# How does political engagement on social media impact psychological well-being? Examining the mediating role of social capital and perceived social support

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ABSTRACT

This study examines how individuals' political engagement on social media platforms could impact their psychological well-being. We focus on two possible indirect paths through bonding and bridging social capital. By testing a serial mediation model with two parallel paths, we found that political engagement on social media contributes to both bonding and bridging social capital, which further increases perceived social support and then improves psychological well-being. This study also examines the moderating role of network heterogeneity in the serial mediation model and documents that the indirect effect through bridging social capital and perceived social support is conditionally affected by network heterogeneity. A higher level of network heterogeneity strengthens the path from political engagement on social media to bridging social capital.

## 1. Introduction

Social media has changed our daily life routines, from the way we read our news to how we interact with others. Social media platforms have attracted billions of users and markedly improved political engagement by enabling individuals to connect with one another in discussing political issues (Boulianne, 2020). As of 2020, there were over 3.6 billion social media users worldwide, which equates to almost half of the current world population (Statista, 2020). Researchers have paid great attention to the role of the Internet and social media in facilitating political engagement (Molyneux, 2019; Skoric et al., 2009); however, they have not yet paid enough attention to how increased political engagement on social media influences psychological well-being. Some studies show that psychological depression could reduce the probability of political participation and efficacy (Bernardi, 2021; Ojeda, 2015). Then conversely, what will be the psychological consequences of political engagement? Scholars have only begun to explore such questions. It is important to acknowledge psychological well-being as a significant outcome given that it is related to better health, higher quality of life, and more satisfactory social relationships (Chan, 2018a), which can contribute to a harmonious society. Thus, understanding such relationships is important in scholarly works and the policy-making process. In the current study, we revisited existing

studies on political engagement and well-being, and further developed a comprehensive model in exploring how political engagement on social media could promote psychological well-being, through what paths and under what conditions.

The body of literature on the relationship between political engagement and well-being has provided complicated and inconsistent results. Some acknowledge that well-being positively predicts political engagement (Nelson et al., 2019; Wray-Lake et al., 2019), while others recognize political engagement as a predictor of well-being with both positive and negative effects (Ballard et al., 2020; Oosterhoff, 2020). For instance, Ballard et al. found that among U.S. college students, "traditional" political behaviors like writing a letter or article about a political issue or contacting a political representative are positively associated with well-being. However, activism and expressive political behaviors like signing a petition and documenting and discussing political and social issues online are negatively associated with well-being. To our knowledge, the relationship between political behavior on social media platforms and psychological well-being has not been explicitly tested.

Given that findings on the relationship between political engagement and well-being are mixed, we argue that the underlying mechanisms in the relationship need to be considered. As social media allows for new connections beyond public and private communications which might impact the nature of interpersonal relationships, engagement on social

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media could potentially affect users' social capital and how they obtain information and emotional support through their social networks (Utz & Muscanell, 2015). For instance, strong ties provide people with emotional support (Putnam, 2000) and weak ties provide them with non-redundant information and diversified perspectives (Granovetter, 1973). Such outcomes of social media engagement may ultimately affect people's psychological well-being. Therefore, we propose social capital and perceived social support as the two mediators in the relationship between political engagement on social media and psychological well-being and investigate whether and how the indirect effect is conditionally affected by network heterogeneity.

## 2. Literature review

### 2.1. Bonding and bridging social capital

The positive effect of social capital on psychological well-being has been well-documented (Chen & Li, 2017; Helliwell & Putnam, 2004). In the field of communication studies, social capital is a term coined by Putnam (2000) to describe the resources that people get from social interactions to achieve their goals and self-interests. With the emergence of social media, people can get various forms of resources from their online social networks to fulfill their own purposes, such as obtaining useful information, improving knowledge, and gaining emotional support (Putnam, 2000). According to Putnam, social capital could be differentiated into strong and weak ties. Bonding social capital points to strong and homogeneous ties among individuals, whereas bridging social capital emphasizes linking open networks with people from various socioeconomic backgrounds, with different personal characteristics and cross-cutting perspectives (Wen & Wei, 2018).

Studies have shown that social capital building and online political engagement mutually benefit from each other. Some suggest that bonding and bridging social capital are positively related to the likelihood of expressing opinions on public issues online given that the reciprocity of social capital, either intimate or looser, would motivate people to take action in public discussions (Wen & Wei, 2018). Others argue that social capital is a by-product of the social interactions with discussants (La Due Lake & Huckfeldt, 1998). For instance, seeking information via social network sites enhances social capital (Gil de Zúñiga et al., 2012). Those who are highly devoted to social media activities are likely to have more acquaintances and be involved in greater levels of social interaction, which leads to higher levels of social capital compared to non-social media users (Brandtzæg, 2012; Quinn, 2016; Steinfield et al., 2008). Therefore, it is plausible that political engagement on social media would prompt users to build more social capital through interaction (Campbell & Kwak, 2010; Chan, 2018a).

