

Chapter 11

Facebook, Social Comparison, and Subjective Well-Being: An Examination of the Interaction Between Active and Passive Facebook Use on Subjective Well-Being

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ABSTRACT

Facebook use has implications for subjective well-being. Previous research has revealed that passive Facebook use is typically related to deficits in subjective well-being, which is thought to be linked through upward social comparison. In contrast, active Facebook use is typically related to enhancements in subjective well-being. The main objective of the present study was to synthesize findings related to Facebook use and subjective well-being and to expand by proposing and testing whether the benefits associated with active Facebook use compensate for the negative effects associated with passive use. The second objective was to discuss policy and research directions. A total of 310 undergraduate students completed an online survey with questions regarding Facebook use, social comparison, and subjective well-being. Bootstrapping analyses revealed that active Facebook use did not buffer the negative effects for subjective well-being that occur during passive Facebook use. Recommendations for future research and education programs are discussed.

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INTRODUCTION

Subjective well-being is a phenomenon that is comprised of people's personal evaluations of their lives, including emotional responses to life events, as well as a personal assessment of one's overall satisfaction with life (Diener, Suh, Lucas, & Smith, 1999). Subjective well-being is influenced by many factors (Diener, et al., 1999), but the factor most relevant to the current study is social comparison. Given that social media is pervasive among young adults today and offers, opportunities to connect with friends and expose them to the successes of others, in other words offering ample opportunities to compare oneself to online friends, it too has the potential to contribute positively or negatively to subjective well-being. There are three aims of the present chapter: First, to provide an overview of how passively and actively using Facebook impacts users' subjective well-being; second, to further investigate these relationships by proposing and testing a model, as well as explore individuals' perceptions of the positive and negative consequences of Facebook use; and third, to provide recommendations for future research and potential policy applications.

AN OVERVIEW OF THE CURRENT LITERATURE

Social media has become pervasive in society today, with the potential to influence psychosocial functioning. Among the most popular of these sites includes the social networking site, Facebook. While on Facebook, users are able to create online profiles that contain personal information (photos, personal disclosures, memories and so on) about the self, which are then broadcasted to a network of individuals that the user deems a Facebook "friend." The content posted by a Facebook user is done so at the discretion of the profile owner and may be updated at any time. The information broadcasted on Facebook is then open to receiving both quantitative (i.e., likes, reactions), and/or qualitative (i.e., comments, messaging) feedback from the user's Facebook friends. Since Facebook was introduced to the public in 2005, the basic function of creating a personal profile, which is then viewed, and responded to, by friends has remained consistent, although Facebook has continued to create features (e.g., reactions, Facebook messenger) that make connecting with friends' content even easier (Gramlich, 2018).

Facebook has rapidly gained popularity since it's induction to the general public. Internationally, over 2.27 billion people visit Facebook every month, with over 1.49 billion visits taking place every day (Stats, 2018). In fact, in October 2018 the Pew Research Centre reported that Facebook remains the most popular social networking site among adults in the United States by a large margin (Gramlich, 2018). Further,

Facebook was rated second in the United States (to video sharing site YouTube) for most visited social media website in 2018 (Gramlich, 2018). One of the potential reasons for its immense popularity is that there are a multitude of features on Facebook, as well as a variety of different ways to use the social networking site—all of which offer the user the ability to instantaneously connect with their friendship network. For instance, people can passively observe their Facebook friends by scrolling through the newsfeed, or browsing friends' photos/timelines; this type of Facebook behaviour is typically regarded as *passive Facebook use* (e.g. Ryan & Xenos, 2011; Tandoc, Ferrucci, & Duffy, 2015). In addition, people can engage more actively while on Facebook, such that users are able to disclose information about themselves in the form of photo and status updates (writing what is on a person's mind), as well as sharing links, memories, or memes that one affiliates with. These types of Facebook behaviours are typically referred to as *active Facebook use* (e.g., Ryan & Xenos, 2011). Due to the huge popularity and variety of social functions while on Facebook, researchers have begun to examine how this particular site may actually impact users' subjective well-being.

