# INTERNET USE AND PSYCHOSOCIAL WELL-BEING IN AN ITALIAN ADULT SAMPLE

Antonino Callea, Marco Cacioppo, Francesco Lucchetti, Vincenzo Caretti

## Abstract

*Objective*: Although in the last years the studies on Internet use are largely increasing, little is still known about its relationship with psychosocial well-being. The present study aims to fill this gap, hypothesizing that Internet use has a negative effect on emotional and psychological well-being and that there are differences between users at risk and users not at risk of IAD.

*Method*: Internet Addiction Test and Mental Health Continuum-Short Form were administered to 172 non-clinical Italian adults.

*Results*: The results of structural equation modeling suggested that Internet use has a significant and negative effect on emotional and psychological well-being, with good fit indices. Furthermore, the results of independent *t*-tests showed that users at risk have lower scores of emotional and psychological well-being than users not at risk of IAD.

*Conclusions*: For the first time, the present clarify the relationship between Internet use and psychological well-being with important theoretical and clinical implications.

**Key words**: Internet use, psychosocial well-being, structural equation modeling, new technology

---

---

Antonino Callea, Marco Cacioppo, Francesco Lucchetti, Vincenzo Caretti
Department of Human Science, Lumsa University of Rome

**Corresponding author**
Antonino Callea
toninocallea@libero.it

## Introduction

In the 21st century, the communication networks have significantly improved in order to provide to the growing need of people to be always in contact with each other. Internet is the key of these new generations of communication media, and over four billion people use Internet every day. Despite the usefulness of Internet, in the last years some authors pointed out that there is a risk to develop dysfunctional behavior related to the usage of the web, i.e. internet addiction disorder. In other words, the use of the Internet could be pathological whether the time and energy spent in Internet affect on people life (Campanella et al. 2015, Schimmenti et al. in press). DSM 5 (APA 2013) acknowledged Internet Gaming Disorder as a condition that necessitates additional study and describes it as a ''persistent and recurrent use of the Internet to engage in games, often with other players, leading to significant impairment or distress'' (p. 795). Internet addiction disorder (IAD) is defined as a compulsive behavior disorder, characterized by the absence of substance abuse, which compromises the normal living functions (Young 2009). Symptoms of Internet addiction generally include excessive preoccupation with the Internet, recurring thoughts about limiting and controlling use of the Internet, inability to eliminate cravings for Internet access, continued use of the Internet despite impaired functioning in various domains, spending increasingly more time on the Internet, and experiencing and cravings for the Internet even when it is unavailable (Young 2009). IAD could develop selectively towards some maladaptive Internet behaviors, i.e. Internet Related Psychopathology (Cantelmi and Talli 2009) such as Compulsive Online Gambling, Cybersexual Addiction, MUD's Addiction and Information Overload Addiction (Schimmenti et al. 2014). All these disorders have been considered new addictions (Griffiths 1995). The IAD could be dangerous not only for its direct implication, but also because of the presence of concurrent with psychiatric pathologies and drugs abuse. In particular several studies about the relation between IAD and dissociation disturb showed that people with dissociation, search a shelter in the Web in order to escape from the reality which is seen as dangerous and inhospitable (Coutinho et al. 2010). Furthermore, Internet could provide anonymity and false identity, which allow fragile Egos to avoid direct contacts with others. These tools act as reinforces toward the usage of Internet, and promote the creation of new personal reality on the net. Internet became a place to live, spend an increasing number of hours and make all kind of relationship, in other word a substitute for the real world (Cantelmi 2013).

IAD has some differences and some similarities with substance abuse disorder. On the contrary to substance abuse disorder that is a physic addiction, in IAD there is only a psychological addiction, i.e. the people search in Internet a ''mental refuge'' (Ferraro et al. 2007, Schimmenti and Caretti 2010). IAD and

substance abuse disorder share behavioral dominance, mood alteration, tolerance, abstinence and conflicts. Therefore, as such as substance abuse disorder, also IAD may be a true psychosocial phenomenon with deep impact on psychological health and on society (Marazziti et al. 2014). Despite this assumption, a meta-analysis (Huang 2010) showed that the relations between Internet use and several issues of psychological health, including depression, loneliness, self-esteem, and life satisfaction, were insignificant or inconsistent. Therefore, in the last years some research (e.g. Junghyun and Jong-Eun 2011, Caso 2015) tempted to consider more aspects of human life, including psychosocial well-being. In line with the World Health Organization psychosocial well-being can be defined as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO 2004 p. 12). There are two path of research about the psychosocial well-being: Hedonic tradition concerns individual happiness and pleasure, while Eudaimonic tradition focus on psychological functions and social life (Waterman 1993). Keyes (1998, 2002) proposed a model in order to integrate these two research approaches, suggesting three-dimensions of psychosocial well-being: Emotional, psychological, and social well-being. In line with hedonic tradition, emotional well-being is referred to experience of pleasant emotions and of happiness in the daily life. In line with eudaimonic tradition, social well-being is referred to the functioning in social world and to personal contribute to the society, while psychological well-being is referred to satisfaction with human relations, autonomy and self-achievement, and in general with own life. Emotional, psychological, and social well-being contribute to the correct function of an organism.