As an outcome of political engagement on social media, social capital can enhance psychological well-being (Baumeister & Leary, 1995), which refers to individuals' psychological evaluation of their overall quality of life, such as having a meaningful life, being optimistic about life, and being respected by others (Diener et al., 2009). However, the two types of social capital—bridging and bonding—appear to play different roles in leading to a satisfactory life. Bonding social capital, as measured by the strength of family, friendship, neighborhood, religious, and community ties, can support well-being (Helliwell & Putnam, 2004). Strong ties, by nature of their intimacy, tend to be high in closeness and trust, which further leads to high life satisfaction (Burke et al., 2010; Burt, 2001). Bridging social capital can also boost self-esteem and reduce depression (Park & Lee, 2012). Diversified information and resources usually come from peripheral weak ties, which could motivate people to communicate and learn more during their interactions with others who vary across a range of socio-economic factors, attitudes, and beliefs (Hampton et al., 2011). Therefore, communication with close friends (strong tie) and strangers (weak tie) on the Internet could both positively predict well-being by reducing loneliness and providing useful information (Burke et al., 2010;

Granovetter, 1973; Valkenburg & Peter, 2007).

Taken together, bonding and bridging social capital play important mediating roles between social media use and psychological well-being (Chen & Li, 2017). Specifically, we argue that bonding and bridging social capital mediate the relationship between political engagement on social media and psychological well-being in parallel. We believe that active political engagement on social media could help individuals solidify the strong ties and bridge the weak ties that potentially construct higher satisfaction with life. Our first set of hypotheses are proposed as follows:

**H1**. The relationship between political engagement on social media and psychological well-being is mediated by bonding social capital (H1a) and bridging social capital (H1b).

### 2.2. Perceived social support and psychological well-being

Social capital may predict psychological well-being not only directly but also indirectly through social support (Chan, 2018b). Most of the prior research has focused on perceived social support because individual differences may influence one's perception of a situation and this is influential on one's mental health (Stokes, 1985). Perceived social support is defined as an individual's overall impressions of whether their social network is supportive enough (Gülaçtı, 2010). Social support can provide emotional and material support in times of need (Dush & Amato, 2005). People who feel that they can find support when necessary could gain more satisfaction from social interaction (Cheng & Furnham, 2003). Insufficient social support can cause problems like negative emotions, misbehavior and difficulties in social adaptation, while sufficient social support can give individuals more ability to overcome health problems, decrease depression, increase personal competence, and have a perception of their own value, all of which lead directly to higher psychological well-being (Gülaçtı, 2010).

As discussed above, bonding and bridging capital allow people to obtain resources to fulfill their own interests, such as useful information and social support (Leung & Lee, 2005), and perceived social support could further increase psychological well-being. Therefore, we propose that perceived social support acts as a mediator between bonding/bridging social capital and psychological well-being. The second set of hypotheses are proposed:

**H2a**. The relationship between bonding social capital and psychological well-being is mediated by perceived social support.

**H2b**. The relationship between bridging social capital and psychological well-being is mediated by perceived social support.

Combining H1 and H2, as bonding/bridging social capital and perceived social support are both antecedent endogenous variables leading to psychological well-being, we propose the following serial mediation model:

**H3a**. The relationship between political engagement on social media and psychological well-being is serially mediated by bonding social capital and perceived social support.

**H3b**. The relationship between political engagement on social media and psychological well-being is serially mediated by bridging social capital and perceived social support.

It is also essential to compare the strength of the two hypothesized indirect effects, as bonding and bridging social capital are different in the ways they prompt social support. As discussed above, bonding social capital refers to the strong ties built between individuals among their social networks with closeness and kinship, while bridging social capital is linked with weak ties mainly created among strangers or others who have not known each other for long (Putnam, 2000). According to the personal relationship literature, the strength of a tie is positively associated with the support that network members give one another (Duck, 2007; Wiseman, 1986). For intimates, it is often felt as an urge,

obligation, or pressure to help each other (Kadushin, 1981). Moreover, as is argued by Wellman and Wortley (1990), different relationships provide different kinds of social support. Strong ties, as a closer and more intimate relationship compared with weak ties, are capable of providing more emotional support, especially when people are in need of comfort. Therefore, the social support created by bonding social capital should be more closed, supportive, and timely, which further leads to greater psychological well-being. In this sense, it is appropriate to assume that the indirect effect through bonding social capital and perceived social support should be stronger than the indirect effect through bridging social capital and perceived social support when mediating the relationship between political engagement on social media and psychological well-being. The following hypothesis is proposed:

**H3c.** The indirect effect of political engagement on social media on psychological well-being is stronger when it is serially mediated through bonding social capital and perceived social support than when it is serially mediated through bridging social capital and perceived social support.

