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# **Problematic, absent-minded social media scrolling, and mental health**

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## Abstract

As the number of social media platforms on the market is continuously increasing, concerns and questions about their effects on mental health are also rising. The current study explored the relationship between the problematic use of social media, the absent-minded scrolling behavior, and levels of anxiety. One hundred and fifty-four participants were given an online questionnaire to assess their manners of social media use focusing on the social media scrolling experience and self-reported anxiety levels using the Generalized Anxiety Disorder Assessment tool (GAD-7). There were strong and positive relationships between the problematic use of social media platforms and the absent-minded scrolling behavior, with a statistically significant relationship with levels of anxiety. Results indicated that social media scrolling is becoming a problematic habit that helps users escape their reality and avoid problems.

Keywords: absent-minded, problematic, anxiety, social media, scrolling

## Sammanfattning

Eftersom antalet sociala medieplattformar på marknaden kontinuerligt ökar, ökar också oro och frågor om deras effekter på mental hälsa. Den aktuella studien utforskade sambandet mellan den problematiska användningen av sociala medier, det frånvarande rullningsbeteendet och nivåerna av ångest. Etthundrafemtiofyra deltagare fick ett frågeformulär online för att bedöma deras sätt att använda sociala medier med fokus på upplevelsen av rullning av sociala medier och självrapporterade ångestnivåer med hjälp av verktyget Generalized Anxiety Disorder Assessment (GAD-7). Det fanns starka och positiva samband mellan den problematiska användningen av sociala medieplattformar och det frånvarande rullningsbeteendet, med ett statistiskt signifikant samband med nivåer av ångest. Resultaten visade att rullning i sociala medier håller på att bli en problematisk vana som hjälper användare att fly från sin verklighet och undvika problem.

Nyckelord: tankspridd, problematisk, ångest, sociala media, scrollar

## **Problematic, absent-minded social media scrolling, and mental health**

Social media platforms are internet-based forms of communication that allow users to share information and digital media, interact with each other, have conversations with people around the globe, and create web content such as blogs and social networking sites. The number of social media platforms available on the market in today's technology-saturated world is constantly increasing reaching nearly 4.65 billion active users in April 2022 alone which is around 58.7% of the global population (DataReportal, 2022). There are several types of social media platforms, and these can be simply downloaded on any mobile phone allowing users to be connected at anytime, anywhere. In the first type, social networks that people use to connect and share information, thoughts, and ideas with others helping them identify common interests or concerns; media-sharing networks where interaction mostly focuses on sharing posts such as videos and pictures; community-based networks like blogs where users leave space for discussions spiraling into more detailed comments and replies and where specific topics can be discussed; and finally, review board networks in which usually a product or service can be evaluated and assessed publicly. Depending on the activity needed, users visit different social media platforms to achieve different things such as messaging friends and family which is a typical Facebook activity, whereas, on TikTok, people usually look for funny and entertaining videos.

The benefits of social media platforms are enormous and make our lives easier both on a personal and a professional level. People use social media to stay in touch, communicate and shorten the distance with friends and family wherever we were on the planet as long as they're connected to the internet. These platforms can also provide learning tools where educational videos and posts can help develop knowledge in a particular field, develop interests by following trends, and also be entertained. On another hand, social media can be used to develop expertise in a particular field and build a professional network by connecting with other professionals in the industry. Businesses use these platforms to promote their products by reaching out to the audience and collecting feedback directly from them.

These interactive platforms provide various functions that are created to keep individuals in any situation and often trap the users into spending long hours during the day completely focused on their small screens. One particular characteristic that keeps users engaged is the scrolling feature that allows moving the content either upward or downward across the display revealing new content as it loads continuously. Social media users seem to actively visit an average of 7.4 different platforms per month spending an average of 2.5 hours per day scrolling through social media pages alone (DataReportal, 2022). A lot of research started to tackle the dark side of technology and emphasizes its effects on human behavior, we seem to develop over time a set of habits or routines that make us more addicted to our smartphones (Heitmayer & Lahlou, 2021). This habit is mostly translated into an absent-minded scrolling behavior where users seem to spend long hours more than intended to and without noticing, making people less aware of their surroundings (Hyman, 2010). Experiences of absent-minded behaviors seem to be caused by the numerous frequent uses of smartphones leading to attention-related errors (Oulasvirta, 2012).

