



# SOCIAL MEDIA

*and mental health of young people*

This document is published by the **CONFIDENT** Consortium,  
formed by three organisations:

The COmbating the Negative influence of social meDia on mENTAL health (*CONFIDENT*) project has received funding from the **Spanish National Agency of the Erasmus+ Programme under the Grant Agreement 2021-1-ES02-KA220-YOU-000028816**.

The main aim of the CONFIDENT project is to provide a system supporting young people through youth work to work on changing their self-image. In order to work towards achieving this aim, the CONFIDENT project will follow these objectives:

- *Raise awareness about the negative impact of social media on young people's mental health*
- *To define the correlation between social media and youth mental health*
- *To train youth educators for combating the negative impact of social media*
- *To promote a healthier approach to communicating online*
- *To create a digital space where young people can learn about the negative influence of social media and share experiences and knowledge*



Co-funded by the  
Erasmus+ Programme  
of the European Union

Authors of this Scientific Literature Review: Experts from BACKSLASH and CONNECT International

Reproduction is authorised when the source is acknowledged.

This document reflects the views only of the authors and the European Commission or the funding National Agency cannot be held responsible for any use which may be made of the information contained therein.



# TABLE OF CONTENTS

Introduction	5
What draws adolescents to the world of the Internet?	11
The online disinhibition effect	17
Internet addiction	23
Prevalence estimates and etiologic models of Internet addiction	24
FoMO	28
A cognitive-behavioral model of pathological Internet use	31
Risk factors of Internet addiction and the health effect of Internet addiction on adolescents	33
Body image, body disturbance, eating disorders and the relationship to adolescent media use	36
Media messages about appearance	37
The Internet and body image disturbance	39





The effect of Instagram photos on body image in adolescent girls	42
Ways to improve the relationship among media use, body image, and eating disorders	44
Internet addiction and depression among young people	45
Relationship between youth bullying and Internet addiction	47
Internet addiction and problematic mobile phone use	51
Cybersex addiction and compulsivity	55
TikTok and mental health of young people: positive and negative impacts	58
Working with adolescents addicted to the Internet, prevention, treatment and how should parents be involved	61
Conclusions	72
References	74
Interactive Literature Map	82



# INTRODUCTION

“Being *a* digital native may have long-term consequences related *to* learning how *to* read.”

---

JASON MERKOSKI, BURNING THE PAGE:  
THE EBOOK REVOLUTION AND THE FUTURE OF READING

♥ 829 likes

The World has gone online. Especially since the COVID-19 pandemic, even more so. One of the most important features of modern society is the growing impact of online communication tools and growing dependence. This impact is strongly felt on young people, often referred as digital natives. The immersive and interactive qualities of the virtual medium, combined with its sheer penetration into every aspect of life, make it different from all media forms that preceded it. As we instant message, e-mail, text, and Twitter, technology redraws the boundaries between intimacy and solitude. Teenagers avoid making telephone calls, fearful that they “reveal too much.” They would rather text than talk. Adults, too, choose keyboards over the human voice. It is more efficient, they say. Things that happen in “real



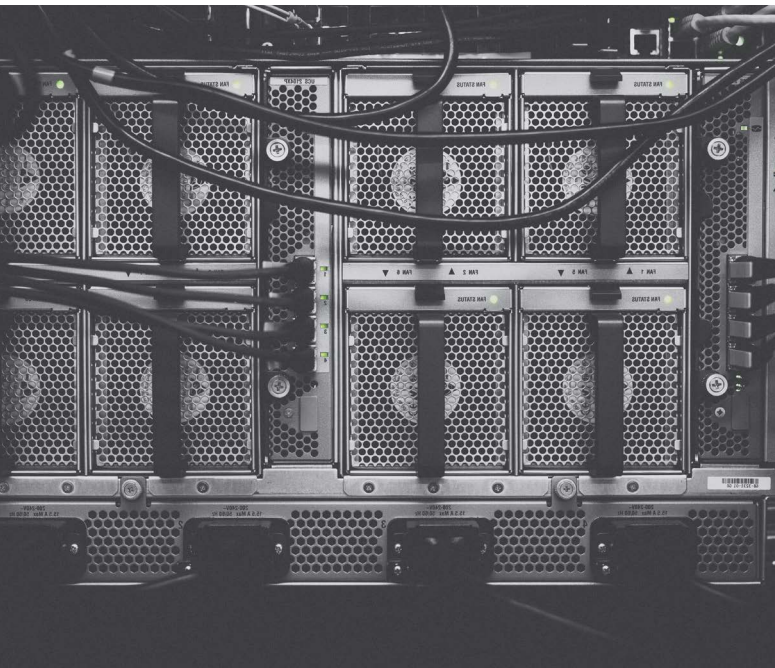
time” take too much time. Zoom has taken over the real life meetings. We are shaken when that world “unplugged” does not signify, does not satisfy. After an evening of avatar-to-avatar talk in a networked game, we feel, at one moment, in possession of a full social life and, in the next, curiously isolated, in tenuous complicity with strangers. (*Turkle, 2011*).

When we talk about technological connectivity through Internet, digital social media, we have keep in mind that these tools are not so easily accessible to all. Mary Chayko, a sociologist, in her book: “Superconnected: The Internet, Digital Media, and Techno-Social Life” (*Chayko, 2016*), says that half of the world population, 3,9 billion people, or 52% doesn't have proper access to the Internet. People without access to Internet mainly live in isolated, rural areas, usually of low income, old, illiterate and very often women. Small percentage of those are offline by their own choice. Global Internet Users statistics show that in 2020, 71 per cent of the world's youth (*aged between 15 and 24 years*) were using the Internet, compared with 57 per cent of the other age groups.



From the very beginning, networked technologies designed to share practical information were taken up as technologies of relationship. The Internet in the last 20 years has grown exponentially. By the mid-1990s, the Internet throbbed with new social worlds. There were chat rooms and bulletin boards and MUDs. Soon after came massively multiplayer online roleplaying games such as Ultima 2 and EverQuest, the precursors of game worlds such as World of Warcraft. Today, between 45 and 95% of adolescents across the USA, Europe, and Southeast Asia report having their own smartphones with many reporting being online “constantly” and not being able to go more than a day without accessing their smartphone (Anderson and Jiang, 2018).

Moreover, the age of smartphone ownership continues to go lower, now approximating age 10 years in some countries. Rooted in variable ratio, partial reinforcement programming, they are designed to encourage users to sustain a high level of connectivity. For example, a user’s behavior is reinforced by the number of “likes,” “dislikes,” “shares,” or “comments” an online post receives by others or awards and penalties meted out in online games. Research findings support that online engagement influences a youth’s developing sense of self and peer relations, for better or worse (Ves-sey, 2022). One of the most popular apps for youth on social media TikTok, started in 2016, and has generated a modern trend among teenagers and permits users to make and share short 15 to 60-second short video and lets them choose songs, effects, or soundbites (Abdul Jaffar et al., 2019).



“  
*From the very beginning, networked technologies designed to share practical information were taken up as technologies of relationship.*

Sherry Turkle (2011) pointed out that online connections were first conceived as a substitute for face-to-face contact, when the latter was for some reason impractical: Don't have time to make a phone call? Shoot off a text message. But very quickly, the text message became the connection of choice. We discovered the network - the world of connectivity - to be uniquely suited to the overworked and overscheduled life it makes possible. And now we look to the network to defend us against loneliness even as we use it to control the intensity of our connections.

Kimberly Young was the first to bring clinical attention to Internet addiction when she published case report of problematic Internet use (Young, 1996). Since that report, an informative body of data originating in the East and West has accumulated over the past decades. The data tell a tale of the Internet's

real potential to cause psychological harm. Research studies have documented a variety of subtypes of Internet-related problems such as online sexual compulsivity, Internet gambling, Facebook addiction, and video game addiction, which the American Medical Association estimates five million children suffer from and once considered calling gaming overuse an addiction in its revised diagnostic manual (Young and Nabuco de Abreu, 2011).

It has to be stressed out that the Internet addiction among young people has increased exponentially during the COVID-19 pandemic along with interpersonal violence and various mental health issues (Lin, 2020).

“ *Very quickly, the text message became the connection of choice.* ”





For a medium that has so radically and irreversibly changed the way we conduct our lives, the Internet's effects on our psychological health remain understudied. It is actually still unknown to what extent the associations between environmental factors and mental disorders are explained by causal processes, in which the environmental risk factor directly increases the risk for psychopathology, or by other processes such as, for example, gene-environment correlation, where the

same genetic variants that influence a child's risk for a mental disorder are associated with the child's risk to be exposed to an unfavourable environment (Rajula et al., 2022). Internet psychology shows that symptoms are changing as the technology evolves - from traditional browsers to smart phones that combine Internet capability with talking, texting, and video games. This field is rapidly developing with new areas of scientific exploration.



This literature review: "Social media and mental health of young people" provides a theoretical framework to understand how to define and conceptualize connections between social media and mental health of young people. The review includes various theoretical models from the psychiatric, psychological, communication, and sociological fields. Leading researchers from various countries explore the global and cultural impact.

John Suler's research on what draws adolescents to the world of the Internet (Suler, 1998) and the online disinhibition effect (Suler, 2004) would be presented first. John Suler's work was a pioneering one in the field of online communication which was just developing at the time, and gave a great impetus for all future theoreticians and researchers.



Following are the Chapters about the Internet addiction and the health effect of Internet addiction on adolescents:

- Prevalence estimates and etiologic models of Internet addiction;
- FoMO
- A cognitivebehavioral model of pathological Internet use;
- Risk factors of Internet addiction and the health effect of Internet addiction on adolescents;
- Body image, body disturbance, eating disorders and the relationship to adolescent media use;
- Internet addiction and depression on among young people;
- Relationship between youth bullying and Internet addiction;
- Internet addiction and problematic mobile phone use;
- Cybersex addiction and compulsivity on youth;
- TikTok and mental health of young people: positive and negative impacts.

Last chapter in this literature review: **“Social media and mental health of young people”** would be dedicated to the important topic of working with adolescents addicted to the Internet, prevention, treatment and how should parents be involved, with more focus on the research of Sherry Turkle, Jean Twenge and Michel Desmurget<sup>1</sup>, since the impact their

work made in the field of Psychology of Internet and Sociology of the Internet. Their focus is particularly on the young people, and they give a very holistic picture of the cyberspace today. Through their work they send a warning to all adults, parents, professors, educators, and to the general public as a whole.

---

<sup>1</sup> **Sherry Turkle**, PhD, is a clinical psychologist and a professor of the sociology of science at the Massachusetts Institute of Technology. She has focused her research on psychoanalysis and culture and on the psychology of people's relationship with computer technology and computer addiction. Book: Turkle, S. (2011). *Alone together: why we expect more from technology and less from each other*. New York: Basic Books.

**Jean Twenge**, PhD, Professor of Psychology at San Diego State University. Book: Twenge, J. (2017). *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy and Completely Unprepared for Adulthood*. New York, NY: Atria.

**Michel Desmurget**, who holds a PhD in Neuroscience and is Director of Research at INSERM. Book: Desmurget, M. (2019). *La fabrique du crétin digital. Les dangers des écrans pour nos enfants*, Belin: Éditions du Seuil.

# WHAT DRAWS ADOLESCENTS TO THE WORLD OF THE INTERNET?



In the article named: **“Adolescents in cyberspace: The good, the bad, and the ugly”** John Suler (Suler, 1998) asks few basic questions about cyberspace. What draws adolescents to the world of the Internet? What are the benefits and dangers of their exploring this new realm that may very well become a cornerstone of the new millennium into which they will grow as adults? To answer these questions, let’s first consider some of the underlying, interlocking needs and motives of the adolescent.

## *Identity experimentation and exploration*

Adolescents are grappling with who they are. Actually, we all are, but for adolescents on the verge of leaving home and establishing their own life, it's a particularly intense issue. Every day we carry with us a tool that provides unlimited social, creative, and entertainment possibilities. Activities facilitated by our smartphones have always been central to the developmental goals of adolescents—

as young people move toward their peers as their primary social support system, their phones provide constant connection to their friends as well as access to the popular media that often defines and shapes youth culture (Bickham, 2021). What do I want to do with my life? What kind of relationships do I want? These are heavy-duty questions... and some of the answers can be found in cyberspace.



## *Intimacy and belonging*

During adolescence, humans experiment intensely with new intimate relationships, especially sexual relationships. They look for comrades and new groups where they can feel a sense of belonging. All these relationships become a big part of exploring

one's own identity. On the Internet, there is an almost limitless array of people and groups to interact with - all kinds of people and groups with all kinds of personalities, backgrounds, values, and interests.

## *Separation from parents and family*

The adolescents' search for their own identity, relationships, and groups goes hand-in-hand with their drive to separate from their parents. They want to be independent, to do their own thing. It's an exciting process, and cyberspace is an exciting place to fulfill those needs of a pioneering, adventurous spirit. On the other hand, adolescents also are a bit anxious about the separation/individuation process. The fascinating thing about the Internet - and perhaps one of the reasons why it is so enticing to some adolescents - is that it neatly takes care of this ambivalence.



## *Venting frustrations*

The teen years certainly can be a difficult and frustrating period of life. What do you do with all frustrations, including the sexual and aggressive ones? You need to vent it somewhere. Welcome to the anonymous, easy to click-in-and-out world of cyberspace!

## *Know-how acquiring new skills*

All adolescents will need to feel comfortable with computers in order to survive in the new millennium. The skill-building goes beyond the computer itself. Designing a good web page or blog, for example, requires skills in graphics, page layout, and writing. It's creative as well as technical. On the other hand, some teachers may be horrified at the seemingly mutated spelling and grammar of email and especially instant messaging. That's because the extremely abbreviated and slang-driven style of instant messaging is a new language that makes conversing efficient, as well as enhances the teen's identity as a member of a unique group with a unique language.

## *In the know: Finding information*



One way adolescents establish their own individual identity is by acquiring new facts and philosophies, which includes the skills that may develop from that information. One attractive feature of the Internet for teens is that there are no holds barred on the information out there. Many areas of cyberspace are minimally controlled by the government, school, parents, and adults in general. Exploring that information can satisfy that need to feel separate and unique from one's parents. Perhaps the positive aspect is that adolescents are placed in the position of deciding for themselves what is good information, and what isn't. They have to learn how to search for the information they want.

Man has lived with a sense of wonder since his existence, and he has maintained this feeling as a situation that affects his life most deeply. Although this sense of curiosity has always taken humanity one step further, the curiosity of individuals in other lives has in some cases led to bad results. Although this sense of curiosity about other people was eliminated up to a certain point in the periods when technology was not developed that much, this sense of curiosity has increased and started to be eliminated more and more with the introduction of technological tools into every aspect of people's lives. In order to meet this need, individuals are constantly connected to social networks and constantly use their smart phones to learn the pages, updates and shares of the people they follow and to satisfy this curiosity (Yang et al. 2021).

## *Getting worldly wise*

Cyberspace offers the opportunity for adolescents to meet others of their kind from around the world. Cross-cultural discussions and debates are common. Comparing school and family life, culture, and national politics with these other kids becomes an intriguing aspect of the relationship.

## *Exploring social skills and personal identity*

Adolescence is the period of personal and social identity formation (Keles, 2020), and much of this development is now reliant on social media. Due to their limited capacity for self-regulation and their vulnerability to peer pressure, adolescents may not evade the potentially adverse effects of social media use, and consequently, they are at greater risk of developing mental disorder. However, evidence on the influence of social media on adolescents' psychosocial development remains at an early stage of development. Much of the research to date has studied young people of later adolescence and college or university students. Adolescents will be encountering people of various ages and cultural backgrounds, so they have the opportunity to learn how to relate to a wide variety of people. Under optimal conditions, those skills may carry over to their in-person life. Cyberspace offers all sorts of



opportunities for adolescents to satisfy that need to express, explore, and experiment with their identity. Building an online profile or personal web page also is a great exercise in figuring out who you are by what you want to reveal about yourself. In online fantasy worlds and games, teens experiment with all sorts of imaginative identities that express their hidden wishes, needs, and fears. Under less than ideal conditions, the online personae simply become another way to ventilate the frustrations and conflicts of their real lives, without any personal insight or change. One significant difference between online and offline conversations is that some of the awkwardness of interacting face-to-face and in-the-moment with their peers, especially for younger teens, is a bit tempered, which results in them opening up a bit more when online.

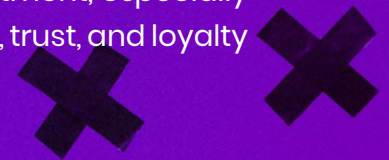
More so than anything else, adolescents are

drawn to cyberspace because they make friends there. Just being online automatically makes you part of the in-crowd. Once again, there's a down side. Teens may join online groups: radical political groups, Satanic cults, online «orgies.» Of course, these groups exist in the real world too. It's just a lot easier to participate in them when you're sitting at the computer. The more common pitfall of online friendships and cliques is that they can be somewhat artificial, shallow, and transient. Cyberspace may seem so surreal, so much like a fantasy inside your head. To the adolescent craving for a group of good friends, it can be heartbreaking when those pals unexpectedly and unexplainably change their «tune,» withdraw, or disappear completely. With just a click, you're gone, almost without leaving any traces behind.



## *Cybersex*

Some parents may think that the anonymity of cybersex is wrong - that it is superficial, artificial, unnatural - or that sex in any form is inappropriate for adolescents. Others may think that adolescents are going to experiment with sex no matter what adults do, so why not permit them to satisfy their sexual interests and learn about sex via cyberspace encounters? This sometimes shallow and transient quality of online relationships doesn't apply in all cases. People do find and keep good friends in cyberspace. But artificial best buddies do appear often enough to be a very problematic disappointment, especially to adolescents who are so sensitized to issues about intimacy, trust, and loyalty and sex as such.





