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Social Media, Misinformation, and Age Inequality in Online Political Engagement

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Abstract

This study explores the role of political information seeking on social media and perceived exposure to misinformation in influencing online political engagement. A survey investigation of three Sub-Saharan African countries (Kenya, Nigeria, and South Africa) suggests that both information seeking and perceived exposure to misinformation are positively associated with online political engagement. We find that younger citizens are more actively engaged in online political activities. However, we also find that perceived exposure to misinformation has varying effects on political engagement across age groups. More frequent perceived exposure to misinformation is found to be a mobilizer for online political engagement for the older population. We conclude with a discussion of how social media may facilitate greater engagement for the older population. Still, the mobilizing role of misinformation exposure raises concerns about the consequences of such political engagement. Theoretical implications for political engagement research, in general and in the countries under study, are discussed.

Keywords: political engagement; survey; misinformation; information seeking; political inequality; Sub-Saharan Africa

Social Media, Misinformation, and Age Inequality in Online Political Engagement

The growth of social media use in the last decade has placed it at the forefront of citizen engagement with politics. Widespread use of platforms such as Facebook, Twitter, and WhatsApp for political purposes has drawn heightened academic attention to the topic (Bosch, 2017; Cho et al., 2018; Dwyer & Molony, 2019; Hopp, 2021; Mutsvairo, 2016; Xenos, Vromen, & Loader, 2014). Substantial research lends support to two consistent findings. First, social media platforms are increasingly a source of political information worldwide (Bode, 2016; Fletcher & Nielsen, 2018; Wahab, 2021). Second, seeking political information through social media nurtures offline and online political engagement in contexts as diverse as the United States and throughout Sub-Saharan Africa (Bosch, 2018; Dwyer & Molony, 2019; Gil de Zúñiga, Jung, & Valenzuela, 2012). These findings primarily highlight the democratic benefits of social media. However, scholarly concern also remains regarding the rise of misinformation on social media and its impact on political engagement among the citizenry (Quandt, 2018).

Misinformation can be understood as false, incorrect, or misleading news and information, that often circulates online under the ruse of reality (Mustafaraj & Metaxas, 2017). Some researchers have differentiated misinformation, from other related terms such as "disinformation", "malinformation" or "fake news" (Jack, 2017; Wardle & Derakhshan, 2017). Others have suggested that misinformation be used as an umbrella term encompassing multiple expressions of inaccurate information (Berger, 2022; Habgood-Coote, 2019). We adopt the latter understanding of "misinformation." Although the existence of false or misleading information is nothing new (Finneman & Thomas, 2018; Wasserman, 2020), social media has enabled newer ways to consume and spread inaccurate information across global contexts, including throughout Sub-Saharan Africa, which is the focus of the current research (Bringula et al., 2021; Wasserman

& Madrid-Morales, 2019). It is necessary to pay attention to misinformation within current empirical frameworks examining political engagement because recent scholarly evidence suggests that exposure to and the spread of misinformation are closely associated with informational uses of social media, a well-established precursor to online political engagement (Valenzuela, Halpern, Katz, & Miranda, 2019; Halpern, Valenzuela, Katz, & Miranda, 2019). This study aims to expand the current theoretical understanding of the role of social media in political engagement by offering a nuanced exploration of the effects of perceived exposure to misinformation on both overall levels and generational differences in online engagement in three Sub-Saharan African countries – Kenya, Nigeria, and South Africa – with large and politically active online populations (Dwyer & Molony, 2019). This is also a relevant question since online engagement surrounding misinformation is often dependent on the age of internet users (Duffy, Tandoc, & Ling, 2019; Guess, Nagler, & Tucker, 2019).

Further, most of the findings outlined above are based on empirical evidence from countries in the Global North. Our knowledge of how observed effects would apply to countries in the Global South remains limited. This is true in Sub-Saharan Africa, where research on the relationship between social media use, political engagement, and misinformation has been limited (Dwyer & Molony, 2019; Madrid-Morales et al., 2020; Mutsvairo & Karam, 2018). This study addresses this gap by focusing on perceived misinformation exposure and political engagement in Kenya, Nigeria, and South Africa. It builds on recent studies indicating that increased use of social media, mainly through mobile phones, has led younger Africans to exhibit new forms of online political engagement (Bosch, 2018; Dwyer & Molony, 2019; Kamau, 2017). However, the extent to which more online engagement can be associated with more offline political engagement remains to be settled. After all, as more elements of political life move

online, there is an increased risk that existing imbalances in political engagement widen (Gordon et al. 2019; Wyche & Baumer, 2017), given that access to the internet remains prohibitive for certain groups, including women, rural residents, and older Africans across the continent (Bailur & Masiero, 2017: Mutsvairo & Karam, 2018).

