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The moderating role of age in the relationship between social media use and mental well-being: An analysis of the 2016 General Social Survey

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ABSTRACT

The relationship between using social networking sites (SNS) and mental health is a thriving area of research producing mixed results. While terms such as “Facebook depression” have gained popularity in the mainstream press, there is not a consensus on the relationship between SNS use and mental health issues such as depression and anxiety. Mixed results from past research hint that age might moderate the SNS/mental health relationship, yet no specific tests of this interaction have been previously reported. In this study, we examine the relationship by analyzing data from the 2016 General Social Survey (GSS). We show that, overall, the number of SNSs one uses is positively related to respondents reporting that they have felt like they were going to have a nervous breakdown. While this relationship is positive for respondents 30 years old and older, it is negative for those who are 18–29 years olds.

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1. Introduction

According to the [American Psychological Association \(2018\)](#), “anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure” (n.p.). While anxiety is normal in certain situations, it can be debilitating to those who frequently experience severe levels of it. The [National Institute of Mental Health, 2016](#) reports an estimated 31.1 percent of U.S. adults experience an anxiety disorder at some time in their lives. These individuals perceive anxiety as impending harm ([Reiss & McNally, 1985](#)). While women and those with a family history of anxiety are most at risk, anyone can suffer from deteriorating mental health ([National Institute of Mental Health, 2016](#)).

One potential trigger for mental stress is the use of social networking sites (SNS) such as Facebook, Twitter, Instagram, and Snapchat. At the time of this writing, Facebook had over two billion active monthly users and, because of these high adoption rates,

there have been a growing number of studies examining the relationship between SNS use and mental health. Some studies have found a direct link between Facebook use and deterioration of emotional well-being. For example, [Shakya and Christakis \(2017\)](#) examined three waves of data from the nationally representative Gallup Panel Social Network Survey from 2013 to 2015 and concluded that Facebook use was “negatively associated with well-being” (p. 203). Other studies, particularly those that have focused on young adults or college students, have found the opposite ([Tandoc, Ferrucci, & Duffy, 2015](#)) or no significant link at all ([Jelenchick, Eickhoff, & Moreno, 2013](#)). Such differing results from general population studies to those focusing on adolescents/young adults suggest that the relationship between social networking sites and mental health may be conditioned on age. In this study, we examine the moderating role of age in the social media/mental health relationship by analyzing data from the 2016 General Social Survey (GSS). Specifically, we examine age as a moderator in the relationship between anxiety (operationalized as feeling like having a nervous breakdown) and the number of social networking sites one uses.

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1.1. Social networking sites, mental well-being, and anxiety

Over the past decade, the number of global users of social networking sites (SNS) has dramatically increased (Vasalou, Joinson, & Courvoisier, 2010). As of 2016, 79 percent of online adults (68% percent of the total adult population) in the United States reported using social networking sites, with the most popular being Facebook (Constine, 2016; Greenwood, Perrin, & Duggan, 2016). On average, users spend at least 40 min per day on Facebook (Stewart, 2016) where they upload photos and share status updates (Moore & McElroy, 2012).

The main motivation to use social networking sites is to facilitate and maintain social relationships (Muscanell & Guadagno, 2012), potentially increasing social capital (Johnston, Tanner, Lalla, & Kawalski, 2013). Nadkarni and Hofmann (2012) suggest that SNS use fulfills our innate need to belong. This explains why the number of Facebook friends one has increases social attractiveness (Utz, 2010) and is associated with higher life satisfaction (Grieve, Indian, Witteveen, Anne Tolan, & Marrington, 2013).

Because of the inherent social nature of these sites, past research has documented that users engage in social comparison. Upward comparisons, wherein one sees others as having a greater status or enviable life, have negative consequences for one's mental and emotional well-being (Krasnova, Wenninger, Widjaja, & Bruxmann, 2013). The more individuals socially compare on Facebook, the lower their self-esteem (Lee, 2014). Evidence suggests that women (Fox & Vendemia, 2016), and particularly new mothers (Coyne, McDaniel, & Stockdale, 2017), are at an increased risk of poor mental health when engaging in social comparison via social networking sites.

In 2011, the American Academy of Pediatrics (AAP) released the "Clinical Report—The Impact of Social Media on Children, Adolescents, and Families" (O'Keeffe & Clarke-Pearson, 2011) which cites "Facebook depression" as a concern that pediatricians should be aware of and that they should help families encourage healthy SNS use among children and adolescences. However, research by Jelenchick et al. (2013) failed to find any connection between SNS use and clinical depression among young adults age 18–23. In fact, she and her colleagues found that college students often use Facebook to openly discuss mental health. They conclude, "SNSs could be an innovative avenue for combating stigma surrounding mental health conditions" (Moreno et al., 2011, p. 447).