---



# THE ONLINE DISINHIBITION EFFECT

When understanding specificities of the online communication it is important to understand the online disinhibition effect. This effect is the lack of restraint one feels when communicating online in comparison to communicating in-person. Suler (2004) says that the online disinhibition effect can work in two seemingly opposing directions. Sometimes people share very personal things about themselves. They reveal secret

emotions, fears, wishes. They show unusual acts of kindness and generosity to help others. We may call this *benign disinhibition*. However, the disinhibition is not always so salutary. We witness rude language, harsh criticisms, anger, hatred, even threats. Or people visit the dark underworld of the Internet - places of pornography, crime, and violence - territory they would never explore in the real world. We may call this *toxic disinhibition*.

Some types of benign disinhibition indicate an attempt to better understand and develop oneself, to resolve interpersonal and intrapsychic problems or explore new emotional and experiential dimensions to one's identity. By contrast, toxic disinhibition may simply be a blind catharsis and an acting out of unsavory needs without any personal growth at all. The distinction between benign and toxic disinhibition will be complex or ambiguous in some cases. For example, hostile words in a chat encounter could be a therapeutic breakthrough for some people. In an increasingly intimate e-mail relationship, people may quickly reveal personal information, then later regret their self-disclosures, feeling exposed, vulnerable, or shameful. An excessively rapid, even false intimacy may develop, which later destroys the relationship when one or both people feel overwhelmed, anxious, or disappointed. Also, in the very wide variety of online subcultures, what is considered asocial behavior in one group may be very à propos in another. Cultural relativity will blur any simple contrasts between disinhibition that is positive or negative.

Whether benign, toxic, or a mixture of both, what causes this online disinhibition? What elements of cyberspace lead to this weakening of the psychological barriers that block hidden feelings and needs? At least six factors are involved. For some people, one or two of them produces the lion's share of the disinhibition effect. In most cases, however, these factors intersect and interact with each other, supplement each other, resulting in a more complex, amplified effect.

### *Dissociative anonymity*

As people move around the Internet, others they encounter can't easily determine who they are. Usernames and e-mail addresses may be visible, but this information may not reveal much about a person, especially if the username is contrived and the e-mail address derives from a large Internet service provider. People can hide some or all of their identity. They also can alter their identities. This anonymity is one of the principle factors that creates the disinhibition effect. When people have the opportunity to separate their actions online from their in-person lifestyle and identity, they feel less vulnerable about self-disclosing. Whatever they say or do can't be directly linked to the rest of their lives. In the case of expressed hostilities or other deviant actions, the person can avert responsibility for those behaviors, almost moral cognitive processes have been temporarily suspended from the online psyche. In fact, people might even convince themselves that those online behaviors "aren't me at all."





Online communication differs from face-to-face communication in multiple ways. Because of these differences, there is an ongoing debate regarding whether people disclose their true selves on social media, or whether they present an idealized or socially appropriate version of themselves. Schlosser (2020) points that whereas some features of online communication (*such as anonymity and reduced information richness*) have been argued to increase self-disclosure, there are other features (*such as asynchronicity, multiple audiences, and audience feedback*) that favor self-presentation.

## *Invisibility*

On the Internet, nobody knows you're a dog» is an adage and Internet meme about Internet anonymity which began as a caption to a cartoon drawn by Peter Steiner and published by The New Yorker on July 5, 1993. This invisibility gives people the courage to go places and do things that they otherwise wouldn't. Although this power to be concealed overlaps with anonymity, there are some important differences. Even with everyone's identity known, the opportunity to be physically invisible amplifies the disinhibition effect. People don't have to worry about how they look or sound when they type a message. They don't have to worry about how others look or sound in response to what they say. Seeing a shaking head, a sigh, a bored expression, and many other subtle signs of disapproval or indifference can inhibit what people are willing to express. Avoiding eye contact and face-to-face visibility disinhibits people.

## *Asynchronicity*

In e-mail and message boards, communication is asynchronous. People don't interact with each other in real time. Others may take minutes, hours, days, or even months to reply. Not having to cope with someone's immediate reaction disinhibits people. In a continuous feedback loop that reinforces some behaviors and extinguishes others, moment-by-moment responses from others powerfully shapes the ongoing flow of self-disclosure and behavioral expression, usually in the direction of conforming to social norms. In e-mail and message boards, where there are delays in that feedback, people's train of thought may progress more steadily and quickly towards deeper expressions of benign and toxic disinhibition that avert social norms.

## *Solipsistic introjection*

Absent face-to-face cues combined with text communication can alter self-boundaries. In fact, consciously or unconsciously, a person may even assign a visual image to what he or she thinks the person looks and behaves like. The online friend then becomes a character within one's intra-psyche world, a character shaped partly by how the person actually presents him or herself via text communication, but also by one's internal representational system based on personal expectations, wishes, and needs.

Online text communication can evolve into an introjected psychological tapestry in which a person's mind weaves these fantasy role plays, usually unconsciously and with considerable disinhibition. Cyberspace may become a stage, and we are merely players.



## *Dissociative imagination*

If we combine the opportunity to easily escape or dissociate from what happens online with the psychological process of creating imaginary characters, we get a somewhat different force that magnifies disinhibition. Consciously or unconsciously, people may feel that the imaginary characters they "created" exist in a different space, that one's online persona along with the online others live in an make-believe dimension, separate and apart from the demands and responsibilities of the real world. They split or dissociate online fiction from offline fact.

Under the influence of anonymity, the person may attempt an invisible non-identity, resulting in a reducing and simplifying of self-expression. In dissociative imagination, the expressed but split-off self may evolve greatly in complexity.

## Minimization of status and authority

Even if people do know something about an authority figure's offline status and power, that elevated position may have less of an effect on the person's online presence and influence. In many environments on the Internet, everyone has an equal opportunity to voice him or herself. Everyone - regardless of status, wealth, race, or gender - starts off on a level playing field. Although one's identity in the outside world ultimately may shape power in cyberspace, what mostly

determines the influence on others is one's skill in communicating (*including writing skills*), persistence, the quality of one's ideas, and technical know-how. Online, in what feels more like a peer relationship - with the appearances of authority minimized - people are much more willing to speak out and misbehave. The traditional Internet philosophy holds that everyone is an equal, that the purpose of the net is to share ideas and resources among peers.

## Individual differences and predispositions

Individual differences play an important role. For example, the intensity of a person's underlying feelings, needs, and drive level affect susceptibility to disinhibition. Personality styles also vary greatly in the strength of defence mechanisms and tendencies towards inhibition or expression. The online disinhibition effect will interact with these personality variables, in some cases resulting in a small deviation from the person's baseline (*offline*) behavior, while in other cases causing dramatic changes.



## Shifts among intra-psychic constellations

The fact that some people report being more like their “true self” while online reinforces this conceptual temptation. We may be tempted to conclude that the disinhibition

effect releases deeper aspects of intra-psychic structure, that it unlocks the true needs, emotions, and self attributes that dwell beneath surface personality presentations.

In his final conclusions Suler (2004) stresses out that the disinhibition effect can be understood as the person shifting, while online, to an intra-psychic constellation that may be, in varying degrees, dissociated from the in-person constellation, with inhibiting guilt, anxiety, and related affects as features of the in-person self but not as part of that online self. This constellations model, which is consistent with current clinical theories regarding dissociation and information processing, explains the disinhibition effect as well as other online phenomena, like identity experimentation, role playing, multitasking, and other more subtle shifts in personality expression as someone moves from one online environment to another. In fact, a single disinhibited “online self” probably does not exist at all, but rather a collection of slightly different constellations of affect,

memory, and thought that surface in and interact with different types of online environments. Different modalities of online communication (e.g., e-mail, chat, video) and different environments (e.g., social, vocational, fantasy) may facilitate diverse expressions of self. Each setting allows us to see a different perspective on identity. Neither one is necessarily truer than another.

❤️ 584 likes

# INTERNET ADDICTION

# PREVALENCE ESTIMATES AND ETIOLOGIC MODELS OF INTERNET ADDICTION

Internet addiction statistics for 2022, from the Influencer Marketing Hub, have some stunning data and predictions. According to **2022 Benchmark report**, an estimated 330 million people will potentially suffer from Internet Addiction in 2022, that is 4.88 billion Internet users, 4.44 billion Mobile Internet Users, 4.55 billion active social media users, 2.8 billion Facebook users. This report states that some

teenagers spend up to nine hours per day on social media. Adolescents spend an average 75 Minutes per day on TikTok, and it is also the social app most blocked by parents. Many teens sleep with their phones by the bed.

Because cyberspace can satisfy so many of the adolescent's needs, there is the possibility of becoming «addicted» to it, asked Suler (1998) more than two decades ago. Are all teens susceptible to this danger? He thought, NO. Some will always be casual users; some may just go through phases of intense Internet use. The ones who do fall prey to the net most likely are experiencing problems in their real lives. Cyberspace becomes an escape, a place to vent, a place to act out or even cry out for help. As it was already mentioned, Internet addiction was first researched in 1996. Kimberly Young was the first to bring clinical attention to Internet addiction when she published case report of problematic Internet use (Young, 1996). As Kimberly Young points out in her book «Caught in the Net» (Young, 1998), Internet-obsessed adolescents may

become the «identified patient» in the family.

What are some of the danger signals of excessive Internet use? In her book, Young (1998) identifies several warning signs:

- Denial and lying about the amount of time spent on the computer or about what they are doing on the computer;
- Excessive fatigue and changes in sleeping habits, such as getting up early or staying up late (*in order to spend more time online*);
- Academic problems, usually grades slipping. Sometimes parents might overlook the fact that the computer is the culprit since they assume their children are doing school work at the keyboard;



- Withdrawal from friends and declining interest in hobbies (*online friends and activities are taking the place of the «real» world*);
- Loss of appetite; irritability when cut-off from computer use; a decline in their appearance or hygiene;
- Disobedience and acting out. Teens may become very hostile when parents confront them. They may deliberately break the computer-use rules that are set. Their reactions may be so intense because they feel that they are being cut off from their attachments to cyber friends.

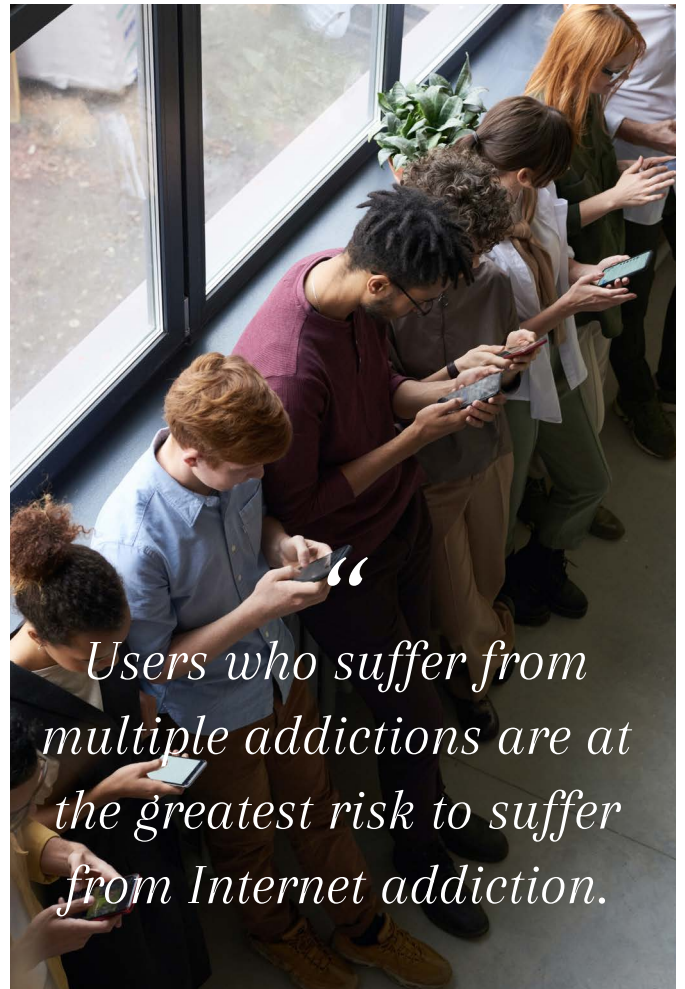
As the problem has become more widespread, little is still understood as to the reasons why people become addicted to the Internet. Among adolescents, a study in Finland investigated the prevalence of Internet addiction among 12- to 18-year-olds. Findings suggested that 4.7% among girls met the definition of Internet addiction as assessed by Young's Internet Addiction Diagnostic Questionnaire (Young, 1998), and of boys 4.6% met the definition (Young et al., 2011). Studies related to the prevalence of specific types of Internet abuse also emerged by the late 1990s. Studies on online sexual activities were the most prevalent, and estimates based on survey data showed that 9% of users fit signs of addiction related to sexually explicit material on the Internet (Cooper, 2002).

In general, Internet addicts have difficulty forming intimate relationships with others and hide behind the anonymity of cyberspace to connect with others in a nonthreatening way. Online, a person can create a social network of new relationships. With routine visits to a particular group (*i.e., a specific chat*

*area, online game, or Facebook*), a person can establish a high degree of familiarity with other group members, thus creating a sense of community. Like all communities, the cyberspace culture has its own set of values, standards, language, signs, and artifacts. Individual users adapt to the current norms of the group. Existing solely online, the group often disregards normal conventions about privacy (*e.g., by posting personal messages to public bulletin boards or chat rooms*); it exists in a parallel time and space and is kept alive only by users connecting with one another via the computer. Once membership in a particular group has been established, Internet addicts rely on the conversation exchange for companionship, advice, understanding, and even romance (Young et al., 2011). The ability to create a virtual community leaves the physical world behind to the degree that well-known, fixed, and visual people no longer exist, and anonymous online users form a meeting of the minds living in a purely text-based society.

Through the exchange of online messages, users compensate for what they may lack in real life (Caplan and High, 2007). They may be able to use chat, instant messaging, or social networking to find psychological meaning and connection, quickly form intimate bonds, and feel emotionally close to others. The formation of such virtual arenas creates a group dynamic of social support to answer a deep and compelling need in people whose real lives are interpersonally impoverished and devoid of intimacy. Some life circumstances, such as being a homebound caretaker, disabled person, retired individual, or homemaker, can limit a person's access to others. In these cases, individuals are more likely to use the Internet as an alternative means to develop the social foundations that are lacking in their immediate environments. In other cases, those who feel socially awkward or who have difficulty developing healthy relationships in real life find that they are able to express themselves more freely and find the companionship and acceptance missing in their lives.

Users who suffer from multiple addictions are at the greatest risk to suffer from Internet addiction. People who have addictive personalities may be more likely to use alcohol, cigarettes, drugs, food, or sex as a way of dealing with problems (Young et al., 2011). They have learned to cope with situational difficulties through addictive behavior, and the Internet seems a convenient, legal, and physically safe distraction from those same real-life problems. In cases where an



“  
*Users who suffer from multiple addictions are at the greatest risk to suffer from Internet addiction.*

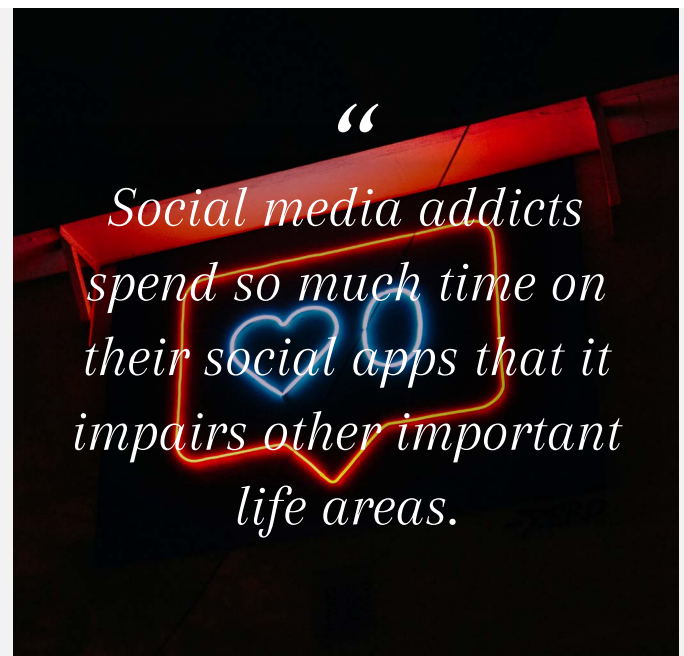
Internet addict also suffers from a sexual or gambling addiction, the Internet serves as a new outlet to engage in sexual or gambling behavior. Sexual compulsives discover a new source for sexual gratification through online pornography and anonymous sex chat. The Internet allows them a way to continue in the sexual behavior without the physical need of visiting strip clubs or prostitutes, and provides a new and socially acceptable way to cope. Those with a history of gambling addiction can visit virtual casinos and poker sites to gamble (Young et al., 2011).

The situational stress, bereavement, recent loss of a job, or striving for academic success, can drive someone to utilize the Internet with greater intensity. Those individuals who use the Internet as a momentary escape or means of coping with situational stress may not initially be addicted to the Internet. However, in cases where the behavior becomes persistent and continuous, online activities can become all-consuming. Behavior adapts to more of a focus on applications that may have initially been

required for recreation, such as a chat room or game. As behavior escalates, online use becomes more chronic and more ingrained and develops into a compulsive obsession. At this stage, life becomes unmanageable for the addict, as relationships or careers. A person is vulnerable to addiction when that person feels a lack of satisfaction in life, an absence of intimacy or strong connections to other people, a lack of self-confidence (Peele, 1985).

