

## UNPACKING THE CYCLE OF SOCIAL MEDIA ADDICTION: UNDERSTANDING SYMPTOMS, PROGRESSION, AND RECOVERY

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### Abstract

Social Media is beneficial when used properly. It's useful for keeping in touch with far distance friends, hard to meet friends and longtime friends, and knowing what they're doing recently, and how thing is going with them. Every social media outlet has their own purpose, and it is clear how powerful social media is in this digital age, so when it is used wrongly, then the benefit will be over shadowed by these disadvantages. Misuse of social media can lead to many consequences, like loss of privacy, 'cyber-bullying', time consumption, loss of traditional social skills. This research is intended to provide practical and theoretical insight into the developing circumstance observed about social media addiction by summarizing social media usage patterns, and the personalities of social media users, identifying the consequences of abusing social media usage, and identifying the signs for potential social media addiction. The outcome of this research should help social media users figure out if the social media is helping or ruining their lives. This research is done in cooperation between information systems specialists and a mental health care professional, trained in dealing with addictions. The findings of this research point out the major indicators for the individual's level of use in each of the expected stages that can lead to the social media addiction, and recommends the practical countermeasures that should be taken to avoid the potential addiction. This research refers to the individuals who responded to the survey as respondents, and the interviewed ones in a clinical setting as participants.

### Introduction

The Internet has a great power to connect and mobilize modern societies. The world at the present time is mostly electronic, that connects people at high speed, and without any boundaries, and thus contributes to the high expansion and usability of social media throughout cyberspace. Social media is continuously growing and offering users, around the world, new ways to communicate and form virtual communities with others. Sitting behind a computer and communicating with cyber friends can be easy and fun but there may be a price tag to it. So, while there are some positive impacts on communication through social media (e.g. no geographic limitations, nurtures and expands relationships, improves communication, strengthening human connection), there are also

negative impacts (e.g. decreases face-to-face communication skills, reduces family closeness, lost productivity for non-work related activity, allows unreliable/false information to spread quickly, as well as in some cases, it can result in Addiction). This study however, will only focus on one of the addiction as one of the negative impacts, and identifies the potential signs of being addicted to social media.

### **Objectives of the study**

Although the American Psychiatric Association. (2013) Diagnostic and Statistical Manual of Mental Disorders (DSM-5) nor World Health Organization (1992) International Statistical Classification of Diseases and Related Health Problems (ICD 10) do currently list Social Media under their behavioral (non-substance related) addiction criteria; it has been heavily argued over the past twenty two years that they should. There is a number of research work related to this study area, conducted basically in different countries, where the availability and facility of the social networks and services are largely available worldwide. The studies conducted generally focus on the timing and impact of the social media usage but less focus on the purpose behind it. There are two specific objectives of this study:

1. To examine the time spent and the (Access Frequencies) of Social Media networks.
2. To study the impacts of the addictive use of the Social Media networks and services on mental health of the users.

### **Literature review**

Social media is the collective of Internet communication means dedicated to community based input, whereas users can create individual public profiles, interact with real life friends, and meet other people based on shared interests. It is an umbrella term that describes websites that (1) connect people and (2) involve user generated content, where the user generated content is the hallmark of a social media site versus a traditional website (Go, 2016). Due to the fact that networking that cyber social communities are so widespread, several studies have looked at the effects of social networking, and several advantages and disadvantages were identified (van der Bank and van der Bank, 2015; Dong et al. 2013; El Khouli, 2013; Yuan et. al, 2011; Young 2010). However, this study is directed towards addiction, which is one of the identified drawbacks by researches (Yuan et. al, 2011; Dong et al. 2014). In the United States, a survey reported that 84% of adolescents in America have a Facebook account (Young, 2010). Over 60% of 13 to 17-year-olds have at least one profile on social media, with many spending more than two hours a day on social networking sites (Hajirnis, 2015), and according to Casey (2016), the heavy social media user group (ages of 35 and 49) spend almost 7 hours per week on social media and millennials are spending just over 6 hours per week.