### 2.3. The moderating role of network heterogeneity

If political communication among citizens is to be informative and deliberative, individuals must encounter divergent political perspectives. Heterogeneous networks help people to interact with diversified viewpoints on various issues that make deliberative democracy come alive (Kim & Chen, 2015; Scheufele et al., 2004). It is obvious that some citizens are mainly surrounded by politically like-minded discussants, while others are located among individuals who hold ambiguous and undetermined political preferences; there are still others located among discussants who hold divergent viewpoints (Huckfeldt et al., 2004). The same goes for social media networks. Social media users may find themselves in different social and political surroundings, with important consequences for the flow of political information, exchanging political viewpoints, and formation of social capital (Chen et al., 2022).

Network heterogeneity has a positive effect on social capital, as well as people's well-being (Kim & Kim, 2017). As bridging social capital refers to bridging ties in a heterogeneous context, like different gender, race, religion, geographical region, and political ideology (Scheufele et al., 2004; Wen & Wei, 2018), we assume that network heterogeneity sets conditions for bridging social capital such that when one's social media network is more heterogeneous, they are more likely to bridge the weak ties by engaging in political activities on social media. Therefore, we propose a moderated mediation model (see Fig. 1) with network heterogeneity as the moderator which conditionalizes the relationship between political engagement on social media and bridging social capital:

**H4.** The indirect effect of political engagement on social media on psychological well-being through bridging social capital and perceived social support is conditionally affected by network heterogeneity. More specifically, in the moderated mediation model, network heterogeneity will strengthen the path from political engagement on social media to bridging social capital.

## 3. Method

### 3.1. Sampling

The data for this study were collected by Qualtrics via an online panel survey of adults in the U.S. in February 2018. Employing stratified quota sampling, the gender, age, yearly household income, and education level quotas were specified so that the sample would match the population features as reported by the U.S. Census and 1131 valid cases were obtained. The demographic distribution of our sample is listed in Appendix A.

### 3.2. Measurement

We include the complete items and reliability results for all the measures in Table 1.

#### 3.2.1. Political engagement on social media

Respondents were asked how often they have engaged in a list of political activities on social media platforms on a 1–5 scale (1 = "never"; 5 = "always"). The list includes 11 different activities related to political engagement on social media, including sharing news, posting personal opinions related to politics, talking about public affairs or elections, encouraging others to act, and so on. The scores were averaged to form a measure of political engagement on social media ($M = 1.88$, $SD = 0.99$).

#### 3.2.2. Bonding and bridging social capital

Measurements for the two dimensions of social capital—bridging and bonding—were developed as levels of agreement on four items for each dimension, measured on a scale of 1 = "strongly disagree" to 7 = "strongly agree". The total of eight items were adapted from the Internet Social Capital Scales (Williams, 2006), and the scores were averaged to form a measure of bonding ($M = 4.78$, $SD = 1.15$) and bridging social capital ($M = 4.82$, $SD = 1.12$).

#### 3.2.3. Perceived social support

Respondents were given a list of statements to rate their level of agreement on a 1–7 scale (Chan et al., 2017; Sarason et al., 1987, p. 1 = "strongly disagree" to 7 = "strongly agree"). Sample items include statements like "I have a special person who is a real source of comfort to me" and "My friends really try to help me". The scores were averaged to
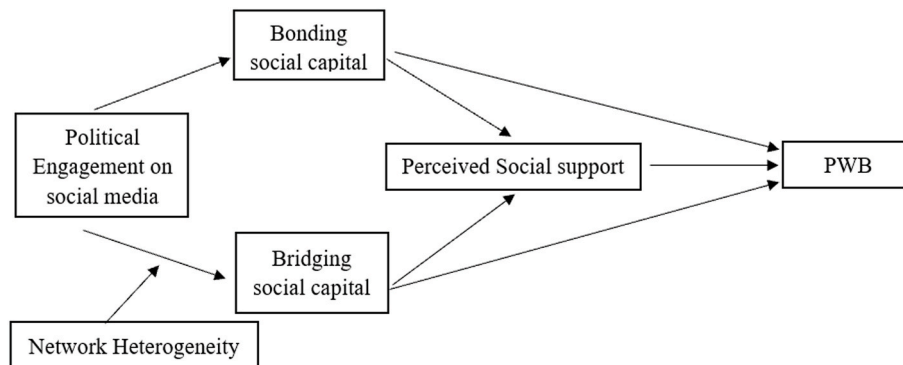


**Fig. 1.** Proposed theoretical model incorporating the indirect effect of political engagement on social media on psychological well-being (PWB) moderated by network heterogeneity.