Social media addiction is a behavioral addiction characterized as being overly concerned about social media and driven by an uncontrollable urge to log on to or use social media. Social media addicts spend so much time on their social apps that it impairs other important life areas. Social media platforms such as Facebook, Snapchat, and Instagram produce the same neural circuitry caused by gambling and recreational drugs. A constant stream of retweets, likes, and shares affects the brain's reward area and triggers the same kind of chemical reaction as other drugs, such as cocaine. Some neuroscientists have compared social media interaction to a syringe of dopamine being injected straight into the system (Geysler, 2021).

A simple algorithm of addiction criteria that is useful is DIAR which stands for



*Desire to stop, Inability to stop, Attempts to stop, and Relapse* to previous use pattern. This is the pattern we often see with many, if not most, addictions. DIAR is a notable marker for Internet addiction, in addition to tolerance and withdrawal markers.

# FOMO

The intense penetration of social media into people's lives has had a very serious impact on people's lives. With increasing shares, social media addiction has caused users to worry about sharing and missing information. This situation has led to the formation of FoMO - **Fear of Missing Out**, especially in users of the post-90s generation (*Wang et al. 2021*). Cambridge Dictionary (2020) defines FoMO as a state of anxiety that occurs when people are not aware of fun and exciting events

shared by their friends on social platforms. According to Urban Dictionary (2006), FoMO is defined as a kind of anxiety about not being aware of valuable experiences in a social organization or meeting or missing important events shared on social media. According to the Oxford Dictionary (2018), FoMO also is included as the anxiety about missing more interesting or exciting events on social media. On the other hand, FoMO was explained as the feeling of missing the life that others shared on social media and worth seeing, and it is stated that FoMO is associated with unhealthy social media use (*Riordan et al. 2021*).

The online environment constitutes an ideal context to fulfill the need to be connected with the others and to be socially informed despite the distance, satisfying individuals' need for relatedness. For this reason, some studies have focused their attention on the association between FoMO and Internet addiction. However, Internet addiction has been criticized as being an inadequate umbrella term that overlooks important differences between various online activities (Starcevic et al., 2017).

McGinnis (2017) has stated that FoMO can be seen frequently in everyone today, especially in people who grow up in the millennium. According to the author, there may be some symptoms of this condition. These symptoms are:

- Having the desire to do all the attractive activities that the individual sees on social platforms and to go to the places he sees in these environments,
- The individual always follows and controls social media networks,
- Feeling bad when the individual is not aware of any event or activity organized or in which his friends follow on social networks,
- The individual's inability to catch up with people by looking at the experiences and events in the virtual worlds and the feeling of being behind people,
- It can be shown as being influenced by the experiences shared by other people on social media.

In another study, Modzelewski (2020) has described the symptoms of FoMO as follows: not being able to take one's eyes off the phone when crossing the street, in a crowded environment, or when there is nothing left unchecked on a social media account; taking pictures of everything he sees; failing to refuse events or invitations invited by people; constantly checking e-mails, even on vacation; Spending a lot of money on expensive things that others have or have experienced, despite having difficulty in purchasing power. FoMO is one emerging construct that impacts

the ability to set boundaries around sleep (Przybylski, et al, 2013). Preliminary research exploring the prevalence of FoMO found nearly three-quarters of young adults reported they experienced the phenomenon (Alt, 2015). Przybylski et al. (2013) found FoMO is associated with greater Facebook use, and those high in FoMO were more likely to use Facebook immediately after waking in the morning and before falling asleep at night, which may impact the time it takes to fall asleep along with the quality of sleep.

---

*According to Tekayak and Akpınar (2017), there are four most important symptoms of FoMO. These are:*

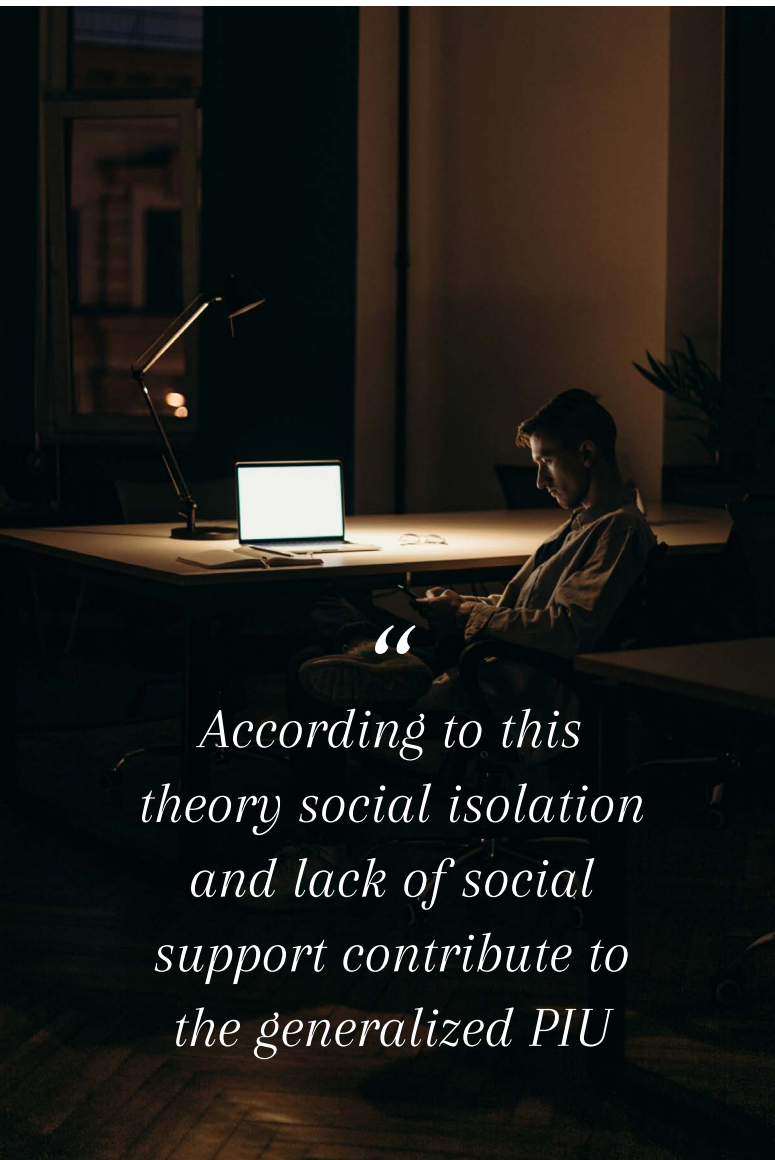


- Feeling of anxiety and nervousness that occurs when social media applications or social media friends cannot be reached,
- Continuous monitoring of who shares what and interacts with in social media applications,
- The individual who cannot follow the social media networks for any reason, looking backwards to the last place she/he looked when she/he had the opportunity,
- It is the feeling of tension that occurs when she/he cannot connect to social media networks, when it reaches access, it is replaced by relaxation or tension is reduced.

# A COGNITIVE-BEHAVIORAL MODEL OF PATHOLOGICAL INTERNET USE

In the article: **“A cognitive-behavioral model of pathological Internet use”** Davis (2001) introduced a cognitive-behavioral theory of Pathological Internet use (PIU).

Davis characterizes PIU as more than a behavioral addiction; instead, he conceptualizes PIU as a distinct pattern of Internet-related cognitions and behaviors that result in negative life outcomes. While previous studies on Internet addiction have described behavioral factors, such as withdrawal and tolerance, the present article focuses on the maladaptive cognitions associated with PIU. The cognitive-behavioral model of PIU distinguishes between specific PIU and generalized PIU. Specific PIU refers to the condition in which an individual pathologically uses the Internet for a particular purpose, such as online sex or online gambling, whereas generalized PIU describes a more global set of behaviors. According to this theory social isolation and lack of social support contribute to the generalized PIU, but not to the specific, the one focused on particular content. Davis points that generalized use of the Internet is more problematic, since people who suffer from that, wouldn't have that problem if there was no Internet, as such, even if they were prone to social isolation or suffered from cognitive disorders. The model implies a more important role of cognitions in PIU, and describes the means by which PIU is both developed and maintained. Furthermore, it provides a framework for the development of cognitive-behavioral interventions for PIU.



“

*According to this theory social isolation and lack of social support contribute to the generalized PIU*

Using a diathesis–stress model, Davis (2001) proposed that the distal cause of IA was the underlying psychopathology (e.g., depression, social anxiety, substance dependence), and the stressor was the introduction of the Internet, suggesting that underlying psychopathology did not in itself result in symptoms of IA but were a necessary element in its etiology. He claimed a key factor in experiencing the Internet and associated new technology is their enforcement an individual receives from the event. He also suggested that stimuli, such as the sound of a computer connecting with an online service the tactile sensation of typing on a keyboard, could result in a conditioned response. Such secondary reinforcers could act as situational cues contributing to the development and maintenance of IA. It seems reasonable to assume that the presence of some psychopathology places

people at increased risk for developing IA. However, more research is needed to identify psychopathology associated with IA. Social-phobia did not predict IA, controlling for depressive disorders and adult ADHD. Furthermore, the distal cause of IA needs to be expanded to include neurobiological and psychosocial antecedents to advance his model. Davis (2001) assumed that the most central factor of the cognitive–behavioral model of IA was the presence of maladaptive cognitions. He classified maladaptive cognitions into two subtypes—thoughts about the self and thoughts about the world—which he viewed as sufficient proximal causes for IA. He further assumed that cognitive distortions such as rumination, self-doubt, low self-efficacy, and negative self-appraisal tended to contribute to, intensify, or maintain IA.



Although many important aspects of the model remain untested, the cognitive–behavioral model proposed by Davis seems to provide a useful framework for developing intervention and prevention programs. Davis suggested that cognitive restructuring should be an essential therapeutic component for intervention in and prevention of IA. The behavioral component of cognitive behavioral therapy (CBT) for IA would include keeping a record of Internet use, thought listing exercises, and exposure therapy.

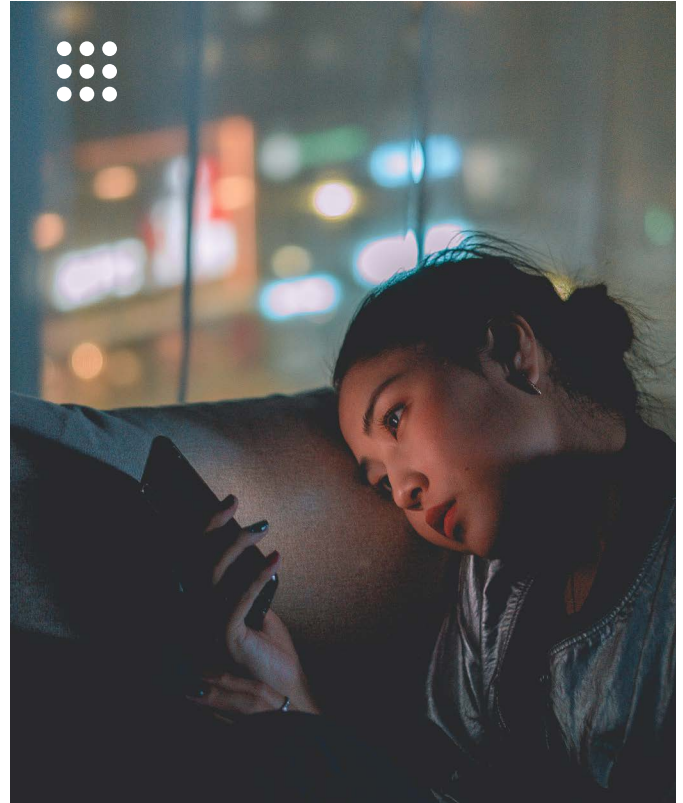


# RISK FACTORS OF INTERNET ADDICTION AND THE HEALTH EFFECT OF INTERNET ADDICTION ON ADOLESCENTS

Talking about the risk factors of Internet addiction and the health effect of this addiction on adolescents, a review of longitudinal and prospective studies done by Lawrence (2014) gives us an adequate review. A systematic review of available longitudinal and prospective studies was conducted to gather epidemiological evidence on risk and protective factors of “Internet Addiction” (IA) and the health effect of IA on adolescents. Many exposure variables were studied and could be broadly classified into three main categories: psychopathologies of the participants, family and parenting factors, and others such as Internet usage, motivation, and academic performance. Some were found to be potential risk or protective factors of IA. It was also found that exposure to IA had a detrimental effect on the mental health of young people.



These results have shed some light on the etiology of the problem as well as the effect of the problem on the health, particularly the mental health, of adolescents. It is apparent that the etiology of IA is rather complex and there are a range of possible risk factors that may influence the onset and the development of the problem. These factors relate to different facets of adolescent life ranging from childhood development and psychopathologies, to communication with parents. These results have also contributed to the understanding and conceptualization of the underlying etiological mechanism of IA. Different conceptual frameworks have been proposed as the theoretical basis for the understanding of IA. Among these theoretical models, stress or anxiety reduction has been proposed as a possible explanatory theory for IA. According to this theory, the motivation for the behavioral maintenance of IA of “over-users” is that the Internet is used as a means for stress or tension reduction. Another theory is the Problem Behavior Theory advocates that there are three main systems: the personality, environment, and the behavioral systems, in the conceptual structure of any problematic behaviors in young people. The propensity of any involvement in problematic behaviors is determined by the balance among risk and protective factors in the three systems. Moreover, the behavior system is also influenced by interactions between the personality and environment systems. A familial and parental factor, such as parental behaviors and attitudes, are the main focus of the environment system,



and risk factors in the personality system include lack of achievement, alienation, and self-dissatisfaction. The results of this review render some support to the Problem Behavior Theory of IA development among adolescents. In conclusion, Lawrence (2014) said that some potential risk and protective factors have been suggested from the included studies. In terms of the effect of IA, there is indicative evidence of the effect of IA on the mental health, particularly depression, of adolescents. The results of the review found that, due to the aforementioned limitations, more similar studies should be conducted to verify the findings of the reported studies in order to provide sufficient evidence for the fulfilment of the validation criteria of a psychiatric disorder (Lawrence, 2014).

Other authors, such as Kandell (1998) states that adolescents particularly risk developing a problematic Internet use (PIU) owing to a mixture of a reduced level of parental monitoring, free access to the Internet and the great availability of free time. The tendency to use the Internet in an uncontrolled way can be connected to certain personal characteristics, like the preference for solitary activities and low social openness or the presence of depressive traits. Adolescents with greater symptoms of PIU perceived themselves as significantly more isolated than those who did not have symptoms. Caplan (2007) verified how the association between loneliness and the negative consequences of Internet use is effectively mediated by the preference for online social interactions, which allows individuals with particular problems in this area to perceive themselves as more secure and more at ease than in traditional face-to-face interactions. But it is not only a question of the individual's self-perception of low social desirability: when the level of social support is perceived as inadequate, a parallel increase in PIU is found.

In this field, some attention was given also to the coping strategies. The importance of coping strategies was underlined by Seepersad (2004), who showed the correspondence between avoidance coping strategies like rumination, for example, and passive-avoidance coping strategies such as visiting entertainment sites (*chat rooms, online games, navigation, etc.*). The objective of research in Italy by Milani and associates (Milani et al., 2009) is to verify in an Italian context the relationship among problematic Internet use (PIU), the quality of interpersonal relationships, and the cognitive strategies habitually used by adolescents to face daily problems. The participants in the research were 98 adolescents ages 14 to 19 ( $M \pm 16.28$  years). The following instruments were administered to the participants: The Internet Addiction Test (IAT), the Test of Interpersonal Relationships (TRI); and the Children's Coping Strategies Checklist (CCSC). Parents of the participants were administered the Child Behavior Checklist (CBCL).

Of the participants, 36.7% showed signs of PIU. These adolescents use the Internet for many hours per week; most utilize dysfunctional coping strategies and show worse interpersonal relations than peers who do not show signs of PIU. Adolescents who use the Internet with the aim of socialization are those more exposed to the development of PIU. The lack of good personal relationships seems to be stably associated with the possibility of developing a problematic behavior in interaction with the new technologies of communication.



# BODY IMAGE, BODY DISTURBANCE, EATING DISORDERS AND THE RELATIONSHIP TO ADOLESCENT MEDIA USE

The construct of body image is multidimensional, and includes cognitive, affective, evaluative, and behavioral aspects of physical appearance. A individual's body image begins to solidify in early adolescence. With Western culture favoring a thin physique, these changes can pull girls farther from the ideal body shape. Puberty does the opposite for boys; adolescent boys experience changes that bring them closer to the cultural ideal of a large, muscular man. These gender differences arise at 13 to 15 years of age, with girls experiencing increased body dissatisfaction and boys experiencing decreased body dissatisfaction (Benowitz-Fredericks et al., 2012). Adolescent girls often derive self-esteem from their physical appearance. Adolescent girls associate thinness with beauty, popularity, and successful dating relationships. Adolescent boys also rate female thinness as an important factor in determining attractiveness and dateability. This scrutiny often leads to feelings of inadequacy in body shape, and increased interaction between genders has been positively associated with body dissatisfaction (Gondoli et al., 2011). Race may also play a role, with studies showing that Caucasian



adolescents report more body dissatisfaction than African American adolescents (Maxwell and Cole, in press). Development and initial validation of the adolescent responses to body dissatisfaction measure. It should be added that a large cross-cultural survey of body image ideals across 26 countries found little difference in ratings of ideal female figure or body dissatisfaction across the different Western countries (Swami et al., 2010). Some adolescents develop dichotomous thinking patterns that can lead to eating disorders. Individuals with this type of thinking believe that higher-order goals, such as happiness, are unattainable without first reaching lower-order goals, such as losing weight (Benowitz-Fredericks et al., 2012).

