

Internet Addiction Prevalence and Relationship with Loneliness and Social Phobia in a Sample of Southern Italian High School Students from Rural Area

Signorelli MS¹, Geraci A^{2*}, Concerto C¹, Sinatra S¹, Romano MV¹, Di Nuovo S², Crea L¹ and Aguglia E¹

¹Department of Clinical and Experimental Medicine, University of Catania, Italy

²Department of Education, University of Catania, Italy

***Corresponding author:** Alessandra Geraci, Department of Education, University of Catania, v. mons. messina Foti 95024 Acireale (CT), Catania, Italy, Tel: +39 3406979636; Email: geraci.ale@gmail.com

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Abstract

Background and Aims: Internet addiction (IA) has become a serious mental health condition and a number of studies revealed that persistent negative consequences resulted from excessive Internet use. The aims of this study were to investigate the prevalence of IA in a sample of students attending high schools in a rural centre of Southern Italy and the relationships between IA with social phobia and loneliness.

Method: The Italian version of the Internet Addiction Test (IAT), the University of California, Los Angeles Loneliness Scale (UCLA-LS) and the Liebowitz Social Phobia Scale (LSPS) have been administered to a sample of 551 students from two high schools in a rural area of Southern Italy.

Results: The majority of respondents were classified as normal users of the Internet (81.12%), 18.33% were moderately addicted and 0.54% was seriously addicted.

Use of the Internet was associated with greater likelihood of loneliness and social phobia.

Discussion and Conclusions: Our study showed that the prevalence of excessive internet use among students living in rural areas was of 0.54%. Variability in prevalence rates can be explained by the geographical origin of samples showing the role of cultural context in affecting Internet usage. Clinical and psychological implications of pathological Internet use and future directions for research are discussed.

Keywords: Internet addiction; loneliness; Social phobia; Rural areas

Abbreviations: IU: Internet Use; ISTAT: Liebowitz Social Phobia Scale; IAD: Internet Addiction Disorder; PIU: Problematic Internet Use; IAT: Internet Addiction Test;

LSPS: Liebowitz Social Phobia Scale; CBT: Cognitive-Behavioral Therapy.

Introduction

Over the past ten years a vast increase of Internet Use (IU) has been observed in Italy. The data collected by the Central Statistical Office showed that 57.3% of the young Italian population has used the Internet in 2014. Depending on the place of residence, IU rates were found to be higher in the North of Italy (60.9%) than in the South (50.5%), where the different use has been related to a different kind of IU expansion (ISTAT). A variety of terms have been used to describe the behavioural problems related to IU, such as “Internet addiction disorder” (IAD) [1] “pathological Internet use” [2] “cyber addiction” and “problematic Internet Use (PIU)” [3,4]. Internet addiction can be defined as “the inability of individuals to control their Internet use, resulting in marked distress and/or functional impairment in daily life” [5]. IA is characterized by excessive or poorly controlled preoccupations urges or behaviors regarding computer use and internet access that lead to impairment or distress [6]. The peculiarity of IA is represented by time-consuming connections and a consequential reduction of external interests as well as social and work activities [7]. According to the criteria suggested by Young [7], Internet addiction can be diagnosed when the following symptoms occur: strong necessity to stay online; need to increase the frequency and time of staying online; unsuccessful attempts to stop or limit the time of staying online; existence of withdrawal symptoms during attempts to stop or reduce online activity; staying online longer than originally intended; work and education-related problems; telling lies to family and friends in order to hide the amount of time spent online; focusing on the Internet in order to escape from problems or to improve psychological well-being.

In a recent systematic literature review the aim is to map the longitudinal research in the field of Internet Use (IU) and Problematic Internet Use (PIU) in adolescents and emergent adults [8]. This study endeavors to examine the terminology and instruments utilized in longitudinal IU and PIU research and investigate whether statistically significant results have arisen from the areas of research focus. In a total of 29 studies, trends in the research of adolescent/emergent adult IU and PIU were discovered. These trends were conceptualized into individual, contextual and activity-related factors and the findings suggested that individual factors are the most researched and have demonstrated significant relationships with adolescent/young adult PIU.