**Table 1**
Reliabilities and confirmatory factor analysis properties.

| Construct | Factor Loadings | α | CR | AVE |
|---|---|---|---|---|
| **Political Engagement on Social Media** | | .97 | .96 | .68 |
| Post/share news or news headlines from news sources | .86*** | | | |
| Post news with my personal thoughts | .90*** | | | |
| Like/share other users' news/comments | .80*** | | | |
| Promote what others have posted | .90*** | | | |
| Post personal opinions related to politics | .91*** | | | |
| Talk about public affairs or elections with friends | .90*** | | | |
| Join groups dedicated to a political cause or issue | .81*** | | | |
| Create a group dedicated to a political cause or issue | .76*** | | | |
| Encourage others to act | .85*** | | | |
| Encourage others to vote for a candidate | .79*** | | | |
| Encourage others not to vote for a candidate | .65*** | | | |
| **Bonding Social Capital** | | .74 | .77 | .46 |
| When I feel lonely there are several people I can call to talk to. | .80*** | | | |
| I am most comfortable with people and groups who share my values and beliefs. | .57*** | | | |
| If I have severe financial difficulties, I know there is someone who can help me. | .66*** | | | |
| I have the ability to organize my group of friends to fight injustice. | .63*** | | | |
| **Bridging Social Capital** | | .81 | .81 | .52 |
| Based on the people I interact with, it is easy for me to hear about the latest news and trends. | .70*** | | | |
| Interacting with people makes me curious about things and places outside of my daily life. | .81*** | | | |
| I am willing to spend time to support general community activities. | .77*** | | | |
| I interact with people who are quite different from me. | .62*** | | | |
| **Perceived Social Support** | | .87 | .88 | .64 |
| I have a special person who is a real source of comfort to me. | .58*** | | | |
| My friends really try to help me. | .86*** | | | |
| I can count on my friends when things go wrong. | .90*** | | | |
| I have friends with whom I can share my joys and sorrows. | .87*** | | | |
| **Psychological Well-being** | | .93 | .93 | .63 |
| My social relationships are supportive and rewarding. | .74*** | | | |
| I am engaged and interested in my daily activities. | .80*** | | | |
| I actively contribute to the happiness and well-being of others. | .80*** | | | |
| I am a good person and live a good life. | .82*** | | | |
| I lead a purposeful and meaningful life. | .84*** | | | |
| I am competent and capable in the activities that are important to me. | .80*** | | | |
| I am optimistic about my future. | .79*** | | | |
| People respect me. | .77*** | | | |
| **Network Heterogeneity** | | .98 | .98 | .85 |
| Social media discussion with people with different opinions | .82*** | | | |
| Social media discussion with people with different political viewpoints | .80*** | | | |
| Social media discussion with people who support a politician or party you do not support | .79*** | | | |
| Social media discussion with people of different gender | .96*** | | | |
| Social media discussion with people of a different race or ethnicity | .97*** | | | |
| Social media discussion with people of a different religion | .96*** | | | |
| Social media discussion with people of a different nationality | .95*** | | | |

**Table 1** (*continued*)

| Construct | Factor Loadings | α | CR | AVE |
|---|---|---|---|---|
| **Political Engagement on Social Media** | | .97 | .96 | .68 |
| Social media discussion with people living in a different place | .95*** | | | |
| Social media discussion with people with different cultural backgrounds | .96*** | | | |

*Notes.* Standardized coefficients reported; ***$p < .001$; AVE = Average variance extracted; CR = Composite reliability.

form a measure of perceived social support ($M = 5.25$, $SD = 1.33$).

### 3.2.4. Psychological well-being (PWB)

PWB was obtained by averaging the scores on eight items from the Psychological Well-Being Scale (Diener et al., 2009) that asked respondents to indicate their level of agreement (1 = "strongly disagree"; 7 = "strongly agree") on the eight items, such as "My social relationships are supportive and rewarding", "I am engaged and interested in my daily activities", "I actively contribute to the happiness and well-being of others", and so on. The scores were averaged to form a measure of psychological well-being ($M = 5.50$, $SD = 1.09$).

### 3.2.5. Network heterogeneity

The measurement of network heterogeneity was developed following the definition by Dietram (2010). We examine how often people discuss politics on social media with people from different social, economic, or cultural backgrounds as well as those who hold different political viewpoints (1 = "never"; 7 = "always"). The scale includes nine items, which were averaged to form a measure of network heterogeneity ($M = 2.31$, $SD = 1.20$).

### 3.2.6. Control variables

Demographic variables (gender, age, education level, and household income), general social media use and social network size were included as controls. General social media use was measured by asking people's average time spent in using social media per day, with answers ranging from 1 = "not at all" to 6 = "5 h or more" ($M = 3.06$, $SD = 1.43$). To measure social network size, respondents were asked to provide an approximate number of friends they have on the social media site that they use most often.

