

HOW SOCIAL COMPARISON ON INSTAGRAM AFFECTS WELL-BEING. PERSPECTIVES FROM A STUDY CONDUCTED DURING THE LOCKDOWN

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ABSTRACT. During the Spring of 2020 amid the COVID-19 pandemic, several countries ordered lockdowns. The limitations of movement contributed to the rise of social media activity. The present research focused on how the active use of Instagram had an impact on well-being during the first lockdown in Romania. Aiming to explore how active Instagram use contributes to users' self-esteem, satisfaction with life, and loneliness during an unprecedented situation of a lockdown, we conducted an online survey in April 2020 on young adults (N=411) in Romania. Findings showed that actively using Instagram during the lockdown did not have a significant direct impact on self-esteem and satisfaction with life, but significantly decreased loneliness. Upward comparison of Instagram active users contributed to the increase in self-esteem but decreased the values of satisfaction with life and increased loneliness. The downward comparison had no significant impact on self-esteem, satisfaction with life, and loneliness.

Keywords: *social media, well-being, Instagram, social comparison, COVID-19 pandemic.*

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Introduction

During the Spring of 2020 amid the COVID-19 pandemic, several countries faced an unprecedented health crisis that made governments order unprecedented measures to limit the spread of the disease. During the lockdown, the limitations of movement and social contacts in form of in-person meetings contributed to the rise of social media activity. Social media, in general, is used for social interaction, searching for new information, spending time, entertainment, relaxing, communicating, expressing opinions, distributing information, supervising and obtaining information about other users (Whiting & Williams, 2013), self-presentation and self-promotion, along with the desire to learn about other users of the platform (Alhabash & Ma, 2017).

The present research focused on how the active use of Instagram, the most popular social network site (SNS) for young people in Europe (Newberry, 2019). In terms of particular motivations to use Instagram, the need for entertainment, convenience, the medium appeal, passing of time, self-expression, self-documentation, social interaction, and information sharing were mentioned by an empirical study conducted among college students (Alhabash & Ma, 2017). In the situation of a lockdown, we might assume that some of the above-mentioned reasons to use Instagram became more relevant.

A study carried out during that period by IRES, called *Romania #StaysHome - Attitudes and behaviors of Romanians during the pandemic* (IRES, 2020) found out that the traditional media consumption such as TV used increased during the first COVID-19 related lockdown for 67% of respondents. Furthermore, 78% of those surveyed declared informing themselves about the pandemic from social media platforms and the Internet in general. These results underlined the role of social media during this time and therefore are an argument in favor of the decision to analyze how using the social media platform, in particular Instagram, the third most used social media platform in Romania and the most relevant platform for young adults (Zelist, 2020) influenced the well-being of young adults during the lockdown.

Previous literature on social media use and well-being took into consideration factors such as the type and intensity of use and consider the social comparison to be a distinguished element that has an impact on well-being variables. The present study aimed to contribute to the existing literature on social media and well-being not only by analyzing the particularities of Instagram use but conducting the study in an unprecedented situation, that of a lockdown during the COVID-19 pandemic.

The context of the study

The COVID-19 pandemic is a unique global situation in the last decades, which has imposed unprecedented measures in recent history. The medical scientific community, the governments of the states dealing with this health crisis, public policy specialists, even the World Health Organization had to adjust their recommendations and how they approached the fight against the spread of the virus, as knowledge on COVID-19 advanced.

In the context of a health crisis as complex and with such global implications, an ongoing crisis at the time of this work's conclusion, it is both relevant and difficult to map the timeline of the COVID-19 pandemic. The disinformation phenomenon adds new features to this endeavor.

According to official information from the Romanian Government, on February 26th, 2020, it is made public that Romania is facing the first case of infection with the new coronavirus (CMR, 2020). At the beginning of March, the number of infection cases is rising, thus banning flights from and to Italy, which becomes the epicenter of the epidemic in Europe and the first country after China to report a large number of cases. On March 10th, 2020, the World Health Organization officially states that we are dealing with a pandemic of the new coronavirus. The health crisis gains momentum on a global scale.