Some researchers believe that social media is no longer a luxury, but now a necessity, and not only the media is here to stay, but also it keeps growing (Idrus and Hitam 2014). In fact, looking at the number of people using social media is a great indicator of the remarkable inspiration such websites and applications have on people reliant to use it for their day to day social life activities. A recent study conducted by Statista (2017) indicates that 81% of the U.S. populations have a social media profile and that the percentage of

U.S. users of social media between the years of 2008 and 2017 indicates around 10% new Americans are added to the social media users every year, except for 2016 and 2017, as 5% new users is being recorded. However, that shall not be viewed as a slowdown, because in the year 2017, the value of Americans who have a social media profile has reached 81%, which is a very high volume of users (see figure 1)

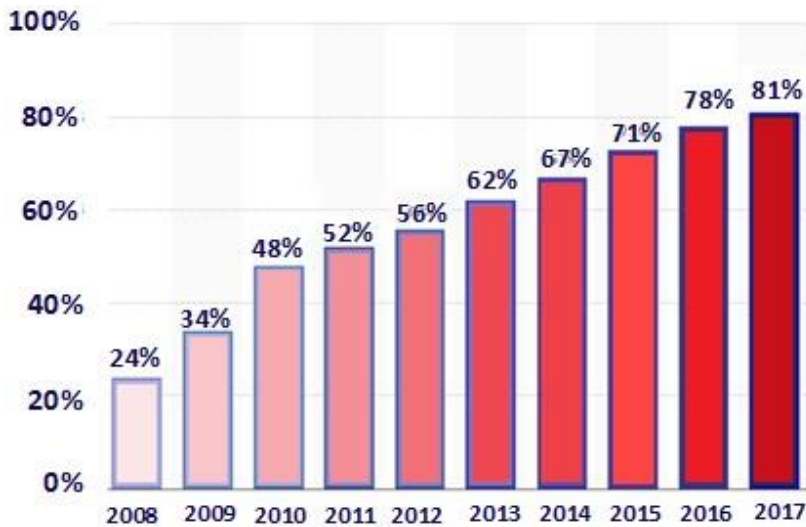


Figure 1: U.S. population with a social media profile 2008-2017 (Statista, 2017)

It seems that even many employees can't stay away from the social media while at work. According to a survey conducted by Proskauer (2014), social media misuse in the workplace has reached a high number where 70% of businesses reported disciplinary action against social media misuse in the office compared to 35% in a previous survey, which is an alarming increase. Conner (2015), in a report published by Forbes states that 89% of responders admitted to wasting time on social media while at work. For content contributors, the benefits of participating in social media have gone beyond simply social sharing to building a reputation and bringing in career opportunities and monetary income. Adler (2015) in another study indicates that 28% of the time spent online is on social networks, where some of the time spent on social media occurs at work, and that these visits for non-work related activity, can cost companies money through lost productivity. Adler (2015) also reports that social media is the most popular use of the Internet and smartphones and other mobile devices seem to be the driving force behind this trend since 60% of the traffic is from a mobile source. A study conducted by Bank of America in 2015 seems to be in line with idea that smartphones be the driving force behind this trend. Bank of America study found that the majority of respondents (71%) are sleeping with—or next to—their smartphones, and that millennials (ages 18-24) are most likely to sleep with their smartphone on the bed (34%), where almost one-quarter (23%) of Americans with different ages have fallen asleep with their smartphone in their hand, but counting only the number of millennials who have fallen asleep with their smartphone in their hand, it was found to be (44%), where more than half (54%) of millennials constantly check their smartphones (Bank of America, 2015).

Other studies have highlighted a number of potential negative correlates of extensive social media usage (Tang et al., 2012). Nyland et al. (2007) conducted an online survey of 184 Internet users, and found that people who spend more time online using the social media were perceived to be less involved with their real life communities. Barker (2009) found that people who do not feel secure about their real-life connections to peers or have a negative social identity tend to use social media more in order to compensate for this. Karaiskos et al. (2010) reported a case of a young adult female who used social media for long times (i.e. used Facebook excessively for at least five hours a day), developed a behavior that significantly interfered with her life, where she was dismissed from her job because she continuously logged on her social media account instead of performing her work related duties. Tazghini and Siedlecki (2013) found a negative association between self-esteem and Facebook activity. This association was related to actions like un tagging undesirable pictures or adding others as friends who they are not familiar with. This self-esteem link may actually be a biological ramification in certain increases and decreases of hormones, rather than just a sociological communication consequence.

