Understanding the Relations Between Exposure to the Positive Self-Portrayals of Others on Social Media and Emerging Adults' Mental Health During a COVID-19 Imposed Lockdown

Ilse Vranken[1,2], Lara Schreurs[1,2], Edward John Noon[3], & Laura Vandenbosch[1]

[1] School for Mass Communication Research, Faculty of Social Sciences, KU Leuven, Leuven, Belgium
[2] Research Foundation Flanders (FWO-Vlaanderen), Brussels, Belgium
[3] Department of Children, Young People and Families, Leeds Trinity University, Leeds, UK

Abstract

Social media fulfil emerging adults' self-presentation needs, and young people often selectively present positive self-portrayals on social media (i.e., exciting social life, successful professional life, and being happy). Yet, being exposed to the positive self-portrays of others can sometimes relate to mental health pressures. In exceptional times of social deprivation (e.g., the COVID-19 pandemic), such relations may differ. This cross-sectional study among 415 emerging adults (M_{age} = 24.27, SD = 3.19; Women = 64.10%) examined the interrelations between exposure to the positive self-portrayals of others on social media and mental health during an intense COVID-19 lockdown period. The study revealed that exposure to such content related to lower levels of mental health. No support emerged for the moderating role of experiencing negative life events, specifically the experience with COVID-19 illnesses in one's environment, or a three-way interaction with such experience and gender. These results provide evidence to suggest that specific social circumstances may lead exposure to positive self-portrayals on social media to relate to lower mental health. Specifying such circumstances can help the field to move away from the current inconsistent findings concerning social media/mental health relations.

Keywords: COVID-19 pandemic; positive self-portrayals on social media; emerging adults; mental health

Introduction

Due to the COVID-19 pandemic, national governments have implemented unprecedented restrictive social-distancing measures to contain the spread of the virus (Ammar et al., 2020). In numerous European countries, such as Belgium and Germany, a first national lockdown was imposed throughout the period March–May 2020. This first lockdown was exceptional as it was stricter than lockdown periods later in the year (after May 2020). Initial evidence suggests that the negative effects of the lockdown periods on citizen's mental health may be particularly marked for emerging adults (18–30 years; McGinty et al., 2020; Pierce et al., 2020).

Social interaction is fundamental in supporting development during emerging adulthood (Barry et al., 2015). To help overcome the major constraints on face-to-face social interaction during the lockdowns, social media proved

to be particularly useful (Ammar et al., 2020). Research has revealed that emerging adults' social media use increased significantly during the pandemic (Abbas et al., 2021; Lisitsa et al., 2020). While these platforms are important tools for involving oneself in social groups, receiving emotional and peer support, as well as building and maintaining relationships (Abbas et al., 2021; Latikka et al., 2022), they are also often used to fulfil one's self-presentation needs and to engage with content shared by others. Indeed, research suggests that young people who spent more time on social media during the lockdown also engaged in more online self-presentation and browsed through their feeds more often to relieve feelings of boredom (Hamilton et al., 2020).

When sharing personal content on social media, emerging adults typically conform to the established social media norm of selectively presenting a positive version of the self (Lee-Won et al., 2014). More specifically, social media users often seek to give the impression that they have many friends and an exciting social life (Schreurs & Vandenbosch, 2022). Moreover, they also tend to come across as being happy (Chou & Edge, 2012; Schreurs & Vandenbosch, 2022). Importantly, research has documented mental health pressures that users may experience due to being exposed to such selective self-presentations of others (e.g., Kleemans et al., 2018; Vogel & Rose, 2016). Yet, recent research has also shown that such content can be inspiring, which may be positive for mental health (Meier et al., 2020). As the available research on the relations between exposure to positive social media self-portrayals and mental health has produced inconsistent results (e.g., for review, see Verduyn et al., 2017), there is utility in identifying the specific conditions that may determine the nature of these relations.

Studies exploring the specific conditions in which exposure to social media content is positively vs. negatively related to mental health are currently lacking. More precisely, studies tend to focus on the relationship between social media use and mental health within a 'general context' (for review, see Verduyn et al., 2017), and typically do not consider the specific social situation emerging adults find themselves in. The current study addresses this gap by focusing on a specific time period (i.e., the first and most severe COVID-19 lockdown period), which is characterized by unprecedented social restrictions. More specifically, in times when social contacts are extremely limited, it is likely that emerging adults perceive their own lives as less interesting and positive. Accordingly, positive social media self-portrayals of others posted during times of social deprivation (i.e., a COVID-19 enforced lockdown) may appear particularly dissimilar to one's own situation (and thus, unattainable), which can have profound negative implications for emerging adults' mental health (Hamilton et al., 2020; Zhao & Zhou, 2020). Research exploring such relations is lacking, however. Furthermore, measurement issues prevail in existing research on the relations between social media use and mental health in 'general contexts', which may partly explain the inconsistency in their research results. More specifically, existing cross-sectional studies on the relations between exposure to social media content and mental health (e.g., Trifiro & Prena, 2021; Verduyn et al., 2017) largely focus on general social media measures and can therefore not account for the specific type of content individuals are exposed to when they are scrolling through social media. To move away from such a general approach, we utilise a recently developed content-specific measure to examine individuals' exposure to positive self-portrayals of others (Schreurs & Vandenbosch, 2022).

Together, this study explores how exposure to a specific type of social media content (i.e., positive social media self-portrayals of others) during a national lockdown (in which social deprivation and physical distancing is the standard and feelings of boredom occur frequently) relates to emerging adults' mental health. In doing so, this study not only sheds light on how specific types of social media use may have informed mental health during a COVID-19 lockdown, but the results may also extend to other situations of increased feelings of social deprivation (e.g., moving to a new home or having a long-term illness). In the current study, mental health was operationalized as "the affective components of psychological distress and well-being" (McHorney & Ware, 1995, p. 17).