This study presents an analysis of primary data collected from an online survey panel of Kenyans, Nigerians, and South Africans. It explores the association between age, social media political information seeking, perceived exposure to misinformation, and online political engagement. It also examines how the relationship between political information seeking, perceived exposure to misinformation, and online political engagement is moderated by age. The findings expand the current theoretical understanding of the effects of social media on online political engagement by offering an exploration of a region largely understudied in literature.

Social Media and Online Political Engagement

A substantial body of research suggests that using media for informational purposes is related to offline and online political engagement in numerous contexts (Gil de Zúñiga, Puig-i-Abril, & Rojas, 2009; Shah et al., 2005; Shah, Rojas, & Cho, 2009). This body of research moves beyond measures of "time spent using media" to explore motivations (e.g., information, entertainment) as well as types of media use on differential outcomes, including political knowledge and engagement (Bakker & de Vreese, 2011; Gil de Zúñiga et al., 2012; Shah et al., 2009; Wahab, 2021). For example, using media for news and political information has been shown to positively influence political behaviors, while entertainment uses have been negatively associated with political and civic actions (Bakker & de Vreese, 2011; Gil de Zúñiga et al., 2012; Shah et al. 2009).

Scholars have also explored how age shapes the relationship between information seeking and behavioral outcomes. The premise is that as more adults use social media sites as sources of news and information, they are also more likely to engage on those sites by posting and sharing such content. Therefore, using social media for political news and information should be related to online political engagement that occurs in these same spaces (Bode, 2016; Skoric et al., 2016). This kind of engagement – posting about politics online – may occur while actively seeking political information or during incidental exposure when news and politics inadvertently come across users' social feeds (Fletcher & Nielsen, 2018; Oeldorf-Hirsch, 2018; Thorson & Wells, 2016). While seeing news and information, seeking it out, and posting it are distinct behaviors, they are often linked (Beam, Hutchens, & Hmielowski, 2016; Vraga & Tully, 2019). Social media political information seeking may originate from contextual factors such as exposure to campaign advertisements (Cho et al., 2009) or connections on social media can drive it. Previous research confirms that social media enables the creation and maintenance of extensive social networks (Ellison et al., 2007). Moreover, information posted and shared by friends and family may foster further information seeking among social media users (Beam et al., 2016), driving them into participatory behavior. Not surprisingly, online political information seeking has been found to enhance online political engagement (Yamamoto, Nah, & Bae, 2019). With this in mind, we propose the following hypothesis:

H1*: Political information seeking on social media will be positively related to online political engagement.*

Research consistently shows that different groups use online media for different purposes and that this use does not affect all groups in the same way (Bakker & de Vreese, 2011; Shah, Kwak & Holbert, 2001). Demographic differences around social media use have been well

documented, with differential use occurring by education, age, gender, and socioeconomic status (Lardies, Dryding, & Logan, 2020). This is true in Nigeria, Kenya, and South Africa, the countries examined in the current study, where younger, more educated people are more likely to go online (Pew, 2019; Wasserman & Madrid-Morales, 2019). Also, younger Africans are more likely to use social media for news than older Africans with approximately a quarter of respondents (24-28%) aged 18-35 reporting using social media for news every day compared to just 4 to 7 percent of respondents aged over 55 (Conroy-Krutz & Appiah-Nyamekye Sanny, 2019).

Scholars investigating the effects of social media use on political engagement have found generational differences in social media uses and effects (Thorson, Xu, & Edgerly, 2018). Thorson et al. (2018) theorize that political interest can start at a young age and carry over into adulthood, but this development is often dependent on parent interest and exposure at home. Anderson and colleagues (2020) found that older generations with higher levels of engagement tend to benefit most from exposure to social media. While the younger generation experience limited political engagement gains through political uses of social media (Anderson et al., 2020). Similarly, Ahmed and Gil-Lopez (2022) found that online media use can enhance participatory behavior among adolescents and young adults, but their social network characteristics can varyingly shape their political engagement. This may be because political norms and values develop as individuals age, and such developments can determine political behavior at a later stage in life (Sears & Levy, 2003). In addition, while fundamental political qualities are built during the early years, it is not until later stages that individuals exercise actual political engagement (Kim et al., 2017; Thorson et al., 2018). Therefore, it is fair to expect that the older population will be relatively more skilled and active in political engagement. Similarly, given

that the existing work suggests that news use on social media and political engagement may vary by age it is critical to ask:

RQ1*: How does age moderate the relationship between social media information seeking and online political engagement?*

Social Media, Misinformation, and Online Political Engagement

In Sub-Saharan Africa, the relationship between misinformation and political engagement is longstanding as election "rumors" and falsehoods are a mainstay of contemporary politics and have been implicated in election issues as extreme as post-election violence (Goldstein & Rotich, 2010). A pre-election survey in 2017 found that 90% of Kenyans believed they had been exposed to false information regarding the election, and much of it spread on social media (Portland Communications, 2017). Additional survey research has shown that 90% of Kenyans, 93% of Nigerians, and 76% of South Africans report coming across political news that they believe were "completely made up" sometimes or often (Wasserman & Madrid-Morales, 2019). A pan-African survey found that 66% of respondents blame politicians and political parties for the spread of misinformation (Conroy-Krutz & Appiah-Nyamekye 2020).