Social media platforms don't seem to directly affect mental health (Baker, 2019), but the way people are using these platforms more specifically the time spent online scrolling through pages and the motivations behind this behavior are what seem to be influential (Elhai, 2016). While other research showed that high usage of mobile phones and the internet are correlated with high levels of anxiety, especially when interacting with others is mostly typing-based where participants are feeling more comfortable than in real-life interactions (Park,

2010). Similarly, another study confirmed the relationship between texting and levels of anxiety where individuals tended to text instead of making phone calls (Reid, 2007).

When talking about problematic use, behavior usually involves any pattern of use that causes individual distress mostly with excessive time spent online, interference with social relationships and responsibilities, and difficulty disengaging from the phone (Coyne, 2019). The problematic use of social media seems to be related to traits of escapism where participants agreed that smartphones provide an escape from problems helping them overcome lower mental health (Nehra, 2012). Another study showed that one of the top reasons behind this behavior is for individuals to distract themselves from what is really going on around them, escape their reality, and find comfort (Grellhesl, 2012). Whereas this behavior falls under the category of avoidance coping while handling problems, individuals with this behavior were found to experience more stress in their lives (Holohan, 2000), and to have lower self-esteem (Chapman, 1999). Additionally, the problematic use seems to be also related to traits of Fear of Missing Out (Elhai, 2016) where users experience a perception that others are having more fun affecting eventually their mental health. Fear of Missing Out seems to drive the overuse of social media where users feel the need to frequently stay connected (Stead, 2017).

The current study explores measures of both the problematic and absent-minded scrolling of social media platforms along with the levels of anxiety to study the main relationship between these constructs. Firstly, to assess the problematic use of social media, the questionnaire was taken and modified from the Cuestionario de Experiencias Relacionadas con Internet that was originally constructed by Beranuy et Al. (2009) in Spanish to inquire about experiences related to the problematic usage of the internet in general and was validated to evaluate interpersonal and intrapersonal conflicts associated with its excessive use (Inostroza, 2019; Casas, 2013). The questionnaire was later translated to English by Panova & Lleras (2016) in collaboration with the creators to be used in a study exploring the relationship between problematic internet use and mental health more specifically anxiety, depression, and escapism correlating the questionnaire's mean scores as well as of those of few subsets with the levels of anxiety (Panova, 2016). Questions include inquiries on personal behavior using social media, interpersonal conduct with others, as well as personal performance in life in general.

Similarly, to assess self-reported scrolling behavior in an absent-minded way, the questionnaire used was originally designed to assess the frequency with which participants scrolled their mobile phones in an absent-minded way. In general, described as the Smartphone Use Questionnaire: Absent-Minded (SUQ-A), focuses mostly on the frequency of absent-minded behavior such as the use of mobile phones for longer than intended, repeating unconscious checking, as well as of engaging in various behaviors without noticing using a 7 points-Likert scale. The study measured the absent-minded use of mobile phones relating it to everyday levels of inattention through specific assessments (Marty-Dugas, 2018).

Using these tools combined, this study will find the relation between the different measured variables where the research question would be: *“To what extent do the problematic use of social media platforms and the absent-minded scrolling of pages predict levels of anxiety?”*

H0: Problematic and absent-minded scrolling of social media platforms are not related to levels of anxiety

H1: Problematic use of social media platforms is related to anxiety levels

H2: Absent-minded scrolling of social media pages is related to anxiety.

## Method

### Participants

One hundred and fifty-four participants responded to the questionnaire, and all agreed to participate after reading the informed consent included at the beginning of the questionnaire that contained a brief description of the research, what we are aiming to study, and most importantly about the anonymity throughout the study. The purpose was to reach as many respondents as possible by sending out the link of the questionnaire to family, friends, and friends of friends and by sharing the link on social media platforms such as Facebook, Twitter, and Instagram. Every one of the responses registered has been complete and taken into account.

### Instruments and Materials

#### *The Questionnaire*

The first part is the informed consent which gave a brief explanation of the concepts put in question and what the questionnaire will be about (Appendix A). The second part collected the demographic data that will give an insight into the characteristics of the population, mainly their gender identity, age, their highest level of education, and lastly their current employment status. The next part collected information about the user's social media scrolling experience through a set of questions exploring the type of platforms mostly used, the average amount of time spent online scrolling through these platforms, and the top reasons why they use these platforms since technology is becoming an even more indispensable part of our lives and affects it on many levels (DataReportal, 2021). Two other forms were implemented to study the users' behavior concerning both the problematic and the absent-minded scrolling of social media pages. And finally, the last part included the General Anxiety Disorder Assessment (GAD-7) to measure the levels of anxiety of each participant.