Furthermore, emerging adults are unlikely to respond to the positive self-portrayals of others in the same way. For instance, theories such as the Media Practice Model postulate that one's identity (formed by, for instance, offline life experiences) inform how media is interpreted and how individuals react to this content (Steele & Brown, 1995). Following this reasoning, this study determines whether the experience of negative life events moderates the relation between exposure to the positive self-portrayals of others on social media and mental health. For the pandemic specifically, emerging adults differed in the extent to which they knew people who became (severely) ill due to COVID-19, which can be considered a salient negative life event during the lockdown period (Johnson et al., 2020). It is possible that for emerging adults who experience people in their environment suffering from COVID-19, the positive self-portrayals of others on social media may appear particularly unattainable. As such, in these instances, there may be a stronger link between exposure to positive social media self-portrayals of others and negative mental health. To understand this interaction pattern and gain an in-depth insight into which individuals are more susceptible, the recently introduced moderation framework of Holbert and Park (2020), which clarifies

interaction patterns in communication sciences, was applied. We tested whether illnesses in one's environment is a contributory moderator which strengthens the negative relationship between exposure to positive self-portrayals of others on social media and mental health.

The Media Practice Model (Steele & Brown, 1995) proposes that gender, combined with other factors (e.g., individuals' 'lived experiences'), may further influence how people interpret and react on media content. In relation to this study, young women typically respond stronger to positive social media self-portrayals (Yau & Reich, 2019) and negative experiences such as illnesses in one's environment (del Mar García-Calvente et al., 2012; Matud, 2004). Therefore, the study also explored how experience with negative life events, combined with individuals' gender, moderated the relation between exposure to positive social media self-portrayals of others and emerging adults' mental health. Based on Holbert and Park's (2020) framework, we propose that gender combined with experiencing COVID-19 illnesses in one's environment acts as a contributory moderator. More precisely, we examined a three-way interaction in which the strength of the negative relations between exposure to positive self-portrayals depends on the levels of individuals' levels of experiences of COVID-19 illnesses in one's environment combined with one's gender.

COVID-19 and Emerging Adulthood

Emerging adulthood is a period of normative transition, wherein young people experience significant change in terms of their education, vocation, living arrangements, and personal relationships (Wood et al., 2018). It is also a time of increased self-focus and volition. Having left behind much of the dependency of adolescence, emerging adults are required to independently confront and overcome these challenges, and in the process, form a synthesised and coherent sense of identity (Arnett, 2000). This is a challenging endeavour for many young people, and the concomitant change accompanying this developmental period often evokes feelings of instability, anxiety, and depressive symptoms (Arnett et al., 2014). With that being said, social interaction is instrumental in aiding emerging adults' adjustment, and peers can play a vital role in supporting identity exploration, fulfilling social needs, and promoting psycho-emotional well-being (Barry et al., 2015).

During the first lockdown period in countries such as Belgium, strict measures such as encouraging working from home, postponing all non-essential travel, cancelling events, banning gatherings with more than one person (besides family members), closing bars, restaurants, and shops, and advising people to stay at home, were introduced. By limiting face-to-face contact during the lockdown, COVID-19 induced restrictions deprived emerging adults of important opportunities for autonomy, exploration, and social interaction. Given the heightened need for peer relationships and interaction during emerging adulthood (Smits et al., 2011), increased feelings of social deprivation are likely to have had significant implications for mental health. Initial evidence supports this assumption, as interpersonal stressors (e.g., being unable to spend time with friends, family, or partners) during the COVID-19 pandemic were positively associated with feelings of anxiety amongst emerging adults (Kujawa et al., 2020). Furthermore, young people have reported that the COVID-19 pandemic has reduced levels of mental health, motivation, and purpose (Young Minds, 2020), with loneliness during a lockdown relating with depression and anxiety (C. H. Liu et al., 2020), social deprivation associating with feelings of lethargy (Folk et al., 2020), and lifestyle disruptions predicting perceived stress, internalising symptoms, and anger (Shanahan et al., 2020).

Despite this concerning trend of results, it has been suggested that emerging adults are well-placed to manage some of the disruptions due to their familiarity with distanced communication via social media (Nagata, 2020; Orben et al., 2020). Through social media, emerging adults can keep in touch with other people, which could help overcome feelings of loneliness or social deprivation (Ammar et al., 2020). However, emerging adults not only use social media to fulfil their relational needs; they also passively use social media as a form of entertainment by browsing through others' selective self-presentational content (Hamilton et al., 2020). However, as little is currently known about how being exposed to such self-presentational content on social media during times of social deprivation (e.g., a COVID-19 lockdown) relates to emerging adults' mental health, this investigation seeks to shed light on this gap of the literature.

Covid-19 Lockdown and the Positive Self-Portrayals of Others on Social Media

During the COVID-19 lockdown period, young people often turned to social media to support relationship building and maintenance (Abbas et al., 2021; Lisitsa et al., 2020). Research also suggests that young people often shared

social media content relating to their mental health problems or to complain about the governmental COVID-19 lockdown regulations (Saha et al., 2020; Vranken et al., 2022). However, whilst there was an increase in negative content shared during the lockdown periods (e.g., content related to mental health issues, e.g., Saha et al., 2020), positive-biased content also emerged on social media (e.g., Vranken et al., 2022).