Early investigations of the relation between Facebook use and subjective well-being presented inconsistent results. Some research indicated that time spent on Facebook may be detrimental to users' subjective well-being (Valenzuela, Halpern, & Katz, 2014; Steers, Wickham, & Acitelli, 2014; Lou, Yan, Nickerson, & McMorris, 2012). Others found that time spent on Facebook may, in fact, enhance subjective well-being (Burke, Kraut, & Marlow, 2011; Valenzuela, Park, & Kee, 2009). Still, others suggested no relation (Benjanin, Benjanin & Dimitijevic, 2014; Glynn, Huge, & Hoffman, 2012; Jelenchick, Eickhoff, & Moreno, 2013). While investigating the discrepancy among the preceding results, researchers found that the direction of the relationship between Facebook use and subjective well-being is dependent on how Facebook is used. Specifically, whether the user was actively (e.g., posting a photo/status update) or passively (e.g., browsing the Facebook newsfeed) engaged while on Facebook.

Typically, passive Facebook use is related to decreases in subjective well-being (Ryan & Xenos, 2011), while active Facebook use is associated with enhancements in subjective well-being (Burke & Kraut, 2016; Csepeli & Nagyfi, 2014; große Deters & Mehl, 2013). In an experiment, Verdyun et al. (2015) dichotomized Facebook use into two conditions, such that participants were asked to use Facebook either solely passively (scrolling through Facebook without posting or interacting), or solely actively (constantly posting, liking, or commenting) for 10 consecutive minutes. At the end of the day, participants were asked to answer questions regarding their affective well-being. The results revealed that participants in the passive Facebook condition experienced decreases in well-being, whereas participants in the active condition did not experience any negative effects (Verdyun et al., 2015). It should be noted that

while there are a variety of factors that have been studied to explain *why* passively browsing Facebook leads to deficits in subjective well-being, most researchers agree that the underlying mechanism responsible for this negative relationship is upward social comparison (see Verduyn et al., 2017 for review). As such, the present study focuses on upward social comparison as the mediating variable in the relationship between passively browsing Facebook and subjective well-being.

The Link Between Passive Facebook Use and Subjective Well-being

Humans possess a fundamental drive to compare themselves with others viewed as similar to themselves (Festinger, 1954). Social comparison helps individuals establish their standing (Brown, Ferris, Heller, & Keeping, 2007), as well as provides information about what is considered attractive, acceptable, powerful, popular, and so on (Verduyn et al., 2017). Self-evaluation also depends on how one compares oneself with other people, with the evaluative outcomes depending on whether the comparisons being made are in an upward or downward direction (Major, Testa, & Bylsma, 1991). In upward comparisons, one perceives the other as better on a particular dimension, which typically leads to feelings of inadequacy, jealousy, or negative affect. Downward comparisons, on the other hand, are those comparisons for which the individual perceives the self as better than the target, which typically results in enhancements for subjective well-being.

Empirical research has well-established the influence of social comparison on subjective well-being (Fujita, 2008), such that people's emotions, moods, and subjective evaluations are significantly influenced by how people perceive they compare to the people in their social circle (Gilbert, 2000). When considering the structure of Facebook, where a mouse click can link users to friends' and friends of friends' social media posts, social comparisons can be carried out on an unprecedented scale. Because of this, when individuals passively browse through the social information posted on Facebook they are inundated with the power, popularity, and physical attractiveness exemplified by their Facebook friends and followers, and compelled to compare themselves accordingly (Tandeoc et al., 2015). This may be especially problematic given that Facebook also provides an opportunity for users to set-up, retake, and edit images which allows people to portray themselves in the most flattering ways, also referred to as selective self-presentation (Walther, 2007). When users do selectively self-present online, this can create an exaggerated expectation of power and attractiveness, which are then confirmed and reinforced through the social interactions that occur online (Walther, 2007). Evidence suggests that social comparisons, both upward and downward, do exist on Facebook, although only upward comparisons impact subjective well-being (Vogel, Rose, Roberts, &

Eckles, 2014). Further, the upward social comparisons that exist on Facebook are consistently associated with deficits in subjective well-being (Nesi & Prinstein, 2015; Steers et al., 2014; Vogel et al., 2014). In other words, while Facebook users passively browse through their friends' information on Facebook they are comparing themselves, on a massive scale, to unrealistic targets, feeling as though they do not measure up, and thus feeling less satisfied in their own lives.