#### *Social Media Use Measures*

As the research question seeks to find the relation between social media scrolling and anxiety, the problematic and absent-minded questionnaires have been adjusted to match the current variables of the present research study. The forms were originally used to study experiences related to the internet in general for the problematic form, and on the other hand, the absent-minded form studied experiences related to phone use in general. For the present study, both forms were combined, and questions' variables have been modified to study experiences related to social media scrolling as follows:

#### *The problematic original form and the changes made*

Problematic 1: How often do you make new friendships online?

Problematic 2: How often do you abandon things that you are doing in order to be online longer? → how often do you abandon things that you are doing and find yourself scrolling through social media pages?

Problematic 3: Do you think that your academic or work performance has been negatively affected by your use of the internet? → Do you think that your academic or work performance has been negatively affected by your use of social media?

Problematic 4: When you have problems, do you connect to the internet to help you evade them? → When you have problems, do you scroll through social media pages to avoid them?

Problematic 5: How often do you anticipate your next connection to the internet? → How often do you anticipate your connection to social media?

Problematic 6: Do you think that life without the internet is boring, empty, and sad? → Do you think that life without social media is boring, empty, and sad?

Problematic 7: Do you get angry or irritated when somebody bothers you while you are connected to the internet? → Do you get angry or irritated when somebody bothers you while you are scrolling through social media pages?

Problematic 8: When you are not connected to the internet, do you feel agitated or uneasy? → When you have trouble connecting to social media pages, do you feel agitated or uneasy?

Problematic 9: When you navigate the internet, does time pass without you noticing? → When you scroll through social media pages, does time pass without you noticing?

Problematic 10: Is it easier or more comfortable for you to interact with people through the internet as opposed to in person? → Is it easier or more comfortable for you to interact with people through social media platforms as opposed to in person?

### ***The absent-minded original form and the changes made***

Absent-minded 1: How often do you open your phone to do one thing and wind up doing something else without realizing it? → How often do you open social media platforms to do one thing and wind up endlessly scrolling without realizing it?

Absent-minded 2: How often do you check your phone while interacting with other people? → How often do you check your social media platforms while interacting with other people?

Absent-minded 3: How often do you find yourself checking your phone “for no good reason”? → How often do you find yourself scrolling through social media pages “for no good reason”?

Absent-minded 4: How often do you automatically check your phone without a purpose? → How often do you automatically scroll through social media pages without a purpose?

Absent-minded 5: How often do you check your phone out of habit? → How often do you continuously scroll your social media pages out of habit?

Absent-minded 6: How often do you find yourself checking your phone without realizing why you did it? → How often do you find yourself scrolling through social media platforms without realizing why you did it?

Absent-minded 7: How often have you realized you checked your phone only after you have already been using it? → How often have you realized you scrolled through social media platforms only after you have already been scrolling through?

Absent-minded 8: How often do you find yourself using your phone absent-mindedly? → How often do you find yourself continuously scrolling through social media pages absent-mindedly?

Absent-minded 9: How often do you wind up using your phone for longer than you intended to? → How often do you wind up continuously scrolling through social media pages for longer than you intended to?

Absent-minded 10: How often do you lose track of time while using your phone? → How often do you lose track of time while continuously scrolling through social media pages?

### ***Anxiety Scale***

The GAD-7 is one of the most effective and commonly used tests, it is a diagnostic 7-item self-reporting scale that had good reliability and excellent internal consistency in screening for anxiety and assessing its severity in clinical practice and research as well (Spitzer, 2006; Johnson, 2019). It can tell a person’s levels of anxiety by calculating the sum of all the 7 question points with scales varying between “not at all = 0 points”, “several days = 1 point”, “more than half the days = 2 points”, and “nearly every day = 3 points”. Depending on the total score given to each participant which can be between 0 and 21, the levels of anxiety measured can vary between minimal, mild, moderate, or severe (Appendix C). the questions inquire

mostly about the behavior of each participant focusing mostly on the feeling of anxiousness, not being able to stop worrying, worrying too much about different things, trouble relaxing, feeling afraid, being restless, and finally becoming easily annoyed or irritable.