Other studies with young adults report contradictory findings. Studying college students in Southwestern China, Wang, Jackson, Gaskin, & Wang, 2014 even found that social networking site use was positively related to students' self-reported subjective well-being. Tandoc et al., 2015 study of college students also suggests that overall the link between Facebook use and mental well-being is positive unless it triggers high levels of envy (i.e. upward social comparison).

Conflicting findings may be a result of differences in measures of SNS use and mental health. While the number of "friends" one has on a particular site may bolster social attractiveness (Utz, 2010), use of multiple social media platforms is associated with increased anxiety (Primack et al., 2017). As social media venues vary in their intended purpose, use of multiple sites creates the opportunity for multitasking. Such multitasking is associated with poor cognitive and emotional outcomes (Chen & Yan, 2016; Rosen, Carrier, & Cheever, 2013; van der Schuur, Baumgartner, Sumter, & Valkenburg, 2015), including higher levels of depression and anxiety (Becker, Alzhabi, & Hopwood, 2013). Thus, the measure of SNS use employed may partially explain the "many mixed findings between depression, anxiety, and SNS use" (Seabrook, Kern, & Rickard, 2016, n. p.).

Additionally, the impact of SNS use may differ in regard to the

associated mental well-being outcome. Not all mental health outcomes are the same. A systematic review of 70 studies examining the link between SNS use and depression and anxiety concluded that relationships differ by the outcome of interest. Anxiety, but not depression, was associated with passive uses of social networking sites (Seabrook et al., 2016).

Passive SNS activity may increase anxiety due to the physiological responses experienced when one engages with social media. That is, when viewing others' posts, a passive SNS user may experience an increased heart rate due to excitement, jealousy, confusion, etc. According to Clark (1986), those with anxiety sensitivity misinterpret the physiological sensations occurring in response to a stimulus as an indication of impending harm. Those with anxiety disorders can misinterpret something as simple as lightheadedness as evidence of an impending psychotic break (Ottaviani & Beck, 1987). For those with anxiety, even subtle physiological responses to stimuli can be misinterpreted and result in feelings of an oncoming mental breakdown. Social networking sites may trigger this response.

Those who are prone to anxiety often selectively attend to threatening information while ignoring positive and reassuring information (see Asmundson, Kuperos, & Norton, 1997). Rauch, Strobel, Bella, Odachowski, & Bloom, 2014 suggest that this focus on socially threatening material on Facebook may prime self-presentation concerns during subsequent face-to-face interactions. The heightened anxiety can then be interpreted as impending harm, leading to the feeling of a potential breakdown. In this study, we therefore examine the relationship between social networking site use and feelings of a having nervous breakdown.

1.2. Mental well-being and life stage

Mental health issues are often triggered and exacerbated by stressful situations. While numerous factors may influence one's life stressors, age plays a significant role. Erik Erikson, Paul Heider, & Gardner, 1959 proposed a theory of development explaining the progression of crises that influence our psychosocial growth. While the first several stages pertain to childhood, the final stages focus on adult development. Approximate ages for each crisis are suggested, although Erikson (1994) acknowledged that the theory is really a framework or 'tool to think with rather than a factual analysis.' Some individuals progress through stages faster or slower than others, indicating that stages should be viewed as a general progression rather than specific chronological categories.

According to Erikson et al., 1959, when we first enter adulthood we are concerned with identity formation. Late adolescents search to define personal values, beliefs and goals. Failure to establish a sense of identity within society leads to role confusion. As a result, emerging adults may begin to experiment with different lifestyles (e.g., work, education, or political activities).

Recent research appears to reflect Erikson et al., 1959 ideas. Those in their late teens and twenties often see themselves neither as adolescents nor as full-fledged adults. They are likely to engage in risky behaviors (Arnett, 2000; Reynolds, Magidson, Mayes, & Lejuez, 2010) that can result in emotional stress and psychological difficulties (Burriss, Brechting, Salsman, & Carlson, 2009; Goldstein, Flett, Wekerle, & Wall, 2009). Stress related to employment conditions, economic outlook, and financial burden is also quite common (Guo, Wang, Johnson, & Diaz, 2011).

Slightly older individuals face what Erikson et al., 1959 referred to as intimacy versus isolation, as well as generativity versus stagnation. Essentially, these midlife adults learn to commit themselves to others and work toward realizing their life's potential. The belief that one may not establish a legacy through family and/or work can create mental stress. This often relates to what is

commonly referred to as the mid-life crisis.