The current literature has well established that passive Facebook use leads to upward social comparison, and ultimately then deficits in subjective well-being (see Joseph, Desjarlais, & Herceg, 2019 for review). It is also clear that actively sharing/interacting on Facebook is at least marginally better for subjective well-being than passively browsing (Verdyun et al., 2015). However, one limitation in the literature is that when Facebook users are dichotomized into either passive or active users, researchers are not able to investigate the interaction effects of passive and active Facebook use on subjective well-being. In effect, this approach neglects the instances where users use some combination of both the passive and active features of Facebook. In a study by Joseph and Desjarlais (2016), participants were asked to indicate how passively or actively they used Facebook on a scale from 1 (*solely passively*) to 10 (*solely actively*). The results revealed that the vast majority of participants reported their Facebook use as a reasonably equal combination of both the passive and active features of Facebook, with some tendency to favour passive Facebook use. Thus Facebook use could potentially be viewed on a continuum where users use some combination of the active and passive features of Facebook, rather than in an either or fashion. Moreover, the findings suggest that all users passively observe Facebook and what differs among users is their level of active Facebook use. Considering that when using Facebook actively, to a greater extent, users exhibit increases in their subjective well-being (Csepeli & Nagyfi, 2014), or at the very least they do not experience the deficits for subjective well-being that are associated with passive Facebook use (Verdyun et al., 2015), the question that arises is: Could actively posting on Facebook compensate for the negative experiences associated with passively browsing Facebook? The current study addresses this question.

THE PRESENT STUDY

There are two main purposes for the current study. First, the author sought to replicate findings in the current literature and provide further support demonstrating passively browsing Facebook leads to upward social comparison, which then leads to deficits in subjective well-being. Second, the present study will expand the current literature by (1) identifying whether the preceding indirect relationship is moderated by active Facebook use by examining whether active Facebook use buffers the deficits in

subjective well-being that result from the upward social comparison that takes place while passively browsing Facebook; and (2) examining individuals' perceptions of the positive and negative outcomes associated with using Facebook.

Based on the positive relationship between active Facebook use and subjective well-being reported previous research (Kim & Lee 2011), it is plausible that if users actively post on Facebook they feel better about themselves (Kim & Lee, 2011) and thus be less impacted by the upward social comparison that accompanies passive Facebook use. Specifically, the author hypothesized that: The negative indirect relationship between passive Facebook use and subjective well-being through upward social comparison will only exist if the frequency of active behaviours is low. If the frequency of active Facebook use is high, users who passively use Facebook and negatively compare themselves to their friends will not experience the deficits in subjective well-being.

METHOD

Participants

A total of 310 introductory psychology students from a Canadian undergraduate university (76.77% female) between the ages of 17 and 50 years ($M = 21.21$ years; $SD = 4.26$) completed an online survey between November 1, 2016 and January 29, 2017. Participation lasted approximately 15 minutes as they completed the scales in the order listed below.

Materials

Demographic Variables

The following scales were included to gain information regarding who is using Facebook and how relevant Facebook is relative to other social networking sites, in order to investigate whether the impacts of Facebook use are still meaningful.

Understanding Facebook Use

The Facebook Intensity Scale (FBI; Ellison, Steinfield, & Lampe, 2007) was used to gain a better understanding of participants' Facebook use. The FBI assessed participants' level of Facebook engagement (i.e., the amount of time spent on Facebook), the size of participants' friendship networks on Facebook (i.e., number of Facebook friends), and participants' emotional connection to Facebook. This scale

has demonstrated high internal consistency in previous research ($\alpha = .83$; Ellison et al., 2007; Whitman & Gottdiener, 2015).

- *Facebook Engagement.* To measure how engaged participants are on Facebook, the amount of time participants spend on Facebook was measured using the FBI (Ellison et al., 2007). Participants were asked to indicate how much time they spend on Facebook on a scale from 1 (*less than 10 minutes*) to 8 (*more than 3 hours*). Higher scores indicated more time spent on Facebook.
- *Number of Facebook Friends.* To gain an understanding of the size of friendship networks on Facebook across the sample, I used the number of friends subscale from the FBI (Ellison et al., 2007). Participants were asked to indicate the number of friends they currently have on Facebook on a scale from 1 (*10 or less*) to 9 (*more than 400*). Higher scores indicated a greater number of Facebook friends.
- *Emotional Connection to Facebook.* This FBI subscale (Ellison et al., 2007) assessed participants' emotional connection to Facebook. Participants were asked to indicate the extent to which they agree or disagree with six statements (e.g., I would be sorry if Facebook shut down) on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The scores were then averaged, where higher scores indicated higher levels of emotional attachment to Facebook. This subscale demonstrated high internal consistency ($\alpha = .88$).