## Procedure

In the present study, the materials used to assess the scrolling behavior of social media pages were two main questionnaires. The problematic social media scrolling was modified to fit the present study's variables looking more specifically into the problematic scrolling behavior through social media pages. Similarly, the absent-minded questionnaire has been also modified to study the absentminded way of using more specifically in relation to the social media scrolling behavior (Appendix B).

The link to the questionnaire was sent directly to friends and family who in their turn tried to recruit participants as well. The link was also shared on several social media platforms such as Facebook, Instagram, and Twitter. All participants fully completed and submitted the questionnaire on their mobile phones. All 154 submitted responses have been recorded and used for the analysis. The collected data was then transferred to an excel sheet where all the values have been coded to be able to enter them accordingly into the IBM® SPSS® Statistics program using version 26. Correlations between all variables have been computed to find the best relationships among all predictors and are shown in the results section below.

## Results

### Descriptive statistics

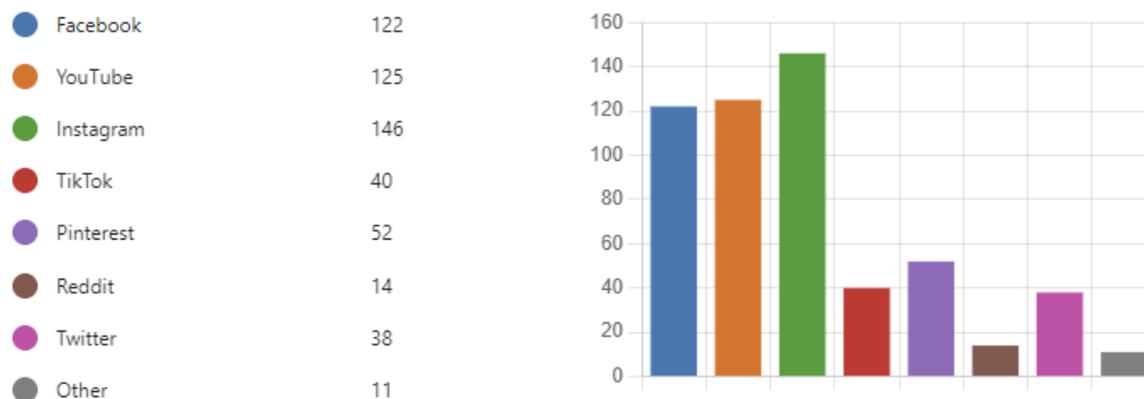
The total number of participants resulted in  $N = 154$  responses of which 71 participants were women, 82 men, and 1 non-binary. Ages ranged between 17 and 50 years with an average of  $M = 30.69$  years. Most of these participants had a master's degree or equivalent with the highest percentage of 49%, whereas 35% hold a bachelor's degree or equivalent, 14% had doctoral studies or equivalent, and lastly, one percent attended high school only.

As for the participants' current employment status, 74% had full-time employment, 9% were freelancers, eight percent were students, seven percent were unemployed, and two percent had a part-time job. All participants reported the usage of at least one of the stated platforms which are Facebook, YouTube, Instagram, TikTok, Pinterest, Reddit, and Twitter as shown in figure 1 and the top three most used platforms were Instagram ( $N = 146$ ), YouTube ( $N = 125$ ), and Facebook ( $N = 122$ ).

Concerning the amount of time spent online scrolling through social media pages, 64% of the sample size spent between 2 and 3 hours, and 19% reported spending 4 hours or more whereas the average amount of time spent online scrolling through these platforms was  $M = 2.44$  hours which was similar to the number provided by DataReportal (2022) an average of 2.5 hours.

**Figure 1**

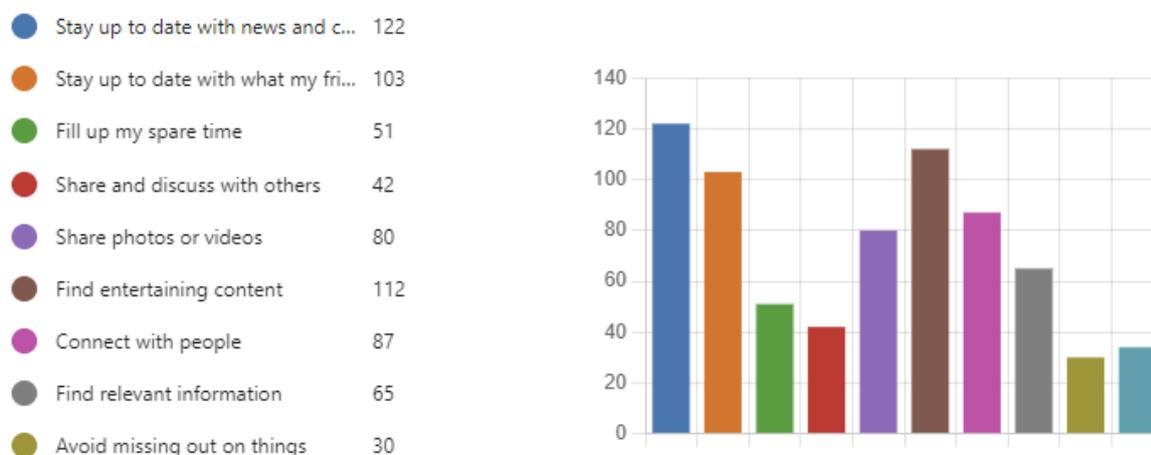
*Platforms cited and the corresponding number of users*