In addition, qualitative data from focus group discussions also show that African audiences perceive misinformation as abundant (Madrid-Morales et al., 2020) and potentially problematic when it has real or perceived negative consequences (Tully et al., 2021). Discussions around the prevalence of misinformation and its possible consequences are also common in the news media in Kenya and Nigeria (Ekdale & Tully, 2019). Misinformation has also been politicized by many African governments and led to the passing of legislation to address the challenges of new forms of false information online (Mare, Mabweazara & Moyo, 2019).

The impact that exposure to misinformation, whether perceived or real, has on the democratic process, whether political outcomes or online engagement, is not fully understood (Weeks & Gil de Zúñiga, 2019) or substantially explored in Sub-Saharan Africa. For some, the perception of being frequently exposed to misinformation might be an enhancer of political engagement, as it might make them more willing, for example, to engage in political discussions to correct said misinformation. For others, it might act as a depressor, as it may turn them into political cynics. Our focus here is on the perception of being exposed to misinformation, in line with work by Wagner and Boczkowski (2019) rather than actual exposure, primarily because of practical reasons: one would not be able to measure the amount of *actual* misinformation a user is exposed to. In addition, any impact on an individual's behaviors and attitudes would be the consequence of their perception, regardless of whether or not they are in fact, exposed to misinformation. For example, a user might not realize that they are often exposed to misinformation, and therefore their behavior might or might not be impacted. However, other users might be exposed to quality information regularly, but if they perceive it to be misinformation, then this might trigger a change in behaviors and/or attitudes.

Previous research suggests that different age groups engage differently with false information online (e.g., fact-checking, sharing, rebutting) in such disparate social and political contexts as the United States and Singapore (Duffy et al., 2019; Guess et al., 2019). However, in a comparative study of Sub-Saharan African countries, including the three under study here, Madrid-Morales et al. (2020) provide evidence that old and young have different misinformation behaviors. For example, older individuals appear to be more likely to share misinformation than younger ones. In this context, it seems worth exploring quantitatively whether these patterns are observed in the contexts under study. Therefore, we ask:

RQ2*: Are there age differences in perceived exposure to misinformation?*

Next, more recent scholarship questioning the democratic benefits of social media has demonstrated a paradox that political engagement is positively associated with misinformation engagement (Halpern et al., 2019; Valenzuela et al., 2019). It is believed that this may be because those who are politically active and therefore are active news consumers are more likely to be exposed to misinformation (Ahmed, 2021), or they engage with misinformation to either debunk it or extend their political ideologies (Gu & Feng, 2021). While these questions have been explored in Western settings, attention to this question has lacked in Sub-Saharan Africa. Given the perceived prevalence of misinformation in the region (Newman et al., 2021; Portland Communications, 2017), we examine if there is an association between perceived exposure to misinformation and online political engagement and ask:

RQ3*: How is perceived exposure to misinformation related to online political engagement?*

Finally, beyond the direct and moderation effects discussed above, we also explore the role of age within the relationship between perceived exposure to misinformation, information seeking, and online political engagement. Here, it is assumed that the conditional relationships (between perceived exposure to misinformation and perceived exposure to misinformation, social media political information seeking, and online political engagement) may vary across age groups. Given the exploratory nature of the relationships and the lack of previous research on the topic, we ask:

RQ4*: How does age moderate the relationship between perceived exposure to misinformation and online political engagement?*

RQ5*: How does age moderate the conditional influence of perceived exposure to misinformation and social media political information seeking on online political engagement?*

Method

Data

This study uses data gathered through an online panel survey fielded in 2019. To recruit participants (N = 901), we employed a European public opinion research firm that maintains online panels in Kenya (n = 305), Nigeria (n = 300), and South Africa (n = 296). Participation was limited to adults (18 years old and above) who were citizens of one of the three target countries and were living there at the time of the survey. The study was approved by the Institutional Review Board at X University and the participants gave their consent to participate. The firm provided financial compensation to participants based on the length of the survey (M = 12 minutes). The survey was conducted in English. The reported analyses below are with unweighted data. We also report results using post-stratification weights to adjust the sample according to the national population in each country. The reported findings were consistent with weighted data findings. For more details, check Appendices A and B.