The President of Romania declares a state of emergency in Romania on March 16th, 2020. A series of measures by the Romanian state follow suit, meant to restrict the spread of the epidemic in our

country, and the term of *lockdown* is the one employed by the Romanian press to describe these measures to restrict freedom of movement. During March-May 2020, the maximum number of cases published daily in Romania is 525, in April, according to daily newsletters of the Ministry of Health (CMR, 2020). On May 15th, the state of emergency is concluded, followed by a state of alert. During the following months, in several countries from the European Union, measures are softening, which contributed to acceleration for the spread of the infection.

During the state of emergency, several military ordinances were issued, that constituted the legal framework meant to contribute to countering the spread of COVID-19. The measures imposed represented restricting the mobility of the population, who could not leave their homes except with a sworn statement to indicate a well-founded reason. Except for grocery stores and pharmacies, all other shops were closed. Teaching moved online on all levels.

The lockdown put in place on March 16th, 2020 was extended on April 15th, thus Romania reached a state of the emergency period of two months, a lockdown. After two months of the emergency state, according to official data, in Romania, there were over one thousand deaths caused by the new coronavirus, and the total number of infection cases crossed 16,000.

Theoretical background

Scholarship on the relationship between social media use and well-being was constantly developed over the last decade. The literature shifted from a generalized perspective that social media use will negatively impact well-being indicators to a much-differentiated view. However, when it comes to the nature of the effects that social media can have on users' well-being indicators mixed findings were reported. Studies that were previously conducted showed both positive (Niera & Barber, 2014) and negative effects (Kim & Lee, 2011;

Steinfeld et al., 2008). The increase of social media use was associated with a decrease in well-being and life satisfaction (Kross et al, 2013; Lin et al., 2016).

The majority of the research conducted on social media and well-being focused on Facebook (Feinstein et al., 2013; Kalpidou et al., 2011). Taken into consideration the multitude of motivations to use social media, scholars observed that different types of Facebook use can lead to different well-being outcomes (Cingel & Olsen, 2019). However, studies focusing on Instagram emerged (Ahadzede et.al., 2017; Kleemans et al., 2018). It is interesting to address the issue of social media use and well-being on several platforms taking into consideration the particularities of each virtual space. Instagram was from the beginning associated with visual communication (Van Dijck, 2013; Lee et al., 2015).

Thus, social media use can be defined not only in a quantitative manner but also in a qualitative one. In terms of behavior on social media, the literature distinguished between passive and active use. Previous literature underlined the positive role of active social media use on well-being indicators (Wang et al., 2017). Opposed to passive looking, self-disclosure in form of text or visual-based posts defines an active social media use that, according to previous literature, can have a positive impact on self-esteem (Cingel & Olsen, 2019). We assume that this type of effect will occur also during the situation of a lockdown and we posited:

H1. The increase in active Instagram use will directly increase a) self-esteem, and b) satisfaction with life.

H2. The increase in active Instagram use will reduce loneliness.

The social comparison theory (Festinger, 1954) that underlined individuals' tendency to evaluate their abilities and opinions compared to those of others was often used as theoretical background when analyzing the relationship between social media use and well-being indicators. The popularity, sociability, and social capital of other users translated in the number of followers, reactions, and comments

provide the basis for social comparative functions of SNS (Chou & Edge, 2012; Vitak & Ellison, 2013). Previous research conducted on Facebook proved that social comparison plays a relevant role, by mediating the impact of social media use on self-esteem (Vogel et. al., 2014). Upward social comparison (with superior others) can inspire people to become similar to the people they admire, but it can also lead to poorer self-evaluation (Lockwood & Kunda, 1997). Downward comparison (with inferior others) can make people feel bad but can contribute to a better self-evaluation (Wills, 1981).

The type of social media use also plays a differentiating role in the effects on well-being (Cingel & Olsen, 2018). Therefore, the present study addressed the impact of active Instagram use on self-esteem, satisfaction with life, and loneliness and we hypothesized:

H3. Mediated by social upward comparison active Instagram use will increase a) self-esteem, b) satisfaction with life, and will decrease c) loneliness.