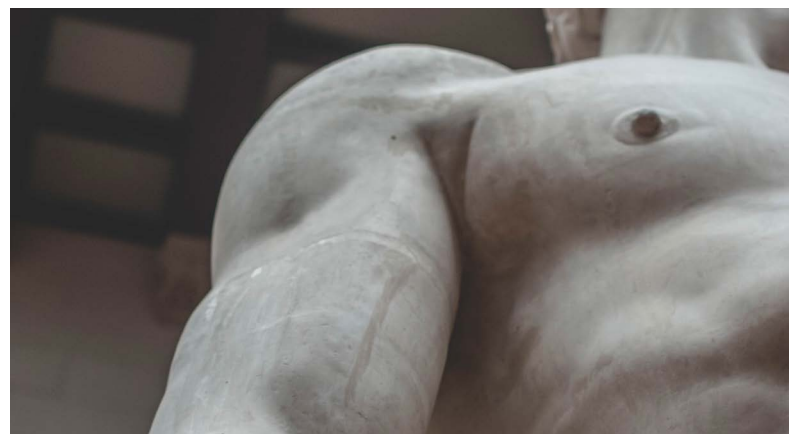
# MEDIA MESSAGES ABOUT APPEARANCE

Messages about body image also differ depending on the magazine's target audience. A magazine targeting African American readers, 76.4% were average weight, and just 5.7% were underweight (*Thopson-Brenner et al., 2011*). Analyses of magazines targeting gay and lesbian readers have found messages about hypermuscularity in the gay men's magazines and more diverse body representations in the lesbian magazines. Gay and bisexual adolescents and college-aged boys may be more vulnerable to media influence on body image, whereas lesbian and bisexual girls may be less (*Carper, 2010*).

In a study of cartoons over 9 decades (*Klein and Shiffman, 2006*), researchers found that body weight and physical attractiveness were inversely related. Female characters were much more likely to be physically attractive than male characters. Overweight characters were three times as likely to be characterized as less smart and less competent than their underweight and normal weight counterparts. Attractive characters were happier and more prosocial. In television programs for preadolescents, lead characters tend to be underweight.

Video game representations seem to offer more realistic body image messages for both genders. For women, female characters

closely resembled the proportions of average fit women, with breast size being the only significant difference. Male characters were not well defined, with less emphasis on muscularity than is found in other media sources (*Benowitz-Fredericks et al., 2012*). An analysis of YouTube has found that videos with fat-stigmatizing content (*in the videos, titles, or commentary*) are often produced by or geared toward Caucasian men. Men were 11.5 times more likely to be aggressors than women, but only 1.7 times more likely to be victims (*Hussin et al., 2011*). The Internet contains easily accessible Web sites focusing on anorexia and bulimia, known as e-Ana and e-Mia Web sites. Interactive features allow users to interact and support each other through poetry and artwork, building a social system for these teens who otherwise struggle to relate to peers. Common messages are about strategies to continue the eating disorder thinking and behaviors. However, approximately 38% of these sites provide information and links to help users recover from the eating disorders (*Borzekowski et al., 2010*).

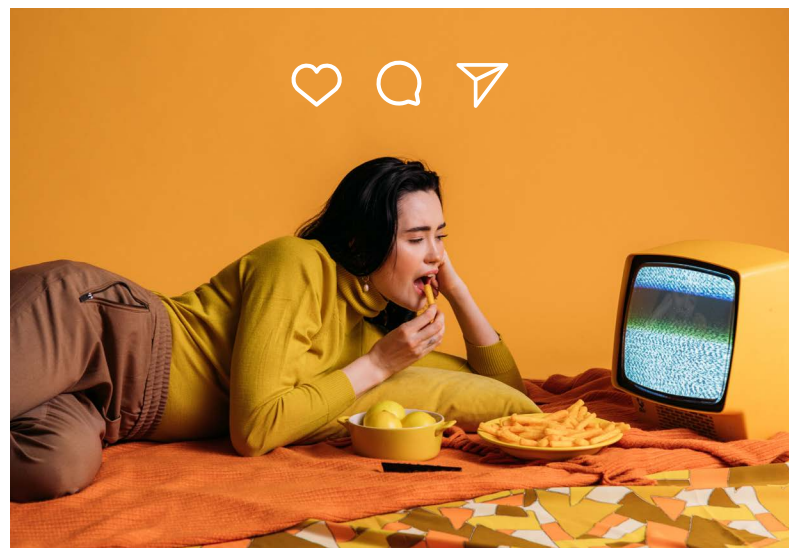


## *Explanations of the relationship among media use, body image, and eating disorders*

The strong influence of media on adolescents occurs not only directly but also indirectly through creation and reinforcement of social norms at all levels of society.

Understanding of media influence on body image and eating disorders relies largely on sociocultural modeling. Media effectively transmits and reinforces certain sociocultural messages, including a thin-ideal body image for girls, hyper muscularity for boys, strict gender role reinforcement, and primacy of appearance as a factor for success. Typically, adolescents make an “upward” comparison between themselves and ultrathin or hyper muscled media models, resulting in feelings of body dissatisfaction, lower self-esteem, and unhealthy eating behaviors (Dittmar et al., 2006; Halliwell et al., 2008).

Family and peers can alter the relationship between media messages and body dissatisfaction. Family influences, early in childhood and into adolescence, set the stage for susceptibility to body dissatisfaction and eating disorders. Personal characteristics may also affect adolescents’ body satisfaction and susceptibility to the influence of media images.



# THE INTERNET AND BODY IMAGE DISTURBANCE

Body image decreases significantly during adolescence, resulting in widespread body dissatisfaction and associated eating disturbances, particularly among adolescent females. Given the strong causal link between body image disturbance and eating disorders (*EDs*), researchers and clinicians point out that it is important to identify factors that contribute to decreases in girls' body satisfaction in order to improve prevention and early intervention efforts targeted to this

highly vulnerable group. Research suggests that the media exerts sociocultural pressure on females to attain the Western "thin ideal" standard of beauty. Females internalize this thin ideal and compare their own bodies against it, which often leads to body dissatisfaction and a drive for thinness if or when they fail to meet this unrealistic standard (*Meier and Gray, 2013*). Studies reported that the media may be the most powerful factor in this influence model and that it exerts

more pressure on adolescent girls compared to boys. The majority of media effects research has focused on the impact of television and magazine exposure, and less is known about how Internet use impacts body image. An increased focus on the effects of Internet exposure is warranted, given the rapid increase in Internet use among adolescents. The rise in adolescent Internet use may in part be driven by the rapidly increasing popularity of social networking sites (SNSs) such as Facebook (FB). Researchers (e.g., Franchina and Lo Coco, 2018) have found that Facebook is the most popular social networking site, with over two billion monthly users worldwide in 2017, and around 98% of western college/university students in 2016 reported having a Facebook account.

Tiggemann and Miller (2010) found that adolescent girls Internet appearance exposure, measured by the amount of time spent on specific websites that had been precoded based on appearance focused content, was associated with greater internalization of the thin ideal, appearance comparison, weight dissatisfaction, and drive for thinness. Analysis on specific websites revealed a particularly strong correlation between time spent on the SNS FB and these body image disturbance variables. For instance, Bair et al. (2012) reported a significant positive correlation between time spent on appearance-oriented websites and eating pathology among female college students. Female college students who share more photos on FB report higher

appearance-based contingencies of self-worth, and college students high in narcissism post more self-promotional content in their profile photos, status updates, and notes. Adolescents exposed to positive feedback on their FB profiles reported improved self-esteem, while negative feedback led to degraded self-esteem. Adolescent girls admit to portraying a version of themselves on an SNS that differs from reality, and self-esteem impacts the type of image girls present online (Salmond and Purcell, (2011).

“ *Female college students who share more photos on FB report higher appearance-based contingencies of self-worth.* ”

Findings linking FB use to body dissatisfaction and eating pathology are particularly troubling given the popularity of this SNS among adolescent girls, but the nature of FB's impact on body image remains unclear. Although these studies do not address body image variables directly, they demonstrate the utility of measuring user interaction with specific FB features (*sharing photos, status updates, etc.*) rather than overall time spent on FB (Meier and Gray, 2013).



Stronger importance of the Internet role in the functioning of young people, especially through Instagram and Facebook and their influence on body image disturbance, caused the greater interest of the researchers. There are many studies conducted on this topic. One of the relevant studies was done by Meier and Gray (2013). The study examined the relationship between body image and adolescent girls' activity on the social networking site (SNS) and Facebook (FB). Participants were 103 adolescent female students between the ages of 12 and 18 years ( $M = 15.4$ ) recruited from a public middle/high school in New York State. Girls in the sample were predominately white (84.5%). A total of 103 middle and high school females completed questionnaire measures of total FB use, specific FB feature use, weight dissatisfaction, drive for thinness, thin ideal internalization, appearance comparison, and self-objectification. Results suggest that it is not the total time spent on FB or the Internet, but the amount of FB time allocated to photo activity that is associated with greater thin ideal internalization, self-objectification, weight dissatisfaction, and drive for thinness. Given the correlational nature of the study, causality cannot be established, but it seems likely that there is a bidirectional relationship whereby adolescents with high thin ideal



internalization and body dissatisfaction are driven to interact more heavily with photo-related FB features, and this frequent appearance-related activity acts to reinforce or exacerbate existing body image issues. According Meier and Gray (2013), this study's findings have several practical implications. Parents and clinicians should be aware of adolescents' general activity patterns on FB and other SNSs, as heavy use of FB photo applications may magnify the already intense pressure placed on girls to be thin, which could contribute to body image disturbance or more serious pathology. School and community-based prevention programs have been developed in the interest of improving adolescent body image. Future iterations of these programs should include consideration of how FB use may play a role in the overarching appearance culture and should encourage teens to self-regulate the amount of time spent interacting with FB photos. FB usage patterns are heterogeneous, and assessing correlations with total time may miss important phenomena.

# THE EFFECT OF INSTAGRAM PHOTOS ON BODY IMAGE IN ADOLESCENT GIRLS

Instagram is currently a very popular social network, especially among teenagers. Instagram allows its users to share photos and videos with others. Since its start in 2010, it has attracted more than 400 million active users, who upload around 80 million photos a day (*Instagram, 2015*). Only 3 years after the 2015 report, Franchina and Lo Coco (2018) reported that Instagram has dramatically risen in popularity, with over 600 million active users sharing over 95 million photos per day and it is actually the second most used SNS in the Western countries after Facebook. 2022 **Benchmark Report** from the Influencers Marketing Hub, states that 37.6% of females and 31.2% of males aged 16–24 prefer Instagram as a social platform.

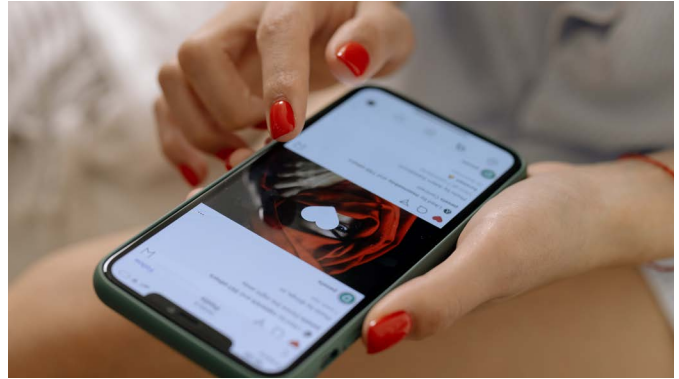
Photos and videos are a very direct form of online self-presentation and have become an increasingly powerful form of social online currency. The main concern involves

the possibility to manipulate Instagram photos by using retouching techniques and, consequently, the potentially negative influence that these “perfect pictures” may have on body image of (*young*) Instagram users. Research has indicated that men and women, both adolescents and adults, compare themselves more often to peers than to models or celebrities for social attributes (*i.e., personality, intelligence*) and physical attributes (*i.e., weight, height, body image*). The individuals generally prefer to make social comparisons to similar others (*e.g., Jones, 2001*). Furthermore, the comparison with peers might affect their body image in a comparable manner as media images do. This might be due to the fact that peers are perceived more similar to themselves than celebrities and therefore are more relevant to compare themselves with. Shortly summarized, when people perceive others to be more similar to themselves, identification and related cognitive and behavioral consequences are more likely to occur. Adolescent girls are often found to be particularly vulnerable for being influenced by media images (*Kleemans et al., 2018*).

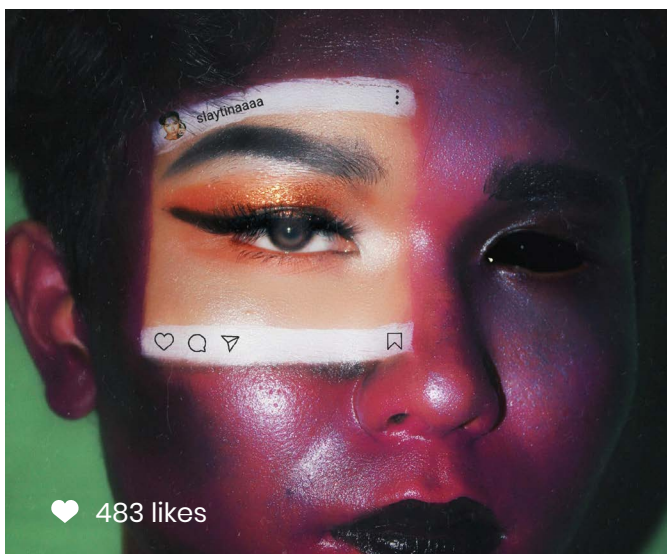
Earlier research focusing on body image has primarily investigated the influence of exposure to idealized thin bodies in advertisements, magazines, television, as well as music videos on young women’s body image. These studies often revealed a relation between exposure to the thin ideal and a negative body image among young girls and women (*e.g., Halliwell et al., 2008*). One important characteristic that

sets social media apart from other studied media types is the strong focus on peer interactions. Models and celebrities, are often presented as unrealistic standards of beauty in for example media literacy programs and the public debate, because of the well-known editing and retouching techniques used when displaying media models. Less known is that “ordinary” social media users also use these techniques, as a part of impression management in self-presentation (Kleemans et al., 2018).

In that context, the study done by Kleemas with his associates, is very illustrative. (Kleemans et al., 2018). They researched the effect of manipulated Instagram photos on adolescent girls’ body image, and whether social comparison tendency moderates this relation. A between-subject experiment was conducted in which 144 girls (14 - 18 years old) were randomly exposed to either original or manipulated (retouched and reshaped) Instagram selfies. Results showed



that exposure to manipulated Instagram photos directly led to lower body image. Especially, girls with higher social comparison tendencies were negatively affected by exposure to the manipulated photos. Interestingly, the manipulated photos were rated more positively than the original photos. Although the use of filters and effects was detected, reshaping of the bodies was not noticed very well. Girls in both conditions reported to find the pictures realistic. Results of this study implied that the recent societal concern about the effects of manipulated photos in social media might be justified, especially for adolescent girls with a higher social comparison tendency.



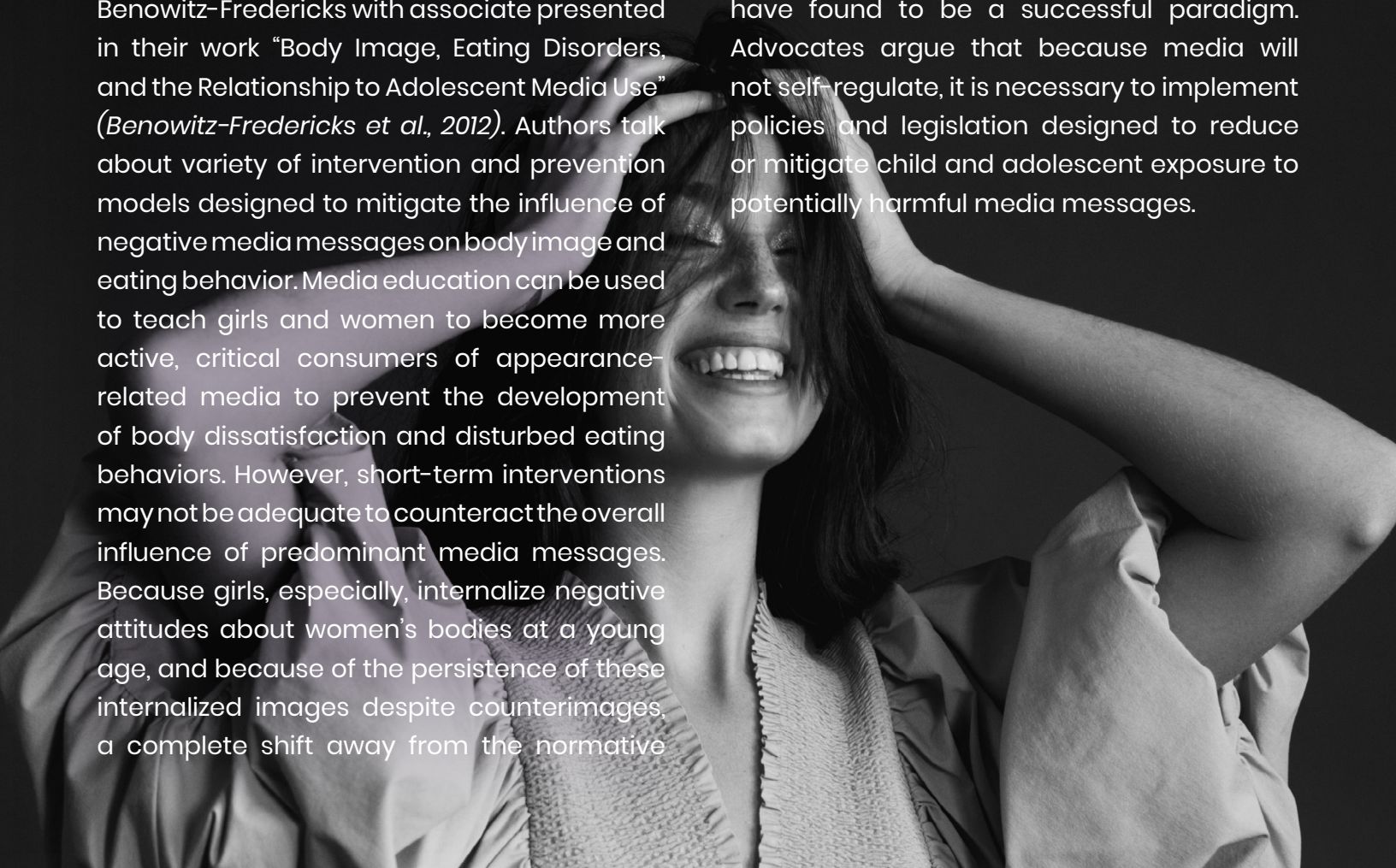
One of the important conclusions of this study might imply recommending including a disclosure when opening an Instagram account that would remind users that the images on Instagram are often retouched and manipulated, as a means of visual literacy and thereby possible protection from harmful effects. More research is needed to unravel how to best protect these young girls from the negative effects of retouched (social) media images.