We selected Kenya, Nigeria and South Africa because they are three of Africa's largest economies with democratic systems. While diverse in their political systems and institutions, the countries do share certain characteristics that made them relevant for a study on political engagement and misinformation. For example, in Coppedge et al.'s (2022) Varieties of Democracy (V-Dem) Project, the three countries score relatively similarly in the "Participatory Democracy Index" (.44 for South Africa, .30 for Kenya, and .33 for Nigeria), as well as in the "Freedom of Expression and Alternative Sources of Information index" (.87, .85, and .80

respectively). The three countries are also regional media and information hubs for English-speaking East, West and Southern Africa, respectively, and have similar levels of internet penetration and social media use. According to data from the latest available wave of the Afrobarometer, Africa's largest social and political values survey, mobile phone ownership, a prime access point to the internet, stands at 92% in Kenya, 87% in Nigeria and 95% in South Africa, while regular internet use ranges from 51% of the population in Kenya, 53% in South Africa to 48% in Nigeria. Furthermore, the online population in the three countries (Newman et al., 2021) also share similar levels of news consumption online (88% in Kenya, 94% in Nigeria and 91% in South Africa); their citizens use the same social media networks (88% in each of the three countries say they use WhatsApp and 79% of Kenyans, 82% of Nigerians and 78% of South Africans are Facebook users); and they trust the news they read in comparable proportions (57% in South Africa, 60% in Nigeria and 65% in Kenya). In sum, while different in many respects, the online populations of the three countries share a set of characteristics that led us to include them in the study.

Measures

Dependent variable. To measure *online political engagement*, respondents were asked how frequently they engaged in the following activities: a) post or share content about politics on a social media site like Facebook or Twitter, b) post or share content about politics on a messaging site like WhatsApp, c) express their political views on a social media site like Facebook or Twitter, d) express their political views on a messaging site like WhatsApp and e) follow a political candidate or group on a social media site. The response to each question was recorded on a five-point scale (1 = never; 2 = rarely; 3 = sometimes, 4 = often, and 5 = all the

time). An index of online political engagement was created by averaging the five individual items ($M = 2.60$, $SD = 1.07$, $\alpha = .89$).

Independent variables. *Social media political information seeking* was measured by asking the respondents how often (1 = never to 5 = all the time) they engaged in seeking information about politics or political issues on a social media site ($M = 3.32$, $SD = 1.21$).

Age was measured by asking respondents, "How old are you? Please enter two digits" ($M = 29.62$, $SD = 9.95$).

Finally, *perceived exposure to misinformation* was measured by asking respondents how often (1= often, to 4 = never) they come across news stories about politics and government online that they think a) are not fully accurate and b) are completely made up. The items were reverse coded such that higher values represent higher perceived exposure to misinformation. An index was created by averaging the two items ($M = 3.33$, $SD = .57$, Spearman-Brown Coefficient = .63).

Control variables. In all models, control variables that have been previously found to have a relationship with political engagement were also included. These variables included a) gender (57% males) b) education (*Median* = attended university) c) political efficacy ($M = 5.06$, $SD = 1.23$, $\alpha = .81$) d) traditional media news use ($M = 3.07$, $SD = .91$, $\alpha = .67$) e) Internet news use ($M = 4.76$, $SD = .67$) f) mainstream media content trust ($M = 2.87$, $SD = .60$, $\alpha = .69$) and g) social media content trust ($M = 2.44$, $SD = .79$). Details are included in Appendix C.

In addition to answering questions used to quantify the variables reported above, participants also took part in a short unrelated experiment, which asked them to read a news story in a 2 (topic) x 3 (source) design. Utmost care went into organizing questions in our survey instrument in such a way that experimental conditions would not have an impact on measures.

The variables included here were measured pre-treatment. Also, we opted to include dummy variables for the six conditions in our statistical models. As expected, the condition in the unrelated experiment had no significant effect on the results discussed here. See Appendices D and E for more details.

Results

Regression models were employed to test the proposed hypotheses and examine the research questions. Control variables were entered at the first step, followed by the independent variables at the second step, and the two-way interaction to explore the mobilizing role of social media political information seeking in the third block.

The results presented in Tale 1 suggest that males (β =.072, p <.05), those with higher levels of political efficacy (β =.397, p <.001), and more frequent traditional media use (β = .211, p <.001) exhibited higher levels of online political engagement. These results are consistent with previous findings where scholars have found a central role of political efficacy (Kenski & Stroud, 2006) and media use (Shah et al., 2005) in political engagement. In addition, the findings of this study also confirm a gender bias in online political engagement, thereby confirming previously found deep-rooted social gender divides in African contexts (Baliamoune-Lutz, 2006).

The finding for *H1* suggests that seeking political information via social media platforms (β = .432, p <.001) is positively associated with online political engagement. In other words, holding all other variables of interest constant, those respondents who say they search for news about politics on social media more often are also those who report higher levels of online political engagement. *H1* is supported.

We also find that younger respondents (β = -.055, p <.05) were more likely to engage in online political engagement than older respondents. This suggests that age has a differing impact on whether political engagement is offline or online. Previous research has consistently found that older citizens are more participatory in offline activities (Verba, Schlozman, & Brady, 1995), but some scholars have found that age-related differences diminish online (Lilleker & Koc-Michalska, 2017; Min & Wohn, 2018). The reversed age pattern here supports the thesis that younger citizens are more politically engaged online.