It is during this stage of life that we are prone to “an emotional state of doubt and anxiety in which a person becomes uncomfortable with the realization that life is half over ... it usually involves reflection and re-evaluation of one’s accomplishments” (Weaver, 2009, p. 69). Peck (1956) characterized the stressors of midlife as related to declining physical abilities, redefining romantic relationships, changing emotional bonds with elderly parents and grown children, and failing to keep an open attitude toward new ideas. Those in their 30s and 40s may not have learned how to handle the pressures of establishing a career, family responsibilities, financial goals, etc. Thus, middle aged adults are particularly prone to mental health disturbances.

Erikson et al., 1959 discussed the last stage of development as involving ego integrity. He believed if we see our lives as unproductive, feel guilt about our past, or feel that we did not accomplish our life goals, we become dissatisfied with life and develop despair, often leading to depression and hopelessness. Although mental health might be assumed to deteriorate with age, findings have been mixed (Jeste, Depp, & Vahia, 2010; Steptoe, Deaton, & Stone, 2015). Numerous studies are showing declines in mental health from early adulthood to middle age, followed by improvement during later adulthood (Blanchflower & Oswald, 2008; Jeste & Oswald, 2014; Stone, Schwartz, Broderick, & Deaton, 2010). For example, adults over the age of 50 likely face common stressors, including health problems, coping with the death of loved ones, financial insecurity and loss of independence (Bosch, 2003). However, they appear to be handling their stress quite well (Blazer, 2006; Jeste, Palmer, Rettew, & Boardman, 2015; Vaillant, 2002), perhaps due to what Linda George (1986) described as a “lowering [of] aspirations to meet realities.”

1.3. Life stage and social network sites

While individuals face different stressors throughout the life-span, social support can help ward off mental health problems as we face psychosocial crises. There is evidence that those with greater social support have better mental health than those with less social support (Kawachi & Berkman, 2001). Due to the rapid adoption of social media, much of our social support comes from those we connect with online. However, it is unclear how mediated social networks impact mental health and how this differs across age groups.

Social networking sites have a strong potential to help younger adults cope with their stressors. These individuals have been shown to value others’ opinions in social media and feel important when they provide feedback about brands or products they use (eMarketer, 2011). Young adults actively contribute content and gravitate toward social media sites where they can participate (Dye, 2007). They prefer to stay connected through technology (Rawlins, Simeon, Ramdath, & Chadde, 2008). As avoiding social isolation is particularly important to the mental health of young adults (Milner, Krnjacki, & LaMontagne, 2016), embracing social media to interact with others (Palfrey & Gasser, 2008) could be beneficial. Moreno et al., 2011 found that college students often use Facebook to openly discuss mental health. They conclude, “SNSs could be an innovative avenue for combating stigma surrounding mental health conditions” (p. 447.) We therefore pose that SNSs may foster mental well-being for younger adults.

Middle aged adults are also highly active users of SNSs (Tapscott, 2009). However, they may not be getting social support from these online interactions. Adults in their late 30s and 40s tend to turn to social media to socialize but do not vent their grievances online (Leung, 2013). Given that mental health among those in midlife is most impacted by social trust (Milner et al., 2016), discomfort using

social media to vent suggests they may be lacking this aspect of support. Therefore, we predict that SNSs play a deteriorating role for the mental well-being of those in their 30’s and 40’s.

Social support remains important to the mental health of older individuals (Milner et al., 2016). Perhaps they are now beginning to find this support online. Internet users aged 50–64 who said they used a social networking site grew by 88% in 2009, and those aged 65 and older grew by 100% (Madden, 2010). However, this group has shown great success at coping with stressors regardless of social media. While limited research has examined the relationship between mental health and social media among this age group, we expect that they will have greater mental well-being compared to younger adults, regardless of SNS use.

1.4. GSS-based hypotheses

Since 1972, the National Science Foundation has funded an annual survey to assess what Americans think and feel regarding numerous social issues. The General Social Survey (GSS) is the only full-probability, personal-interview social survey currently being conducted in the United States. We therefore rely on the 2016 data collected by the GSS to test our hypotheses. The operationalization of our variables of interest is dependent on the question wording available on the GSS.

As discussed, we are interested in respondent’s mental well-being, specifically the experience of anxiety. The GSS measures this variable by asking respondents: “Have you ever felt you were going to have a nervous breakdown?” We are interested in this acute experience, distinct from general mental well-being. As the GSS also asks “the number of days in the past month one’s mental health was not good” and one’s “general perception of happiness,” these items are used to distinguish general mental well-being from the perception of having a breakdown.

Social networking site use is measured on the GSS with questions that asked respondents if they were regular users of different sites. Much of the previous research has examined the time spent with SNS. However, the number of sites used potentially exposes an individual to a broader array of information and encourages multitasking. Thus, more content is available that may trigger an experience of heightened anxiety.