General Social Media Use

To gain an understanding of the popularity of a variety social media sites used across the sample, a social media use scale was created. Participants were asked to indicate on a scale from 1 (*never*) to 7 (*several times a day*) how often they used a variety of social media websites, including social networking sites (e.g., Facebook, Twitter); photo sharing networking sites (e.g., Instagram, Snapchat); messaging networking sites (e.g., Facebook messenger, WhatsApp); and video sharing sites (e.g., YouTube). Higher scores indicated higher levels of engagement for each social media site presented.

Variables Included in the Hypothesized Model

Subjective Well-Being

Chan's (2013) adaptation of Diener et al.'s (2009) Psychological Well-being Scale, which included eight items, was used to assess participants' subjective well-being. Participants were asked to indicate the degree to which they agreed or disagreed

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with each of the eight statements (e.g., “I lead a purposeful and meaningful life”) on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The scores were then averaged, where higher scores indicated higher levels of subjective well-being ($M = 5.01$, $SD = 4.41$). This scale demonstrated high internal consistency ($\alpha = .89$).

Facebook Use

To get an accurate depiction of participants’ use of both the passive and the active features of Facebook, the author collected the duration of passive Facebook use and the frequency of active use separately.

- *Passive Facebook Use.* Using a single item, participants indicated the amount of time they spend per day passively using Facebook (i.e., browsing their newsfeeds/friends timelines) on a scale from 1 (*Less than 10 minutes*) to 8 (*More than 3 hours*). Higher scores indicated more time spent passively using Facebook ($M = 2.79$, $SD = 0.48$).
- *Active Facebook Use.* Based on previous research assessing active Facebook use (Verduyn et al., 2015; Ryan & Xenos, 2011), the author created an active Facebook use scale for the current study. Participants indicated the frequency that they engage in five of the most prominent active Facebook features: Status updates, sharing links/memories, uploading photos, commenting on friends’ posts, and like/reacting to friends’ posts. Participants indicated how often they use each of the preceding five active features during a typical Facebook session on a scale from 1 (*never*) to 7 (*always*). The five scores were then averaged and higher scores indicated higher frequency of active Facebook use ($M = 3.24$, $SD = 1.18$). This scale demonstrated high internal consistency ($\alpha = .86$).

Social Comparison

To assess participants’ level and direction of social comparison while on Facebook, Allan and Gilbert’s (1995) Positive and Negative Social Comparison Scale was adapted to be specific to Facebook. To address upward social comparison specifically, participants were asked to indicate on a scale from 1 (*never*) to 6 (*always*) how often they feel 11 negative constructs (e.g., inferior) when comparing themselves to their Facebook friends. The negative comparison scores were averaged for a total upward social comparison score, where higher scores indicated higher levels of upward social comparison on Facebook ($M = 2.71$, $SD = 1.07$). This scale demonstrated high internal consistency ($\alpha = .95$).

Supplementary Information

Qualitative Question

For supplementary information regarding participants' perception of the positive and negative consequences of Facebook use, one qualitative item was created. Participants were asked to reflect on their Facebook use and determine how Facebook has been either positive or negative in their lives. This was an open-ended question that was coded for common themes among participant responses.

RESULTS

Describing the Sample

To gain information regarding who is using Facebook and whether investing the impacts of Facebook use is still meaningful, frequency procedures were run on all demographic variables. The five most frequently used social media sites included Facebook ($M = 6.12$, $SD = 1.24$), Snapchat ($M = 5.92$, $SD = 1.90$), Instagram ($M = 5.81$, $SD = 1.98$), YouTube ($M = 5.18$, $SD = 1.72$), and Twitter ($M = 3.07$, $SD = 2.48$). Furthermore, as depicted in Table 1, participants were avid users of Facebook,

Table 1. Results for understanding Facebook use

	%
Time Spent (in Minutes)	
< 10	16.1
10 – 30	30.6
31 – 60	23.5
60 – 90	10
Number of Friends	
251 – 300	10.3
301 – 400	13.9
> 400	45.2
Emotional Connection to Facebook	
Not emotionally connected	57.3
Somewhat emotionally connected	22.7

Note. $N = 310$. % = Percentage of participants who reported each category.

who typically had over 400 friends (45.2%). Although participants were frequently engaged on Facebook, they were not typically emotionally connected to Facebook.