# WAYS TO IMPROVE THE RELATIONSHIP AMONG MEDIA USE, BODY IMAGE, AND EATING DISORDERS

Even though different theoretical and research studies have been presented here, that were dealing with the relationship among media use and body image of youth, the conclusions are pretty common with the ones that Benowitz-Fredericks with associate presented in their work “Body Image, Eating Disorders, and the Relationship to Adolescent Media Use” (Benowitz-Fredericks et al., 2012). Authors talk about variety of intervention and prevention models designed to mitigate the influence of negative media messages on body image and eating behavior. Media education can be used to teach girls and women to become more active, critical consumers of appearance-related media to prevent the development of body dissatisfaction and disturbed eating behaviors. However, short-term interventions may not be adequate to counteract the overall influence of predominant media messages. Because girls, especially, internalize negative attitudes about women’s bodies at a young age, and because of the persistence of these internalized images despite counterimages, a complete shift away from the normative

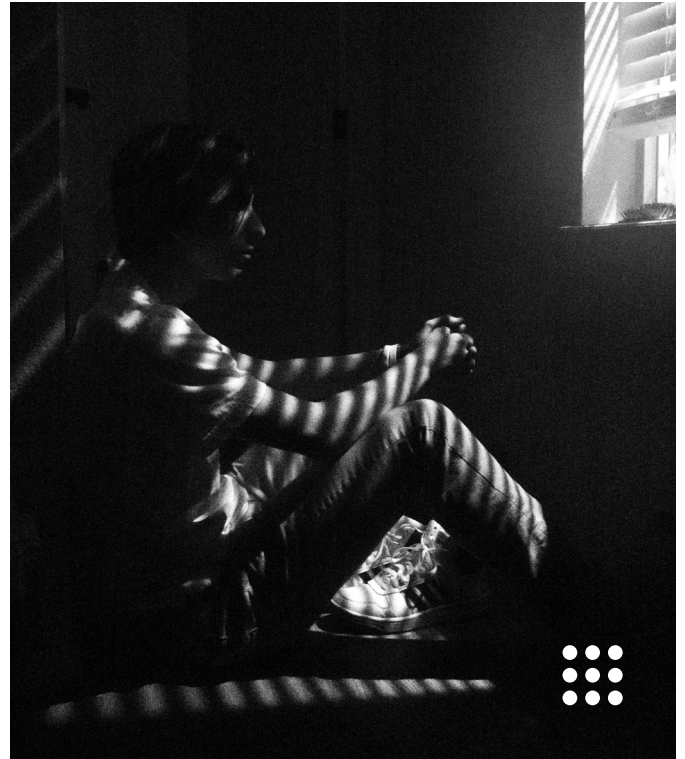
use of unrealistic-looking models and actors may be necessary to reform the internalized images of a healthy ideal body in the minds of the next generation of children and adolescents.

However, most media outlets are not motivated to move away from what they have found to be a successful paradigm. Advocates argue that because media will not self-regulate, it is necessary to implement policies and legislation designed to reduce or mitigate child and adolescent exposure to potentially harmful media messages.



# INTERNET ADDICTION AND DEPRESSION AMONG YOUNG PEOPLE

The prevalence of Internet addiction is high among young people and has been reported to vary from 1.5% to 24.2% (for instance: Tsai *et al.*, 2009; Ceyhan, 2008). Literature shows that even young people without mental health problems report addiction to the internet and mental health problems. Internet addiction has been reported to be associated with anxiety disorders (e.g., Kratzer and Hegerl, 2008), introversion (Ebeling-Witte *et al.*, 2007), personality disorders and mental health problems, such as paraphilia, pathological gambling and game-playing, bipolar disorder, social phobia, attention deficit hyperactivity disorder and depression in young people (Yen *et al.*, 2007). Paraphilias are abnormal sexual behaviors or impulses characterized by intense sexual fantasies and urges that keep coming back. The urges and behaviors may involve unusual objects, activities, or situations that are not usually considered sexually arousing by others. There is a similar incidence of depression among individuals addicted to the Internet and of internet addiction among depressive patients (Orsal *et al.*, 2013). Depression manifests as deep sorrow or grief, insomnia, loss of appetite, unpleasant mood, hopelessness, irritability,



self-dislike, and suicidal tendencies. Low self-esteem, low motivation, fear of rejection and the need for confirmation from others, all of which are commonly observed in depressive people, may result in frequent use of the Internet, and the interactive functions of the Internet may lead to Internet addiction in individuals with these characteristics. It has also been found that depression may occur due to the social isolation caused by Internet addiction. The literature debates whether the primary disease in this case is internet addiction or depression.

Results of the research done in Turkey may shed some light on the cultural factors that are connected to the Internet addiction of young people. The purpose of study by Orsal et al., (2013) was to evaluate the levels of internet addiction and depression among students from Eskisehir Osmangazi University (Turkey). It has been reported that, for social and cultural reasons, Internet addiction is more common among men than women because of the lack of social control on the Internet over activities such as reading the news, gaming and gambling, virtual sex, chatting and meeting new people. However, no differences were observed between women and men in terms of the level of Internet addiction in our study group. In this study, a high level of internet addiction was found in students at the Faculty of Economics and Administrative Sciences. The level of Internet addiction was found to be higher among students whose mothers and fathers were employed and among those with a high family income level. The level of Internet addiction was higher among students who used the internet 13 or more hours daily. The level of Internet addiction was found to be higher among students with a chronic disease than among those without a chronic disease. The decreased self-esteem resulting

“ *Depression may occur due to the social isolation caused by Internet addiction.* ”

from this loss of control may facilitate the emergence of Internet addiction.

Problems with school, health, family and time management may aggravate the level of Internet addiction and/or depression, research authors state. Students can establish risk-free, positive communications with other people by using the Internet. However, excessive use of this positive communication tool may lead to Internet addiction, which is a step toward depression. It would be beneficial to refer individuals who are suspected of having depression and Internet addiction to advanced centers for accurate diagnosis and treatment and to inform students about the controlled use of the Internet (Orsal et al., 2013).

# RELATIONSHIP BETWEEN YOUTH BULLYING AND INTERNET ADDICTION

Psychological abuse is not a new phenomenon, nor is it new or behavior that this term describes. Cyberspace caused progressive development of information technology and the globalization of the Internet. They are, on the one hand led to improvements in almost all areas of social life, and on the other hand, has led to high levels of aggression and violence and transferred to the cyberspace. Problems of abuse in cyberspace produce negative effects that are not reflected only in vulnerable individuals, but to his family and the environment. Cyberbullying remains a major public health problem

internationally. Composite findings support that approximately one-third of youths across the globe have been victimized by bullying. One in four victims of school age, reports some of the elements of cyberbullying, such as emails or instant messages. Bullying has traditionally been defined as being exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself. Access to Internet sites is no longer dependent on computer availability. Among youths, indications are that current cyberbullying rates (Vessey et al., 2022).



Just a brief reminder that Suler (1998), nearly 25 years ago warned about youth bullying pointing at the adult predators in cyberspace. Describing adult predators, Suler says even in those communities that are well supervised, there is little that can be done to prevent predatory adults from pretending to be teens in order to win the favors of young people. If a predator doesn't use an adolescent disguise, he (*and usually they are males*) may present himself as a supportive, sympathetic confidant who encourages the adolescent to discuss personal problems and become emotionally attached to him. Troubled adolescents who feel alienated from their parents and lonely in general are especially vulnerable. The Internet is just another avenue to launch their abuse

Suler (Suler, 1998) points that the dilemma with the predator scenario is that some online adults are indeed understanding, caring people who are happy to look after adolescents. While attempting to separate from their parents and distance themselves from everything about them, some adolescents miss out on the opportunity to use their folks as role models. In troubled families, teens may need a benign adult figure to fill in where the parents have been deficient. In those cases where adolescents feel especially distant from parents who know nothing about or are hostile towards the Internet, the online «parent» may become a sympathetic, emotionally powerful figure in

against children. Children need to be taught the same sorts of rules that apply to real world encounters with questionable adults:

- Don't divulge personal information to strangers. Don't give out your phone number or address
- Log off if someone makes you uncomfortable or asks you to do something that is wrong.
- Don't accept gifts from strangers or call someone, even if they invite you to call collect.
- Never meet anyone offline without adult family supervision (Suler, 1998).

their lives.

The purpose of this review was to explicate the relationship between youth bullying and Internet addiction (IA). Different forms of IA were captured in the instruments used across studies. These included excessive screen time, extensive or risky social networking, compulsive video game playing, high viewing rates of pornography/violence and excessive shopping/spending. In studies reporting gender differences, the cooccurrence of bullying and IA was more commonly seen in males. Tsimtsiou et al. (2018) reported that Greek males were more likely to be perpetrators, had a longer history of Internet



usage, and viewed online pornography, while their female counterparts were more likely to be victims, older, and engaged in social media. Problematic gaming was significantly associated with both traditional and cyberbullying victimization and perpetration in males. The impact of problematic computer gaming on bullying perpetration and victimization was seen in youths of both genders with both genders reporting having fewer friendships (Vessey et al., 2022).

The interaction between cyberbullying and IA lead to poorer global physical and mental health outcomes. Unfortunately, according to Vessey et al. (2022), many studies did examine correlations between IA and psychosocial outcomes such as low self-esteem, depression, and anxiety but did not fully model these relationships with the inclusion of bullying in their analyses. Low levels of social and emotional competence were related to IA and greater bullying victimization and perpetration, with a stronger relationship being reported for perpetrators than victims. Clusters of risky behaviors also were reported – problematic Internet use, cyberbullying perpetration, and meeting strangers on line were related.

Consequences of the psychological violence in cyberspace can be more dangerous for the victim than the classical violence, since the psychological violence in cyberspace is of public nature and the victims of the cyberbullying are exposed to the bullies all the time, day and night, without the possibility to escape to

the safe place in the cyberplace. Cyberbullies very often expose victim's personal data (*real name, address, photos, school, friends, family*) on various public fora, or they use face identities and publish materials that shame the victim and exposes them to the public ridicule. This type of violence can have very heavy and negative consequences – fear, sleeping and eating disorders, or lack participation in different social activities (*sports, hobbies, etc.*) (Kowalski et al., 2010).

“ *Consequences of the psychological violence in cyberspace can be more dangerous for the victim than the classical violence.* ”

In the beginning of any kind of the psychological violence in the cyberspace, the first consequences on the victim can be noticed through their anxiety, insomnia, irritability, problems with concentration. Sometimes some physical problems and discomforts are happening. After a while, depending on the psychological state and age of the person who is a victim of cyberbullying, that person can

start doubting own knowledge, competencies, start feeling insecure, have a need to isolate from the social life and the family. Very often a feeling of helplessness, apathy and loss of interest for anything else, can be noticed. It is important to stress that when it is the case of peer cyberbullying, problem is often far more complex and requires involvement of the family, school, psychologist and other institutions responsible for the care of children and youth. (Campbell, 2005). When analyzing literature in this field, Vessey et al. (2022) state that the role of parental supervision and their co-occurrence of bullying and IA in their children's lives was in evidence but not a major focus in the majority of studies. Less parental supervision was shown to place youths at higher risk for cyberbullying and IA.

It is not surprising that when viewed from the singular perspective of bullying, females are more vulnerable to relational bullying that occurs on social networking sites, while males are more vulnerable to bullying from gaming sites where aggression is often prominent. This is an important issue as both IA and bullying are more likely to occur in youths with nonconforming gender expression with the participants experiencing greater harm. Youths from cultural orientations different from the mainstream, especially if not politically recognized or shunned, are a high risk for bullying. Such youths may also be drawn to Internet social media and gaming sites, falsely perceiving personal anonymity and safety (Vessey et al., 2022). This has been confirmed in the study done by Lapierre and Dane (2022)

that shows that anonymous aggression was most consistently associated with impression management functions (*status and mate seeking*), especially for girls, concordant with their greater risk aversion and concerns about reputation for reciprocity and trustworthiness. Moreover, both cyber and relational forms of anonymous aggression and victimization were associated with bullying against less powerful peers, whereas only anonymous cyber aggression and victimization were associated with adversarial aggression against equally or more powerful targets, likely because anonymity in cyberspace can mitigate the risks of targeting powerful rivals. Finally, anonymous victimization was associated with victim perceptions of harm when controlling for victimization by known perpetrators, albeit only for girls in cyber form.

The high comorbidity between bullying and IA supports that formalized screening approaches for both disorders be instituted in educational, medical, and mental health settings. If problems are noted, additional screening for psychiatric disorders is warranted. The relationship between bullying and IA is firmly supported. Professionals involved with improving youths' mental health must consider the roles that bullying, IA, or its co-occurrence may play in behavioral health issues.

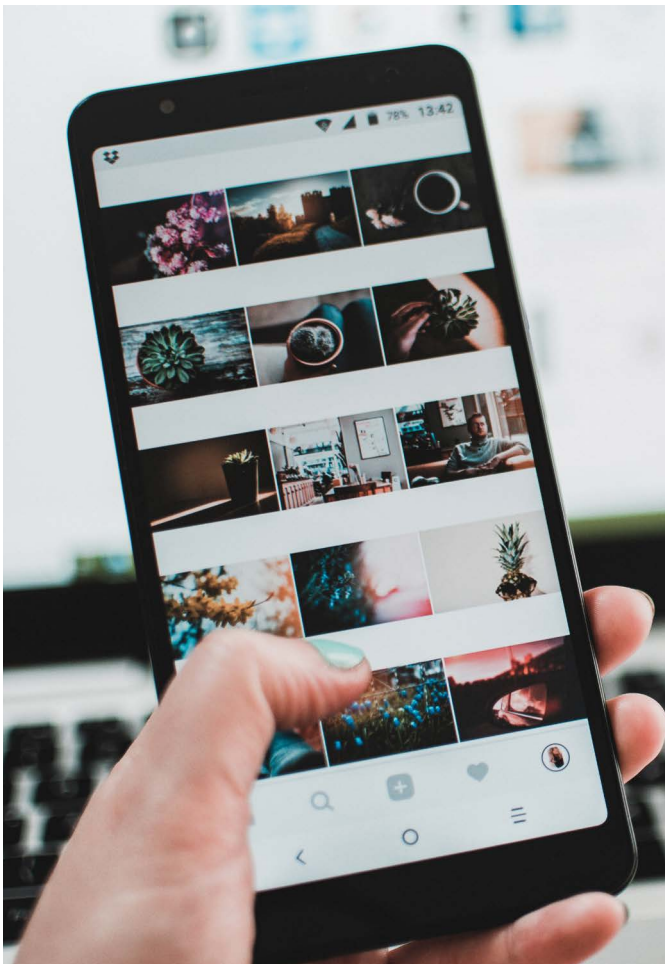
# INTERNET ADDICTION AND PROBLEMATIC MOBILE PHONE USE

The laptop computers were now the most popular mechanism for accessing the Internet, closely followed by the smartphone. This proliferation in the use of mobile devices means that individuals are being afforded the freedom to engage in digital media wherever and whenever they like. Although there may be anecdotal links between poor attention and higher levels of Internet and mobile phone use but to date very little is known about such exposure and its effect on human information processing. One might have begun online life

in a spirit of compensation. For the were lonely and isolated, it seems better than nothing. But online, one can be slim, rich, and buffed up, and feel to have more opportunities than in the real world. So, here, too, better than nothing can become better than something - or better than anything. Not surprisingly, people report feeling let down when they move from the virtual to the real world. It is not uncommon to see people fidget with their smartphones, looking for virtual places where they might once again be more.



The arrival of the smartphone has radically changed every aspect of teenagers' lives, from the nature of their social interactions to their mental health. These changes have affected young people in every corner of the nation and in every type of household. The trends appear among teens poor and rich; of every ethnic background; in cities, suburbs, and small towns. Where there are cell towers, there are teens living their lives on their smartphone. The smartphone was introduced with the first iPhone in 2007 and was adopted faster than nearly any other technological innovation (Lenhart, 2015).



iGen (*iGen, born 1995–2012*) is the first fully internet generation who have never known a time without smartphones and social media. The 'i' in iGen stands for internet, but it also represents other iGen features such as individualism, income inequality, irreligiosity and insecurity, Twenge (2017). Their phone is the last thing iGen'ers see at night and the first thing that they check in the morning. iGen'ers spend close to 2 hours a day texting on their cell phones, 2 hours on the internet and another 2 hours gaming and video chatting. With more time spent on social media, they are less likely to read than previous generations, leading to lower reading levels and less patience to delve deeply into a topic.