The existence of positive content on social media can be explained by theoretical and empirical evidence which suggests that humans typically desire to maintain and (ever) increase a positive perception of the self among others (Goffman, 1959; Leary, 2007). To achieve this, individuals often selectively emphasise favorable elements of the self to help control how others perceive them (Goffman, 1959). In the social media landscape, such intrinsic positive self-presentation processes also occur, and are even more pronounced as they are facilitated by specific platform features such as asynchronicity, editability, and selectivity (Walther et al., 2015). Indeed, empirical research has repeatedly confirmed that young social media users often aim to present themselves positively on these platforms (e.g., portraying themselves as socially attractive, interesting, and popular; Schreurs & Vandenbosch, 2022; Yau & Reich, 2019).

Cross-sectional research investigating the relationship between adults' mental health and exposure to social media content has produced inconsistent results (for review, see Verduyn et al., 2017). More precisely, studies find that using social media can relate to both negative (e.g., Sherlock & Wagstaff, 2019; Yue et al., 2022; Zhao & Zhou, 2020) and positive mental health outcomes (Trifiro & Prena, 2021). Yet, these cross-sectional studies often relied on aggregated measures of social media usage, such as time spent on social media (e.g., Verduyn et al., 2017; Yin et al., 2018) or passive social media use (e.g., Trifiro & Prena, 2021; Verduyn et al., 2017). As social media use is highly diverse, measures that aggregate all social media experiences are not particularly insightful. Rather, to truly understand the relations between social media use and mental health, researchers have highlighted the necessity to capture exposure to specific content types (Valkenburg et al., 2022). Despite this, to date, surprisingly limited research has adopted this approach to investigate the relations between social media and its' (well-being) outcomes. In this regard, a validated scale has recently been introduced to specifically measure exposure to the positive social media self-portrayals of others (Schreurs & Vandenbosch, 2022). This scale enables researchers to assess how often social media users perceive to be exposed to content of other users in which they seem to have an interesting social life and look successful (Schreurs & Vandenbosch, 2022). As such, research in the social media/mental health domain should move away from studying aggregate social media use and adopt such validated measures that assess exposure frequency to a specific content type. In doing so, research should also determine the conditions that shape the nature of the relations between specific social media uses and mental health. One particular relevant condition may be finding oneself in times of social deprivation such as a COVID-19 induced lockdown.

Specifically, even during circumstances in which social interactions are severely restricted, young users might still attempt to post positive content as the tendency towards positive social media self-presentation aligns with their developmental sensitivities (Michikyan et al., 2015). For instance, young social media users could post #*throwback* pictures from pleasurable moments from before the COVID-19 pandemic, or they may share content regarding the (scarce) positive and pleasurable events that still occur in their daily lives. It is possible that engaging with such content predominantly relates negatively to users' mental health.

That is because seeing such content might trigger more adverse upward social comparison processes than it would in 'pre-lockdown' times. Such comparison processes are described in social comparison theory (Festinger, 1954), which was developed to explain individuals' inherent motivation to self-evaluate by comparing themselves with others. Different comparison processes can be distinguished (i.e., upward and downward social comparison). Whilst downward comparisons occur when individuals compare themselves with individuals who are inferior or worse off, upward comparisons occur when the comparison target is superior or better off (Wills, 1981). Upward comparisons are more likely to occur in a social media context wherein individuals portray their 'perfect' lives and thus present themselves as superior target comparisons (Noon et al., 2022). Yet, even within upward comparison processes, literature revealed links with both positive (Meier et al., 2020) and negative outcomes (Yue et al., 2022). This may be explained by literature on assimilation/identification and contrast, which proposes that the implications of comparison behavior depend on whether the comparer identifies similarities to, or differences from, the comparison target (Buunk & Ybema, 1997). More precisely, upward comparisons are more likely to result in self-improvement motivations, and thus inspiration and positive affect, when the person focuses on similarities with the upward comparison target and envisions the targets' situation as their own future (i.e., upward assimilation/identification) and/or perceives that the displayed behavior is achievable (Kang & B. Liu, 2019; Meier et al., 2020). Yet, when the person focuses on differences with the upward comparison target and/or the displayed

behavior is perceived unachievable (i.e., upward contrast), negative outcomes are more likely (Meier et al., 2020; Midgley et al., 2021). Accordingly, the extent to which the positive social media self-portrayals are perceived to be (un)achievable may determine the outcome of the upward social comparison process.

As previously explained, the COVID-19 induced restrictions have caused emerging adults to have minimal social interactions through which they can gain pleasurable and fun experiences (Ammar et al., 2020). As such, seeing other people's social media content regarding pleasurable social interactions, holidays, and personal successes might serve as a reminder that the current situation does not allow them to have such opportunities, and that the behaviors of the comparison target seem highly unattainable and dissimilar to one's own situation (i.e., upward contrast). A previous study has hinted at this possibility, revealing that browsing through social media (in which positive self-portrayals of other frequently occur) positively relates to upward contrast, which in turn relates to negative outcomes (e.g., stress; Yue et al., 2022). Following this reasoning, exposure to the positive self-portrayals of others on social media during COVID-19 lockdown is likely to negatively associate with mental health. As such, the following hypothesis (H) is posed:

H1: Exposure to the positive self-portrayals of others on social media during the first COVID-19 lockdown period negatively relates to emerging' adults mental health.