Addressing *RQ1*, the two-way interaction between age and social media political information seeking was found to be statistically significant (β =.178, p <.05). The interaction results are presented using a graphical illustration and simple slope test in Figure 1. The figure suggests that, at lower levels of political information seeking, younger citizens gain more engagement benefits from social media, but the generational differences diminish at higher levels of information seeking. The gain in engagement is steeper for older respondents (b = .42, se = .03, p < .001) than younger (b = .33, se = .03, p < .001). These estimations confirm that while social media may act as a mobilizing tool for younger participants, it also enables the older population to gain more engagement benefits but only when they seek political information through social media. The Johnson-Neyman results suggest that the effect of social media political information seeking is significantly positive for individuals across all ages observed in the sample (i.e., 18 to 70 years old).

[Table 1 here]

[Figure 1 here]

Next, we explore the effects of age on perceived exposure to misinformation (*RQ2*). The results of the regression analyses are presented in Table 2. No differences in age were found in

predicting perceived exposure to misinformation (β = -.014, p =. 70). However, we find that those who rely on the internet for news consumption (β = .087, p <.05) and use social media to seek political information (β =.075, p <.05) are more likely to be exposed to misinformation.

The findings for *RQ3* (see Table 1) reveal that perceived exposure to misinformation (β = .059, p <.05) was positively associated with online political engagement. The mechanism through which this relationship is articulated has not been explored in previous literature, and neither has been the nature of the resulting increased engagement. After all, those who perceive that they are exposed to false or misleading stories with high frequency could be turning to social media to counter, confront, and correct these stories (Rojas, 2010), but they could also be contributing to the dissemination of inaccurate information by sharing news stories that might not be true.

We also test how age moderates the relationship between perceived exposure to misinformation and online political engagement (*RQ4*). The moderation effects were found to be statistically significant (β = .306, p <.05; see Table 1). The interaction results are presented in Figure 2. The patterns suggest that the engagement levels of younger participants do not change across levels of perceived misinformation exposure (b = .02, se = .07, p = .82). However, older participants tend to get more engagement with an increase in perceived misinformation exposure (b = .19, se = .06, p < .001). The Johnson-Neyman results suggest that the effect of perceived misinformation exposure is significantly positive for individuals above the age of 28 years (41.06% of the sample).

To summarize, the findings confirm that younger citizens are more engaged in political issues online, and the use of social media for political information seeking is beneficial for online political engagement. However, the information-seeking benefits are more robust for

older participants. We also find no age differences in perceived misinformation exposure. However, perceived exposure to misinformation is positively associated with online political engagement and an increase in perceived exposure to misinformation is associated with greater engagement for older respondents.

The next goal of this study was to examine if age influences the relationship between social media political information seeking, perceived exposure to misinformation, and online political engagement (*RQ5*).

As presented in Table 3, the three-way interaction between age, social media political information seeking, and perceived exposure to misinformation was found to be statistically significant ($\beta = 1.095$, $p < .05$). Probing the interaction results suggested that the interaction between social media political information seeking and age transitions between statistical significance and non-significance at a perceived exposure to misinformation value of 3.28 (valid for 56.82% sample). Above this limit of perceived exposure to misinformation, there is a statistically significant difference in the effect of information seeking between the younger and older respondents. As such, in Figure 3, the interaction between social media political information seeking and age is plotted for perceived exposure to misinformation at the mean value (3.30) and one standard deviation above the mean (3.90). The illustration also includes a simple slopes analysis. As the level of perceived exposure to misinformation increases, the engagement divide between younger and older citizens amplifies such that older citizens are found to be more frequent in political engagement than their younger counterparts (plot on the bottom).

In addition, the Johnson-Neyman results indicate that the effect of social media political information seeking continues to be significantly positive for individuals across all

groups (*range* = 18 to 70 years) for both perceived exposure to misinformation conditions (mean and +1SD).

These findings confirm that perceived exposure to misinformation further moderates the influence of social media political information seeking in age-driven engagement inequality online, with older participants getting more engaged.

[Table 1 here]

[Figure 2 here]

Discussion

This study examined the role of online information seeking and perceived misinformation exposure in online political engagement and how these relationships differ across age groups. Overall, the findings suggest that political information seeking via social media benefits online engagement, but these effects vary with age and perceived exposure to misinformation. Furthermore, it is observed that perceived misinformation exposure is positively associated with online political engagement, and frequent perceived exposure to misinformation is found to mobilize the older population into online political engagement. Taken together, the findings suggest that the democratic potential of social media is more complex than previously observed in advanced Western democracies.