Finally, age is determined by the GSS based on respondents’ date of birth. We broke down age into the following categories: 1) age 18–29, 2) age 30–49, and 3) age 50 plus. Albeit these age categories are somewhat arbitrary they represent 1) young adults, 2) middle-aged adults, and 3) older adults. Given these operationalizations and the prior research we reviewed above, we state the following hypotheses:

H1. Age will be negatively related to GSS respondents affirming that they have ever felt that they were going to have a nervous breakdown.

H2. The number of social media outlets one uses will be positively related to GSS respondents affirming that they have ever felt that they were going to have a nervous breakdown.

H3. The relationship between the number of social media outlets one uses and GSS respondents saying they have felt like they were going to have a nervous breakdown will be moderated by age, with this relationship being negative for those under 30, positive for those aged 30 to 49 and orthogonal for those aged 50 and older.

2. Methods

Data for this study come from the 2016 General Social Survey

Table 1
Correlation matrix of all variables in the analyses.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|------------------------|---------|----------|----------|----------|----------|----------|--------|---------|----------|--------|----------|---------|---------|
| 1) Female | | | | | | | | | | | | | |
| 2) Age18-29 | -0.06 | | | | | | | | | | | | |
| 3) Age30-49 | -0.01 | -0.42*** | | | | | | | | | | | |
| 4) Age50+ | 0.06 | -0.04*** | -0.63*** | | | | | | | | | | |
| 5) White | 0.00 | -0.15*** | -0.03 | 0.16*** | | | | | | | | | |
| 6) Hispanic | 0.03 | 0.14*** | 0.03 | -0.15*** | -0.17*** | | | | | | | | |
| 7) Religiosity | 0.09* | -0.07* | -0.02 | 0.08* | -0.11** | 0.07* | | | | | | | |
| 8) Education | 0.04 | -0.15*** | 0.05 | 0.07* | 0.12*** | -0.17*** | 0.03 | | | | | | |
| 9) Income | -0.03 | -0.16*** | 0.04 | 0.10* | 0.23*** | -0.17*** | -0.05 | 0.37*** | | | | | |
| 10) Rural | 0.03 | -0.02 | -0.04 | 0.05 | 0.04 | -0.06 | 0.06 | -0.06 | -0.00 | | | | |
| 11) Happy | 0.04 | -0.01 | -0.04 | 0.05 | 0.12** | -0.04 | -0.01 | 0.15*** | 0.36*** | 0.02 | | | |
| 12) Mental health days | 0.10** | 0.05 | 0.05 | -0.09** | 0.03 | 0.02 | -0.08* | -0.04 | -0.16*** | -0.08* | -0.27*** | | |
| 13) Social media | 0.05 | 0.42*** | 0.04 | -0.40*** | -0.08* | 0.01 | -0.04 | 0.04 | -0.04 | 0.01 | 0.02 | 0.03 | |
| 14) Ever breakdown | 0.12*** | 0.08* | 0.11*** | -0.18*** | 0.08* | 0.03 | -0.03 | -0.05 | -0.14*** | -0.02 | -0.14*** | 0.26*** | 0.14*** |

Pearson-correlation, listwise-deletion, *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

(GSS) (<http://gss.norc.org/>), the National Science Foundation-funded survey conducted by the National Opinion Research Center (NORC) at the University of Chicago. Because of the split-ballot design to maximize the number of questions asked and the listwise deletion of missing values in the analyses presented below, we rely on a subset of data from 743 respondents. Our criterion variable of interest is the GSS question EVBRKDOWN: “Have you ever felt you were going to have a nervous breakdown?” (37.3% reported “Yes” and 62.7% reported “No”). Our social media variable is calculated by summing the GSS measures: FACEBOOK, TWITTER, INSTAGRAM, and SNAPCHAT. The exact wording is “Which of the following social networking or social media sites are you a member or regular user of? Facebook, Twitter, Instagram, and/or Snapchat” ($M = 1.48, SD = 1.32$).

We control for a host of co-variables to rule out plausible alternative relationships that may explain away the direct and interactive effects found in our statistical models. To this end, we include a group of variables that represent overall wellbeing of the respondents. Particularly, the GSS measure MNTLHLTH that asked respondents “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” ($M = 3.67, SD = 7.04$) and the GSS measure HAPPY that asks, “Taken all together, how would you say things are these days? Would you say that you are 3) very happy, 2) pretty happy, or 1) not too happy” ($M = 2.12, SD = 0.644$). We also include a host of social

demographic control variables. Sixty percent of the respondents in the data used in these analyses are female, 78.8 percent of are white, 10.4 percent are Hispanic, and 9.2 percent are assigned a “rural” SRC beltcode. Education is measured in years of formal schooling ($M = 14.48, SD = 2.84$). Income was measured on a 26-point scale (“Under \$1000” to “170000 or over”) with the median income being “\$50000 to \$59999.” Religiosity was measured by attendance to religious service ($M = 20.22$ days per year, $SD = 29.18$). While age was measured as a continuous variable ($M = 44.76, SD = 16.20$), a categorical age measure is used for analyzing and graphing the statistical interaction (age 18–29: 16.8%; age 30–49: 33.3%; age 50 plus 49.9%). Table 1 reports a correlation matrix of the variables used in the analyses.