Additionally, as there are many reasons for the use of social media platforms, the top five motivations that were mostly picked, as shown in figure 2, respectively from the highest occurrence: stay up to date with news and current events, find entertaining content, stay up to date with what my friends are doing, connect with people, and finally, share photos or videos.

**Figure 2**

*Reasons why participants are using the mentioned social media platforms*



Furthermore, anxiety levels have been grouped according to the severity ranging from minimal to severe anxiety. Percentages of anxiety severity came as follows: 33.8% had mild anxiety, followed by 28.6% with minimal anxiety, then 20.8% with moderate anxiety, and finally, 16.9% with severe anxiety given that 38% of the total sample had moderate to severe anxiety.

### **Inferential statistics**

To be able to calculate the correlations between the different variables, the mean scores of each of the questionnaires have been computed after adding together the points given to each question, each depending on its corresponding scale, and then eventually all compared together.

The scale used for the problematic questionnaire was as follows: “strongly disagree/ never = 0 points”, “disagree/ rarely = 1 point”, “neither agree nor disagree/ sometimes = 2 points”, “agree/ more often = 3 points”, and “strongly agree/ always = 4 points”. Whereas the scale used for the absent-minded questionnaire was as follows: “never = 0 points”, “very rarely = 1 point”, “rarely = 2 points”, “occasionally = 3 points”, “frequently = 4 points”, “very frequently = 5 points”, and “all the time = 6 points”.

Pearson product correlation presented in Table 1 was found to be positive and statistically significant between the anxiety measure and the problematic scrolling of social media pages on one hand ( $r = .334$ ,  $p < .01$ ), was also found to be positive and more statistically significant between the anxiety measures and the absent-minded scrolling of social media pages on the other hand ( $r = .376$ ,  $p < .01$ ). This shows that an increase in the problematic use of social media scrolling as well as absent-minded behavior would lead to higher levels of anxiety measures.

To add, analysis from Table 1 also showed there is a positive and statistically significant correlation between the average amount of time spent online on social media pages on one hand ( $r = .305$ ,  $p < .01$ ), it was also found to be positive and more statistically significant between the average amount of time spent online and the absent-minded way of scrolling through social media pages ( $r = .386$ ,  $p < .01$ ). This shows that with an increase in the problematic and absent-minded fashion of social media scrolling behaviors there is also an increase in the average time spent scrolling through these platforms. This means that when scrolling in an absent-minded way, time is really passing without the person noticing.

More on that, the correlation calculation between the problematic and the absent-minded scrolling behavior was also found to be highly positive and statistically significant as shown in Table 1 ( $r = .606$ ,  $p < .01$ ). This means that the more people scroll in an absentminded fashion, the more problematic their behavior is becoming.

**Table 1**

*Correlation Analysis 1.*

Predictor	Average time spent	GAD-7	Problematic	Absent-minded
Average time spent	1			
GAD-7	.176*	1		
Problematic	.305**	0.334**	1	
Absent-minded	.386**	0.376**	0.606**	1

\* $p < .05$

\*\* $p < .01$

A lot of computations were made to find significant relations between the different variables such as gender identity, age, level of education, absent-minded scrolling, anxiety, and the type of platform used. Pearson’s correlation in Table 2 shows the most statistically significant relations between the many variables at the same time. The correlation was slightly positive and statistically significant between TikTok use and gender identity ( $r = .179$ ,  $p < .05$ ). This means that more males than females could be using the platform TikTok. The correlation was more positive and statistically significant between TikTok use, absent-minded scrolling, and anxiety ( $r = .238$ ,  $p < .01$ ) and ( $r = .210$ ,  $p < .01$ ) respectively. This means that TikTok pages could be the most scrolled through in an absent-minded way where anxiety levels may also be increasing. Whereas the correlation between TikTok use, age, and level of education is negative and statistically significant ( $r = -.258$ ,  $p < .01$ ) and ( $r = -.310$ ,  $p < .01$ ) respectively.