Numerous scholars have highlighted the apathetic political nature and disassociation from politics of younger populations, while others have refuted these claims (Marsh, O'Toole, & Jones, 2007; Resnick & Casale, 2011). The findings of this study support the argument that younger adults in the studied contexts are not inactive citizens but are actively using social media platforms for political information consumption (Dwyer & Molony, 2018), which is further linked to higher levels of online political engagement. As Bosch (2018) has argued in the context

of South Africa, "though few young people used social media to engage in traditional political action; (...) they used it for quasi-political discussions about identity politics and other aspects of their lived, everyday experiences of citizenship" (p. 145). Similarly, research in Kenya suggests that young, urban Kenyans use Twitter to engage in political conversations and actions, suggesting an active and engaged online citizenry (Mukhongo, 2020; Tully & Ekdale, 2014). Furthermore, research on misinformation in Kenya and Nigeria shows that perceived exposure is high and is often entangled with politics (Chakrabarti, Rooney, & Kweon, 2018; Okoro & Emmanuel, 2019). While not all these studies focus on the social media platforms, findings appear rather consistent. As more diverse forms of social media use emerge in the countries under study, it is important for future studies to investigate whether use of different platforms (e.g., Twitter, Facebook, WhatsApp) leads to different forms of political engagement, and whether age is a relevant factor in explaining these potential differences.

One might interpret our findings as an optimistic observation of longstanding issues of age-related political inequality in the region, a characteristic described in previous research. For example, two studies, one in South Africa (Gordon et al., 2019) and one in ten African countries (Kuenzi & Lambright, 2011), found that, when it comes to offline political engagement, age is positively correlated with participation. Another less optimistic interpretation of the findings might lead to asking a new question: "Are we observing a new form of political inequality where the older population is now marginalized in online politics?" The more extensive integration of social media in the political lives of younger populations might suggest so. Still, this study also observes that the mobilizing potential of social media is not age-restricted. We observed that higher use of social media for political information seeking is associated with significant engagement benefits for older participants, thereby supporting the mobilization thesis for this

group. In simpler terms, if the older population actively seeks more political information via social media platforms, then they are more likely to engage in online political activities and diminish the gap compared to their younger counterparts. In summary, these findings show promise for an engaged citizenry, suggesting that social media information seeking acts as a positive tool for online political engagement for all, but it also helps flatten age inequalities in political engagement by balancing the information-to-engagement benefits for the older groups.

Subsequent investigations in our study were directed toward a more nuanced understanding of the effects of social media use on political engagement by exploring how perceived exposure to misinformation impacts the previously discussed relationships. As observed in previous literature, frequent engagement with misinformation is associated with greater levels of online political engagement (Valenzuela et al., 2019). Our findings also support this claim. Still, it also distinctively shapes the engagement effect of social media for various age groups. It may seem contradictory to observe that both informational uses of social media and perceived exposure to misinformation are positive determinants of online political engagement. Given the cross-sectional nature of the data, it is difficult to infer causality, but we offer two possible explanations for these findings.

First, and perhaps a perilous observation for democratic societies, particularly among the older population, our findings could suggest that those who believe they are exposed to false or misleading political news exhibit higher levels of online engagement because they post and share higher levels of political news (a more significant part of which could be false). In support of this view, the two-way moderation effects (Figure 2) suggest that an increase in perceived misinformation exposure does not result in increased levels of online political engagement for the younger respondents, but we observe an increase in engagement levels for older respondents. In

addition, the three-way interaction results (Figure 3) could be understood as a pattern where at higher levels of social media information seeking and greater perceived exposure to misinformation, the older respondents are more participative in online political activities because they intentionally or unintentionally share a higher amount of misinformation than the younger respondents. This thesis is supported by recent studies in the U.S. that have found that the older population is more likely to share inaccurate political information (Guess et al., 2019) and by similar anecdotal evidence in countries like Nigeria (Kazeem, 2019). If such is the case, these findings raise concerns for the much-debated democratic implications of the recent growth in online misinformation and should also act as a methodological caution for scholars. Future studies investigating social media and political engagement should be more robust about their operationalization of online political engagement (e.g., asking the respondents "how frequently do you share political news") and rule out any activity that raises doubts over the quality (negative or positive forms) of online political engagement. Any claim about online political engagement should be independent of harmful forms of political engagement (e.g., sharing misinformation) or should address this "dark" participation directly.

Conversely, perceived exposure to misinformation may act as a catalyzer, invoking a sense of civic responsibility amongst those who believe they are exposed to such content, compelling them to post, share, or engage in more online political activities. Madrid-Morales et al. (2021) have found some evidence of this behavior in a comparative study of what motivates the sharing of misinformation in six African countries. Such heightened engagement could include raising concerns or engaging in political discussions surrounding information users find online and believe to be inaccurate. In support of this alternative view, the three-way interaction results could be understood as a pattern where at higher levels of information seeking and

perceived exposure to misinformation, the older respondents are more participative in online political activities because they are driven by a greater sense of civic responsibility to raise more awareness (post or share political posts) or engage in political discussions about misinformation. This thesis is supported by previous findings which argue that older adults are often more attached to their community, exhibit higher levels of civic commitments (Glenn & Grimes, 1968), and have a more significant set of necessary skills for effective political action (Burr, Caro, & Moorhead, 2002). Relatedly, qualitative research conducted in Kenya and Nigeria suggests that adults in both countries share news and "fake news" as a type of "civic duty" to inform others of potential issues of public concern (Chakrabarti et al., 2018).