Individual Differences

Media theories such as the Media Practice Model propose that individuals are active media users who differently select (i.e., individuals choose the type of media they want to consume), interact (i.e., individuals can cognitively, affectively and behaviourally interact with the media they consume) and apply (i.e., individuals use media messages and intentionally vs. unconsciously apply them in their lives) media (Steele & Brown, 1995). The Media Practice Model (Steele & Brown, 1995) further explains that the identity of media users informs how they select, respond, and interact with media content as some messages may align or contrast more with users' identity, impacting their susceptibility to the influence of a particular media messages. This identity is largely formed by so-called 'lived experiences' (e.g., socio-cultural differences such as gender, personal experiences via interactions with one's environment such as family members; Steele & Brown, 1995; Vygotsky, 1978). Therefore, individuals' 'lived experiences' may drive how individuals react when they are exposed to positive self-portrayals of others on social media.

Lived Experiences During the COVID-19 Pandemic: Illnesses

One important lived experience (Steele & Brown, 1995; Vygotsky, 1978) which may inform the implications of media engagement is experience with negative life events. One salient negative life event during the first lockdown, which may make social media users differently susceptible for the relations between exposure to positive social media self-portrayals and mental health, was *personal experience* with COVID-19 illnesses in emerging adults' direct environment. The health of others, and thus experiencing COVID-19 illnesses among people in one's environment, was a major concern during the COVID-19 pandemic (Statista, 2020). During the first wave of COVID-19 illnesses (approximately April 2020), approximately 28% of individuals knew somebody who was diagnosed with this illness, and 20% knew somebody who had to be hospitalized or even died (Johnson et al., 2020).

Knowing people in one's environment who became ill due to COVID-19 may affect individuals' mental health and influence how individuals perceive their own personal situation. It is possible that individuals who knew somebody who became severely ill due to COVID-19 or even died, were more stressed and felt personally impacted by the virus. Research indeed indicates that personal experience with COVID-19 illnesses or even deaths in one's environment related to a lower mental health in the form of (post-traumatic) stress and anxiety (Rodríguez-Rey et al., 2020; Rossi et al., 2020). Additionally, perceiving COVID-19 as more severe related to a decrease in positive emotions, and an increase in negative emotions and sleep problems (Li et al., 2020).

Such experience may also change how individuals respond to the positive social media self-portrayals of others. More specifically, the relations between exposure to such content on social media and lower mental health may be particularly strong for emerging adults who knew somebody in their environment who became severely ill due to COVID-19. For these individuals, the positive experiences portrayed in social media content may appear highly dissimilar to their current situation, and thus extremely unachievable. As a result, stronger links with poor mental

health can be expected. When individuals did not know somebody in their environment who became (severely) ill due to COVID-19, the displayed social comparisons may still be perceived as unattainable due to the strict COVID-19 measures taken by the government. Yet, these links are probably less strong than those of people who knew somebody who became severely ill due to COVID-19.

Together, a negative contributory moderation (Holbert & Park, 2020) is suggested to occur in which the strength of the negative relation between exposure to positive social media self-portrayals of others and emerging adults' mental health depends on emerging adults' experience with negative life events (i.e., experience with people in their environment who became ill due to COVID-19):

H2: The negative relation between exposure to the positive self-portrayals of others on social media during the first COVID-19 lockdown period and mental health is stronger for emerging adults who knew somebody in their environment who became severely ill due to COVID-19 than for emerging adults who did not know somebody who became ill due to COVID-19 or knew somebody that was only moderately ill.

Gender Differences

The Media Practice Model (Steele & Brown, 1995) also proposes that gender should be considered when examining how users interpret media content. Such personal factors (i.e., gender) combined with other lived experiences may explain how users differently react on the media content they are exposed to (Steele & Brown, 1995). Thus, gender may strengthen the hypothesized moderation of knowing somebody who became severely ill due to COVID-19 on the relationship between exposure to positive self-portrayals of others on social media and mental health. Prior studies evidenced that men and women often adopt different coping strategies and are differently affected when facing negative life events (del Mar García-Calvente et al., 2012; Matud, 2004). Women tend to be more worried and stressed about health issues among people they know (e.g., deaths in a family) than men (Matud, 2004). This gender difference also emerged during the COVID-19 crisis as women were more concerned about the health of people in their environment (Van der Vegt & Kleinberg, 2020).

Besides these differential responses, men and women also respond differently to (positive self-portrayals on) social media. Women spend more time on highly image-based social media platforms, such as Instagram, than men (Mackson et al., 2019). As such, they are more likely to be exposed to positive self-portrayals, as such content is particularly commonplace on such image-based social media platforms (e.g., Yau & Reich, 2018). This may therefore help to explain why previous studies have found that gender moderates the mental health implications of social media use (Casale et al., 2021; Kelly et al., 2018). For instance, Kelly et al. (2018) revealed that the interrelations between social media use and negative mental health outcomes (e.g., depressive symptoms) were stronger for women than men.

Following this reasoning, we expect gender to be a contributory moderator (Holbert & Park, 2020). That is, we predict there will be gender differences in how personal experience with COVID-19 illnesses moderates the relationship between exposure to positive social media self-portrayals and mental health.

H3: The negative relations between exposure to the positive self-portrayals of others on social media and emerging adults' mental health is stronger for women who know somebody in their environment who became (severely) ill due to COVID-19 compared to men who know somebody in their environment who became (severely) ill due to COVID-19.

To test these three hypotheses, our study will control for age, living arrangements, socio-economic status (SES), and frequency of offline meetings with friends during the lockdown period, as the literature suggests that these factors may relate to emerging adults' mental health and/or exposure to social media content (Gao et al., 2020; Marroquín et al., 2020). For instance, having to avoid offline contact with people during the pandemic, being older, living alone, and having a lower SES positively related to mental health problems during the pandemic (Blix et al., 2021; Gao et al., 2020; Latikka et al., 2022; Marroquín et al., 2020). Additionally, being younger and having a higher SES related to higher levels of social media exposure during the COVID-19 lockdown period (Gao et al., 2020; Yue et al., 2022).