### **Social Media Addiction and Stages**

The enormous attraction of social networks on the Internet could possibly be a cause for concern, specifically when attending to the gradually increasing amounts of time being spent online by the social media users, and according to the new Digital in 2017 Global Overview report from We Are Social and Hootsuite revealing that more than half of the world's population now uses the internet, where compared to year 2016, global social media use has increased by 21% reaching 2.8 billion users globally (Hootsuite, 2017). It has been suggested by researchers that, while in the cyberspace, people engage in a range of activities some of which apparently can be to be addictive, meaning that rather than becoming addicted to the medium, some users may get addicted to specific activities being carried out online (Griffiths, 2000). Young (1999) suggests that there are five different types of internet addiction: (1) computer addiction such as computer game addiction, (2) information overload, such as web surfing addiction, (3) net compulsions, such as online gambling or online shopping addiction, (4) cyber sexual addiction such as online pornography or online sex addiction, (5) cyber-relationship addiction such as an addiction to online relationships (which now a day is represented in the form of social media). This study however, is concerned with the second identified addiction, where the Internet has become the backbone of social media, and we will extend on that identification and build upon it for our study.

### **Internet addiction Related Research**

Internet addiction was studied by several researchers, and it was found that to excessive Internet use interferes with daily life (Cash et al. 2010; Dong et al. 2010; Yuan et al. 2011). Cash et al. (2010) indicated that the field of Internet addiction was found to be advancing rapidly even without its official recognition as a separate and distinct behavioral addiction and with continuing disagreement over diagnostic criteria. Dong et al. (2010) whose research also has proven that internet addiction disorder subjects show less efficiency in information processing and have lower cognitive control. In an article on Internet Addiction Disorder, Yuan et al. (2011) discusses internet addiction disorder being associated with structural abnormalities and were able to confirm that long-term Internet addiction would result in brain structural alterations, and referred to it as a now common mental health problem, that can negatively affecting an individual's psychological wellbeing, contributing to academic failure and making way for reduced work performance.

### **Facebook addiction Related Research**

Facebook addiction has been investigated by scientists for years now, however our concern is extend beyond one social media network. In 2012, researchers from the University of Bergen conducted a first-of-its-kind study about the ways in which people develop Facebook dependency, indicating that the social nature of the site itself was considered problematic, especially for women, extroverts, and those unable to fall asleep until very late at night (people with a delayed sleep-wake rhythm) Andreassen et al., (2012). Turel et al., (2014) conducted a study, which required the participants to answer questions that examined symptoms such as withdrawal, conflict and anxiety (which are markers of addiction). The study also evaluated the participants responses to a series of photos (some are random images, some are related to Facebook), and those who quickly responded to Facebook-related photos were found to also score high on the addiction questionnaire. This indicates that at the examined levels of addiction-like symptoms, social media obsession shares some neural features with gambling and substance addictions Turel et al. (2014).

### **Definition and Identification Social Media Addiction**

This research defines Social Media Addiction to be the excessive use and dependence on communication devices and devoting cumulative amount of time accessing social networks, and the activity users get engage in above all others to produce pleasurable effect. We have identified four stages that lead to Social Media Addiction

(1) Normal  
(Typical) use. (2) Misuse. (3) Abuse, (4) Addiction (see Figure 2)



Figure 2: From Normal to Addiction Stages

Normal social media is adapted and used; the individual behavior conforms to the most common or appropriate to the purpose or circumstances of connecting with one another, engaging with content, and sharing information. To "misuse" is "to use incorrectly". For example, if you take a screwdriver and try to use it to paint a picture, you are misusing it; the screwdriver is not designed for painting, and will not do a good job when pressed into that service, but neither the paint, the picture, nor the screwdriver will be damaged as a result of your action. To "abuse" is "to use excessively or damagingly". For example, if you take a screwdriver and try to use it to pry up a manhole cover, you are abusing it; although a screwdriver can often be used to pry up small objects, a manhole cover is much too large for an average screwdriver and you are likely to end up with a bent, damaged screwdriver and an unmoved manhole by the time you give up. Misuse and Abuse the two can be used synonymously, but there is generally a difference at least of degree between them, and often of intended meaning.