Adolescence seems to be a critical period of addiction

vulnerability, based on social but also neurobiological factors. The earlier onset of behavioral/substance dependence seems to predict greater addiction severity, morbidity, and multiple addictive disorders [9]. For a concept of anonymity, the internet represents a tool to escape reality [10]. The lack of visual references in online communication allows individuals to control elements of possible negative evaluation, to avoid the stress caused by face-to-face social interaction and the fear of derision and refusal [11,12]. Individuals may decrease their motivation to create interpersonal relationships with peers outside the network [13] and this might lead to social isolation and loneliness [11]. A recent study shows the influence of neuro-biological, psycho-social and clinical standpoints on Internet addiction in adolescence, and due to the specific neuro-developmental plasticity in adolescence, Internet addiction poses risks to youths’ mental health, and may likely produce negative consequences [14]. This is coherent with a recent psychological view that emphasizes the role of psychological factors in internet addiction.

Otherwise some studies support that Internet usage depends on the urbanization of the place of residence and that youth living in urban areas are at higher risk for IA than those living in rural areas [15-17]. Otherwise other studies found an opposite result [18]. In Italy, Poliand Agrim [19] administrating the Internet Addiction Test (IAT) to Northern Italian high school students demonstrated a lack of statistically significant differences in IAD prevalence between students from district capitals and from their nearby villages. Only one study has been conducted in the South Italy on a sample of 600 high school students and results show that 8.2% of the respondents were internet addicted and that IA scores were associated with alexithymia scores [20]. No studies have addressed Internet addiction among students living in rural areas of Southern Italy. The aims of this study were: a) to assess the prevalence of Internet addiction in a group of high school students from rural areas in the South of Italy; b) to address the relationships between IA severity, loneliness and social phobia.

Methods

Participants

The participants were 551 high school students (321 males and 230 females) enrolled in three high schools in two rural areas of Southern Italy (Belpasso, Piazza Armerina), between September 2014 and January 2015. Ages ranged from 13 to 20 years old, with a mean of 16.55

years (± 1 , 6 SD). All students received the same type of instructions and were told that their participation was voluntary and anonymous. They all agreed to participate to the study. The School Departments involved authorized the study. Informed consent from students, their parents and their teachers were obtained. The survey questionnaires were filled out in the student's classroom settings.

Measures

Data collection consisted of written questionnaires to assess Internet addiction, loneliness and social phobia. The survey also included information about social and demographic characteristics such as age, gender and place of residence, as well as questions about student habits of surfing the Net.

Levels of Internet use were assessed using the Italian version of the Internet addiction test (IAT). It is a self-report questionnaire composed of 20 questions with 5 Likert scales ranging from 1 (rarely) to 5 (always) [21].

According to the severity of their Internet-addictive behavior, three types of Internet-user groups can be identified: excessive, moderate and minimal users, whose scores on the IAT are 80 or higher, 50 to 79, and 49 or lower, respectively [1].

Participants' subjective feelings of loneliness were assessed by the 20-item University of California, Los Angeles Loneliness Scale (UCLA-LS), measured on a 4-point scale [22,23].

The average scores were used in all subsequent analyses. Total scores range from 20 to 80, with higher scores indicating higher levels of loneliness. Avoidance behaviours and/or fear in social relationships were evaluated with the Liebowitz Social Phobia Scale (LSPS). The scale consists of 24 items answered on a 4-point scale and of two subscales measuring social relationship (11 items) and social performance (13 items). The total score is obtained by adding the scores of the two subscales. Higher scores reflect greater social phobia [24].