Testing the Model

The hypothesis was tested via bootstrapping analyses using the SPSS PROCESS macro developed by Hayes (2013). The bootstrapping analyses created a 5,000 participant sample from the original data set through a process of sampling with replacement, and constructed a 95% confidence interval (CI) around the proposed indirect effects. Indirect effects were significant when the range across the CI's did not contain a zero (Hayes, 2013).

It was predicted that the indirect negative association between passive Facebook use and subjective well-being, through upward social comparison, is moderated by active Facebook use. Active Facebook use was predicted to buffer the negative association between upward social comparison and subjective well-being after passively using Facebook. The hypothesis was analyzed using model 14 of the PROCESS macro (Hayes, 2013). This model simultaneously added active use, passive use, upward social comparison, and the interaction between upward social comparison and active use as predictors of subjective well-being. The analysis revealed that the overall model was significant, $F(4, 305) = 5.166, p = .001, R^2 = .122$; passive Facebook use was positively related to upward social comparison ($B = 0.095, t = 2.400, p = .017$), which was negatively related to subjective well-being ($B = -0.194, t = 4.053, p < .001$). Further, active Facebook use was positively related to subjective well-being ($B = 0.106, p < .05$). The interaction between upward social comparison and active Facebook use however, was not significant ($B = 0.051, t = 1.112, p = .267$). An index of moderation was also calculated (Hayes, 2013) and it was not significant, $0.005, SE = .005, 95\% \text{ CI } [-0.002, 0.019]$. Thus, the moderated mediation did not occur, and deficits in subjective well-being that came from the upward social comparison that accompanies passive Facebook use were not buffered by active Facebook use.

Qualitative Analysis

The qualitative item was coded for major themes based on the frequency in which participants referred to specific subjects in their responses. A total of 292 of the 310 participants responded to this question. Multiple themes were identified for each participant. Overall, 125 participants indicated that Facebook was both positive and negative in their lives. In addition, 110 participants indicated that Facebook was only positive in their lives, 33 participants indicated that Facebook was only negative, and 24 participants indicated that Facebook did not affect them.

In total, 226 participants reported that Facebook positively impacts their lives. The most prominent positive outcomes reported were as follows: Relationship maintenance ($n = 193$), anytime participants indicated that they found Facebook was positive because they could be in touch or connect with their friends and family, this was coded as relationship maintenance; entertainment purposes ($n = 52$), anytime participants indicated that they found Facebook positive because of the news, memes, videos, or quotes found on the SNS this was coded as entertainment; and posting information about the self ($n = 7$) anytime participants indicated that Facebook was positive because of the ability to post or share information about themselves, this was coded as posting personal information on Facebook.

On the other hand, 156 people reported that Facebook negatively affects their lives. The most frequently reported negative outcomes were as follows: Spending too much time on Facebook ($n = 64$), anytime participants indicated that they spent too much time, or waste their time on Facebook, this was coded as spending too much time on Facebook; negative social comparison ($n = 36$), anytime participants indicated that they negatively social compare on Facebook, or that they feel worse about themselves after comparing to their Facebook friends, this was coded as negative social comparison; and feeling bullied ($n = 8$), anytime participants indicated that they feel bullied, marginalized, or received mean comments on Facebook, this was coded as feeling bullied.

DISCUSSION

The purpose of the current study was to identify whether the positive effects of active Facebook use compensate for the negative effects of passive use on subjective well-being. Consistent with previous studies, and the fact that users in this sample typically reported that using Facebook positively impacted their lives, actively posting on Facebook was associated with enhancements for users' subjective well-being. Contrary to expectations however, the benefits associated with actively posting on Facebook were not strong enough to compensate for the deficits in subjective well-being that are produced by the upward social comparison that accompanies passive Facebook use.

Replicating previous findings, passively browsing Facebook led to increases in upward social comparison, which then led to decreases in subjective well-being. In addition, there were participants in this sample who referenced that negatively comparing themselves to their Facebook friends as a negative outcome for using Facebook. These findings reaffirm the negative consequences for subjective well-being that accompany passive Facebook use.