Methods

Sample and Procedure

Ethical approval for an online cross-sectional study among emerging adults (i.e., 18–30 years old) was obtained from the ethical review committee of KU Leuven. Data were collected during the first and most severe national lockdown in Belgium (in April 2020). During this period, (1) schools, restaurants, and non-essential stores (e.g., clothing stores) were closed, (2) all non-essential travel was banned, (3) only limited personal contact was allowed (i.e., contact with one person apart from the people who live under the same roof was allowed), (4) teleworking was the standard, and (5) hyper attention was given to social distancing and hygiene regulations.

Data were collected using two strategies. Specifically, a research agency recruited a sample of 201 emerging adults (51.7% women) who completed the online questionnaire. Additionally, the researchers recruited 276 emerging adults (76.7% women) by distributing the link to the survey on different social media platforms (i.e., personal Facebook, Twitter profile of the faculty) and social media groups (i.e., student Facebook groups). All participants provided active consent. A lottery to win a gift card of €20 was organized among participants. The current study was part of a larger study[1].

Of the 477 participating emerging adults who responded to the survey, 415 were part of the analytical sample. Participants were removed if they did not provide consent (*n* = 17), did not fit the correct age criteria (*n* = 4), or did not fill in the questions for the key variables in this study, often because they chose to quit the survey (*n* = 41). The final sample had a mean age of 24.27 (*SD* = 3.19), 64.10% were women, 42.17% were students, and 80.96% had a bachelor or master degree.

Measures

Mental Health During COVID-19

Based on the Mental Health Inventory (MHI-5; Rumpf et al., 2001), participants indicated how they felt when the COVID-19 regulations were in force on a scale ranging from (1) *never* to (7) *multiple times in a day*. The scale consisted of five items such as *I felt calm and peaceful* and *I felt happy*. Three items (i.e., *I felt nervous*, *I felt downhearted and blue*, and *I felt so down in the dumps that nothing could cheer me up*) were reverse items and were thus rescaled. Principal component analysis (PCA) revealed that the items loaded on one factor, eigenvalue = 2.92, explained variance = 58.48%, α = .82. A new variable was created by averaging the item scores; higher scores indicated higher levels of mental health.

Exposure to Positive Social Media Self-Portrayals of Others

We drew on the validated Exposure to Positive Social Media Content Scale (Schreurs & Vandenbosch, 2022) to assess emerging adults' exposure to the positive self-portrayals of others on social media. This scale has been recently developed and the authors demonstrated that the scale had good internal reliability (i.e., Cronbach's alpha > .70) and good test-retest reliability over a period of four months (i.e., Pearson correlation > .50; see Schreurs & Vandenbosch, 2022). More specifically, the items concerning positive social interactions and life attributes were used. Some of the items of the original scale were slightly reworded or not used to fit the current COVID-19 circumstances[2]. Participants indicated how frequently they were exposed to the following posts on social media since the COVID-19 regulations were announced: posts in which the one who posted it … (1) shows that he/she has a lot of fun, (2) looks successful (e.g., he/she achieved something in a hobby), (3) shows how great a friendship is (e.g., it is clear they have much fun together), (4) does nice things (e.g., fine dining), and (5) shows that he/she is happy. Participants who never used social media indicated (1) *I never use social media.* Answer options for social media users were (2) *(almost) never*, (3) *once in a month,* (4) *multiple times a month,* (5) *once a week,* (6) *multiple times in a week,* (7) *everyday* (8) *multiple times a day.* Note that for the current study, non-social media users were also included as studies indicate that not all emerging adults use social media (Vandendriessche et al., 2021). The inclusion of non-users in the sample also aligns with prior studies (e.g., Allington et al., 2021). This enables researchers to include answer options that distinguish between non-social media users, social media users who are exposed to certain types of social media content, but not to positive self-portrayals of others, and social media users who are less/more frequently exposed to positive self-portrayals of others. This distinction is

relevant as research has evidenced differences in mental health between social media users and non-users (e.g., Brailovskaia & Margraf, 2016). PCA revealed that the items loaded on one factor, eigenvalue = 3.56, explained variance = 71.27%, α = .90. A new variable was created by averaging the item scores; higher scores indicated higher levels of exposure.

Moderators

Experience With COVID-19 Illnesses in One's Environment

First, participants indicated if they knew people in their environment who were ill due to COVID-19 (1 = *yes, I know one person,* 2 = *yes, I know multiple people,* 3 = *no, I know nobody)*. If participants knew somebody, they indicated how ill this person/people were on a scale ranging from (1) *totally not severe* to (7) *very severe.* Participants who did not know somebody who became ill due to COVID-19 received the score 0.

Gender

Participants indicated if they were a man (= 0) or a woman (= 1).

Control Variables

Participants indicated their age and living situation (0 = *living alone*, 1 = *living with others such as parents, partner, friends*). Socio-economic status (SES) was measured using the MacArthur scale of subjective social status (Adler et al., 2000; Goodman et al., 2001). Finally, participants indicated how frequently they met offline with multiple friends (e.g., a lockdown party) since the COVID-19 regulations were announced (in March 2020). Answer options ranged from (1) *never* to (7) *multiple times in a day.* Note that this measurement measured a violation of the Belgian COVID-19 lockdown regulations at the time.