### 3.3. Statistical analysis

In our hypothesized serial mediation model, two parallel paths are bridging the effects from political engagement on social media to psychological well-being, and each path includes two serial mediators (i.e., bonding social capital and perceived social support, bridging social capital and perceived social support). According to Hayes (2013), PROCESS macro model template 80 is applicable when a mediation model consists of three or more mediators, both in parallel and in series (Stride et al., 2015). Studies could also be found using model template 80 in testing mediation models with similar structures (Kolesova & Singh 2019). Therefore, to test our hypotheses and the moderated mediation model, we also adopted Hayes' (2013) PROCESS macro model template 80, with 10,000 bias-corrected bootstrap samples and 95% confidence intervals (CIs). Statistical significance ($p < .05$) is achieved when lower bound (LL) and upper bound (UL) CI do not include zero.

To avoid potential confounding effects and provide a more robust analysis, all the controls were included in the analyses. To examine the moderating role of network heterogeneity, we further customized the syntax for model template 80 to allow us to add network heterogeneity as the moderator on the path between political engagement on social media and bridging social capital.

## 4. Results

### 4.1. Survey reliability and validity testing

Before testing the hypothesized model, reliability and construct validity for each construct were examined. To assess construct reliability and validity, a confirmatory factor analysis was run with Mplus. The standardized factor loadings of each latent construct were greater than 0.5 ($p < .001$), suggesting high convergent validity (Hair et al., 1998). Discriminant validity was also successfully achieved as the AVE for the latent construct was greater than the squared intercorrelation of any two variables (Fornell & Larcker, 1981). Table 1 shows the AVEs, composite reliability, Cronbach's Alpha and factor loadings while Table 2 shows the AVEs, correlations, and squared correlation coefficients of the constructs.

### 4.2. Model testing

The results (regression coefficients are summarized in Table 3) show that there is no significant relationship between political engagement on social media and psychological well-being ($B = -.04$, $SE = 0.03$, $p = .11$), which implies that individuals' political engagement on social media will not directly impact their psychological well-being. However, the indirect effect was significant through various paths. The results from the mediation analysis (Model 80) demonstrate that bonding and bridging social capital mediate the indirect relationship in parallel and that bonding/bridging social capital and perceived social support serially mediate the relationship between political engagement on social media and psychological well-being. Results indicate that political engagement on social media is positively associated with bonding social capital ($B = .17$, $SE = 0.04$, $p < .001$), and bonding social capital is significantly related to psychological well-being ($B = 0.27$, $SE = 0.03$, $p < .001$). Bonding social capital has a significant mediation effect on the relationship between political engagement on social media and psychological well-being ($B = .05$, $SE = 0.01$, 95% $CI = 0.024$ to $0.074$), supporting H1a. Meanwhile, political engagement on social media is significantly related to bridging social capital ($B = 0.31$, $SE = 0.04$, $p < .001$), and bridging social capital is positively associated with psychological well-being ($B = 0.27$, $SE = 0.03$, $p < .001$). Bridging social capital has a significant mediation effect on the relationship between political engagement on social media and psychological well-being ($B = .08$, $SE = 0.01$, 95% $CI = 0.056$ to $0.112$), supporting H1b.

The results show that perceived social support is significantly related to both bonding ($B = 0.61$, $SE = 0.03$, $p < .001$) and bridging social capital ($B = 0.26$, $SE = 0.04$, $p < .001$), as well as psychological well-being ($B = 0.26$, $SE = 0.02$, $p < .001$). Thus, perceived social support is deemed to be a mediator between bonding/bridging social capital and psychological well-being, supporting H2a and H2b. The results of the test of the serial mediation model indicate that bonding social capital and perceived social support serially mediate the relationship between political engagement on social media and psychological well-being ($B = .03$, $SE = 0.01$, 95% $CI = 0.14$ to $0.04$). In parallel, bridging social capital and perceived social support also serially mediate the relationship between political engagement on social media and psychological well-being ($B = .02$, $SE = 0.01$, 95% $CI = 0.012$ to $0.032$), supporting H3a and H3b. Comparing the indirect effects proposed in H3a and H3b, the results show that the indirect effect of political engagement on social media on psychological well-being serially through bonding social capital and perceived social support is slightly stronger than through bridging social capital and perceived social support. However, the difference is not significant ($B = 0.01$, $SE = 0.01$, $CI = -0.007$ to $0.022$). H3c was not supported.