This means that with both increase in age and the level of education, TikTok use is becoming less.

**Table 2**

*Correlation Analysis 2.*

Predictor	<i>Gender</i>	<i>Age</i>	<i>Education</i>	<i>Absent-minded</i>	<i>GAD-7</i>
TikTok	.179*	-.258**	-.310**	.238**	.210**

\* $p < .05$

\*\* $p < .01$

Also, another set of computations was made to determine a relation between the motivation behind using social media, the type of platform used, and the other demographic variables. Pearson's correlation was found to be positive and statistically significant between Reason 2 which is to "*stay up to date with what my friends are doing*" and both platforms Facebook and Instagram ( $r = .252$ ,  $p < .01$ ) and ( $r = .208$ ,  $p < .01$ ) respectively. The relation was also positive and statistically significant between Reason 2 and many other variables at the same time considering the time spent online on social media platforms ( $r = .209$ ,  $p < .01$ ), the absent-minded and problematic scrolling ( $r = .243$ ,  $p < .01$ ) and ( $r = .283$ ,  $p < .01$ ) respectively, the anxiety levels ( $r = .186$ ,  $p < .05$ ), and finally, Reason 1 which is "*stay up to date with current news and events*". This means that people might be using mostly Facebook and Instagram to stay up to date with what their friends are doing, probably spending more time scrolling through these platforms in an absent-minded and problematic way, and lastly slightly affecting levels of anxiety. Staying up to date with current news and events seems to also be related to news about friends which could be explained by a Fear of Missing Out trait.

**Table 3**

*Correlation Analysis 3.*

Predictor	<i>Facebook</i>	<i>Instagram</i>	<i>Time spent</i>	<i>Absent-minded</i>	<i>Proble matic</i>	<i>GAD-7</i>	<i>Reason 1</i>
Reason 2	.252**	.208**	.209**	.243**	.283**	.186*	.252**

\* $p < .05$

\*\* $p < .01$

Another finding was found to be highly correlated and statistically significant among its variables (Table 4). Pearson's correlation was calculated between means of one subset of the problematic questionnaire more specifically problematic 4 "*when you have problems do you scroll through social media pages to avoid them?*" along with means of absent-minded scrolling of social media pages ( $r = .490$ ,  $p < .01$ ), means of the general problematic scrolling scores ( $r = .519$ ,  $p < .01$ ), and finally with levels of anxiety from the GAD-7 ( $r = .407$ ,  $p < .01$ ). This means that at some point people tend to avoid their problems and probably try to seek comfort scrolling through social media platforms. This problematic behavior seems to be perceived as a habit since it is mostly happening in an absent-minded way and which might also be leading to higher levels of anxiety.

**Table 4***Correlation Analysis 4.*

Predictor	<i>Absent-minded</i>	<i>Problematic</i>	<i>GAD-7</i>
Problematic 4	.490**	0.519**	.407**

\*\* $p < .01$

Most importantly, to finally determine which variable is mostly related to anxiety levels, a series of regression analyses were conducted, predicting the anxiety level measures using the problematic and the absentminded predictors in a linear regression model (Table 5) where the anxiety levels are considered as a dependent variable. The absent-minded scrolling behavior was more significant in predicting the relationship with anxiety levels,  $b = .274$ ,  $t = 2.93$ ,  $p < .001$ . This means that the absent-minded way of scrolling through social media pages might be affecting the levels of anxiety.

**Table 5***Multiple regression analysis*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.010	1.444		.699	.486
	Problematic mean	1.669	.933	.168	1.789	.076
	Absentminded mean	1.414	.483	.274	2.927	.004

**Discussion**

There are numerous daily life triggers that have an impact on our anxiety levels. Considering the included sample, respondents to the questionnaire were mostly from Lebanon where Lebanese people are recently facing continuous daily challenges mostly from the economic crisis and others eventually affecting their mental health. Some of the comments that were given by participants at the end of the questionnaire support this point. *“Better be noted that I’m already battling depression regardless of social media”* and *“who isn’t feeling like hell in Lebanon anyways?”* were two of the most relevant remarks showing the struggle that these participants were in at the time of the test. Given the results of the current study, the problematic use of social media platforms especially when scrolled through in an absent-minded way is probably one of these triggers affecting levels of anxiety.