## Aims and hypotheses

The present study aims to analyze the relationship between internet use and psychosocial well-being. A recent research carried out on Italian teenagers (Caso 2015) showed that Internet use was negatively correlated to emotional and psychological well-being; no relationship was founded with social well-being. Firstly, present study intends to extend previous results to adult sample and to investigate the effect of internet use on psychosocial well-being. Therefore:

H1: Internet use will have a negative effect on emotional (H1a) and psychological (H1b) well-being.

Furthermore, in according to Tonioni et al. (2011) an excessive internet use can be more detrimental for psychosocial well-being. Therefore:

H2: Users at risk of IAD will have lower scores of emotional (H2a) and psychological (H2b) well-being than users not at risk of IAD.

## Method

### Participants and procedure

Participants were selected via a snowball procedure,

beginning with people known to the researchers. Questionnaires were collected via computer assisted web interviewing (CAWI) through an online platform. After completion of the questionnaire, to each participant was asked to recommend other people. Participants were asked to volunteer for a survey on internet use and anonymity was guaranteed.

The sample was composed of 172 Italian adults, 50% male (N=86) and 50% female (N=86). The average age of the participants was 26.72 years old ($SD = 8.90$), ranging from 18 to 63. The majority of participants (59.3%) were students, 31.4% were workers and 9.3% were unemployed. With respect to cut off of Internet Addiction Test (Young 1998), 82% are not at risk of IAD and 18% are at risk of IAD; therefore, no participant have a internet addiction disorder.

### Measure

Internet addiction disorder was measured through Internet Addiction Test (IAT) developed by Young (1998). This test was composed from 20 items on a 5-point scale from 1 (*never*) to 5 (*always*). A sample item was: *How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?* In the present study the Cronbach's alpha was $\alpha = .89$.

Psychosocial well-being was measured through the Italian version of the Mental Health Continuum-Short Form (Petrillo et al. 2014). This test was composed from 13 items on a 5-point scale from 1 (*never*) to 5 (*every day*). According to the Keys' model, this questionnaire asked how often the respondent felt some events referring to: emotional well-being (items from 1 to 3; sample item: *Interested in life*); social well-being (items from 4 to 8; sample item: *That you had something important to contribute to society*); psychological well-being (items from 9 to 14; sample item: *That you had experiences that challenged you to grow and become a better person*). In the present study the Cronbach's alpha was $\alpha = .86$ for emotional well-being, $\alpha = .76$ for social well-being and $\alpha = .91$ psychological well-being.

## Results

In order to test the negative effect of Internet use on psychosocial well-being, a structural equation model with latent and observed variables was performed, by M-PLUS 7.3. The latent variables were Internet use (predictor), and emotional and psychological well-being (criteria). The observed variables were each item measuring of the latent variables; in order to solve the problem of the model identification (Byrne 1998), the 20 items of IAT was reduced in three parcels, i.e. item aggregations, in according to suggestions of the recent literature (Callea et al., 2012). Final model was evaluated with the chi-square/df statistic, that suggest a good fit whether is lower than 3, and with the following fit indices: the comparative fit index (CFI) and the non-normed fit index (NNFI) that suggest a good fit whether they are higher than 0.90; the root mean squared error of approximation (RMSEA) and the standardized root mean square residual (SRMR) that suggest a good fit whether they are lower than 0.08.