3. Results

Table 2 reports the results of three logistic regression models predicting the GSS question (EVBRKDOWN) “Have you ever felt you were going to have a nervous breakdown?” Model 1 reports the logistic regression without the interactions to test the direct effect of age (hypothesis 1) and number of social media sites, while controlling for socio-demographic and well-being variables. Models 2 and 3 include the interaction terms between age groups and number of social media sites separately to avoid multicollinearity. Model 2 reports the interaction between the youngest age group (18–29) and number of social media sites whereas Model

Table 2
Logistic Regressions Predicting the GSS question (EVBRKDOWN) “Have you ever felt you were going to have a nervous breakdown?”

| | Model 1 | | Model 2 | | Model 3 | |
|---------------------------------------------|---------|---------|---------|---------|---------|---------|
| | b | OR | b | OR | b | OR |
| Intercept | -0.97 | -- | -1.07 | -- | -0.80 | -- |
| Female | 0.54 | 1.71** | 0.50 | 1.65** | 0.53 | 0.45** |
| Age 18–29 | 0.56 | 1.75* | 1.65 | 5.22*** | 0.80 | 2.23** |
| Age 30–49 | 0.72 | 2.05*** | 0.63 | 1.88** | 0.23 | 1.26 |
| White | 0.78 | 2.17*** | 0.77 | 2.17*** | 0.78 | 2.19*** |
| Hispanic | 0.01 | 1.01 | -0.05 | 0.95 | -0.02 | 0.93 |
| Religiosity | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.90 |
| Education | -0.02 | 0.98 | -0.02 | 0.98 | -0.02 | 0.98 |
| Income | -0.04 | 0.96* | -0.04 | 0.96* | -0.41 | 0.96* |
| Rural | -0.02 | 0.98 | -0.02 | 0.98 | -0.02 | 0.98 |
| Generally happy | -0.23 | 0.79 | -0.23 | 0.79 | -0.21 | 0.81 |
| Number of bad mental health days past month | 0.06 | 1.06*** | 0.06 | 1.06*** | 0.06 | 1.07*** |
| Social media | 0.20 | 1.22* | 0.35 | 1.43** | 0.02 | 1.02 |
| Social media × Age 18–29 | -- | -- | -0.55 | 0.58** | -- | -- |
| Social media × Age 30–44 | -- | -- | -- | -- | 0.37 | 1.45* |
| Nagelkerke R ² | 0.18 | | 0.19 | | 0.19 | |

Data: 2016 General Social Survey; $N = 743$; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

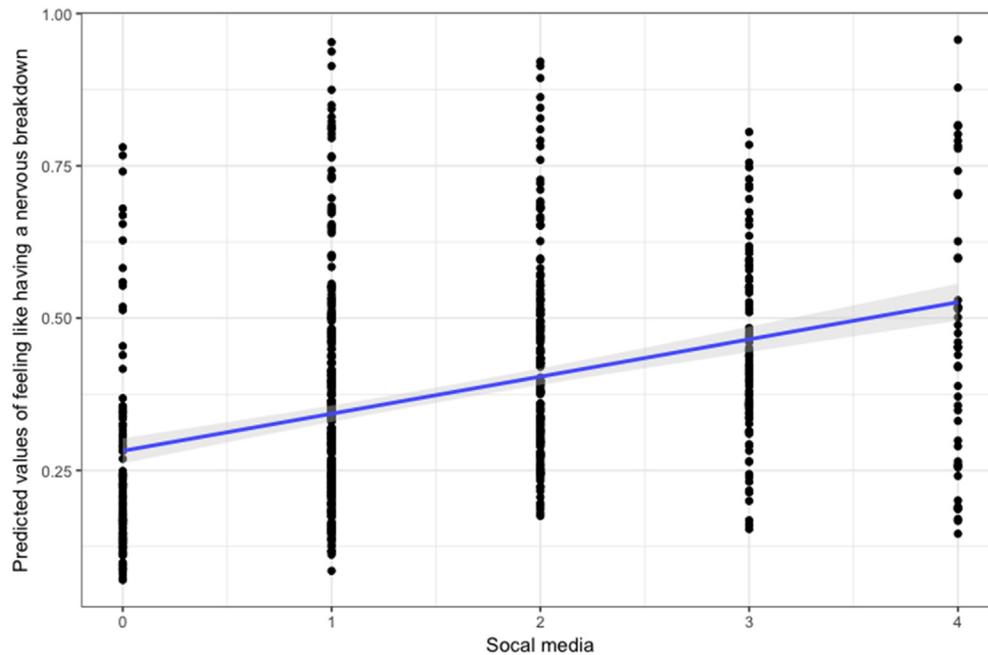


Fig. 1. Direct relationship between social media and report feeling like having a nervous breakdown.