H4 proposed a moderating role of network heterogeneity in influencing the mediating relationships proposed in H2b (simple mediation

**Table 3**

Regression coefficients in the mediation model and moderated mediation model.

| | M1 | M2 | | M3 | PWB |
|---|---|---|---|---|---|
| **Predictors and mediators** | | | | | |
| Political engagement (IV) | .17 (.04) *** | .31 (.04) *** | -.06 (.11) | -.07 (.04) * | -.04 (.03) |
| Bonding social capital (M1) | | | | .61 (.03) *** | .27 (.03) *** |
| Bridging social capital (M2) | | | | .26 (.04) *** | .27 (.03) *** |
| Perceived social support (M3) | | | | | .26 (.02) *** |
| **Moderator** | | | | | |
| Network heterogeneity (W) | | | .02 (.06) | | |
| **Interaction** | | | | | |
| IV * W | | | .08 (.03) * | | |
| **Control variables** | | | | | |
| Age | -.05 (.02) * | -.05 (.02) * | -.05 (.02) * | .05 (.02) * | .05 (.01) *** |
| Gender (male = 0; female = 1) | -.33 (.07) *** | -.16 (.07) * | -.16 (.07) * | -.09 (.06) | -.02 (.05) |
| Household income | .10 (.02) *** | .08 (.02) *** | .08 (.02) *** | .04 (.02) * | .04 (.01) ** |
| Education level | .03 (.02) | .08 (.02) *** | .07 (.02) ** | .01 (.02) | .01 (.02) |
| General social media use | .08 (.03) ** | .04 (.03) | .03 (.03) | .06 (.02) * | -.03 (.02) |
| Social network size | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| **Constant** | 4.1 (.19) *** | 3.9 (.18) *** | 4.1 (.22) *** | .65 (.21) ** | 1.3 (.16) *** |
| $R^2$ | .10 *** | .15 *** | .17 *** | .49 *** | .58 *** |

*Notes.* $*p < .05$; $**p < .01$; $***p < .001$; Cell entries are unstandardized coefficient with standard errors in parentheses; Model A: mediation model by running PROCESS model 80; Model B: moderated mediation model by running PROCESS model 80 with customized syntax; PWB: Psychological well-being.

**Table 2**

AVE, correlations, and squared correlation coefficients.

| | Political Engagement | Bonding Social Capital | Bridging Social Capital | Perceived Social Support | Psychological Well-being | Network Heterogeneity |
|---|---|---|---|---|---|---|
| Political Engagement | **.68** | .05 | .11 | .02 | .02 | .54 |
| Bonding Social Capital | .23** | **.46** | .38 | .45 | .44 | .03 |
| Bridging Social Capital | .33** | .62** | **.52** | .29 | .38 | .08 |
| Perceived Social Support | .15** | .67** | .54** | **.64** | .44 | .03 |
| Psychological Well-being | .13** | .66** | .62** | .66** | **.63** | .02 |
| Network Heterogeneity | .74** | .17** | .29** | .16** | .13** | **.85** |

*Notes.* $**p < .01$; The diagonal elements (bold) represent the AVE values; Upper diagonal represents squared correlations of each construct.

through bridging social capital) and H3b (serial mediation first through bridging social capital, then through perceived social support). The results show that the relationship between political engagement on social media and psychological well-being through bridging social capital and perceived social support is conditionally affected by network heterogeneity ($B = .08$, $SE = 0.03$, $p < .05$). As shown in Table 4, the indirect effect of political engagement on social media on psychological well-being through bridging social capital is not significant if network heterogeneity is at a low or medium level. Therefore, H4 was supported.[1] The moderation effect is visualized in Fig. 2.

## 5. Discussion

With the emergence of social media, more and more people engage in political activities online. The rapid development of social media technology has continued to enlarge the scope of people's political life as it expands individuals' connections and interactions with political news and discussions. While more and more studies focus on the effects of social media or mobile phones on psychological well-being, few have specifically examined the effect of political engagement on social media (i.e., post/share political news, talk about public affairs or elections, join/create groups, encourage others to act). To fill this gap, this study acknowledges the significance of political engagement on social media and strives to reveal the underlying mechanism in the relationship between political engagement on social media and psychological well-being. More specifically, this study examined a theoretical model that emphasized the mediating role of bonding/bridging social capital and perceived social support in the relationship between political engagement on social media and psychological well-being. As a previous study found that political engagement variables had only small associations with well-being (Ballard et al., 2020), our study further supported that such direct effect is insignificant in the context of social media. However, the insignificant direct effect does not imply no linkage between political engagement on social media and psychological well-being. Instead, it calls for a more detailed investigation on the indirect paths which could possibly bridge political engagement and psychological outcomes.