On another note, the average time per day spent scrolling through social media  $M = 2.44$  hours was the same as the average time calculated by the statistics platform DataReportal (2022) which was  $M = 2.5$  hours. This number is considered high and alarming where one would stay for a really long period in one day reaching 5 or 6 hours scrolling through social media pages without being aware of the time that had passed.

As expected, the study results replicated those found by Panova (2016) where participants were given questionnaires to assess their manner of mobile phone and internet use and their levels of depression and anxiety showing a strong positive relationship between the

problematic use of mobile phones and lower mental health. Participants seem to turn to smartphones for them to avoid going through negative experiences or even escape reality.

Similarly, the study results also replicated those found by Marty-Dugas (2018) that showed a strong positive correlation between general smartphone use and the absent-minded behavior, between the smartphone questionnaires and the measures of inattention, as well as between items of the questionnaire and the measures of inattention. The current study indicates that people using these platforms in a problematic way are also inducing an absent-minded behavior where users are losing track of time when scrolling online.

To add, a recent study published in 2021 by Sha & Dong puts attention to male adolescents of the Chinese population who excessively use the platform TikTok also show higher levels of depression and anxiety than female adolescents. Participants assessed their manner of using smartphones with The Smartphone Addiction Scale Short Version where the item “smartphone” was changed to “TikTok”. These results showed a strong positive relationship with their levels of depression and anxiety measured with The Depression Anxiety Stress Scales 21. TikTok use disorder was found to be positively linked to memory loss and more importantly to depression, anxiety, and stress.

Specific items from the questionnaires help also reveal problematic manners and behaviors scrolling through social media platforms. This behavior seems to become a habit taking more of our time than intended to where users are also escaping their problems to find themselves scrolling more through social media pages without them realizing the time that had passed. Item 4 of the problematic measure “*when you have problems, do you scroll through social media pages to avoid them?*” is also positively related to finding entertaining content indicating this issue as people might seek social media platforms to escape stressful situations and probably find comfort scrolling endlessly through these pages. Panova (2016) found that students use their mobile phones to escape boredom and feelings related to anxiety-inducing situations. Mobile phones seem to offer a security blanket that helps lower the initial negative reactions to stress. Nehra et al. (2012) also reported that anxious participants used texting as a way to escape boredom or any other unwanted activity where 70% of participants agreed that mobile phones helped them overcome negative feelings such as guilt, anxiety, depression, etc.

Fear of missing out has been also revealed to be a way of coping as people seem to use mostly Instagram and Facebook to stay up to date with what their friends are doing which also seems to take a lot of their time. This behavior seems to be problematic as it is also becoming a habit where levels of anxiety are found to be coexisting with higher levels as well, similar to the findings in Elhai’s study (2016) where problematic smartphone use was associated mostly with fear of missing out as well as with other variables such as depression, anxiety and need for touch.

Just like every research, this project is considered to have limitations within the context of methodology mainly. As this is a correlational analysis, no intervention was conducted which would be an asset to further investigating how social media use affects levels of anxiety by simply manipulating the different variables. Lowering the time spent on social media platforms may show how levels of anxiety change. To add, more information needed to be collected from participants to have a better understanding of their daily behaviors using social media platforms. Such information would have provided a richer description of the number of connections per day, ways and reasons for coping and escaping, scales to determine active vs. passive use...

Also, the present study focused on the general levels of anxiety that might be affected. Social anxiety and addictive traits might be more relevant to examine especially when dealing with social media platforms and their problematic use.

To conclude, the number of social media platforms is still excessively increasing reaching around 4.65 billion active users globally where people seem to spend an average of 2.44 hours per day on social media platforms alone probably creating a sense of comfort for the

user. The problematic use of these platforms seems to be positively linked to the absent-minded scrolling of social media pages and positively linked to higher levels of anxiety.

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## Appendix

### Appendix A: Consent form

#### Absent-minded Social Media Scrolling vs. Anxiety

...

##### Informed consent

You are being invited to participate in my research study as part of the master's Thesis in Cognitive Science at Umeå University.

The number of social media platforms is constantly increasing and scrolling through social media pages seems to take up much of our time. One of the problematic habits that seem to be related to anxiety is the absent-minded scrolling through social media pages. This compulsory continuous connectedness behavior seems to keep us for long hours despite our will to engage in other more meaningful activities.