3 reports the interaction between respondents aged 30–49 and the number of social media sites. All models report unstandardized b coefficients and odds ratios (OR).

Supporting [hypothesis 1](#), results suggest that age is directly related to negative emotional well being with those under 50 being significantly more likely to reported feeling like they were going to have a nervous breakdown (Age 18–29: $b = 0.56$, $OR = 1.71$, $p < 0.05$; Age 30–49: $b = 0.72$, $OR = 2.05$, $p < 0.001$). Supporting [hypothesis 2](#) and in line with past research looking across all age groups (e.g. [Shakya & Christakis, 2017](#)), overall social media use is positively and significantly related to respondents affirming that they have felt that they were going to have a nervous breakdown ($b = 0.20$, $OR = 1.22$, $p < 0.05$, zero-order coefficient without controls: $b = 0.26$, $OR = 1.30$, $p < 0.001$, *Nagelkerke* $R^2 = 0.03$). This direct effect is illustrated in [Fig. 1](#), which plots the predicted values from this regression model by social media use.

Significant relationships were produced by the control variables in the main effect model. These relationships are consistent with past research examining socio-demographic relationships with mental health and therefore provide a construct validity check on our dependent variable and the data overall. Specifically, being female ($b = 0.54$, $OR = 1.71$, $p < 0.01$) and white ($b = 0.78$, $OR = 2.22$, $p < 0.001$) were all positively and significantly related to the dependent variable. Naturally, the number of bad mental health days in past 30 days was a significant positive predictor ($b = 0.06$, $OR = 1.06$, $p < 0.001$) while higher income was negatively related ($b = -0.04$, $OR = 0.96$, $p < 0.05$) to respondents reporting that they have felt like they were going to have a nervous breakdown. Together these variables explain a sizable portion of the variance in the dependent variable (*Nagelkerke* $R^2 = 0.18$).

The interaction between social media and the youngest age group produced a negative coefficient ($b = -0.55$, $OR = 0.58$, $p < 0.01$) while the interaction with respondents aged 30–49 produced a positive one ($b = 0.37$, $OR = 1.45$, $p < 0.05$). The relationship between social media and self-reporting of felt like having a nervous breakdown in respondents aged 18–29 is negative while this relationship is positive for those aged 30–49 and, albeit small, also positive for those aged 50 plus (largely supporting [hypothesis 3](#)).

The interactions between social media and age are illustrated in [Fig. 2](#). The divergence between these age groups on the Y-axis at zero social media use is interesting and we discuss this in detail below.

4. Discussion

In this national sample of US adults collected by the 2016 General Social Survey (GSS), the relationship between number of social media outlets one uses and their affirmation that they have felt like they were going to have a nervous breakdown is positive and statistically significant in the face of controls. In general terms, one could make the argument based on the analyses reported here that social media is detrimental to emotional and mental well-being, specifically in regard to anxiety. However, this relationship is moderated by age and stark differences make themselves apparent when we compare young adults age 18 to 29 to those who are older. For young adults, use of more social media platforms equated to better mental well-being, whereas among those aged 30 to 49, and aged 50 and older, the opposite relationships were produced. These relationships hold in the face of stringent demographic controls and other measures of mental well-being. The influence of social comparison may help to explain this finding.

Social comparison is likely greater for middle-aged adults as opposed to younger adults. Middle adulthood is sometimes viewed as a “phase of taking stock and reviewing one’s previous accomplishments” ([Freund & Ritter, 2009](#), p. 588). The “concepts of life span development” place weight on “the interplay between social expectations and personal goals” ([Freund & Ritter, 2009](#), p. 589). While there is a scholarly debate over the conceptual boundaries of what does and does not constitute a “mid-life crisis” (see [Freund & Ritter, 2009](#)), the popular notion of the concept is informative in interpreting our results. In their desire to validate accomplishments, many middle-aged adults may look to high school peers (i.e. those who roughly had the same starting line) as a point of comparison. As most people present themselves hyper-positively online, social comparisons are unrealistic and may deteriorate self-worth and mental well-being. Furthermore, [Rauch et al. \(2014\)](#)