The findings show that bonding and bridging social capital mediates

**Table 4**
The indirect effect of political engagement on social media on psychological well-being through bonding/bridging social capital and perceived social support moderated by network heterogeneity.

| Paths | Effect | SE | LLCI | ULCI |
|---|---|---|---|---|
| **IV → DV** | -.0381 | .0266 | -.0902 | .0140 |
| **IV → perceived social support → DV** | -.0188 | .0090 | -.0375 | -.0016 |
| **IV → bonding social capital → DV** | .0489 | .0131 | .0250 | .0761 |
| **IV → bridging social capital → DV** | | | | |
| Heterogeneity = mean - 1SD | .0057 | .0253 | -.0441 | .0542 |
| Heterogeneity = mean | .0308 | .0183 | -.0046 | .0674 |
| Heterogeneity = mean + 1SD | .0558 | .0152 | .0279 | .0873 |
| **IV → bonding social capital → social support →DV** | .0291 | .0081 | .0146 | .0459 |
| **IV → bridging social capital → social support → DV** | | | | |
| Heterogeneity = mean - 1SD | .0015 | .0065 | -.0115 | .0140 |
| Heterogeneity = mean | .0079 | .0048 | -.0011 | .0178 |
| Heterogeneity = mean + 1SD | .0143 | .0044 | .0065 | .0237 |

*Note.* IV: political engagement on social media; DV: psychological well-being; Bootstrap resample = 10,000. Estimates were calculated using the PROCESS macro (Customized Model 80). Control variables are included in the analysis.

the relationship between political engagement on social media and psychological well-being in parallel, suggesting that political engagement on social media not only contributes to bonding strong ties with close friends, family members, and religious communities but also helps bridge weak ties with different online communities and even strangers. Through bonding social capital, political engagement on social media decreases loneliness, creates a comfortable atmosphere for individuals to exchange their views, and makes it easier to organize and mobilize the community. Through bridging social capital, political engagement on social media helps people get more diversified news and keep up-to-date with current trends, especially those assumed to be outside of their daily life. Meanwhile, politically interacting with people who are different from themselves could broaden individuals' social networks, which may offer great help when necessary. All of the positive consequences above lead to greater satisfaction with life. Therefore, political engagement on social media not only plays a significant role in facilitating political participation at a societal level (Chan et al., 2021; Chen & Lin, 2021), but also helps at the individual level by enhancing psychological well-being.

Furthermore, bonding and bridging social capital may affect psychological well-being not only directly but also through perceived social support. By testing a parallel and serial model, we found that active political engagement on social media can increase the level of psychological well-being first through bonding social capital and then through perceived social support. Political engagement on social media can also increase the level of psychological well-being first through strengthening bridging social capital and then through perceived social support. The findings echo previous studies on the relationships between social capital and perceived social support (Leung & Lee, 2005; Putnam, 2000) and highlight the mediating role of perceived social support in our model. Although we hypothesized a significant stronger indirect effect through bonding social capital and perceived social support as bonding social capital could create more close and supportive social networks in times of need than the support created by weak ties, our findings did not show a significant difference. It is possible that one's perceived social support and self-reported well-being level may not differ a lot between strong and weak ties as both bonding and bridging social capital could provide various kinds of support which promotes a happier life.

Findings on the mediating role of bonding and bridging social capital uncovered the positive relationship between social media political use and social capital development, as well as the positive relationship between two types of social capital building and psychological well-being. Scholars like Gil de Zúñiga et al. (2017) have introduced social media social capital as a new conceptual construct and found its relationship with offline social capital is an over-time virtuous circle. Our findings further supported that owing to social media interactions, online and offline social capital building could enrich each other. In addition, political engagement on social media could contribute to social capital development, which further promotes psychological well-being. Practically, it provides a promising implication of how social media could facilitate social capital building after political engagement, which helps people engage in relationships with others in a broader circle. This further enhances their perceived social support and psychological well-being, which could lead to greater happiness, higher self-esteem and higher life satisfaction. It could also reduce depression, anxiety, and loneliness. Thus, the democratic social media development for political use is playing a significant role in societal development and is closely linked with citizens' personal life and everyday happiness.

It is also interesting that the findings suggest a negative relationship between political engagement on social media and perceived social support ($B = -.07$, $SE = 0.03$, $p < .05$), which implies that if there is no bonding or bridging social capital created by political engagement on social media, perceived social support will decrease, which in turn will weaken psychological well-being. A possible explanation for this could be that political engagement is a double-edged sword on social media platforms. Political engagement can enhance social support by allowing
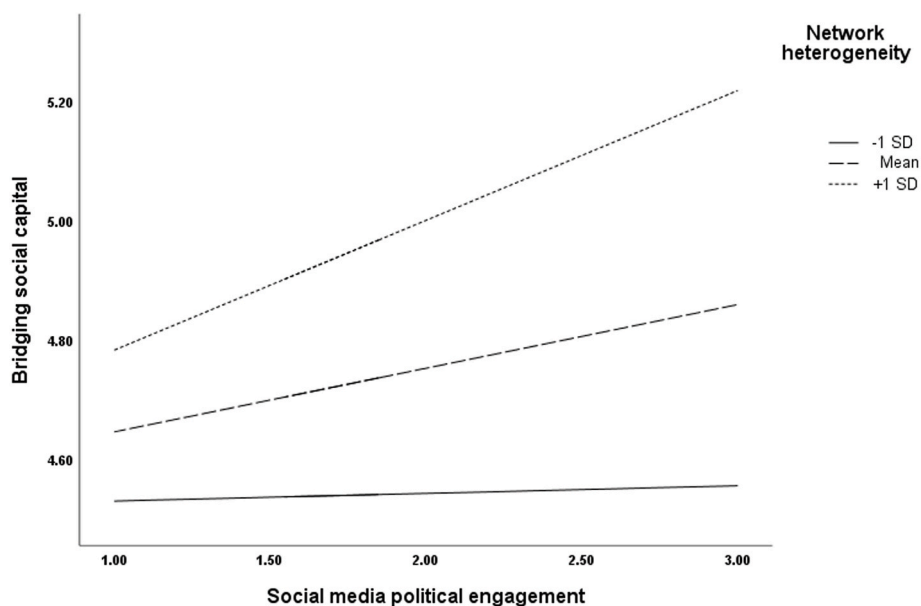
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[1] We also tested the moderating role of network heterogeneity in the path between political engagement on social media and bonding social capital and found that network heterogeneity does not significantly moderate the path ($B = .06$, $SE = 0.03$, $p > .05$).