For addiction, there are seven criteria for substance dependence. To be diagnosed, the person would have to have at least three of the criteria within one year period (American Psychiatric Association, 2013). The first two criteria, tolerance, and withdrawal, are central to —physiological dependence on a drug. A person can be diagnosed with substance dependence either with or without the —physiological dependence, although a person is at greater risk of medical problems and relapse if he does not have —physiological dependence. The seven criteria for substance dependence are:

- I. Tolerance, as defined by either of the following: (a) A need for markedly increased amounts of the substance to achieve intoxication or desired effect; (b) Markedly diminished effect with continued use of the same amount of the substance.
- II. Withdrawal, as manifested by either of the following: (a) The characteristic withdrawal syndrome for the substance (refer to Criteria A or B of the criteria sets for Withdrawal from specific substances); (b) The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.
- III. The substance is often taken in larger amounts or over a longer period than was intended.
- IV. There is a persistent desire or unsuccessful efforts to cut down or control substance use.
- V. A great deal of time is spent in activities necessary to obtain the substance (such as visiting multiple doctors or driving long distances), use the substance (such as chain smoking) or recover from its effects.
- VI. Important social, occupational, or recreational activities are given up or reduced because of substance use.
- VII. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.



## Research Methodology

This study is based upon the intensive fieldwork conducted in clinical settings. Both the quantitative and qualitative methods were used for the analysis of the data. Due to the nature of the collected data, Microsoft Excel was used for the data analysis. A random sampling method was followed to collect information from 312 respondents, and clinical observation notes were used to evaluate the behaviors and attitudes of treated patients, who were under the professional care of physician researcher (no doctor-patient confidentiality are broken, because the research uses general notes on patients' behaviors with common symptoms and signs of addiction to substances). These notes included dealing with patients suffering from different addiction to substances including Alcohol, Opioids (like heroin), Prescription drugs (like sedatives, hypnotics, or anxiolytics like sleeping pills and tranquilizers), Cannabis (like marijuana), Amphetamines (like methamphetamine, also known as meth), and Hallucinogens, as well as some of the evaluated social media users, and a comparison was made between the behaviors and attitudes of addiction to substances and behaviors and attitudes of social media users, who were selected based on the assumption that they were addicted to social media..

## Methods of Data Collection

The questionnaire used in this study is a structured one. The first part of the questionnaire is consisting of the demographic profile of the participants followed by four sections. The latter four sections were containing close ended questions regarding the use of the social media networks. Semi-structured and unstructured interviews (in a clinical setting) were conducted, with volunteered social media network users regarding the use of the platforms and services and its impact on their health and social status. These types of interviews were chosen for this study because the study deals with the social media and also consists of the information about the impact of the social media on the participants' health. Changing of the question was required based on the reaction and behaviors of the participants for getting correct information as well as diagnosis (clarification) of the participants. The data collected through this process was helpful for qualitative analysis in the study.

## Research Findings

Today, according to Statista (2017), around eight-in-ten Americans use social media. Our study sample was not as large as the sample in the Statista study, but we found that around 73% of our respondents used at least one of the social media platforms, where 54% of the respondents were females and 46% were male, and we did not find significant differences between the number of male and female users, where 71% of males and 74% of females of the study respondents reported to have one or more social media network account. Table 1: Percentage of Americans who use each social media platform.

Table 1: Gender, Ages, social media platform, and Percentage of American Users

	<b>Facebook</b>	<b>Instagram</b>	<b>Pinterest</b>	<b>LinkedIn</b>	<b>Twitter</b>	<b>YouTube</b>
Male	71%	24%	14%	30%	20%	41%
Female	74%	34%	39%	22%	22%	59%
Ages 1829	89%	61%	38%	36%	37%	34%
Ages 3039	77%	29%	30%	28%	20%	25%
Ages 4049	60%	15%	24%	21%	18%	15%
Ages 5059	56%	11%	19%	18%	16%	9%
Ages 60+	38%	7%	11%	13%	8%	4%

Looking at the broken down, time spent on social media differs across each platform as shown in table 2. Among the users of each social media platform, Facebook leads in the first position, where 75% users are accessing it daily. Instagram comes second where 53% users are accessing it daily (53%), and Twitter is being accessed daily by 44% of users. YouTube while used for both entertainment and users can make comments and interact through those comments, the reported statistics is about the users who make comments and interact. For Pinterest, only 27% of the users access their network daily, and the last in the list is LinkedIn where 22% of the users access their network on a daily basis.

