertainment, information exchange, and education, regardless of time and place limitations. The Internet is playing a substantial role in our existence as a means of communication, information exchange, entertainment, and social interaction. It is simple, available, and affordable to all ages and socio-economical levels. The essential services that the Internet presents to the youth are email, chatting, discussion group, social recreation (games, songs, videos), shopping, and search for a kind of knowledge.

While researchers have begun to explore the meaning and the consequences of excessive Internet use in non-clinical populations of children and adolescents, some of the surveys probed the level of PIU and factors associated with PIU. Few studies evaluated the impacts of PIU on daily lives. The associations of PIU to socio-educational characteristics, demographic characteristics, and internet usage patterns and adolescents' behaviors have also been assessed. However, there is still little consistent expertise on the topic, PIU, and its impact on Physical and Psychosocial problems in adolescence, so the researcher sensed the necessity to evaluate PIU and its impact on the two variables.

The research design used for the present study was a descriptive comparative cross-sectional survey design. One

hundred subjects each were recruited from selected schools in Udaipur district, Rajasthan, North India, using a convenient sampling technique.

The students were recruited according to pre-specified inclusion and exclusion criteria. Inclusion criteria specified that students who had mild to severe PIU, from grades 8th, 9th, and 11th, willing to participate in this study, and whose parents signed the informed consent form were eligible for this study. Exclusion criteria were withdrawal from the study for any reason, suffering from any condition that impaired communication, such as physical illness or comorbid psychiatric illness.

In the initial phase of the study, after receiving permission from the administrative departments of respective Principal, PTA for data collection, the researcher approached the participants directly during their class hours, explained the purpose and method of using the questionnaires, and also ensured the confidentiality of the data. One hundred subjects from 8th, 9th, and 11th std have been chosen using a convenient sampling technique. The subjects who met the inclusion criteria were recruited as the sample. Informed permission was taken from the participants as well as their parents. A paper-and-pencil survey was used that include sections of demographic data, internet use, internet addiction, psychosocial, musculoskeletal disorders. Overall, 20-30 minutes were needed to complete the whole questionnaire. Doubts, if any, were cleared. After completion, the questionnaire was collected back. Data was entered in the excel, and Analysis was done using R software.

Based on the objectives and hypothesis of the study, the following steps will be taken to analyze the data. Assessment of Problematic Internet Use will be analyzed using descriptive statistics n frequency, percentage, Mean & standard deviation. The correlation was calculated using Spearman's rho coefficient Association between PIU and socio-demographic variables will be calculated using inferential statistics: Chi-square at 0.05 level of significance.

It shows the frequency and percentage distribution of adolescents according to their socio-demographic characteristics. Adolescents belonged to the age group 13-18 years, with equal no of males and females. Religion wise 64% of

the subjects were Hindus, 26% Muslims, 10% Christians. Adolescents were from 8th, ninth (35% each), and 30% from 11th Grade, respectively. Seventy-six adolescents belonged to the Urban locality, 65% of the subjects hailed from the nuclear family, and half of the subjects (50%) had a monthly income of Rs 30,000/-. Approximately half of the subjects (44%) had more than one sibling, and 76% of them described a good relationship with their parents, and 6% had reported frequent conflict. Fifty-two adolescents felt their parents were strict and one percent of the hundred reported their parents to be negligent.

The highest 55% of the adolescents started using the Internet at the age of 10-12 yrs. 81% used laptops to access the Internet, with 91% accessing the Internet at home. 65% of adolescents accessed the Internet for entertainment purposes. Fifty-four subjects reported high privacy, 72 of the subjects reported continuous login status, and the highest 50 subjects preferred to access the Internet during evening hrs. Maximum subjects (30%) accessed the Internet for 2-3 hrs daily and 40% between 14-28 hrs every week.

A cross-sectional study was conducted in the selected school of Udaipur dist. Rajasthan, North India, to assess the relationship between PIU and risk of musculoskeletal pain and

psychosocial problems. Overall, 22% of adolescents reported moderate PIU and 1% severe PIU, and the overall prevalence of 23% was similar or slightly higher than those reported in previous literature. In relation with the psychosocial problem, the present study is supporting the previous studies in which PIU is related with the psychological problem as well as psychological well-being.

At Present, the relationship between excessive use of the Internet and an increase in the risk of musculoskeletal pain is widely accepted. Because the current study confirmed previous findings on PIU status and the use of the Internet and smartphones .we conclude that PIU is significantly related to an increased risk of musculoskeletal pain among adolescents. The possible explanation may be associated with poor postural habits leading to strain on muscles, tendons, and disks, which may further lead to aggravating pain in the regions of the neck, shoulder, elbow, and wrist.

Our results confirm that problematic internet users more often report health problems, even after monitoring for confounding factors. Among those, problems related to musculoskeletal disorder is the most closely associated and seems to influence the other ones.