This study aims to investigate the effect of Absent-minded Social Media Scrolling on Levels of Anxiety.

The questionnaire takes about 10 minutes to complete and consists of 4 sections as per below:

- 1- Informed consent,
- 2- Demographic data,
- 3- Social media use,
- 4- GAD-7 assessment.

Participation in this study is voluntary and you may withdraw at any point without consequences. Your data and answers collected are completely anonymous, confidential, and only used for academic purposes.

For further information, you may contact the person responsible for this study via the following:  
 anthony.eid@live.com  
 +46735825477

1. By clicking "I agree to participate" below you are indicating that you have read and understood this consent form and agree to participate in this research study. In case you disagree, this questionnaire will come to an end. \*

I agree to participate.

## Appendix B: Questionnaire

### Section 2

#### Demographic data

2. Gender identity.

Woman

Man

Prefer not to say

Other

3. Age in years:

4. Highest level of education:

No education

Elementary

High school

Bachelor's degree or equivalent

Master's degree or equivalent

Doctoral or equivalent

Other

5. Current employment status:

Full-time employment

Part-time employment

Unemployed

Student

Retired

Other

### Section 3

#### Social Media Scrolling Experience

This section consists of questions that cover your use of social media.

Kindly read each question carefully and answer as accurately as possible with what best describes your behavior.

6. Which of the following platforms do you use?

Facebook

YouTube

Instagram

TikTok

Pinterest

Reddit

Twitter

Other

7. Why do you use these platforms? (Several answers can be chosen)

Stay up to date with news and current events

Stay up to date with what my friends are doing

Fill up my spare time

Share and discuss with others

Share photos or videos

Find entertaining content

Connect with people

Find relevant information

Avoid missing out on things

Other

8. What is the average amount of time you spend daily on social media only?

Less than 1 hour

1 hour

2 hours

3 hours

4 hours or more

9. Problematic social media scrolling: Kindly read each question carefully and answer as accurately as possible with what best describes you. The following 5 items Likert scale applies respectively: "strongly disagree/ never", "disagree/ rarely", "Neither agree nor disagree/ sometimes", "Agree/ more often", and "strongly agree/ always".

How often do you make new friendships online?

How often do you abandon things that you are doing and you find yourself scrolling through social media pages?

Do you think that your academic or work performance has been negatively affected by your use of social media?

When you have problems, do you scroll through social media pages to avoid them?

How often do you anticipate your next connection to social media pages?

Do you think that life without social media is boring, empty, and sad?

Do you get angry or irritated when somebody bothers you while you are scrolling through social media pages?

When you have trouble connecting to social media pages, do you feel agitated or uneasy?

When you scroll through social media pages, does time pass without you noticing?

Is it easier or more comfortable for you to interact with people through social media platforms than in person?

10. Absentminded social media scrolling. Kindly read each question carefully and answer as accurately as possible with what best describes you. The following 7 items Likert scale applies respectively: "never", "very rarely", "rarely", "occasionally", "frequently", "very frequently", and "all the time".

How often do you open social media platforms to do one thing and wind up endlessly scrolling without realizing it?

How often do you check your social media platforms while interacting with other people? (e.g. conversation)

How often do you find yourself scrolling through social media pages "for no good reason"?

How often do you automatically scroll through social media pages without a purpose?

How often do you continuously scroll your social media pages out of habit?

How often do you find yourself scrolling through social media platforms without realizing why?

How often have you realized you scrolled through social media platforms only after you have finished scrolling through?

How often do you find yourself continuously scrolling through social media pages absent-mindedly?

How often do you wind up continuously scrolling through social media pages for longer than you intended?

How often do you lose track of time while continuously scrolling through social media pages?

## Appendix C: Generalized Anxiety Disorder Assessment (GAD-7)

## GAD-7 Anxiety

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid, as if something awful might happen	0	1	2	3

Column totals    \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ =

*Total score*    \_\_\_\_\_

## Scoring GAD-7 Anxiety Severity

This is calculated by assigning scores of 0, 1, 2, and 3 to the response categories, respectively, of "not at all," "several days," "more than half the days," and "nearly every day." GAD-7 total score for the seven items ranges from 0 to 21.

0–4: minimal anxiety

5–9: mild anxiety

10–14: moderate anxiety

15–21: severe anxiety