Statistical Analysis

Socio-demographic characteristics, the habit of surfing the Net, Internet addiction, loneliness and social phobia scores were summarized using descriptive statistics. A logistic regression analysis was conducted to determine the impact of socio-demographic variables, loneliness and

social phobia on the Internet use level. The collected data was statistically analyzed using the SPSS (version 19.0) program. P value < 0.05 was taken as the level of significance.

Results

Of the 600 high school students that were contacted, 551 (91.83%) agreed to participate and to complete the survey. The average age of respondents was 16.55 (± 1 , 6 SD) years of age. 230 (41.7%) of the participating students were female. In Italy the duration of high school is 5 years in length. Responders were distributed across the 5 years (year 1: 12.3%; year 2: 16.3%; year 3: 30.1%; year 4: 18.5%; year 5: 22.7%). The behavioural morbidities towards the use of the Internet are summarised in Table 2.

Behavioral morbidities			
N=551			
		Frequency	Percentage
Internet	Yes	538	97.60%
	No	13	2.40%
Social Network (Face book)	Yes	492	89.30%
	No	236	42.80%
Chat	Yes	315	57.20%
	No	33	47.10%
Gaming	Yes	184	33.40%
	No	367	66.60%
Ecommerce	Yes	424	77%
	No	127	23%

Table 1: Frequency and Percentage of behavioral morbidities of participants.

Mean IAT was $38.30 \pm 11.6SD$. The majority of respondents were classified as normal users of the Internet (81.12%), 18.33% were moderately addicted and 0.54% was seriously addicted.

Mean LSPS was $34.30 \pm 19.7SD$; 14.4 % of students had LSPS above the cut-off value for social phobia. In addition, students reported a UCLA mean score of $40.74 \pm 9.53SD$. We used a logistic regression model to identify the correlation between loneliness, social phobia and Internet Addiction (see table 2). We included demographic variables that did not increase the odds for Internet addiction. On the contrary, increased UCLA scores [AOR 1.06 (1.03, 1.09)] and LSPS scores [AOR 1.02 (1, 1.03)] have shown to increase the odds for Internet addiction.

	Coef	Std. Error	Coef/SE	Chi-Square	P-Value	Exp(Coef)	95% Lower	95% Upper
Constant	-5,830	2,468	-2,362	5,581	,0182	,003	2,328E-5	,370
UCLA	,060	,013	4,538	20,597	<,0001	1,062	1,035	1,090
Age	,089	,181	,493	,243	,6219	1,093	,767	1,557
Years	-,226	,219	-1,032	1,066	,3019	,798	,519	1,225
PHO BIA	,021	,006	3,372	11,374	,0007	1,022	1,009	1,034
Gender: 2	,332	,244	1,360	1,849	,1739	1,394	,864	2,251

Table 2: Logistic Model Coefficients Table for IA T nom.

Discussion

Previous studies revealed that Internet usage depends on the urbanization of the place of residence and youth living in urban areas are at higher risk for IA. Our study showed that the prevalence of excessive internet use among students living in rural areas was of 0.54%. These results could be explained by differences regarding internet use, such as the different rates of internet penetration across rural areas. The favourable climate conditions which discourage addictions and the lower internet availability may protect adolescents from excessive involvement with the internet, promoting instead outdoor activities. Our conclusions are coherent with a recent psychological view, in which parental education and family income significantly moderate the association between the amount of Internet addiction and severity of problematic internet use in childhood [25] and in adolescence [26,27].

In our study internet use was also associated with greater likelihood of loneliness and social phobia, and our results suggest a strong correlation between psychological disorder and behaviours. Treatment includes a variety of interventions and a mix of psychotherapy theories to treat the behavior and address underlying psychosocial issues that are often co-existent with this addiction (e.g., social phobia, mood disorders, sleep disorders, marital dissatisfaction and job burnout) and the most discussed therapies are Motivational Interviewing, Cognitive-Behavioral Therapy (CBT) [28].

Future studies are needed to investigate the contribution of psychological variable on problematic internet use and new studies could analyze social, economic and cultural variables to pathological internet use in other countries in the world.

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