While either of the above-offered explanations could be true, our data are insufficient to address the conundrum. Future research should utilize more refined measures of online political engagement to better address the reasons suggested in this study. It is also vital to examine the nature of the relationships we describe in countries with more restrictive political climates. The advent and subsequent popularity of social media among young people in many African nations, which some political elites have seen as a potential challenger of the political status quo; and the appropriation of the term "fake news" by politicians wishing to discredit the media in general, from the United States to Hungary to Tanzania, have been used as pretexts by leaders throughout Africa to curtail access to and use of digital technologies (Mutsvairo & Karam, 2018). In Africa and elsewhere, this has taken the form of attempts to tax social media use, passing punitive legislation for "misuse" of social media, and internet or social media shutdowns (Conroy-Krutz & Appiah-Nyamekye Sanny, 2019).

As we conclude, it is essential to acknowledge the study's limitations. First, the findings presented here are based on cross-sectional data, limiting the interpretation of causal

relationships. While our conceptualization of the relationship between perceived exposure to misinformation and political engagement is based on recent literature (Valenzuela et al., 2019), it is also likely that those who are more engaged with political affairs are more likely to report seeing misinformation. This may be because greater political engagement provides individuals with the necessary skills to identify misinformation, or they may be motivated to verify and report more misinformation. Therefore, under such settings, one could argue for alternate pathways. While the current dataset limits definite conclusions, future studies can employ longitudinal data to explore causal relations.

Second, in our analysis, we use weighting techniques to correct for biases in our sample (see appendix). These are primarily caused by the type of data collection: online surveys. This leads to samples that skew urban, highly educated, and younger. By using gender, age, and place of residence, we reduced imbalances in the data. However, we did not have enough variance to weight our data by education level. To avoid this, future research might consider using face-to-face surveys or mobile polling to correct some of the sampling biases we identified when using online panels in these three countries. In addition, these studies should seek to gather a larger sample size than the one used in this study.

Third, while the cross-national investigation increases the generalizability of the findings to other nations in Sub-Saharan Africa, we cannot definitively apply them to other regions in Africa or the commonly investigated advanced democratic contexts, although the positive effects of social media and age-inequality in online political engagement are consistent with what has been found in most contexts in the Global North. Thus, it is likely that the effects of perceived exposure to misinformation would follow similar patterns, a relationship that future research should continue to explore.

Finally, this study has investigated age as an inequality factor, but for a more nuanced understanding of the effects of social media and misinformation in online political engagement, future work should replicate this study with a focus on other stratification factors (e.g., gender, education, income level), and consider the impact of different social media uses and platforms (e.g., mobile vs. desktop access; social messaging apps vs. microblogging platforms) to account for people using different social media platforms for different purposes.

Beyond these limitations, this study has offered a more nuanced understanding of the role of social media in online political engagement in three Sub-Saharan African countries, suggesting that social media act as a helpful political information-seeking tool that benefits engagement for the citizenry in these contexts, helping reduce previously observed inequalities driven by age. However, with the reality of misinformation in social media environments, it is essential to restructure our conceptualizations of what constitutes online political engagement to capture both socially beneficial and detrimental behaviors that may be occurring.

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Table 1: Predicting online political engagement

	β
Control Variables	
Kenya (ref: South Africa)	-.018
Nigeria (ref: South Africa)	.015
Gender (males)	.072*
Education	-.013
Political efficacy	.397***
Traditional media news use	.211***
Internet news use	.039
Mainstream media content trust	-.022
Social media content trust	.127***
R-sq change (%)	30.0
Independent Variables	
Age	-.055*
Social Media political information seeking	.432***
Perceived exposure to misinformation	.059*
R-sq change (%)	15.9
Two-way moderation	
Age x social media political information seeking	.178*
Age x perceived exposure to misinformation	.306*
R-sq change (%)	.50
Total R-sq (%)	46.4

Notes: To mitigate the contextual influence, dummy variables for experimental conditions (see Appendix D) were also included in all the models; *** $p < .001$; ** $p < .01$; * $p < .05$.