**Figure 1.** *Effects of Internet use on Psychosocial well-being*
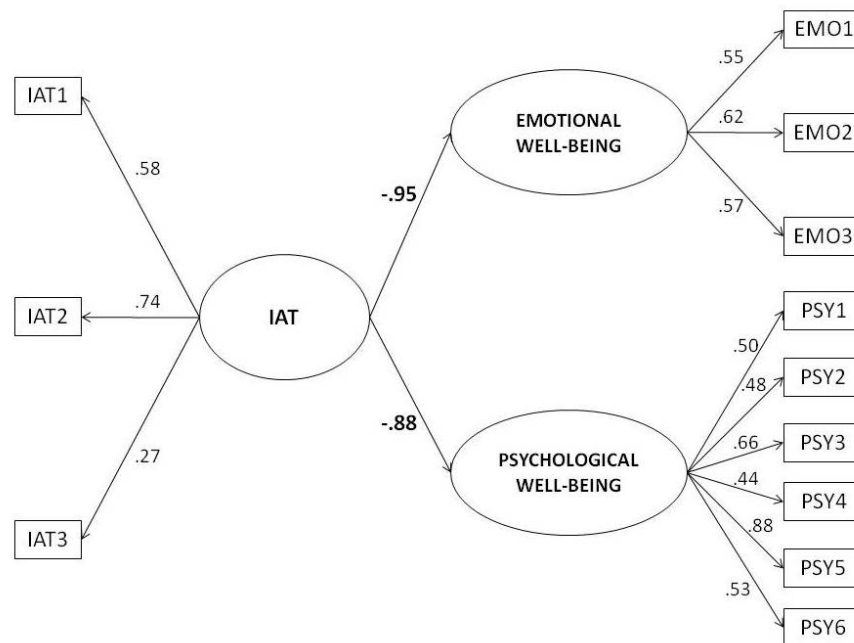


IAT1-IAT3 are parcels of IAT; EMO1-EMO3 are items of emotional well-being; PSY1-PSY6 are items of psychological well-being.

The model showed a good overall fit ($\chi^2$ / df = 1.74; *NNFI* =.90; *CFI* =.92; *RMSEA* = .06; *SRMR* = .06), suggesting that it explaining the relationship between IAT and psychosocial well-being. In particular, the standardized effects of IAT on emotional (-.95, *p* < .001) and psychological well-being (-.88, *p* < .001) were negative and significant, supporting H1a and H1b.

In order to test significant differences between users at risk and users not at risk of IAD a series of *t*-test for independent samples was carried out, using a 0.05 criterion for statistical significance. **table 1** reports the descriptive statistics of users at risk and users not at risk of IAD, *t*-values, degrees of freedom and *p*-values.

Internet use and psychosocial well-being on an adult sample, showing that the Internet use may compromise on Emotional and Psychological dimension of well-being. Damaging two dimensions of psychological well-being, this behaviour creates difficulties and discomforts in everyday life. Secondly, the growing number of hours that people spend on the net should push the development of new criteria of evaluation of this disease, in particular considering that the new generations, born after 2000th, called "Digital Natives" have a different kind of relation with technology (Cantelmi 2013).

As regards to the social implications, a major

**Table 1.** *Student's t tests and descriptive statistics of men and women*

|  | Mean | SD | *t* | df | *p* |
|---|---|---|---|---|---|
| Emotional well-being | 7.77 (9.61) | 3.61 (3.54) | 2.61 | 170 | 0.01 |
| Social well-being | 8.13 (9.90) | 4.08 (5.59) | 1.66 | 170 | 0.10 |
| Psychological well-being | 17.45 (20.30) | 7.43 (7.26) | 1.97 | 170 | 0.05 |

In Mean and in SD: without parenthesis users at risk of IAD (N=31), in parenthesis users not at risk of IAD values (N=141)

The results of independent *t*-tests showed that users at risk have lower scores of emotional and psychological well-being than users not at risk of IAD, supporting H2a and H2b. In line with previous research, there was not any difference between users at risk and users not at risk of IAD with respect to social well-being.

Discussions

The present study contributes to previous literature about Internet use in several ways, with theoretical, social and clinical implications.

As regards to the theoretical implications, firstly for the first time it focused on the relation between

knowledge about the use and abuse of the internet can help several professionals, as educators, psychologists and psychiatrists, to promote social interventions, including campaigns of sensibilization about the risks of Internet use especially in schools.

As regards to the clinical implications, the present study suggests the importance to intervene preventively on people that spend a lot of them time in Internet. Furthermore, the consciousness of the impact of the Internet use on Emotional and Psychological well-being could be an important signal to the development of specific treatments in order to avoid not only the insurgence of psychopathological diseases but also the deterioration of quality of life.

Anyway this research has some limitations that need to be discussed and addressed. First, the gap in literature about the relationship between Internet use and psychosocial well-being had not allowed suggesting several specific hypotheses; consequently, further studies should be addressed to clarify these relationships, also considering other variables of personnel well-being, such as life satisfaction, quality of human relations and family support. Moreover, the self-reported data were another limitation because people may not perceive themselves accurately. However, perceptions of internet use and psychosocial well-being are highly subjective and a self-report measure seems more appropriate. Another weakness is that participants were not selected by means of a probabilistic procedure and sample size was not very large; these shortcomings may undermine the generalizability of the findings to the total population. Therefore, further research on large samples are necessary, promoting the sample diversification through other sampling methodologies in addition to CAWI. Finally, the present study has not considered the use of the internet of participants (i.e., reasons for Internet use; time spent per day or per week; use of the internet in mobile devices). Further studies also may consider these important topics that may affect the relationship between Internet use and psychosocial well-being.

In conclusion, although the limitations and the exploratory nature of the present study suggest that other studies are necessary to investigate the effect of Internet use of psychosocial well-being, these results can open an important new research field because today the Internet use is constantly growing.