## *Problematic mobile phone use*

A variety of studies have explored the effects of problematic mobile phone use from a number of perspectives. For instance, the work by Bianchi and Phillips (2005) highlighted a series of psychological predictors for problematic mobile phone use by using the Mobile Phone Problematic Use Scale (MPPUS). They concluded that aspects of extraversion and lower self-esteem served to explain higher problematic mobile phone use. Problematic mobile phone use has also been explored in terms of the psychological and health consequences indicating links to higher anxiety, insomnia, a variety of depressive symptoms as well as an element

of higher interpersonal activity and also lower self-esteem.

Some studies that have explored the link between cognition and excessive mobile phone use have focused on the exposure of individuals to the electromagnetic radiation (EMF) as a source of cognitive impairment. Besset et al., (2005) explored the effect of daily exposure to EMF and found no effect of mobile phone use on cognitive function after a 13hr rest period. The exposure to EMF did have an effect on attention and vigilance with reduced reaction times and increased vigilance when under exposure to EMF. Smythe and Costall (2003) also reported effects of mobile phone exposure on short-term and long-term memory in male and female participants. Surprisingly the results showed that males exposed to an active phone made fewer spatial errors compared to an inactive mobile phone suggesting some form of facilitation effect. It should be noted that in this instance the participants simply held the phone against their left ear during the experiment with no requirement to interact with it and the sample size was relatively small (15 males). However, to date there appears to be no systematic exploration of the impact the excessive use of mobile phones is impacting on human information processing capabilities.

“ *The aspects of extraversion and lower self-esteem served to explain higher problematic mobile phone use.* ”

There are lots of research projects dealing with the cognitive aspects of mobile phone use today, but the Hadlington study (2015) will be presented briefly here. The aims of this study were to explore the link between excessive Internet use and problematic mobile phone use and associated links to cognitive failures. Previous research has suggested that individuals who have lower working memory capacity (WMC) and poorer attentional control (AC) maybe poorer at limiting the distraction effect posed by access to communicative digital media such as the Internet and mobile phones (e.g., Unsworth et al., 2012; Smythe and Costall, 2003). 210 participants completed and online questionnaire which comprised of the

Online Cognition Scale (OCS), the Problematic Mobile Phone Use Scale (MPPUS) and the Cognitive Failures Questionnaire (CFQ). Both the OCS and MPPUS were significantly positively correlated to scores on the CFQ. Further analysis revealed a significant difference between high and low scoring groups for both the MPPUS and the OCS and scores on the CFQ, with those in the higher groups presenting greater self-reported cognitive failures. The results are interpreted as being symptomatic of individuals in the higher OCS and MPPUS groups as being less resilient to the distractions posed by digital media and technology with a suggested link to lower WMC and AC.

In this context one possible mechanism that could serve to explain the results is the impact of reduced cognitive resources, where competition arises between the need to conduct those activities an individual conducts on a daily basis and the draw of both excessive Internet and mobile phone use. On the basis of the current design there is no capacity to determine if aspects of Internet addiction and problematic mobile phone use serve to have a causal influence on aspects of daily cognitive failures but there is a distinct link between these factors.





## CYBERSEX ADDICTION AND COMPULSIVITY

Falling in love over the Internet and cybersex are becoming part and parcel of many adult and youth and their everyday life. Suler (*Suler, 2004*) was one of the first who wrote about the nature of the Internet romance and the similarities with the real world. The Internet allows expressing many aspects of sexuality without fear and inhibition, thus vicariously reenacting a lost link between fantasy, craving for intimacy and yearning for carnal love or sex. Without doubt, reasons for cybersex vary. This new way of communication satisfies two basic human needs, need for safety and

need for sex (*McKenna et al., 2001*). Sexuality is for sure the most important event during the adolescence. Instead of being a contribution to the maturing of the person, sexual act is reduced to the physical act without any affect and positive consequences for the mental apparatus. Mature human sexuality is being formed through several phases. Vast majority of young people have had the experience of some form of pressure in relation to their sexuality. This may be the pressure from families, schools and the church not to enter into sexual relations, and at the same time the pressure from the media, peer groups and partners to enter into sexual relationships. The family strongly influences, both positively and negatively, the sexual development and behavior of children at puberty and adolescence.

As a result of the increased number of people online, as well as the availability of sexual material online, researchers and clinicians have reported a significant increase in the number of individuals seeking help for their cybersex addiction and cybersex compulsivity. A study estimates that one of every three visitors to adult pornography web sites is likely to be female. Other groups, such as those under the age of 18, are also seeking sexual material online. The top search terms used by teens online include teen sex and cybersex (*Family Safe Media, 2010*). It is important that not all online sexual activity should be viewed as having a negative impact on its consumers. Estimated that nearly 80% of those who engage in online sexual activity

could be considered “recreational users,” and do not self-report any significant problems related to their online behavior. Both youth and adults report using the Internet to research sexual information on issues such as preventing the spread of sexually transmitted infections, purchasing and reviewing options for contraception, exploring healthy sexuality, and so forth. However, for the 20% of individuals who struggle with problematic online sexual behavior, the consequences can be devastating and long lasting. Some individuals become compulsive with collecting and viewing pornography, while still others find themselves spending 10+ hours each day online in search of intimacy or romance (*Delmoniko and Griffin, 2011*).



## *Youth online*

Cybersex predators are commonly presented in the media as the key risks to young people who go online. However, the biggest risk facing youth is the lack of adult knowledge and supervision of online behavior, combined with the developmental issues (*e.g., risk-taking behavior, sexual curiosity, decision making, problem solving, etc.*) common to most young people. (*Wolak et al., 2008*) found that certain online behaviors of youths placed them at higher risk for sexual exploitation:

- Interacting with unknown people.
- Having unknown people on buddies or friends lists.
- Using the Internet to make rude or nasty comments.
- Sending personal information to unknown people met online.
- Downloading images from file-sharing programs.
- Visiting X-rated sites on purpose.
- Using the Internet to embarrass or harass people.
- Talking online to unknown people about sex.



Although the research emphasized these behaviors as being associated with sexual exploitation, it may also be true that such behaviors place young people at risk for developing their own online sexually compulsive behaviors. Although Internet

prevention and safety programs are more widespread, their focus is often on the cyber-predator and not on the ways young people may get themselves into trouble sexually (*online pornography, sexting, cyber-harassment, etc.*).



“  
*iGen sees sex, marriage and family as ‘distractions’ to achieving economic success.*”

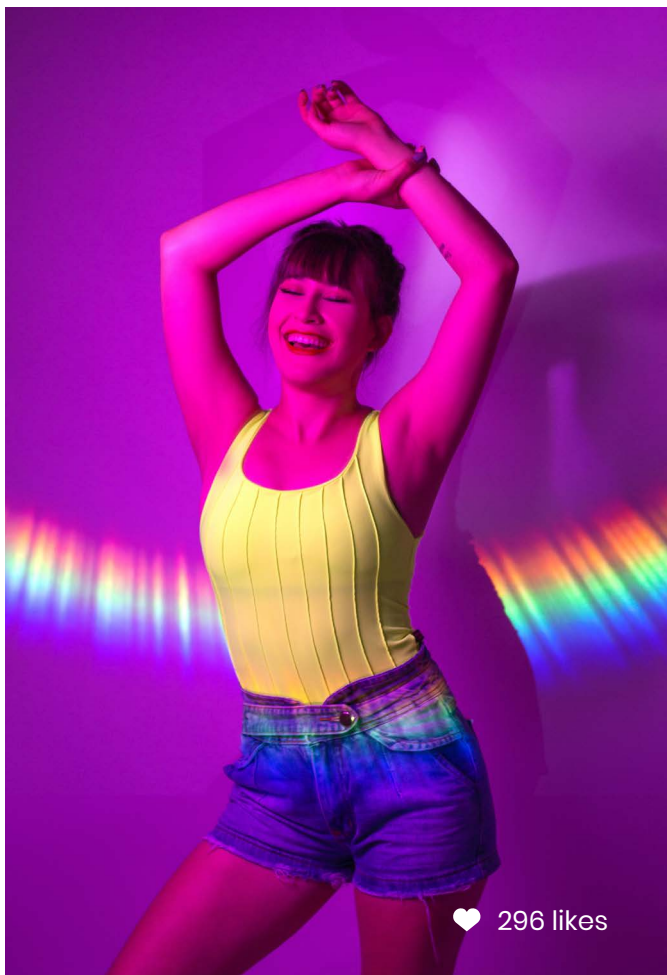
It goes without saying that emotional relations in cyberspace lack the context of the flesh-and-blood reality of the actual world and this appears to be the essential difference between the two. Regardless of this important distinction, virtual partnering in virtual space is simply another reality that we have to accept as it is a natural outgrowth of human history and technological advances. Twenge (2017) notes that iGen sees sex, marriage and family as ‘distractions’ to achieving economic success. She concludes that contrary to popular opinion, today’s teens are less likely to engage in casual sex. Relationships are seen

as stressful and hence marriage, family and kids are pushed off into the future, once they have achieved their individual goals.

Existence of the new area for experience and action opens up many questions, among which the question of limits and setting up safety borders and what is place of the person in that interaction. How much the new dimension of the sexual experience and intimacy becomes personality trait, and how well the new, and recently obtained experiences can be integrated into a person?

# TIKTOK AND MENTAL HEALTH OF YOUNG PEOPLE: POSITIVE AND NEGATIVE IMPACTS

In September 2016 started one of the most popular apps on social media TikTok and has generated a modern trend among teenagers. The thing that makes TikTok different from other media apps is the availability of several kinds of background music, challenges, dance videos, magic tricks and funny videos that fascinate the young people.



The app provides users with thousands of dialogue and music options for users to lip-sync to or use in the back of their videos. Though TikTok like all social media platforms has community guidelines, users have the freedom to use the platform for their own creative ways. TikTok is also a relatively easy app to use.

Abdul Jaffar et al. (2019) reported that TikTok has 500 million monthly active users and is accessible in 34 languages. In the context of mental health, it is estimated that due to the COVID-19 pandemic, 43 percent of people aged 16 to 64 spent longer using social media, 36 per cent spent more time on mobile phone apps, and 16 per cent spent their time creating and uploading videos. TikTok also can be identified as one of the most significant trending video content creation apps at the moment, therefore this statistic has direct relation to the increase of usage and mental health through the COVID-19 lockdown (Mander, 2020). Another researcher, Tankovska (2021) states that TikTok engagement went up by as much as 180 per cent after the outbreak of the pandemic. Different defense mechanisms take part in the coping strategies in events of stress (and the pandemic was certainly one of the global stress events), and that for many young people, TikTok is not just an escape

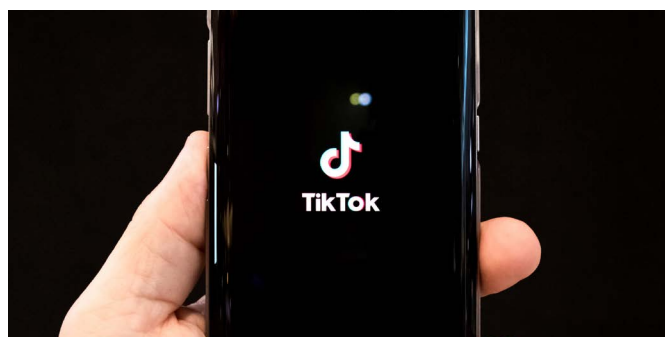
from reality, fight against boredom, search for medical information, but also one of the constructive ways to deal with the physical and mental isolation during the pandemic.

Social media can be used for many different reasons. Different theories have evolved through time to explain why applications such as TikTok gain a massive user base. Abdul Jaffar et al. (2019) find two theories that are dominant. One of the theories is the

## *TikTok and young people: positive and negative impacts*

Literature in field deals mainly with the negative impact of TikTok on young people's wellbeing. But there are also some positive aspects of the TikTok influence on youth. TikTok provides a platform for youth to connect intimately with each other, using features such a duets and stitches, people can interact and respond directly to videos. Like most other social media apps, you can like, comment and share the videos as well. As this app is not only used as a social network but focuses more on user's innovation and supports the users by offering them to easily convey their message and use their imagination. For instance, this app may give an opportunity to people who can showcase their acting skills and other talents which may help the users to get chance to be noticed by film industries (Xiao Yu, 2019).

“users centric” theory, which means mainly focuses on users and their needs. Another theory is the “business model” theory where the company mainly focuses on financial, societal, cultural and other conditions. Business model represent the reasons of how the company produces, distribute and seize merit in financial, societal, cultural and further situations (Xiao Yu, 2019).



TikTok may also provide a sense of community by allowing users to respond to videos and follow others with similar interests. Whereas traditional video-based technologies might be better suited for more comprehensive videos discussing complex topics, TikTok allows for shorter, high-yield content with a focus on rapid identification of key points and engaging presentations. According Comp et al. (2020), despite potential limitations, TikTok offers significant benefits for public health and medical education. In an age where the use of social media is becoming more pervasive in our lives, the medical community should consider harnessing the unique characteristics of TikTok to deliver information to patients as well as for targeted training for medical education.

When talking about negative influences of TikTok on youth, addiction would be one of them. Campana (2022) points out that TikTok may be addictive if the content provides enough stimulus for the users to exhibit addiction symptoms and a neurological reaction that is consistent with addiction. Some of TikTok's content is more addictive than others, that of which being content containing information and content that is short and captivating. In 2019 India alone has obtained 88.6 million TikTok users regardless of the often-inappropriate content it holds. It also exposes kids and Indian teenagers to cyberstalking, online predators and being victims of criminal offense (Abdul Jaffar et al., 2019). The research by Abdul Jaffar et al. (2019) has been conducted through content analysis of parent's comments and feedback on TikTok and its effect on children. The idea was to look for most commonly used words (expressed as experience with TikTok application). Parents state that vulgarity and inappropriate comments are present on the app.



“ *TikTok has a significant impact on the value judgment system that guides people, causing serious social issues.* ”

Generally, newspaper articles have found a lot of cases where children and adults are calling counsellors at different times to complain about harassment, bullying and addiction that they experienced through this app. TikTok has had a dangerous impact on young people that has even led to some cases of self-harming and suiciding because of cyber bullying and different “challenges” posted on TikTok. This app mostly aims young people posting videos, and very often enhances body stereotypes and body humiliation trends.

TikTok has become a place for young people to express themselves in various ways, from lip-sync videos to crazy dances. The culture and structure of the platform encourage users to imitate each other and participate in hot topics (Liu, 2022). TikTok has a significant impact on the value judgment system that guides people, causing serious social issues. It is important that the scholars, and software developers should first understand the consequences of the content published on the platform, not only this one, but many other platforms frequented by young people.

# WORKING WITH ADOLESCENTS ADDICTED TO THE INTERNET, PREVENTION, TREATMENT AND HOW SHOULD PARENTS BE INVOLVED



Previous chapters give some suggestions for prevention and recommendations for different ways of dealing with psychological issues and problems connected to the cyberspace. Michel Desmurget, in a book *La fabrique du crétin digital: «Les dangers des écrans pour nos enfants»* (Desmurget, 2019) gives some very concrete suggestions for parents on this issue. The excessive use of screens and dematerialized content from early childhood can lead to problems. It is this most critical period in the development of cognitive skills, human interaction and speech which Michel Desmurget explores. He looks at the issue in its entirety:

- too many screens in all their forms (*TVs, tablets, telephones, computers*)
- too much screen time every day, to the detriment of other important activities (*several hours a day on average*)
- starting from an extremely early age (*from the early years*)
- unsuitable or even inappropriate content (*in the guise of so-called educational content*)

As a result, memory, speech, concentration, sleep, etc. will gradually be irreversibly affected, to a greater or lesser extent. The subsequent effects include failure at school, difficulties in social and emotional development, and even an increased risk of obesity. The underlying economic rationale for the development of the digital technology industry has for a long time overshadowed the negative impact. This has been achieved by using misleading information and biased expert reports to play it down, or even by making screens and digital content appear as an 'opportunity' for the development of our children and young adults. We have lost our sense of perspective and the necessary hindsight to deal with these issues. We therefore now need to demonstrate, individually and then collectively, a form of 'intellectual strength'. What kind of society are we building? What kind of future society do we want for our children? Now we have access to the right information, can we ask ourselves this question and answer it with the benefit of hindsight? The increasing amount of information, sources of information, and the

proliferation of social media where everyone can voice their opinion is rendering us 'deaf' and gradually making us increasingly unable to think critically. Overwhelmed by information, very often contradictory, we often quickly turn to information that reassures us or reinforces our natural convictions. This is because it is more difficult and time-consuming to search for and double-check information, and to verify the quality of sources, as well as to challenge the apparent convenience offered by this digital world. As a result, we are losing the necessary perspective to make informed choices.

When it comes to psychotherapeutic interventions, no one form of psychological intervention can be suggested as being the most recommended for the treatment of Internet addiction. It is suggested that the support therapies (*those giving emotional support to patients, focusing on the here and now*) would be of great value, as well as the counseling therapies.