**Fig. 2.** The moderation effect of network heterogeneity on the relationship between political engagement on social media and bridging social capital.

social interactions (Valkenburg & Peter, 2007), but it may also decrease perceived social supports because negative interactions are unavoidable in an atmosphere of divergent public opinion (Lincoln, 2000). Our findings suggested that under certain circumstances, political engagement on social media could be harmful. Thus, it should be exercised with caution.

Our study also found that the path between political engagement on social media and bridging social capital is moderated by network heterogeneity. More specifically, the simple mediation through bridging social capital and the serial mediation first through bridging capital then through perceived social capital are both conditionally affected by network heterogeneity. Both indirect effects are significant when people have a highly heterogeneous social network. This is quite understandable, as these individuals will be more likely to interact with people from diverse backgrounds during their political activities online. Such interactions will create more opportunities to bridge weak ties. As more and more scholars are worried about the consequences of echo chambers (Sunstein, 2009) and selective exposure (Stroud, 2011) that people are more likely to talk with like-minded peers, our findings further prove the importance of a diversified network as it is the condition of one particular path from political engagement on social media to psychological well-being. Thus, this study further calls for introspections and attention of the social media industry to the filter bubble problem, which formulates homogenous social networks (Berman & Katona, 2020). The industry should further examine how algorithms are used to bring like-minded people together and curate similar political content to feed the audience, which may attenuate the positive potential of political engagement on social media in leveraging a happier life.

Nevertheless, several limitations should be acknowledged. First, the data analyzed in this study were based on an opt-in online survey. Although we matched the sample demographic distribution including age, gender, education, and income with the U.S. census report, it was still not a strict random sampling procedure, which may reduce the generalizability of the model.

Second, this study incorporated a list of political activities on social media platforms as a whole and examined the effect of such political engagement on social capital, perceived social support, and psychological well-being. However, different categories of political engagement may lead to different results. Political engagement on social media can be examined in more detail in future studies, such as separating the term into supportive or non-supportive and in-group or out-group.

Third, the model was tested with a sample from the U.S, where political engagement on social media is a popular activity with extensive freedom. How political engagement on social media leads to psychological well-being in non-democratic countries is an open question. Will it still be able to enhance well-being through bonding or bridging social capital? Comparative studies are needed to answer these kinds of questions.

Last but not least, although the proposed moderated mediation model is statistically significance, we cannot rule out the reverse directions between variables because the survey is cross-sectional. Any causal interpretation should be made with great care. Future researchers should consider examining the model in longitudinal studies with a two-wave panel that is conducted over the course of a longer time period to trace possible changes in psychological well-being.

Despite the limitations, this study provides a possible mechanism in explaining how political engagement on social media could improve psychological well-being. The hypothesized model demonstrates a parallel path structure for political engagement on social media to affect psychological well-being through bonding and bridging social capital moderated by network heterogeneity. It also provides a serial path for us to better understand the inner mechanisms between political engagement on social media, social capital, and perceived social support. Our findings suggested an overall positive picture of how active political engagement on social media could lead to a happy life. In addition to emphasizing the significant role of social media in citizens' daily lives, we should acknowledge the detrimental effect of negative interactions in political engagement on social media. Therefore, the media industry and regulators should recognize that opportunities for cross-cutting exposure and heterogeneous network building should be promoted and encouraged on social media platforms. The development of a healthy democratic society and individual well-being are equally important.

**Credit author statement**

**Jing Guo**: Conceptualization, Formal analysis, Writing – original draft preparation; **Hsuan-Ting Chen**: Methodology, Writing-reviewing and editing, Funding acquisition.

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.chb.2022.107248.

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