H4. Mediated by social downward comparison active Instagram use will decrease a) self-esteem, b) satisfaction with life, and will increase c) loneliness. Figure 1 depicted the conceptual model.

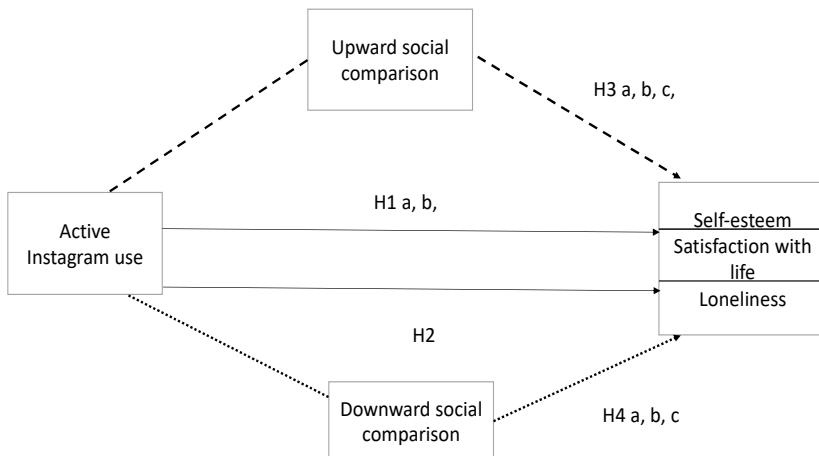


FIGURE 1. Conceptual model. Solid lines represent the tested direct paths. Dashed lines represent the tested indirect effects of active Instagram use via upward social comparison on a)self-esteem, b)satisfaction with life, and c) loneliness. Dotted lines represent the tested indirect effects of active Instagram use via downward social comparison on a)self-esteem, b)satisfaction with life, and c) loneliness.

Methods and measures

Aiming to explore how active Instagram use contributes to users' self-esteem, satisfaction with life, and loneliness during an unprecedented situation of a lockdown, we conducted an online survey in the second half of April 2020 in Romania. Participation was voluntary. The link related to the survey was disseminated via Facebook. The sample of the online survey consisted of $N=411$ participants, young adults, age 18 to 30, $M=22.06$, $SD=4.89$. 62.5% of the participants were women, 70.1% of them had a high school degree, 29.9% BA or MA degree, and 85.2% were living in the urban area.

In terms of Instagram use our respondents have $Mdn= 443$ ($M=588.2$, $SD=682.73$) accounts that they follow and $Mdn= 619$ ($M=944.17$, $SD=1526.53$) followers. Instagram stories are the most appealing feature of the social network platform. When active on Instagram several times a day (90.8%) they mainly use Instagram stories where 70.84% of the participants reported to have posted several times a day and 11.7% one a day. They react to Instagram stories once a day (24.1%), or several times a day (25.8%).

Posting on feed is something they do one a year (41.4%), one a week (22.6%), one a month (6.8%), or several times a day (3.9%). Commenting on others' posts was an activity that 30.9% of the participants perform once a week, 13.1% once a day, and 9.7% several times a day.

Measures

Input variable

Active Instagram use, was measured using seven statements (e.g., 'How often do you post on the Instagram feed?') on a 6-point Likert scale ranking 1= 'never or almost never' to 6='multiple times a day' ($\alpha=.88$, $M=4.32$, $SD=.99$; adapted from Vogel et al., 2014).

Mediators

The upward social comparison was measured using one statement ('When comparing yourself to others on Instagram, to what

extent do you focus on people that are better off than you?') on a 7-point Likert scale ranking 1= 'never' to 7='always' ($M=3.16$, $SD=1.72$; Vogel et al., 2014).

The downward social comparison was measured using one statement ('When comparing yourself to others on Instagram, to what extent do you focus on people that are worse off than you?') on a 7-point Likert scale ranking 1= 'never' to 7='always' ($M=2.58$, $SD=1.5$; Vogel et al., 2014).