## Treatment

Before treatment can begin, assessment of the adolescent should occur and be ongoing. Beard (2005) described the use of a clinical interview and a Working with Adolescents Addicted to the Internet standardized assessment instrument as a

way to understand the signs, symptoms, and development of the problematic Internet behavior. His assessment protocol is based on the biopsychosocial model of behavior. As a result, there are suggested questions related to biological, psychological, and

social factors that could be contributing to the adolescent's Internet use. The biological questions focus on biological symptoms or problems that may occur in a person engaging in an addictive behavior (e.g., *Does your Internet use interfere with your sleep?*). The psychological questions focus on how classical and operant conditioning as well as thoughts, feelings, and behaviors may play a role in initiating and maintaining behavior of those addicted to the Internet (e.g., *Have you ever used the Internet to help improve your mood or change your thoughts?*). The social questions focus on familial, social, and cultural dynamics that prompt excessive Internet use (e.g., *How has your Internet use caused problems or concerns with your family?*). Besides these areas, Beard also included questions related to the presenting problem (e.g., *When did you begin to notice problems with your Internet use?*) and questions related to relapse potential (e.g., *What seems to trigger Internet use?*).

As Beard (2011) pointed out, the use of technology and the Internet is becoming more and more ingrained in our society. It may be impossible for the adolescent to completely stop all use of the Internet and to not have some contact with online content. Therefore, the idea of just pulling the plug and going cold turkey for the Internet addict is not very realistic. Instead, the focus on treatment should be exploring ways to engage in controlled Internet use. This could be done by helping the adolescent define clear limits on their Internet use. Likewise, the adolescent should be aware of and learn to identify triggers that could cause a relapse so that maladaptive behavior patterns can be avoided and stopped from recurring. The adolescent may need to be reminded of treatment strategies and interventions to help control Internet use, as well as where to seek help if more support is needed.

“

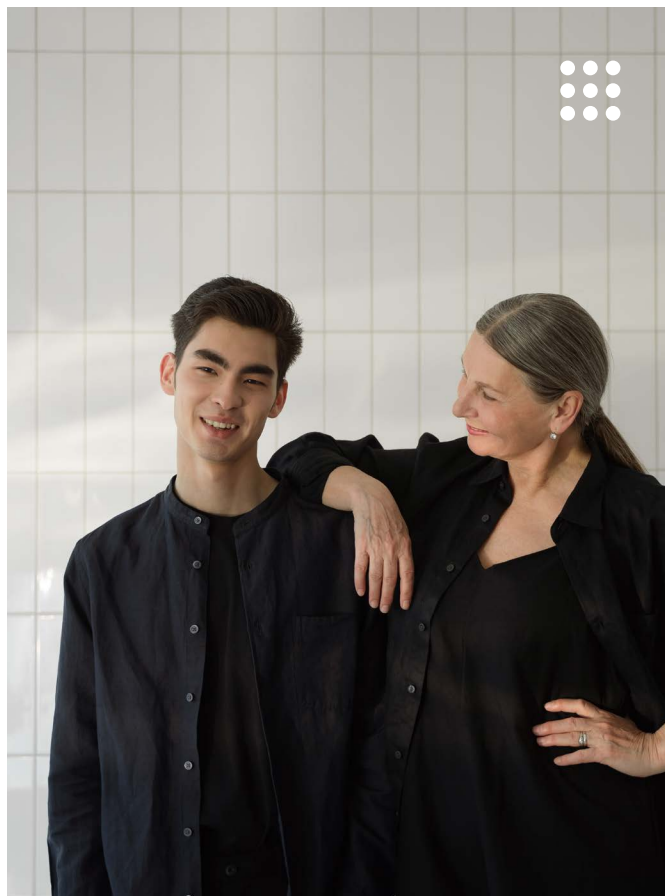
*The idea of just pulling the plug and going cold turkey for the Internet addict is not very realistic.*



## Family therapy

When working with adolescents, the therapist is often working and intervening with the caregivers and other family members. As a result, family therapy is often a primary treatment modality. A Multidimensional Family Therapy (MDFT) is model to treatment of an addicted adolescent. With this model the therapy services are provided in various settings and formats such as in the office, in the home, brief formats, intensive outpatient therapy, day treatment, and residential treatment. A therapy session may involve the adolescent alone, the parent(s) alone, or with the adolescent and parent(s) together. Who is involved with a particular therapy session is based on the specific issue to be addressed in that session?

In their study, Liddle et al. (2008) treated the family across four domains (*adolescent, parent, interactional, and extrafamilial*). The adolescent domain focused on getting the client engaged in treatment, improving communication skills with parents and adults, developing skills related to coping with everyday problems, emotion regulation and problem solving, improving the client's social skills as well as his or her school and work performance, and establishing alternatives to addictive behavior. The parent domain focused on getting the parents engaged in treatment, improving their behavioral and emotional involvement with the adolescent, developing more effective parenting skills such as monitoring the adolescent's behavior



and clarifying their expectations of the adolescent, setting limits and consequences, and addressing the psychological needs of the parents. Additionally, caregivers may want to examine their own Internet behaviors and explore ways that they may model appropriate Internet use. The extrafamilial domain focused on developing family competency in the social systems in which the adolescent is involved (*e.g., educational setting, juvenile justice, settings where the adolescent spends spare time*). It is also necessary to examine previous and current family problems since these may be factors in why the adolescent sought out the Internet and began to use the technology in a problematic way.



Beard (2011) said that lecturing the adolescent is typically a futile and unproductive intervention. Family members need to learn how to effectively listen to the adolescent, acknowledge the feelings and thoughts the adolescent is experiencing, and convey messages in a way that the adolescent understands and is receptive to hearing. Likewise, caregivers may want to take a proactive stance and begin talking to their adolescents early on about the Internet, just as they might do when talking to them about drugs and alcohol.

Young (1995) suggested that the family be educated on how the Internet can be addictive for some people. The family is also encouraged to help the adolescent find new interests and hobbies, take time for themselves, and find other activities to fill in the time gained by decreasing the amount of Internet use. The families need to be supportive and learn how to validate the adolescent for any effort being made. At the same time, they do not want to enable problematic Internet use or aid the adolescent with excuses for why he or she missed school or failed an assignment. According to Young (2009), working with siblings may also be vital since they are a part of the family system. It is possible that since siblings are in the same environment as the addicted adolescent, they could be enabling the addictive behavior of the client or be engaging in addictive behavior themselves. This should be examined during the assessment and treatment process. Even if the siblings are not engaging in

addictive behavior, implementing some of these strategies within the whole family unit may be useful in helping establish a more structured home environment and better communication among family members.

“ *The families need to be supportive and learn how to validate the adolescent for any effort being made.* ”

Young (1995) further recommended that families look for support groups for Internet addiction. If these cannot be located in the immediate area, then other support groups could provide information about dealing with any addiction in the family. Seeing that others are dealing with addictive behaviors can help normalize the family experience, increase a sense of validation, and decrease the sense of isolation often associated with addiction. Likewise, caregivers may want to seek support from parent associations affiliated with schools in order to connect with other caregivers who are experiencing similar difficulties. Although it may sound contradictory, families may find support online through various sites that have been developed to provide education, information, and support for families dealing with addiction as well as sites that focus on the treatment of Internet addiction.

## How should parents be involved?

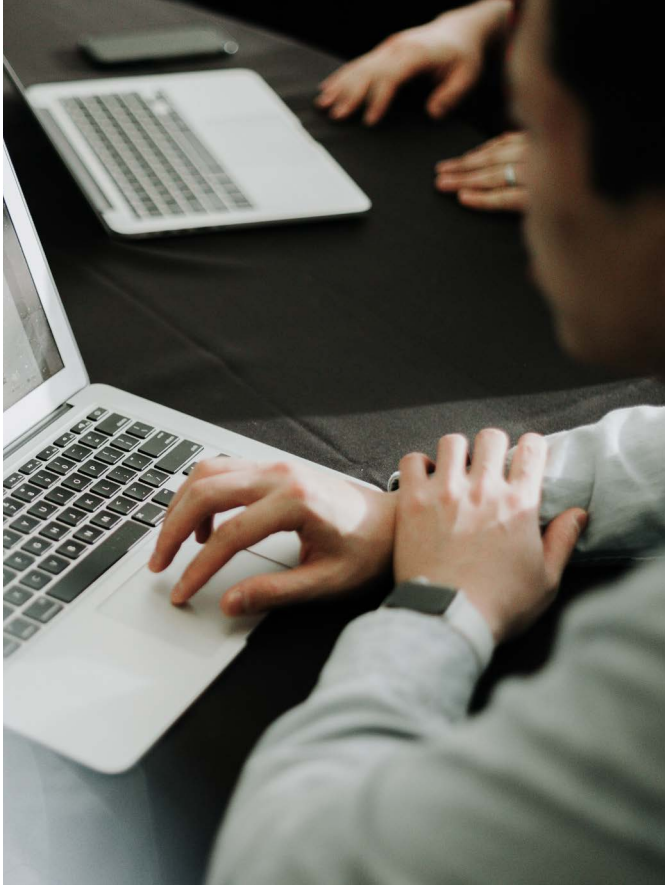
As is true of all adolescent activities, they need at least some supervision to stay on track and avoid trouble. Some parents fall into the trap of benign neglect. Getting involved doesn't just mean supervising in order to avert trouble. The world of computers also can become an excellent way for parents and adolescents to have fun together, to get to know each other better. Recommendations from Suler (1998) formulated more than two decades ago, despite rapid technological developments are still relevant and actual today:



1. Get knowledgeable and join in: To be most effective in supervising the adolescent's cyberspace activities, the parent needs to know something about the topic. You don't have to become a hacker yourself, but read up on the topic. Discuss it with other parents, explore cyberspace yourself. Talk to your kids about cyberspace and join them in some of their online activities. Cruise web sites together. Even hang out with your child and their friends in a chat room (*for a short period of time, if they can tolerate your presence!*).
2. Talk to them: Ask them about their Internet use. What web sites and blogs are they visiting? Avoiding an accusatory tone, ask them what they like online and why. Casually ask them about their cyberfriends, what they talk about, what they do on the Internet. Avoid interrogation. Instead, show them that you are interested in knowing more about their cyberfriends.
3. Acknowledge the good and the bad: Talk about both the pros and cons. Show an acceptance of their cyberlife, but discuss some of the dangers and what steps they should take if they encounter unsavory situations or people.



4. Set reasonable rules: Adolescents need rules. In fact, they secretly want rules so they don't feel out of control and unprotected by a seemingly uncaring parent. Create rules about what exactly they can and can't do on the Internet.
5. Encourage a balance: Encourage the adolescent to stay involved in «real world» activities too. If there's something they really enjoy on the Internet, find a way to expand that activity into their in-person life. Use the Internet for school projects. The goal is to avoid letting the adolescent isolate cyberspace from the rest of their life. Instead, integrate cyberspace into the rest of their life, and encourage them to develop non-Internet activities too.
6. Software controls: There are a variety of commercial programs that can be used to monitor and control the adolescents' activities in cyberspace. The programs aren't perfect either. There are loopholes, and a technically sophisticated adolescent will be able to defeat them. Probably the last thing a parent wants is an ongoing technical battle of wits with their child. If that happens, something has gone awry. Software controls are a tool in the supervision of the adolescent. There are various tracking apps that parents can use, and that could help them: Secure Teen Parental Control, Kids Place – Parental Control, Screen Time Parental Control, and others.




7. Intervening with addiction: In her book, Dr. Kimberly Young (*Young, 1998*) describes some strategies for parents who need to help their children who have fallen into excessive Internet use. Don't try to take the computer away or ban them from using it. This strategy can backfire. Don't enable adolescents by making excuses for them when they miss school or their grades start falling. Tolerate their emotional outbursts when you try to intervene. If all else fails, seek the help of a professional counselor.
8. Discipline misbehavior/encourage humaneness: It's not a good idea to let adolescents treat other people online as if they are not really people. If an adolescent can apply compassion for others even in the anonymous world of cyberspace, they can apply it anywhere in life.

From the mental health perspective, Young and her associates (*Young et al., 2011*) point out that Internet users who become addicted fear that the field has been slow to respond, as a limited number of recovery centers have dedicated services related to Internet addiction. To pursue such effective recovery programs, continued research is needed to better understand the underlying motivations of Internet addiction. Future research should focus on how a psychiatric illness plays a role in the development of compulsive Internet use. Longitudinal studies may reveal

how personality traits, family dynamics, or interpersonal skills influence the way people utilize the Internet.

Teens spend an average of seven hours per day exposed to various technologies (*cell phone, Internet, gaming, etc.*; (*Rideout, Foehr, & Roberts, 2010*)). Given the frequency of exposure to the online world, it is critical for clinicians to assess the possible impact that medium is having on a youth's life. It is not unusual that the presenting problem is exacerbated by a youth's media use. Young people tend



to be more technologically savvy, and may require additional supervision of their online behaviors. Adults need to be more conscious and less intimidated about the issues of supervising adolescents online. The earlier the management techniques begin, the more effective the results. Having conversations with young children (*preschool and older*) is the most effective strategy in developing open communication and supervision of an older youth's online behavior (*Delmoniko and Griffin, 2011*).

Jean Twenge's book brings us face-to-face with current trends and sheds important light on the technological impacts on anthropology. Understanding iGen is key to future reforms in education, business and political life. Parents need to see technology and the internet as an inevitable part of the present and future and hence mentor their children and teens to properly use them (*Twenge, 2017*).

## TABLE 1.

# STRUCTURED COGNITIVE PSYCHOTHERAPY MODEL FOR THE TREATMENT OF INTERNET ADDICTION IN ADOLESCENTS AND PARENTS

(NABUCO DE ABREU AND SAMPAIO GOES, 2011)

### *Meeting Goal (adolescents)*

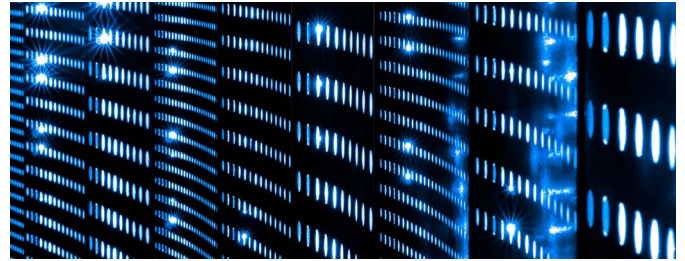
1. Express feelings and thoughts.
2. Reduce the frequency of criticisms and increase the empathy among the group.
3. Learn about the potential reasons and interests associated with the use of the Internet.
4. Evaluate negative beliefs and expectations that are hindering the management of new behaviors.
5. Distinguish the adolescent's inadequate behaviors due to parental care deficit or excess.
6. Differentiate rights from privileges.
7. Functionally analyze the adolescents' and the parents' or caregivers' behaviors.
8. Identify problem-solving procedures.
9. Learn new social skills and educational practices.
10. Develop a family support repertoire for the maintenance of the changes achieved.
11. Acquire family support for vulnerability factors.
12. Evaluate interventions of behavioral and emotional changes and consequences. Follow up.

## *Meeting Goal (parents)*

1. Write down on a record sheet the experiences shared with the child.
2. Describe the child's adequate and inadequate behaviors; indicate the adequate ones and try not to reinforce the inadequate ones.
3. Observe the child's use of the Internet on different days. Write down the experiences on the record sheet.
4. Write down in a diary the personal sensations when negative behaviors come up.
5. Identify and describe potential influences of the abusive Internet use.
6. Survey the rights and privileges granted to the child.
7. Compare their parenting methods with those adopted by their parents (trans-generational pattern).
8. Apply a problem-solving exercise. Experience alternative forms of parenting.
9. Keep consistent with the parenting methods adopted with the child.
10. Recognize the relapse risk factors and use the strategies learned at the therapeutic program.
11. Report on the experience with the meetings.
12. Identify the effects on the reduction of the use and/or relapses.

# CONCLUSIONS

The global network is becoming more and more a space of our lives and everyday functioning of not only the youth but also adults and elderly people, especially since the COVID-19 pandemic. We use it for the purposes of our work, education, to search for information, communicate, interact with others and have contact with popular culture. The idea of young people being digital natives, a term coined by education consultant and author Marc Prensky, first became popular twenty years ago. They have also been referred to as the 'iGen' and 'smartphone generation', seeking to capture the same central idea that younger generations are fundamentally different because of their exposure to technology.



Young people need time to discover themselves, time to think. But technology, put in the service of always-on communication and speed and brevity, has changed the rules of engagement with all of this. The text-driven world of rapid response does not make self-reflection impossible but does little to cultivate it. FoMO (*Fear of Missing Out*) has become a prevalent, especially among youth. When interchanges are reformatted for the small screen and reduced to the emotional shorthand of emoticons and emojis, there are necessary simplifications. Adolescent autonomy is not just about separation from parents. Adolescents also need to separate from each other. They experience their friendships as both sustaining and constraining. Connectivity brings complications. Online life provides plenty of room for individual experimentation, but it can be hard to escape from new group demands. It is common for friends to expect that their friends will stay available. The gold standard tarnishes if a phone is always in hand. You touch a screen and reach someone presumed ready to respond, someone who also has a phone in hand.







Increasingly, people feel as though they must have a reason for taking time alone, a reason not to be available for calls. But if your phone is always with you, seeking solitude can look suspiciously like hiding. Our neurochemical response to every ping and ring tone seems to be the one elicited by the “seeking” drive, a deep motivation of the human psyche. Connectivity becomes a craving; when we receive a text or an e-mail, our nervous system responds by giving us a shot of dopamine (*Berridge and Robinson (1998)*). We are stimulated by connectivity itself. We learn to require it, even as it depletes us.