Analytical Strategy

Prior to analyzing the data, assumptions were checked. Skewness and kurtosis indicated that the variable regarding offline social contact during COVID-19 exceeded the acceptable range (skewness < 3, kurtosis < 10; Kline, 2011). Bootstrapping (i.e., 5,000 bootstrap samples, 95% confidence interval; CI) was applied to deal with this non-normal data (Hancock & M. Liu, 2012). First, descriptive statistics and bootstrapped correlation analyses (5,000 samples) were performed. Data were analyzed using moderated moderation (model 3) of Hayes Process Macro v3.5 for SPSS (Hayes, 2013). Participants' age, living arrangements, extent of offline social contact during the COVID-19 lockdown period, and SES were entered as control variables, whereas exposure to positive self-portrayals of others on social media and mental health were entered as independent and dependent variables, respectively. Additionally, gender and experience with COVID-19 illnesses in one's environment were entered as moderators.

Results

Descriptive Statistics

Zero-order correlations and descriptive statistics can be found in Table 1. During the first COVID-19 imposed lockdown period, participants were on average exposed to the positive self-portrayals of others on social media multiple times in a week (*M* = 5.15, *SD* = 1.63). Generally, participants experienced positive feelings such as happiness and calmness multiple times in a week (i.e., mental health; *M* = 5.00, *SD* = 1.16) during this lockdown period. With regards to personal experience of COVID-19 illnesses in one's environment (*M* = 2.49, *SD* = 2.63), almost half of participants (47.71%, *N* = 198) did not know anybody who had COVID-19. Descriptive statistics further revealed that 14.22% of participants (*N* = 59) knew somebody who was ill (but not severely), whereas almost one third of the participants (33.49%, *N* = 139) knew somebody who were severely or very severely ill.

Zero-order correlations revealed some significant correlations and can be found in Table 1.

Table 1. *Zero-Order Correlations and Descriptive Statistics.*

	1.	2.	3.	4.	5.	6.	7.	8.	*M (SD)*
1. EPSMSP[a]	—								5.15 (1.63)
2. Mental health[b]	.03	—							5.00 (1.16)
3. IE	.13**	.02	—						2.49 (2.63)
4. Gender	.20***	−.14**	.07	—					
5. Age	−.18***	.06	.05	−20***	—				24.27 (3.20)
6. SES[c]	.17***	.25***	.11*	.08	−.09	—			6.82 (1.25)
7. Living situation	.11*	.01	.15**	.07	−.22***	.04	—		0.93 (0.25)
8. Offline social contact [b]	−.08	−.14**	−.09	−.02	−.06	−.11*	−.01	—	1.20 (0.73)

Note. EPSMSP = exposure to positive social media self-portrayals, EI = experience with COVID-19 illness in one's environment, SES = socio-economic status. *p < .05, **p < .01, ***p < .001. [a] 8-point scale, [b] 7-point scale, [c] 10-point scale.

Exposure to the Positive Social Media Self-Portrayals of Others and Mental Health

Full results of the moderated moderation model are provided in Table 2. The overall model was statistically significant, $F(11, 397) = 4.93$, $p < .001$, $R^2 = .12$. More precisely, a path-by-path analysis indicated that, after controlling for age, living situation, offline social contact, and SES, exposure to the positive social media self-portrayals of others during the COVID-19 lockdown negatively related to emerging adults' mental health, $B = −0.33$, $p = .029$, which thus supports H1. No support for H2 emerged as the relation between exposure to the positive social media self-portrayals of others and emerging adults' mental health was not significantly moderated by experience with COVID-19 illness in one's environment, $B = 0.06$, $p = .201$.

To test the three-way interaction (i.e., moderated moderation) between exposure to the positive self-portrayals of others on social media, gender, and experience with COVID-19 in one's environment, all other possible two-way interactions are typically tested. We therefore explored all two-way interactions, and all were non-significant except exposure to positive social media self-portrayals of others X gender (see Table 2), $B = 0.20$, $p = .033$. More specifically, the negative relation between exposure to positive self-portrayals of others on social media and mental health was found to be stronger for women than for men.

Additionally, no support emerged for H3 as a three-way interaction (i.e., moderated moderation) between exposure to the positive self-portrayals of others on social media, gender, and personal experience was not significant, $B = −0.03$, $p = .312$. The model indicated no statistically significant increase in R^2 when adding the three-way interaction, $F(1, 397) = 1.03$, $p = .312$, R^2change = .00.

Table 2. *Results of the Three-Way Interaction Models Predicting Mental Health.*

Predictors	95% CI	B	p	SE (B)	t
Constant	[3.19; 6.93]	5.08	< . 001	0.98	5.16
EPSMSP	[−0.64; −0.03]	−0.33	.029	0.15	−2.20
EI	[−0.68; 0.16]	−0.23	.317	0.23	−1.00
Gender	[−2.28; −0.38]	−1.29	.001	0.49	−2.64
EPSMSP X EI	[−0.02; 0.14]	0.06	.201	0.04	1.28
EPSMSP X gender	[0.02; 0.39]	0.20	.033	0.10	2.14
EI X gender	[−0.15; 0.39]	0.10	.481	0.15	0.70
EPSSPM X EI X gender	[−0.08; 0.02]	−0.03	.312	0.03	−1.01
Age	[−0.02; 0.05]	0.02	.274	0.02	1.09
SES	[0.14; 0.33]	0.24	< . 001	0.05	5.28
Living situation	[−0.31; 0.60]	0.13	.561	0.23	0.58
Offline social contact	[−0.27; −0.05]	−0.17	.028	0.08	−2.21

Note. EPSMSP = exposure to positive social media self-portrayals, EI = experience with COVID-19 illness in one's environment, SES = socio-economic status. Note that bootstrapped CI are reported.