Output variables

Self-esteem was measured using ten statements (e.g., 'On the whole, I am satisfied with myself.') on a 4-point Likert scale ranking 1= 'totally agree' to 6='totally disagree' ($\alpha=.822$, $M=1.96$, $SD=1.89$; Rosenberg, 1965). Satisfaction with life was measured using five statements (e.g., 'From many perspectives of view my life is closed to my ideal.') on a 6-point Likert scale ranging 1= 'totally disagree' to 6='totally agree' ($\alpha=.851$, $M=4.13$, $SD=.99$; Diener et al., 1965).

Loneliness was measured using twenty statements (e.g., 'How often do you feel part of a group of friends?') on a 4-point Likert scale ranking 1= 'never' to 5='always' ($\alpha=.789$, $M=2.05$, $SD=.36$; Russell, 1996).

Findings

To test the proposed hypothesis mediation analysis for each dependent variable was run using Model 4, PROCESS V3.4 in SPSS (Hayes, 2017) employing 5,000 bootstrap sample. Findings indicate that active Instagram use has no significant direct effect on self-esteem ($b=-.02$, $SE=.02$, 95% BCBCI=[-.0732, .0183], $p=.239$), nor on satisfaction with life ($b=.08$, $SE=.05$, 95% BCBCI=[-.0158, .01783], $p=.101$). Thus, H1a and H1b were not supported. However, in line with H2, active Instagram use has a significant negative direct effect on loneliness ($b=-.04$, $SE=.02$, 95% BCBCI = [-.0784, -.0078], $p=.017$).

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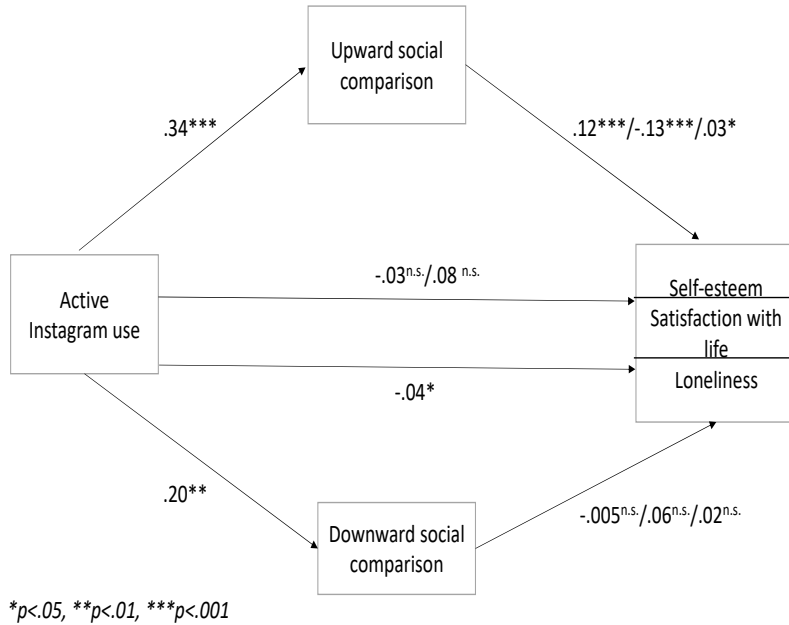


Figure 2. Direct effects

Active Instagram use has a significant positive indirect effect via upward comparison on self-esteem ($b = .04$, $BootSE = .0127$, 95% $BootBCBCI = [.0190, .0686]$), a significant negative indirect effect on satisfaction with life ($b = -.04$, $BootSE = .0212$, 95% $BootBCBCI = [-.0917, -.0095]$), and has a significant positive indirect effect on loneliness ($b = .01$, $BootSE = .01$, 95% $BootBCBCI = [.0005, .0246]$). Thus, H3a was supported, but H3b and H3c were not supported.