## References

American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders, 5th ed*. American Psychiatric Association, Washington, DC.

Byrne B (1998). *Structural Equation Modeling With Lisrel, Prelis, And Simplis: Basic Concepts, Applications and Programming*. Routledge, Hardcover.

Callea A, Urbini F, Bucknor D (2012). Temporary employment in Italy and its consequences on gender. *Gender in Management: An International Journal* 27, 380-394.

Campanella M, Mucci F, Baroni S, Nardi L Marazziti D (2015). Prevalence of internet addiction: A pilot study in a group of Italian high-school students. *Clinical Neuropsychiatry* 12, 90-93.

Cantelmi T (2013). *Tecnoliquidità: La psicologia ai tempi di internet: la mente tecnoliquida*. San Paolo, Cinisello Balsamo.

Cantelmi T, Talli M (1998). Internet addiction disorder. *Psicologia contemporanea* 150, 4-11.

Cantelmi T, Talli M (2009). Trapped in the web: the psychopathology of cyberspace. *Journal of Cybertherapy & Rehabilitation* 4, 337-350.

Caretti V, La Barbera D (2005). *Le dipendenze patologiche: Clinica e psicopatologia*. Raffaello Cortina, Milano.

Caso D (2015). L'uso del benessere psicosociale in adolescenza: uno studio correlazionale. *Psicologia della salute* 2, 141-155.

Coutinho G, Mattos P, Miele F, Borgers M (2010). The cognitive profile and different presentation of internet addiction in teenagers: two case reports. *Clinical Neuropsychiatry* 7, 164-169.

Ferraro G, Caci B, D'Amico A, Di Blasi M (2007). Internet Addiction Disorder: An Italian Study. *Cyberpsychology & Behavior* 10, 170-175.

Griffiths M (1996). Technological addictions. *Clinical psychology forum,* 161-162 .

Huang C (2010). Internet use and psychological well–being: a meta–analysis. *Cyberpsychology Behavior and Social Networking* 13, 241–249.

Junghyun K, Jong–Eun RL (2011). The Facebook Paths to Happiness: Effects of the Number of Facebook Friends and Self–Presentation on Subjective Well–Being. *Cyberpsychology, Behavior, and Social Networking* 14, 259-266.

Keyes CLM (1998). Social well–being. *Social Psychology Quarterly* 61, 121-140.

Lamer SMA, Westerhof GJ, Bohlmeijer ET, Kloster PMT, Keyes CLM (2011). Evaluating the psychometric properties of the mental health continuum–short form (MHC–SF). *Journal of Clinical Psychology* 67, 1, 99-110.

Marazziti D, Presta S, Baroni S, Silvestri S, Dell'Osso L (2014). Behavioral addictions: A novel challenge for psychopharmacology. *CNS Spectrums* 19, 486-495.

Perella R, Caviglia G (2014). *Dipendenza da internet: Adolescenti e adulti*. Maggioli Editore, Santarcangelo di Romagna.

Petrillo G, Capone V, Caso D, Keyes CLM (2014). The mental health continuum–short form (MHC–SF) as a measure of well–being in the Italian context. *Social Indicators Research* 1-22.

Schimmenti A, Caretti V (2010). Psychic retreats or psychic pits? Unbearable states of mind and technological addiction. *Psychoanalytic Psychology* 27, 115-132.

Schimmenti A, Caretti V, La Barbera D (2014). Internet gaming disorder or internet addiction? A plea for conceptual clarity. *Clinical Neuropsychiatry* 11, 145-146.

Schimmenti A, Passanisi A, Caretti C, La Marca L, Granirei A, Iacolino C, Gervasi AM, Maganuco NR, Billieux J (in press). Traumatic Experiences, Alexithymia, and Internet Addiction Symptoms Among Late Adolescents: A Moderated Mediation Analysis. *Addictive Behaviors*. doi: 10.1016/j.addbeh.2015.11.002

Waterman AS (1993). Two conception of happiness: contrast of personal expressiveness (heudaimonia). and hedonic enjoyment. *Journal of Personality and Social Psychology* 64, 4, 678-691.

World Health Organization (2004). *Promoting mental health: Concepts, emerging evidence, practice*. (Summary Report. WHO, Geneva).

Young KS (1996). Internet addiction: the emergence of a new clinical disorder. *Cyberpsychology and Behavior* 1, 237-244.

Young KS (1998). *Caught in the net: How to recognize the signs of internet addiction and a winning strategy for recovery*. John Wiley & Sons, New York.

Young KS (2004). Internet addiction: A new clinical phenomena and its consequences. *American Behavioral Scientist* 48, 4, 402-415.

Young KS (2009). Internet addiction: diagnosis and treatment considerations. *Journal of Contemporary Psychotherapy* 39, 241-246.