Discussion

The current study provides novel insights in the relationships between a specific type of social media use, personal background variables, and emerging adults' mental health during times of social deprivation (i.e., the strictest COVID-19 lockdown period in Belgium). Most importantly, a direct relation between exposure to the positive self-portrayals of others on social media and emerging adults' mental health was found. Experience with negative life events, which was operationalized as experience with COVID-19 illnesses in one's environment in this study, did not seem to moderate this relation, nor did a three-way interaction with gender and experience with COVID-19 illnesses. Below, we discuss these findings in more detail.

During the pandemic, social media have generally been praised because of their limitless potential in facilitating social connection (Ammar et al., 2020; Hamilton et al., 2020). The current study exposes that social media usage can at the same time negatively relate to emerging adults' mental health in such specific social circumstances. A negative relation was found between exposure to positive social media self-portrayals of others and mental health. Although the lockdown period was a challenging time in which emerging adults were restricted by governmental regulations (i.e., social interactions were severely limited), content of positive social interactions such as *#throwback* pictures with friends was still circulating on social media. The emerging adults in this study were, on average, exposed multiple times a week to the selective and positive self-portrayals of others on social media.

It is plausible that exposure to such content related to upward comparisons where individuals compared themselves to others who appeared superior or better off (Wills, 1981). The fun and pleasurable social interactions which were depicted in such content were probably perceived as unachievable (i.e., upward contrast) at the time due to the governmental restrictions. Contrasting upward social comparisons, in turn, could have related to a lower mental health (Hamilton et al., 2020; Noon & Meier, 2019). This reasoning is supported by prior research which also revealed that browsing through social media positively related to upward contrast, which in turn positively related to negative outcomes (Yue et al., 2022). Yet, future research is needed to explore whether social comparison is indeed the key psychological process that explains such negative social media experiences under specific circumstances of social deprivation (Kross et al., 2021), as the current study did not measure social comparison. Additionally, as prior studies found both positive and negative outcomes related to upward social comparison (Meier et al., 2020; Yue et al., 2022), it seems important to not only consider upward versus downward comparisons, but also the cognitive process in terms of focusing on similarities/differences with the comparison target (i.e., assimilation/contrast). Additionally, research should consider whether the behaviors displayed in the content on social media seem (un)achievable. Insights into these more specific types of social comparison allows us to understand under which specific circumstances upward social comparison may results in more positive versus negative outcomes.

Our study contributes to the literature exploring the relations between social media use and individuals' mental health (e.g., Sherlock & Wagstaff, 2019; Verduyn et al., 2017) by investigating how more specific types of social media use (in this study: exposure to positive self-portrayals of others on social media) relates to mental health. Previous literature reported inconsistent findings regarding how social media usage relates to mental health (Yin et al., 2018). To explain such inconsistencies, scholars have pointed at the massive adoption of aggregate measures of social media use (Frison, 2016). Therefore, they have called to consider more specific types of social media uses to achieve a more detailed understanding of the relation (Frison, 2016; Valkenburg & Peter, 2013). This suggestion has been followed in the current study as a validated instrument that measures exposure to positive self-presentational social media content specifically was employed (Schreurs & Vandenbosch, 2022).

Additionally, whilst prior studies did not specify social circumstances in which social media is used (e.g., Sherlock & Wagstaff, 2019; Verduyn et al., 2017), our study contributes to the research field by specifying such circumstances (e.g., times of social deprivation) to help the social media/mental health field to move toward more consistent findings. We specifically considered the relations between social media use and mental health within the social circumstances of a COVID-19 induced lockdown period. A clear negative relation between exposure to others' positive self-portrayals on social media and emerging adults' mental health was found. Our findings likely extend to other times of social deprivation that go beyond the COVID-19 pandemic (e.g., moving to a new city, having a long-term illness). Future research may also consider other types of social circumstances to unravel the current inconsistent relations between social media use and mental health further.

Furthermore, based on insights from the Media Practice Model (Steele & Brown, 1995), we explored whether individuals' lived experiences would impact the responses that users have on the media they consume. In this

regard, the current study explored the role of experience with negative life events, and specifically considered experience with COVID-19 illnesses in one's environment as an important 'lived experience' during the pandemic. Experience with COVID-19 illnesses in one's personal environment did not moderate the relation between exposure to positive self-portrayals of others on social media and mental health. Whilst the Media Practice Model (Steele & Brown, 1995) proposes that lived experiences can moderate media effects, the results of this study suggests that not all 'lived experiences' impact how individuals would react to media content. More research is therefore needed to help identity the 'lived experiences' which do informs individuals' responses to media content. One potential 'lived experience' that can be considered in future research is individuals' feelings of loneliness, as research revealed that lonely individuals experienced heightened mental health problems such as psychological distress during the pandemic (Latikka et al., 2022). Therefore, individuals who felt lonely and were exposed to positive self-portrayals in which others presented their amazing friendships, for instance, may have felt like their situation was particularly dissimilar (i.e., contrasting upward comparison). This may result in negative outcomes stemming from contrasting upward comparisons.

With that being said, not finding support for the moderating role of experiencing COVID-19 illnesses in one's environment might be because the measure used did not specify the tie strength or attachment between the emerging adult and the person that became ill in his/her environment. Research indicates that emerging adults were very concerned about people with whom they had a strong emotional connection (i.e., family members and friends) during the pandemic (Statista, 2020). Such worries also related to higher chances of experiencing negative outcomes such as depression (Elmer et al., 2020). Of course, emerging adults who felt emotionally close with a person that became ill due to the COVID-19 virus may have experienced this situation as more stressful and suffered more than those who did not feel emotionally close to the person that became ill. Future research looking at the role of experiences with illnesses in one's environment should therefore include one's emotional bond with the ill person.