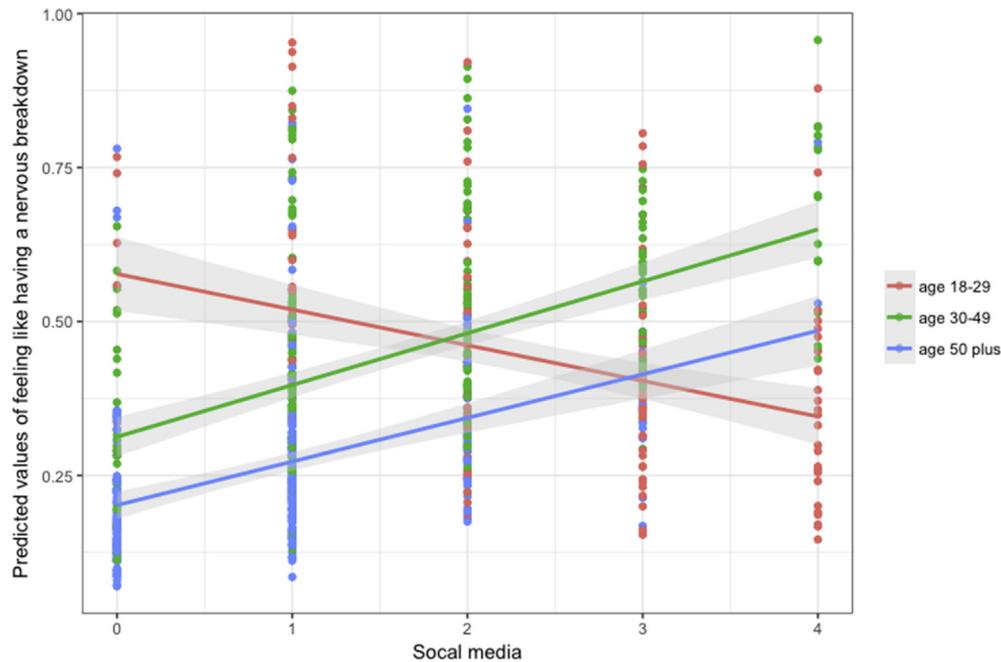


Fig. 2. Interactive relationship between social media and report feeling like having a nervous breakdown.

suggest that online interactions may increase social comparisons, and thus anxiety, during subsequent face-to-face interactions. This heightened anxiety can then be interpreted as impending harm, leading to the feeling of a potential breakdown (Ottaviani & Beck, 1987). Our findings suggests that this phenomenon is more likely among adults those over 30 than those who are aged 18–29.

Unfortunately, we do not have empirical evidence to conclude that social comparison explains the relationships found in this study. The GSS does ask respondents the following question: “Compared with American families in general, would you say your family income is far below average, below average, average, above average, or far above average?” It is the only question that could possibly get close to measuring social comparison. Exploratory analyses did not reveal a relationship between social media use and this measure, which is not surprising given the poor face validity of the item as a proxy for social comparison. Future research should continue to explore the moderating role of age in the relationship between social media use and mental well-being with methodologies that explicitly measure peoples level of social comparison through the sites. A series of questions that ask respondents about their childhood and adolescence peer group, the successes and failures of members from that peer group, and how often they use social media to compare themselves to others would be highly informative for understanding the interaction between age and social media use on one’s feeling of an impending nervous breakdown.

Additionally, research is needed to examine relationships between social media use and mental health based not only on age but birth cohort. Generational cohort theory (Mannheim, 1952) suggests that individuals of the same generation have many shared experiences and interpret events through a common lens (Sessa, Kabacoff, Deal, & Brown, 2007). As personality traits, work values, attitudes, and motivations develop similarly among those in the same generation (Smola & Sutton, 2002), these shared experiences, rather than life stage alone, may explain differences in their experience with social media and mental health.

For example, the Millennial generation tends to be more affluent, better educated, and more ethnically diverse than any

previous generation (Howe & Strauss, 2000). They may experience stress due to their greater sense of entitlement (Twenge, 2007) and struggle to cope with failure (Howe & Strauss, 2000). These experiences are not only associated with life stage but are specific to that generation.

Most notably, Millennials have spent their entire lives with digital media (Bennett, Maton, & Kervin, 2008). Because they and their social media “friends” have grown together online, social comparison may produce less stark and shocking contrast between them and their peers compared to older adults who adopted social media after losing contact with many of their peers. As older adults regain contact with childhood and adolescence peers, the heightened salience of social difference is pronounced. It is analogous to someone not noticing the aging face of a spouse that they see everyday but noticing how much older a distant family member looks compared to the last time they saw them years ago.