Table 2: The Social Media Platform Access Frequencies

Platform	Less often	Weekly	Daily
Facebook	9%	16%	75%
Instagram	20%	27%	53%
Twitter	30%	26%	44%
YouTube	27%	32%	41%
Pinterest	39%	34%	27%
LinkedIn	49%	29%	22%

It is a fact that holding a cell phone while driving is a major driver distraction, and makes likely to crash, and texting while driving is as dangerous as driving under the influence of alcohol, but according to the collected data, some of the respondents (43%) say they've been texting or reading messages while driving a car. This research also finds that 37% of the time spent on the internet is used to access social media networks, where the majority of that time, (63%) is facilitated by a mobile device, and that 28% of smartphone users check their social media channels before getting out of bed in the morning. Other findings that 54% use smartphones while eating with family, however, only 27% indicated that their friends/family think that they use technology too frequently. In addition, the respondents aged 18 to 29 spend at least three hours a day accessing their social media networks. And 18% of social media users say they can't go more than a few hours without checking out what's happening on social.

In conclusions, this research has identified all potential activities and behaviors in terms of misuses, abuse, and addiction. We recommend that the social media users to self-evaluate, and determine the stage they are in, and take the necessary measures to avoid going through the full cycle of social media networks addiction. We can say that social media can bring more goods than harms when people realize what they can get and using it right. However, the social media networks are evolving their tools and options to further attract and engage new users. The issues is not using social media networks, however, no one has to have and use all the major social media networks, and users only have to use some social media, which can connect them to what social media purpose is.

Based on the interviews and clinical analysis and observations of the interviewed and studied social media users, this research lists different social media activities that different users undertake, and associates these activities as indicators for each of the addiction stages (shown in figure 2). These indicators are shown in Table 3, Table 4, and Table 5. The research found nearly seven in ten participants had significant mental and physical distress, panic, confusion and extreme isolation when forced to be disconnected from the social media for an entire day. Frustration was assumed, but the research didn't expect to have the psychological effects of being lonely with extreme isolation. To analyze the addictive use of the social media it is necessary to consider the number of platforms used by the participants. The more number of social media platform a user access will have the more time of him/ her will be spent with those networks. It is clear from the data that the majority all of the participants (79%) are having at least three social media accounts and access them on a daily bases. Among them 43.6% of the respondents have more four accounts, and 19% of the participants have more than four accounts and, and access them more frequently on daily bases, and those the one that share the behaviors and common symptoms

and signs of addiction to substances (note that these the participants were selected based on the assumption of potentially being addicted to the social media).

Table 3: Potential Social Media Abuse Indicators

<b>You check your mobile phone very often for new notifications on Facebook or any other media.</b>
<b>You have a meeting every week with others to plan on what updates to put up on social media.</b>
<b>You expect all of your friends to like and comment on your posts.</b>
<b>You feel angry if people do not understand what you mean when you use social media notations</b>
<b>You secretly access your social media account while at work.</b>
<b>You feel upset when nobody comments on your social media updates.</b>
<b>You add strangers on your social media account to make up the numbers.</b>
<b>You feel uncomfortable communicating with friends without using any social media device.</b>
<b>You have more social media icons on your Phone than productivity apps.</b>
<b>You have more online friends than you have in real life.</b>
<b>You think that your online friends are as important as your real life friends</b>
<b>You have almost every editing app available for your phone.</b>
<b>You can't go to an event without taking pictures to post on the social media.</b>
<b>Social media is basically your online diaries.</b>
<b>You have to check every form of social media more often.</b>
<b>You've been on Facebook on your laptop and gone on the app on your phone at the same time.</b>
<b>You are sharing or posting something during peak time more often.</b>