Furthermore, the three-way interaction between exposure to positive social media self-portrayals of others, gender, and experience with COVID-19 illnesses in one's environment was not a significant predictor of mental health. Although gender did not strengthen the hypothesized interactions between exposure to positive social media self-portrayals and experience with COVID-19 illnesses in one's environment, we found a significant two-way interaction between exposure and gender. More precisely, the exploratory analyses showed that regardless of participants' experience with COVID-19 illnesses, the negative relation between exposure to the positive self-portrayals of others on social media and mental health was stronger among women than men. This aligns with prior research which also revealed that women in general are more susceptible to the interrelations between social media use and negative mental health outcomes (Kelly et al., 2018; Keresteš & Štulhofer, 2020). This also aligns with insights from the Media Practice Model (Steele & Brown, 1995), that also highlighted the importance of considering various background factors (including gender) in the relations between media use and its' outcomes. Given that we found support for the moderating role for gender (but not for experiences of illnesses due to COVID in one's environment), this suggests that more stable factors (in this study: gender) may have greater impacts on how people respond to media content, compared to changing factors (e.g., illnesses in one's environment). Future research is needed to examine this reasoning.

Limitations

Although this research was the first to consider the interrelations between exposure to the positive self-portrayals of others on social media, mental health, and experience with negative life events, several limitations should be noted. First, due to the cross-sectional design, no causal inferences could be drawn (Levin, 2006). One conclusion may be that being exposed to the positive self-portrayals of others on social media negatively affected emerging

adults' mental health during a lockdown period. Yet, it is also possible that individuals with low levels of mental health engage more often with such content when using social media. Longitudinal studies are therefore recommended. Longitudinal studies may also allow researchers to investigate whether the nature of the relation between exposure to positive self-portrayals of others and mental health differs across different social contexts, and thus, whether the found negative relation can truly be attributed to finding oneself in times of social deprivation. Yet, longitudinal studies are quite challenging to conduct in this research context, as the exceptional times of social deprivation characterizing the situation in which data collection took place cannot be predicted beforehand.

Additionally, although the research agency recruited a representative sample in terms of gender, we also collected additional participants via a convenience sample. Consequently, women were slightly overrepresented in the sample (64.10%). As such, it is unclear if the research findings can be generalized (Sedgwick, 2013).

Lastly, the study was conducted in Belgium where the lockdown measures were very strict with regards to social contact, travelling, and social and leisure activities (e.g., closure of restaurants, stores). It is possible that the relation between exposure to the positive self-portrayals of others on social media (which focused on, for instance, throwback content of social activities in pre-lockdown times) and emerging adults' mental health may be stronger in countries with more freedom-limiting governmental measures compared to other countries who imposed less severe measurements. Future studies can examine such cross-national differences.

Footnotes

[1] More information about the larger study can be requested from the corresponding author. The larger study investigated emerging adults' pro-governmental and anti-governmental social media use during the lockdown period and young adults' cognitions and risk behaviors. None of the key variables that are used in this study were used in another manuscript.

[2] As non-essential travel and gatherings with more than one friend were forbidden, items which concerned engaging with positive social media content regarding holidays and popularity of the original scale were not used. Furthermore, the examples of the original item "how often do you see posts on which the one who posted it does nice things (e.g., go to the movie theaters or to the zoo, have something to drink/eat with a friend)" were changed as such activities were not possible during the first lockdown.

Conflict of Interest

The authors have no conflicts of interest to declare.

Authors' Contribution

Ilse Vranken: conceptualization, data curation, formal analysis, investigation, methodology, project administration, resources, visualization, writing—original draft, writing—review & editing. **Lara Schreurs**: methodology, writing—original draft, writing—review & editing. **Edward John Noon**: writing—original draft, writing—review & editing. **Laura Vandenbosch**: methodology, writing—review & editing, supervision.

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About Authors

Ilse Vranken, MA, is a PhD researcher at the School for Mass Communication Research (KU Leuven, Belgium) funded by the Research Foundation Flanders (FWO), supervised by professor Laura Vandenbosch. She studies the role of televised series and social media (e.g., TikTok, Instagram) in late adolescents' vocational aspirations and beliefs. Her research also focuses on the effects of TV portrayals and social media portrayals of women in atypical careers (e.g., STEM-professions) on late adolescents.

https://orcid.org/0000-0001-5156-3629

Lara Schreurs, PhD, is a postdoctoral researcher at the School for Mass Communication Research, KU Leuven, Belgium, supervised by professor Laura Vandenbosch. Lara's research focuses on social media effects in adolescents' well-being, the role of social media literacy in these effects, and the development of social media literacy through interventions.

https://orcid.org/0000-0003-3027-3934

Edward John Noon, PhD, is a Senior Lecturer in Children, Young People, and Families at Leeds Trinity University, UK. His research interests concern social media use, identity development, and well-being during adolescence and emerging adulthood.

https://orcid.org/0000-0003-2779-7905

Laura Vandenbosch is an associate professor at the Leuven School for Mass Communication Research, KU Leuven, Belgium (BOF-ZAP research professorship grant). The relationship between media and well-being is the core subject of her research, leading to international publications in several fields including developmental psychology, sexology, body image, social relationships and communication theory.

https://orcid.org/0000-0001-6834-8386

✉ **Correspondence to**
Laura Vandenbosch, School for Mass Communication Research, KU Leuven, Parkstraat 45, B-3000 Leuven, Belgium, laura.vandenbosch@kuleuven.be