Given that Millennials were born into a world with the Internet and are accustomed to technology being a major part of their lives (Prensky, 2001), this generation may also be the first to become accustom to using multiple social media platforms. Indeed, use of two or more platforms increased by 10% from 2013 to 2014 (Duggan, Ellison, Lampe, Lenhart, & Madden, 2014). While the multitasking required to use multiple sites has been related to higher levels of depression and anxiety (Becker et al., 2013; Richards, Caldwell, & Go, 2015), the Millennial generation enjoys multitasking more so than their older counterparts (Brack & Kelly, 2012). They switch attention between media platforms 27 times per hour, compared to 17 times per hour among those in other generations. Thus, it may be that today’s young adults are better able to multitask, allowing use of multiple SNSs to lessen, rather than increase, risk of a nervous breakdown. This does not necessarily counter previous research showing the association between use of multiple platforms and more general ongoing depression and anxiety (Primack et al., 2017), but rather suggests that Millennials’ ability to multitask (see Carrier, Cheever, Rosen, Benitez, & Chang, 2009) could protect them from experiencing heightened levels of anxiety that result in panic attacks, or feelings of having a nervous breakdown.

4.1. Limitations and future research

As with most secondary data analyses, researchers are limited by the question wording of the measures in the available dataset. While the General Social Survey produces high quality data, the conceptualization and operationalization in this study is slightly disjointed. Our dependent variable is measured by a single dichotomous measure that asks if respondents ever felt like they were going to have a nervous breakdown. There are variables that we modeled as control variables that could have been modeled as dependent variables. For example, the highly skewed MNTLHLTH variable asked “for how many days during the past 30 days was your mental health not good?” and the HAPPY variable asked how happy the respondents were. These could have been modeled as criterion variables but, as reported in the correlation matrix (see Table 1), there were no bivariate relationships between them and social media use.

The difference between these variables and the nervous breakdown variable that we used as our criterion is level of specificity and severity. Having a bad mental health day could mean many things to many people, such as just being in a bad mood or emotionally tired. This same level of broad generalness applies to the variable that asked respondents how happy they are. However, feeling like you are going to have a nervous breakdown is much more specific and severe than feelings of slight emotional malaise. Furthermore, it may be a direct overreaction to negative online interactions. Therefore, we chose to model the highly specified nervous breakdown variable as the criterion while modeling these overly general well-being variables as controls. Future research needs to test the interactions we found in this data with a battery of more developed questions measuring respondents' mental health, specifically their experience with anxiety.

The GSS social media measures are also limited in that they do not measure frequency of use. Future research asking respondents how much time they spend with each SNS, as well as frequency of multitasking with multiple social media platforms, would provide additional precision and insight. Additionally, using a multi-method approach, future research could examine different features across different sites in conjunction with user motivations to uncover site-specific effects on mental well-being.

Another threat to the causal relationship when using cross-sectional observational data is the possibility of spuriousness. Included in the regression model are nine other co-variates to control out many plausible alternative relationships that may explain away the direct and interactive effects produced in our statistical analyses. Yet, there is no way to guarantee perfect model specification to rule out all threats of spuriousness. The GSS contains a variety of variables asking respondents about numerous topics. We believe that all third possible theoretically relevant variables in the 2016 GSS dataset are controlled for in the regression models.

5. Conclusion

Given the mainstream popularity of terms such as ‘Facebook Depression’ (Guernsey, 2014), it is not surprising that the relationship between using social networking sites and mental health has been a thriving area of research. However, empirical evidence is equivocal, indicating both a positive (Selfhout, Branje, Delsing, et al., 2009; O’Keeffe & Clarke-Pearson, 2011; Kalpidou, Costin, & Morris, 2011; Kross, Verduyn, Demiralp, et al., 2013; Guernsey, 2014) and negative (Ellison, Steinfield, & Lampe, 2007; Kim & Lee, 2011; O’Dea and Campbell, 2011; Valenzuela, Park, & Kee, 2009) relationship between use of SNSs and risk for mental health problems. With few exceptions (e.g., Primack et al., 2017;

Shakya & Christakis, 2017), research in this area has focused on adolescents and young adults. However, as SNS use has been popular since the early 2000’s (Boyd & Ellison, 2008), young adults represent a very different group today than just 5–10 years ago. Our results suggest that young adults, unlike middle-aged adults, are using social media in the way it was intended; to come together and garner social support. This helps explain the changing role of social media in the mental health of younger, as compared to older, adults.

On July 27, 2017, Facebook co-founder and CEO Mark Zuckerberg posted on his Facebook wall that “As of this morning, the Facebook community is now officially 2 billion people! We’re making progress connecting the world, and now let’s bring the world closer together. It’s an honor to be on this journey with you.”¹ “Connecting the world” and bringing it “closer together” sounds utopic, yet our findings suggest that those who grew up in the digital age may be closer to this reality than those born just a few years earlier.

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¹ Zuckerberg’s post: <https://www.facebook.com/zuck/posts/10103831654565331>.

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