

Validation Protocol of the Italian Version of the Internet Related Measures (IRM) Questionnaire and Assessment of Internet Use Among High School Students in Italy: A Multicenter Study

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INTRODUCTION

Internet use has become an integral part of adolescents' daily lives, a trend that intensified during and after the COVID-19 pandemic [1]. Alongside the increase in online activity, adolescents are now more exposed to digital threats such as harmful content (e.g., self-harm, radicalization), sexual exploitation, and cyberviolence [2]. Scientific literature highlights that some groups of adolescents—particularly those with psychological, familial, or social vulnerabilities—are more likely to encounter these risks [3,4].

In the Italian context, however, validated tools to assess Internet use and related risks are often outdated and lack cultural and technological relevance. This gap hinders effective screening and prevention efforts in schools. The present study addresses this need by validating an internationally adopted tool—the Internet Related Measures (IRM) questionnaire—for use with Italian adolescents, ensuring both scientific accuracy and contextual relevance.

OBJECTIVES

The study aims to:

1. Validate the Italian version of the Internet Related Measures (IRM) questionnaire through linguistic, cultural, and psychometric adaptation;
2. Explore and describe patterns of Internet use and perceived online risks among high school students in Lombardy.

METHODS

This study will adopt a multicenter design and will involve students attending upper secondary schools (scuole secondarie di secondo grado) across the Lombardy region in Northern Italy. Participants will complete a structured questionnaire comprising sociodemographic items (age, gender, ethnicity, school attended) along with the Italian version of the IRM questionnaire.

Descriptive statistics will summarize participant characteristics and Internet use patterns. Means and standard deviations will be used for normally distributed variables; medians and interquartile ranges for non-normally distributed data; and frequencies and percentages for categorical variables.

Psychometric properties of the IRM will be evaluated through both exploratory and confirmatory factor analyses. Internal consistency will be assessed using Cronbach's alpha and corrected item-total correlations. To explore associations between IRM responses and sociodemographic variables, generalized additive models for location, scale, and shape (GAMLSS) will be employed. All statistical analyses will be performed using R software (version 4.4.1), with significance set at $p < 0.05$.

EXPECTED RESULTS

The Italian version of the IRM is expected to show robust psychometric properties, including high internal consistency and structural validity in line with its original version. The study

is also expected to reveal a relevant prevalence of problematic Internet use among high school students in Lombardy.

Additionally, the analysis is anticipated to identify associations between certain sociodemographic characteristics—such as age and gender—and increased perceptions of digital risk. These may include exposure to harmful or inappropriate content, compulsive or excessive use of the Internet, and experiences of cybervictimization. The findings will offer valuable insights for designing evidence-based digital health promotion strategies in the educational setting.

CONCLUSIONS

This study will provide an updated and in-depth picture of Internet use and digital risk perception among Italian adolescents. By validating the Italian version of the Internet Related Measures (IRM) questionnaire, it will offer a reliable and culturally adapted tool for use in educational and public health contexts. The results are expected to support the development of targeted prevention programs, digital literacy initiatives, and evidence-based policies aimed at promoting safer and healthier online behaviors among youth.

REFERENCES

1. Marinoni, C., Zanetti M.A., Caravita S.C.S., Sex differences in cyberbullying behavior and victimization and perceived parental control before and during the COVID-19 pandemic. *Social Sciences & Humanities Open*, 2023 Nov; 8(1): 1-9.
2. Long, M., Dowdell, E.B. Cyberbullying and Victimization: An Examination of Online and Health Risk Behaviors in High School. *Pediatric Nursing*, 2021 Sept.-Oct., 47(5): 226-232.
3. El Asam, A.; Katz, A. Vulnerable young people and their experience of online risks. *Human-Computer Interaction*, 2018, 33(4): 281-304.
4. Notten, N.; Nikken, P. Boys and girls taking risks online: A gendered perspective on social context and adolescents' risky online behavior. *New Media & Society*, 2016, 18(6): 966-988.