Active Instagram use has no significant indirect effect via downward comparison on self-esteem ($b = -.001$, $BootSE = .01$, 95% $BootBCBCI = [-.0115, .0094]$), on satisfaction with life ($b = .012$, $BootSE = .01$, 95% $BootBCBCI = [-.0082, .0395]$), and on loneliness ($b = .003$, $BootSE = .003$, 95% $BootBCBCI = [-.0031, .0117]$). Thus H4a, H4b, and H4c were not supported. Figure 2 indicates the direct effects and table 1 in the annex shows detailed results of hypothesis testing.

Discussion

Actively using Instagram during the lockdown did not have a significant direct impact on self-esteem and satisfaction with life, but significantly decreased loneliness. Posting pictures and stories on Instagram made our respondents feel like a part of a community and thus made them feel less lonely. Similar to recent studies conducted on Facebook, an upward comparison of Instagram active users contributed to the increase in self-esteem (Cingel & Olsen, 2019).

Contrary to our expectations, upward social media comparison significantly decreased the values of satisfaction with life and increased loneliness. People who compared themselves with others that they consider to be superior have a lower level of satisfaction with life and feel lonely. The downward comparison had no significant impact on the well-being indicators that we measured, self-esteem, satisfaction with life, and loneliness.

Conclusions and implications, limits

Our study contributed to a better understanding of the impact of active Instagram use on well-being in a special situation such as a pandemic related lockdown. We are aware of the sample limitations and future research may take into consideration additional aspects. The major limitation of our study consists of the use of a convenience sample having females over-represented. An experimental design would have explored in a better way the causality between Instagram uses and well-being indicators. We did not measure for example who are they living in the house during the lockdown, nor what is their economic situation to have a larger picture of other factors that might influence the well-being indicators besides the social comparison caused by Instagram use. As the COVID-19 pandemic was not yet over at the end of 2020, a longitudinal perspective on how Instagram use affected well-being indicators is to be considered.

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Table 1. Hypothesis testing

Hypothesis testing	Pathway	b(SE)	95% BCBCI
Direct effects			
H1a	Active Instagram use > Self-esteem	-.03(.02)	[-.0733, .0183]
H1b	Active Instagram use >	.08(.05)	[-.0158, .1783]
H2	Satisfaction with life	-.04(.02)*	[-.0784, -.0078]
	Active Instagram use > Loneliness	.34(.08)***	[.1711, .5011]
	Active Instagram use >	.20(.07)**	[.0569, .3470]
	upward social comparison		
	Active Instagram use>		
	downward social comparison		
	Upward social comparison>	.12(.02)***	[.0843, .1597]
	Self-esteem		
	Upward social comparison>	-.13(.04)***	[-.2106, -.0511]
	Satisfaction with life		
	Upward social comparison>	.03(.01)*	[.0053, .0633]
	Loneliness		
	Downward social comparison>	-.005(.02)	[-.0471, .0386]
	Self-esteem		
	Downward social comparison>	.06(.05)	[-.0275, .1539]
	Satisfaction with life		
	Downward social comparison>	.02(.02)	[-.0167, .0493]
	Loneliness		
Indirect effects			
H3a	Active Instagram Use >	.43(.01)	[.0190, .0686]
	Upward social comparison>		
	Self-esteem		
H3b	Active Instagram Use >	-.04(.02)	[-.0917, -.0095]
	Upward social comparison>		
	Satisfaction with life		
H3c	Active Instagram Use >	.01(.01)	[.0005, .0246]
	Upward social comparison>		
	Loneliness		
H4a	Active Instagram Use >	-.001(.01)	[-.015, .0094]
	Downward social comparison>		
	Self-esteem		

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Hypothesis testing	Pathway	b(SE)	95% BCBCI
Direct effects			
H4b	Active Instagram Use > Downward social comparison> Satisfaction with life	.01(.01)	[-.0082, .0395]
H4c	Active Instagram Use > Downward social comparison> Loneliness	.003(.003)	[-.0031, .0117]

Note. Unstandardized b coefficients (with boot SE between parentheses).

BCBCI=bias corrected 5,000 bootstrap confidence interval;

N=241. ^{†††*} p < .05; ^{**} p < .01; ^{***} p < .001.