Table 4: Potential Social Media Abuse Indicators

<b>You have to check in at every new location to let everyone know where you are.</b>
<b>You share with everyone on social media what you are doing throughout the day.</b>
<b>Common social media word has become part of your lingo.</b>
<b>You think that everybody should have a social media account.</b>
<b>You check your mobile while walking.</b>
<b>You keep running out of storage on your phone.</b>

Table 5: Potential Social Media Addiction Indicators

<b>You feel anxious or stressed if you're not connected or when your social media is down.</b>
<b>While on social media, you start to comment on everything you read.</b>



<b>You see life is more happening on social media than in reality.</b>
<b>You freak out if your pictures are not able to be uploaded onto the social media.</b>
<b>You cannot live a day without social media (e.g. eats with it, study with it, sleep with it).</b>
<b>You feel stressed if your finds do respond to your request soon enough.</b>
<b>You love to stalk your friends via their social media accounts.</b>
<b>You feel proud when a picture of yours gets many likes on social media.</b>
<b>You spend at least 4 hours a day on social media and isolate yourself away from social life.</b>
<b>Social media has become part of your daily ritual; like sleeping and eating.</b>
<b>You would wake up in the middle of the night to check your social media for updates.</b>
<b>When you leave your iPhone behind at home you feel a sense of loss and isolation while out .</b>
<b>You log on to your social media before you do anything else in the morning.</b>
<b>Low battery is an apocalyptic scenario.</b>
<b>You get mad when someone breaks your streak.</b>
<b>Your normal sleeping patterns are interrupted.</b>
<b>You have tension in your relationships if your partner or family members feel irritated or resentful towards your usage.</b>
<b>Missing out on real life and failing to attend social activities or meetings.</b>
<b>If you wake up in the middle of the night, you will check your accounts.</b>
<b>Your friends/parents shout at you for mindlessly scrolling through one of your many apps during a conversation.</b>
<b>If you're ever waiting for something, your first port of call is to quickly check your social media.</b>

### **Recommendations for Treatment**

Mental health providers may at best be able to guide the person through The Transtheoretical model (Prochaska and DiClemente, 1983; Prochaska, DiClemente and Norcross, 1992), which posits health behavior change, through progression through the six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination (see Figure ). Multiple psychoanalytic psychotherapies can be applicable to Social Media Addiction. However much research is needed to clearly apply any of said therapies. There is no clinical avoidance as of yet, of pharmaceutical effectiveness for Social Media Addiction.



**Figure:** The Transtheoretical model (Prochaska and DiClemente, 1983)

The main approach of dealing with Social media addiction is to progress through the stages of change, people apply cognitive, affective, and evaluative processes. Ten processes of change have been identified to achieve more permanent change. The processes themselves have been identified as being more relevant to a specific stage of change than other processes. These processes result in strategies that help people make and maintain longstanding change.

1. Consciousness Raising - Increasing awareness about the healthy behavior.
2. Dramatic Relief - Emotional arousal about the health behavior, whether positive or negative arousal.
3. Self-Reevaluation - Self reappraisal to realize the healthy behavior is part of who they want to be.
4. Environmental Reevaluation - Social reappraisal to realize how their unhealthy behavior affects others.
5. Social Liberation - Environmental opportunities that exist to show society is supportive of the healthy behavior.
6. Self-Liberation - Commitment to change behavior based on the belief that achievement of the healthy behavior is possible.
7. Helping Relationships - Finding supportive relationships that encourage the desired change.
8. Counter-Conditioning - Substituting healthy behaviors and thoughts for unhealthy behaviors and thoughts.
9. Reinforcement Management - Rewarding the positive behavior and reducing the rewards that come from negative behavior.
10. Stimulus Control - Re-engineering the environment to have reminders and cues that support and encourage the healthy behavior and remove those that encourage the unhealthy behavior.

For a user, before diving too deep into the world of social media, perhaps you should consider some of these possible consequences. Is social media helping or hindering your life? Is it safe? When using any social media platform, take responsibility for your own safety and never join a group just because it is trendy or all your friends are doing it. In evaluating the advantages and disadvantages of social networking, it's best to err on the side of caution and protect your privacy. Be careful with what you post and treat others as if you were in a face-to-face situation.

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