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Although active use was associated with enhancements to users' subjective well-being, the enhancements were not strong enough to buffer the deficits in users' subjective well-being after passively browsing Facebook and negatively comparing themselves to their Facebook friends. In general, there are inconsistencies in the literature regarding whether active use does in fact enhance subjective well-being (see Verdyun et al., 2017 for review). Among the studies that have found that active Facebook use enhances subjective well-being, a commonality among them is including Facebook messaging when measuring active Facebook use (Ryan & Xenos, 2011; Kim & Lee, 2011). In fact, in a recent review of the relationship between Facebook and subjective well-being, active Facebook use was categorized as actively self-disclosing through communicating with Facebook friends (Verdyun et al., 2017). Considering that it is self-disclosure via communicating online has been linked to increases in friendship quality (Desjarlais & Joseph, 2017) and subjective well-being (Valkenburg & Peter, 2009), and that communication with friends on Facebook is typically accomplished through the chat and messaging and features (Pempek, Yermolayeva, & Calvert, 2009), it may be that the posting of photos, status updates, memes and so forth used to measure active Facebook use in the present study did not capture enough meaningful self-disclosure to enhance users' subjective well-being enough to compensate for the observed negative effects.

In addition, it may also be that how and why people use Facebook is evolving. In early Facebook research, social networking sites such as Facebook were typically used to publically share information to offline friends (boyd & Ellison, 2007), as well as maintain friendships (Davis, 2012). In the present study, although users reported that Facebook positively impacted their lives via some form of relationship maintenance, few people reported using Facebook to post information about themselves or communicate with friends in any deep or intimate way. In fact, users more frequently reported enjoying the funny, or inspirational, memes and videos on Facebook than communicating or disclosing with friends. Furthermore, only one participant mentioned using social networking sites to express themselves, and they indicated that they used Instagram and Snapchat to do so. In fact, more recent research has shown that Instagram and Snapchat are more popular than Facebook messenger (Lee, Lee, Moon, & Sung, 2015), especially among adolescents (Gramlich, 2018). Given the rise in popularity of Instagram and Snapchat among adolescents and emerging adults (Lee et al., 2017), it may be that Facebook is no longer being used to disclose information, but rather be entertained with friends online, and that disclosing about oneself on social media may now take place on either Instagram or Snapchat, which are more photo and feedback based sites as opposed to the sharing of content/memes that occur on Facebook.

Despite the rise in popularity of other social networking sites like Instagram and Snapchat, young adult users in this sample did report using Facebook more frequently than the preceding sites. However, due to the changes in the how people are using Facebook, it may be that studying the effects of actively posting on Facebook may not be as meaningful as it was in earlier studies. To clarify whether actively using Facebook enhances subjective well-being enough to buffer the deficits in subjective well-being associated with passively browsing Facebook, future research will need to target the features of Facebook that allow for meaningful communication and self-disclosure such as direct messaging via Facebook messenger.

RECOMMENDATIONS FOR RESEARCH AND POLICY

Although previous researchers have advocated for encouraging posting on Facebook to decrease the likelihood of experiencing negative effects, the results of the present study indicate that posting photos, status updates, and memes on Facebook are not enough to compensate for the negative effects from the upward social comparison that occurs while browsing Facebook. Therefore, the way people use Facebook is evolving and these changes should be reflected in how researchers study the effects of Facebook in future research.

As suggested in previous research, support networks such as clinicians, educators, and parents should be aware of negative consequences associated with browsing Facebook. If members of an individual's support network are aware of the effects on subjective well-being associated with browsing Facebook, they could encourage emerging adult users to lessen their browsing behaviours, or encourage them to recognize and avoid the negative social comparison that results from passive browsing. It should also be noted that the upward social comparison that occurs while passively browsing only accounted for 12% of the variability in subjective well-being. Thus, the effects found in the present study are meaningful, but not large enough to warrant a complete boycott of Facebook. Additionally, relatively few people in this sample recognized that they engaged in upward social comparison when using Facebook, and thus awareness alone may be enough to alleviate the deficits in subjective well-being and related constructs such as depression and loneliness.