It was claimed that young people could multitask more easily, had shorter attention spans, preferred visuals and interactivity, and liked using technology more. Cyber-communication may change many aspects of our lives – private, social, cultural, economic, and intellectual. However, with proper instruction, guidance, and supervision, therapy and treatments, there is the potential for the impact of positive, personal growth. It is important to teach and model for our youth how and why to get “unplugged”. In this age of ever-increasing electronic usage, from mobile phones to computers and video games, to also take into account the mental health of young people. Balancing the “virtual” world with the “real” world can be a challenge, but also the greatest gift of all.

# REFERENCES

- Abdul Jaffar, B., Riaz, S., Mushtaq, A.** (2019). Living in a Moment: Impact of TikTok on Influencing Younger Generation into Micro-Fame. *Journal of Content, Community & Communication*, 10, 5, 187-194.
- Alt, D.** (2015). College students' academic motivation, media engagement and fear of missing out. *Computers in Human Behavior*, 49, 111-119.
- Anderson, M. & Jiang, J.** (2018). Teens, social media & technology. Pew Research Center Retrieved: [https://www.file:///C:/Users/vessey/Downloads/PI\\_2018.05.31\\_TeensTech\\_FINAL.pdf](https://www.file:///C:/Users/vessey/Downloads/PI_2018.05.31_TeensTech_FINAL.pdf). Accessed 25 July 2021.
- Arvanitidou, M.** (2018). Pathological Internet use, cyberbullying and mobile phone use in adolescence: a school-based study in Greece. *International Journal of Adolescent Medicine and Health*, 30, 1-9.
- Bair, CE., Kelly., NR., Serdar., KL, et al.** (2012). Does the Internet function like magazines? An exploration of image-focused media, eating pathology, and body dissatisfaction. *Eating Behaviors*, 13, 398-401.
- Beard, K. W.** (2005). Internet addiction: A review of current assessment techniques and potential assessment questions. *CyberPsychology & Behavior*, 8, 7-14.
- Beard, K.** (2011). Working with Adolescents Addicted to the Internet. In: (Eds.) K. Young., C. Nabuco de Abreu. *Internet addiction: a handbook and guide to evaluation and treatment*, Hoboken, New Jersey: John Wiley & Sons, Inc.
- Benowitz-Fredericks, C., Garcia, K., Massey, M., Vasagar, B., Borzekowski, D.** (2012). Body Image, Eating Disorders, and the Relationship to Adolescent Media Use. *Children, Adolescents, and the Media*, 59, 3, 691-704
- Besset, A., Espa, F., & Dauvilliers, Y.** (2005). No effect on cognitive function from daily mobile phone use. *Bioelectromagnetics*, 108(26), 102-108.
- Bianchi, A., & Phillips, J. G.** (2005). Psychological predictors of problem mobile phone use. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, 8(1), 39-51

- Bickham, D.S.** Current Research and Viewpoints on Internet Addiction in Adolescents. *Curr Pediatr Rep* 9, 1–10 (2021). <https://doi.org/10.1007/s40124-020-00236-3>
- Borzekowski, DLG., Schenk, S., Wilson, JL, et al.** (2010). E-Ana and e-Mia: a content analysis of pro-eating disorder web sites. *Am. J. Public Health*, 100(8), 1526–34.
- Berridge, K., Robinson, T.** (1998). What Is the Role of Dopamine in Reward: Hedonic Impact, Reward Learning, or Incentive Salience? *Brain Research Reviews*, 28, 309–369.
- Campbell, M.** (2005). Cyber bullying: An old problem in a new guise?, *Australian Journal of Guidance and Counseling*, 15, 1, 68–76.
- Campana, S.** (2022). How TikTok Provided an Outlet for Generation Z to Face Pandemic Related Mental Health Struggles. <https://digitalcommons.sacredheart.edu/acadfest/2022/all/16>
- Caplan, S.** (2007). Relations among loneliness, social anxiety, and problematic Internet use. *CyberPsychology & Behavior*; 10, 234–42.
- Carper, TL., Negy, C., Tantleff-Dunn, S.** (2010). Relations among media influence, body image, eating concerns, and sexual orientation in men: a preliminary investigation. *Body Image*; 7(4):301–9.
- Chayko, M.** (2016). *Superconnected: The Internet, Digital Media, and Techno-Social Life*. SAGE Publications, Inc.
- Ceyhan, A.** (2008). Predictors of problematic internet use on Turkish university students. *Cyberpsychol Behav*, 11, 363–66.
- Comp, G., Dyer, S., & Gottlieb, M.** (2020). Is TikTok The Next Social Media Frontier for Medicine?. *AEM education and training*, 5(3), 10.1002/aet2.10532. <https://doi.org/10.1002/aet2.10532>
- Cooper, A.** (2002). *Sex & the Internet: A guidebook for clinicians*. New York: Brunner-Routledge.
- Davis, R. A.** (2001). A cognitive-behavioral model of pathological Internet use. *Computers in Human Behavior*, 17(2), 187–195. [https://doi.org/10.1016/0747-5632\(00\)00041-8](https://doi.org/10.1016/0747-5632(00)00041-8)
- Delmonico, D. L., & Griffin, E. J.** (2005). Internet assessment: A structured interview for assessing online problematic sexual behavior. Unpublished instrument, Internet Behavior Consulting.
- Desmurget, M.** (2019). *La fabrique du crétin digital. Les dangers des écrans pour nos enfants*, Belin: Éditions du Seuil.

- Dittmar, H., Halliwell, E., Ive, S.** (2006). Does Barbie make girls want to be thin? The effect of experimental exposure to images of dolls on the body image of 5-to 8-year-old girls. *Dev. Psychol*, 42(2):283–92.
- Ebeling-Witte, S., Frank, M. & Lester, D. S.** (2007). Internet use, and personality. *Cyberpsychol. Behav.*, 10, 713–6.
- Family Safe Media.** (2010). Pornography statistics. Retrieved January 25, 2021, from <http://www.familysafemedia.com/pornography-statistics.html>
- Eghtesadi, M., Florea.** (2020). A. Facebook, Instagram, Reddit and TikTok: a proposal for health authorities to integrate popular social media platforms in contingency planning amid a global pandemic outbreak. *Can. J. Public Health*, 111:389–91
- Franchina, V., Lo Coco, G.** (2018). The influence of social media use on body image concerns. *International Journal of Psychoanalysis and Education*, 10, 1, 5–14.
- Geyser, W.** (2021) <https://influencermarketinghub.com/social-media-addiction-stats/>
- Gondoli DM, Corning AF, Salafia EH, et al.** (2011). Heterosocial involvement, peer pressure for thinness, and body dissatisfaction among young adolescent girls. *Body Image*, 8(2),143–8.
- Hadlington, L. J.** (2015). Cognitive failures in daily life: Exploring the link with Internet addiction and problematic mobile phone use. *Computers in Human Behavior*, 51, 75–81
- Hall, A., Parsons, J.** (2001). Internet addictions: college students' case study using best practices in cognitive behavior therapy. *Journal of Mental Health Counseling*, 23, 312–27.
- Halliwell, E., Dittmar, H., Dittmar, H., et al.** (2008). Does size matter? The impact of ultra-thin media models on women's body image and on advertising effectiveness. *Consumer culture, identity, and well-being*, 121–46.
- Hussin, M., Frazier, S., Thompson, JK.** (2011). Fat stigmatization on YouTube: a content analysis. *Body Image*, 8, 90–2.
- Influencer Marketing Hub** (2022) Benchmark report (<https://influencermarketinghub.com/influencer-marketing-benchmark-report/>)
- Instagram** (2015). Instagram statistics. Retrieved from <http://instagram.com/press>.

- Jones, D.C.** (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles*, 45, 645–664.
- Kandell, J.J.** (1998). Internet addiction on campus: the vulnerability of college students. *CyberPsychology & Behavior*, 1:11–17.
- Keles, B., McCrae, N., Grealish, A.** (2020) A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth*, Volume 25, 2020 – Issue 1, 79–93.
- Kleemans, M., Daalmans, S., Carbaat, I., Anschütz, D.** (2018). Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls. *Media Psychology*, 21, 1, 93–110.
- Klein H, Shiffman KS.** Messages about physical attractiveness in animated cartoons. *Body Image*, 3, 353–63.
- Kowalski, R., Limber, S., Agatston, P.** (2010). *Cyber Bullying: Bullying in the Digital Age*. Hoboken, New Jersey: John Wiley & Sons.
- Kratzer, S., & Hegerl, U.** (2008). Is «Internet Addiction» a disorder of its own? – a study on subjects with excessive internet use. *Psychiatr Prax*, 35, 80–83.
- Mander, J.** (2020). Coronavirus: insights from our multinational study wave 5. Retrieved from Global Web Index: <https://blog.globalwebindex.com/trends/coronavirus-multinational-study-5/>
- Maxwell, MA., Cole, DA.** Development and initial validation of the adolescent responses to body dissatisfaction measure. *Psychol Assess*, in press.
- McKenna, K. Y. A., Green, A. S. & Smith, P. K.** (2001). Demarginalizing the sexual self, *Journal of Sex Research*, 38, 302–311.
- Meier, E., Gray, J.** (2013). Facebook Photo Activity Associated with Body Image Disturbance in Adolescent Girls. *Cyberpsychology, Behavior, and Social Networking*, 10, 10, 1–8.
- Milani, L., Osualdella, D., Di Blasio, P.** (2009). Quality of Interpersonal Relationships and Problematic Internet Use in Adolescence. *Cyberpsychology & Behavior*, 12, 6, 681–684.
- McGinnis P** (2017) 7 symptoms of fomo you need to treat now. <http://patrickmcginnis.com/7-symptoms-of-fomo-you-need-to-treat-now> (Accessed 22.06.2022).

- Modzelewski P** (2020) Fomo (fear of missing out)–an educational and behavioral problem in times of new communication forms. *Konteksty Pedagogiczne*, 14:215–232.
- Lawrence, T. L.** (2014). Risk factors of Internet Addiction and the health effect of Internet Addiction on adolescents: A systematic review of longitudinal and prospective studies. *Curr. Psychiatry Rep*, 16(11):508.
- Lenhart, A.** (2015). *Teens, social media, and technology overview*. Washington, DC: Pew Research Center.
- Liddle, H. A., Dakof, G. A., Turner, R. M., Henderson, C. E., & Greenbaum, P. E.** (2008). Treating adolescent drug abuse: A randomized trial comparing multidimensional family therapy and cognitive behavior therapy. *Addiction*, 103(10), 1660–1670.
- Lin MP.** (2020). Prevalence of internet addiction during the covid-19 outbreak and its risk factors among junior high school students in Taiwan. *International Journal of Environmental Research and Public Health*, 17(22), 8547.
- Liu, J.** (2022). The Influence of the Body Image Presented Through TikTok Trend-Videos and Its Possible Reasons, *Advances in Social Science, Education and Humanities Research*, 559, 359–363.
- Orsal, O., Orsal, O., Unsal, A., Ozalp, S.** (2013). Evaluation of Internet Addiction and Depression Among University Students. *Procedia – Social and Behavioral Sciences*, 82, 445 – 454.
- Nabuco de Abreu, C., Sampaio Goes, D.** (2011). Psychotherapy for Internet Addiction. In: (Eds.) K. Young., C. Nabuco de Abreu. *Internet addiction: a handbook and guide to evaluation and treatment*, Hoboken, New Jersey: John Wiley & Sons, Inc.
- Peele, S.** (1985). The concept of addiction. In: S. Peele, *The meaning of addiction: Compulsive experience and its interpretation*. Lanham, MD: Lexington Books.
- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V.** (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29, 1841–1848.
- Rajula, H.S.R., Manchia, M., Agarwal, K. et al.** (2022). Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe – an EU Marie Skłodowska-Curie International Training Network. *Eur. Child Adolesc. Psychiatry*, 31, 829–839.

- Rideout, V. J., Foehr, U. G., & Roberts, D. F.** (2010). Generation M 2: Media in the lives of 8- to 18-year-olds. Retrieved January 26, 2022, from <http://www.kff.org/entmedia/mh012010pkg.cfm>
- Riordan BC, Flett JA, Cody LM, Conner TS, Scarf D** (2021) The fear of missingout (fomo) and event-specific drinking: the relationship between fomo and alcohol use, harm, and breath alcohol concentration during orientation week. *Curr Psychol*, 40:3691–3701.
- Salmond K, Purcell K.** (2011) *Trend in teen communication and social media use: what's really going on here?* Washington, DC: Pew Internet & American Life Project.
- Seepersad, S.** (2004). Coping with loneliness: adolescents online and offline behavior. *CyberPsychology & Behavior*, 7, 35–9.
- Smythe, J. W., & Costall, B.** (2003). Mobile phone use facilitates memory in male, but not female, subjects. *Neuroreport*, 14, 243–246.
- Suler, J.** (1998). Adolescents in cyberspace: The good, the bad, and the ugly. In J.
- Suler (Ed.),** *Psychology of Cyberspace*. (Web-Publishing). Accessed: 4/4/22. Available: <http://www.rider.edu/users/suler/psycyber/adoles.html>
- Suler, J.** (2004) The Online Disinhibition Effect, *Cyberpsychology & Behavior*, 7, 3, 321-326.
- Schlosser, A.** (2020) Self-disclosure versus self-presentation on social media, *Current Opinion in Psychology*, Volume 31, February 2020, Pages 1-6
- Starcevic V, Billieux J.** Does the construct of internet addiction reflect a single entity or a spectrum of disorders? *Clin Neuropsychiatry*. (2017) 14:5–10.
- Swami, V., Frederick, D. A., Aavik, T., et al.** (2010). The attractive female body weight and female body dissatisfaction in 26 countries across 10 world regions: Results of the international body project i. *Personality and Social Psychology Bulletin*, 36, 309–325.
- Tankovska, H.** (2021). TikTok usage during COVID-19 in the United States 2020. Retrieved from Statista: <https://www.statista.com/statistics/1207831/tiktok-usage-among-young-adults-during-covid-19-usa/>
- Tekayak HV, Akpınar E** (2017) Tıp alanında yeni bir dönem: dijital çağda doğan yeni hastalıklar, *Eurasian Journal of Family Medicine*, 6:93-100

- Tiggemann, M., Miller, J.** (2010). The Internet and adolescent girls' weight satisfaction and drive for thinness. *Sex Roles*, 63, 79–90.
- Thompson–Brenner H, Boisseau CL, St. Paul MS.** (2011). Representation of ideal figure size in ebonny magazine: a content analysis. *Body Image*, 8, 373–380.
- Tsai, H., Cheng, S., & Yeh, T.** (2009). The risk factors of Internet addiction—a survey of university freshmen. *Psychiatr. Res.*, 167, 294–9.
- Tsimtsiou, Z., Haidich, A. B., Drontsos, A., Dantsi, F., Sekeri, Z., Drosos, E., & Turkle, S.** (2005). *The Second Self: Computers and the Human Spirit*. Cambridge, MA: MIT Press.
- Turkle, S.** (2008). Inner History. In: S. Turkle (Ed). *The Inner History of Devices*, Cambridge, MA: MIT Press, 2–29.
- Turkle, S.** (2011). *Alone together: why we expect more from technology and less from each other*. New York: Basic Books.
- Twenge, J.** (2017). *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy and Completely Unprepared for Adulthood*. New York, NY: Atria.
- Vessey, J., Difayio, R., Neil, L., Dorste, A.** (2022). Is There a Relationship Between Youth Bullying and Internet Addiction? An Integrative Review. *Int. J. Ment. Health Addict*, 6, 1–25.
- Wang L, Qiu J, Yan S, Liu W** (2021) Does mobile social media undermine our romantic relationships? the influence of fear of missing out (fomo) on young people' romantic relationship. Research Square; 2021; doi:10.21203/rs.3.rs-636141/v1.
- Wolak, J. Sabina, C., & Finkelhor, D.** (2008). The nature and dynamics of Internet pornography exposure for youth. *CyberPsychology & Behavior*, 11(6), 691–693. <https://doi.org/10.1089/cpb.2007.0179>
- Unsworth, N., McMillan, B. D., Brewer, G. A., & Spillers, G. J.** (2012). Everyday Attention Failures: An Individual Differences Investigation. *Journal of Experimental Psychology, Learning, Memory, and Cognition*, 38(6), 1765–72.
- Xiao Yu, jiang.** (2019). Research on TikTok APP Based on User-Centric Theory. *Applied Science and Innovative Research*, 3. doi:10.22158/asir.v3n1p28.
- Yang H, Liu B, Fang J** (2021) Stress and problematic smartphone use severity: smartphone use frequency and fear of missing out as mediators. *Front Psychiatry*, 12:594.



- Yen, J., Ko, C., & Yen, C.** (2007). The comorbid psychiatric symptoms of internet addiction: attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. *J. Adolesc. Health*, 41, 93–8.
- Young, K. S.** (1995). Internet addiction: Symptoms, evaluation, and treatment. Retrieved January 9, 2022, from <http://www.netaddiction.com/articles/symptoms.html>
- Young, K.** (1996). Psychology of Computer Use: XI. Addictive Use of the Internet: A Case That Breaks the Stereotype. *Psychological Reports*, 79, 899–902.
- Young, K.** (1998). *Caught in the Net*. New York: John Wiley & Sons.
- Young, K. S.** (2009). Understanding online gaming addiction and treatment issues for adolescents. *American Journal of Family Therapy*, 37, 355–372.
- Young, K., Dong Yue, X., Ying, L.** (2011). Prevalence Estimates and Etiologic Models of Internet Addiction In: (Eds.) K. Young., C. Nabuco de Abreu, *Internet addiction: a handbook and guide to evaluation and treatment*, Hoboken, New Jersey: John Wiley & Sons, Inc.

# INTERACTIVE LITERATURE MAP

What draws  
adolescents to the  
world of the Internet?

PREVENTION

## SOCIAL MEDIA

*and mental health of young people*

INTERNET ADDICTION