In addition to awareness, positive strategies for coping with the upward social comparison that occurs online could also be promoted. For instance, Facebook users could be encouraged to develop self-compassion using mindfulness techniques while on Facebook (Rumsey, 2018). Given that social comparison is an automatic process (Festinger, 1954), perhaps especially on Facebook (Vogel et al., 2014; Feinstein et al., 2013), users could be encouraged to employ mindfulness skills once they notice they are comparing themselves to their Facebook friends. For example,

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users could be encouraged to overcome any negative emotions by taking a moment to practice expressing gratitude for the things they do have, and compassion for themselves (Rumsey, 2018). Further, social comparison theory states that upward social comparison can be used as motivation for self growth and improvement (Festinger, 1954). As such, users could be encouraged to use the target's information to create goals for themselves and promote personal growth as opposed to feelings of inadequacy (Rumsey, 2018).

Social media users could also be encouraged to manage their Facebook newsfeeds to set themselves up for more positive experiences while browsing. In essence, users could organize the content they are exposed to on their Facebook newsfeeds by setting boundaries and removing content that triggers negative emotions. For example, users could block, or unfollow any accounts that make users feel badly about themselves (Rumsey, 2018). This could include removing friends, or celebrities, that consistently present themselves as perfect, removing friends who constantly boast about body image, or removing people that represent a negative part of their past, such as a former partner (Miller, 2017). In addition to blocking or unfollowing, which are more permanent forms of removing users on Facebook, in December 2017 Facebook unveiled a 'snooze' feature to help users organize their newsfeeds and prevent negative experiences (Muraleedharan, 2017). This feature allows users to take a 30 day break from Facebook users by temporarily unfollowing them for 30 days.

In what context should these techniques be taught and/or employed? Given that, roughly 85 percent of American adolescents (13-17 years) are exposed to online social environments (Anderson & Jiang, 2018), and that social comparisons and peer feedback is an imperative part of adolescents' self evaluations and development (Harter, 1999), an ideal setting to start conversations about the impact of social media and employ these techniques would be as part of the educational curriculum in middle schools. For instance, in May 2018 the New Democratic Party in Alberta, Canada suggested that the government donate 5 million dollars to Alberta schools to implement mental health education in schools (Ferguson, 2018). These programs were developed in response to complaints from parents and educators regarding the need for mental health programming in schools, and are aimed at reducing mental health stressors, including the stressors students face while on social media (Ferguson, 2018). These mental health programs could potentially then offer a venue for educators, parents, and counsellors to inform adolescents about the upward social comparison that occurs on Facebook, and the consequences for subjective well-being that ensue, possibly before social media becomes ubiquitous in their daily routine. Further, these programs could promote the preceding positive strategies that could act as protective factors and enable youth to combat the consequences for subjective

well-being that accompany passive Facebook use. In essence, programs like these could be implemented in schools across North America to help young social media users avoid these deficits in subjective well-being.

CONCLUSION

A clear theme in the current literature, and consistent with the results of the present study, is that passively browsing Facebook leads to upward social comparison, which then leads to deficits in subjective well-being. Further, active Facebook use may produce some enhancements for subjective well-being, albeit not enough to compensate for the deficits associated with passive use. While the effects are not large enough to encourage users to boycott Facebook altogether, users should be aware of the negative consequences for subjective well-being that accompany passive Facebook use. An avenue to spread awareness and employ protective strategies, such as using mindfulness skills and controlling content while browsing Facebook, would be in the education system. Given that parents, educators, and clinicians have advocated for mental health programs in schools, and that there is some notion of progress in some Canadian provinces (Rumsey, 2018), the author proposes that the consequences for subjective well-being associated with Facebook use, and the skills to combat them, be incorporated into such programs across North America.

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KEY TERMS AND DEFINITIONS

Active Facebook Use: An approach by which Facebook users interact with other users through sharing textual and pictorial information, sending messages, and reacting to others' posts. Instances where the targets of social comparison appear to be doing better than oneself.

Downward Social Comparison: Instances where the targets of social comparison appear to be doing worse than oneself.

Passive Facebook Use: An approach by which Facebook users surveil others through scrolling the newsfeed and browsing timelines.

Selective Self Presentation: The idea that users are able to manipulate the information presented about themselves on social media so that it is framed in the most attractive, desirable, socially acceptable way.

Social Comparison: A process by which individuals compare themselves to others as means of gaining information on what is most popular and acceptable, then making self-evaluations based on these observations.

Social Media: Any technological medium that enables individuals to connect with their social networks (e.g., texting, e mail, social networking sites).

Subjective Well-Being: The evaluation of one's own life including an assessment of overall life satisfaction and emotional responses to life events.

Upward Social Comparison: Instances where the targets of social comparison appear to be better than oneself.