Table 2: Predicting perceived exposure to misinformation

	β
Control Variables	
Kenya (ref: South Africa)	.120*
Nigeria (ref: South Africa)	.089*
Gender (males)	.014
Education	.064
Political efficacy	.069
Traditional media news use	.061
Internet news use	.087*
Mainstream media trust	-.102***
Social media trust	.027
R-sq change (%)	6.5
Independent Variables	
Age	-.014
Social Media political information seeking	.075*
R-sq change (%)	.50
Total R-sq (%)	6.9

Notes: To mitigate the contextual influence, dummy variables for experimental conditions (see Appendix E) were also included in all the models; *** $p < .001$; ** $p < .01$; * $p < .05$

Table 3: Three-way interaction predicting online political engagement

	Online Political Engagement
Age x social media political information seeking x perceived exposure to misinformation	1.095*
Total R-sq (%)	46.7
N	901

Notes: Prior blocks include all variables and interactions included in Step 3 (Table 1) and pre-requisite two-way interactions between age, social media political information seeking, and perceived exposure to misinformation (i.e., social media political information seeking x perceived exposure to misinformation and age x perceived exposure to misinformation). Entry is a standardized coefficient after controlling for the prior blocks. * $p < .05$

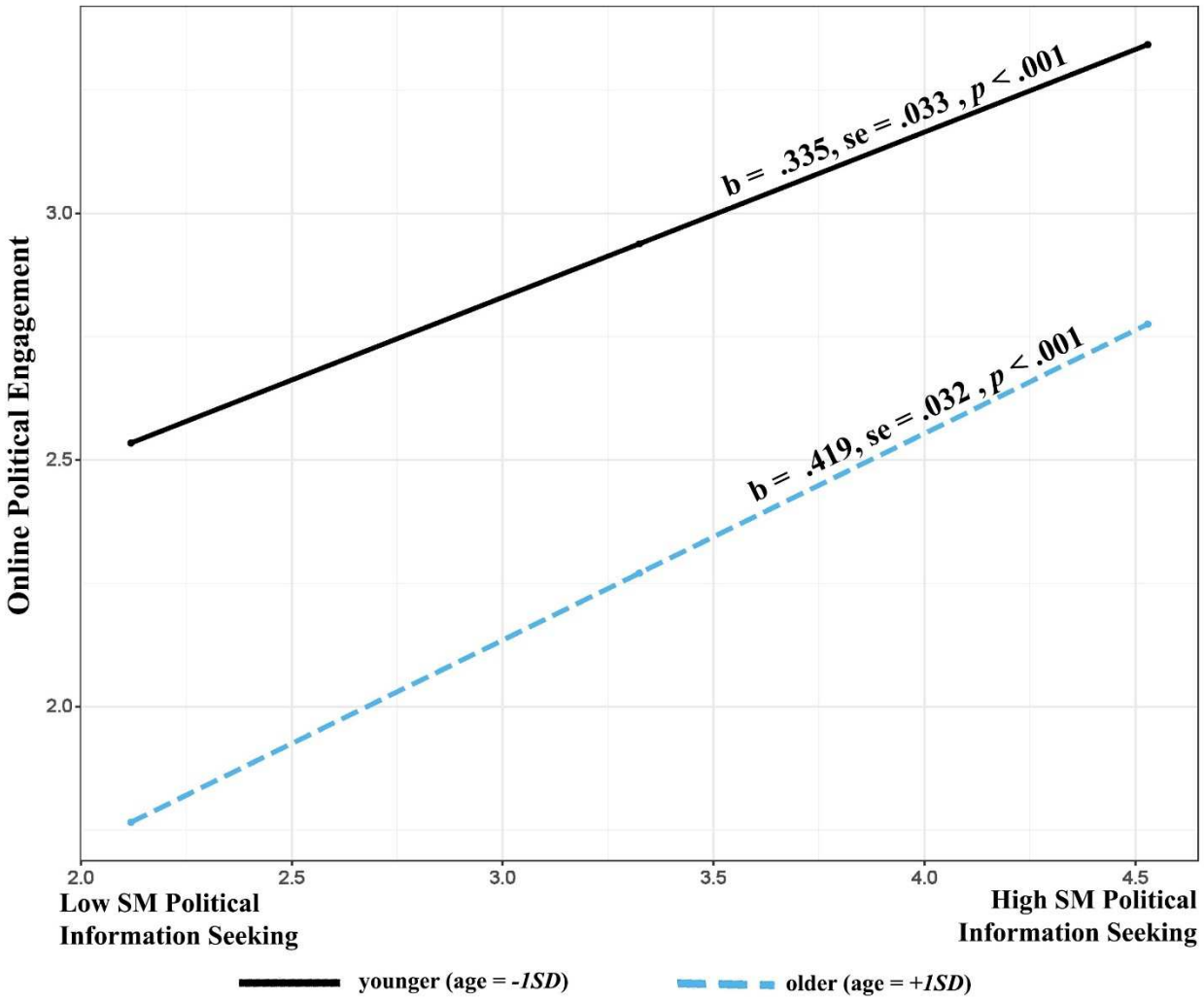


Figure 1. Visualization of the conditional effect of social media political information seeking at different values of age in explaining online political engagement.

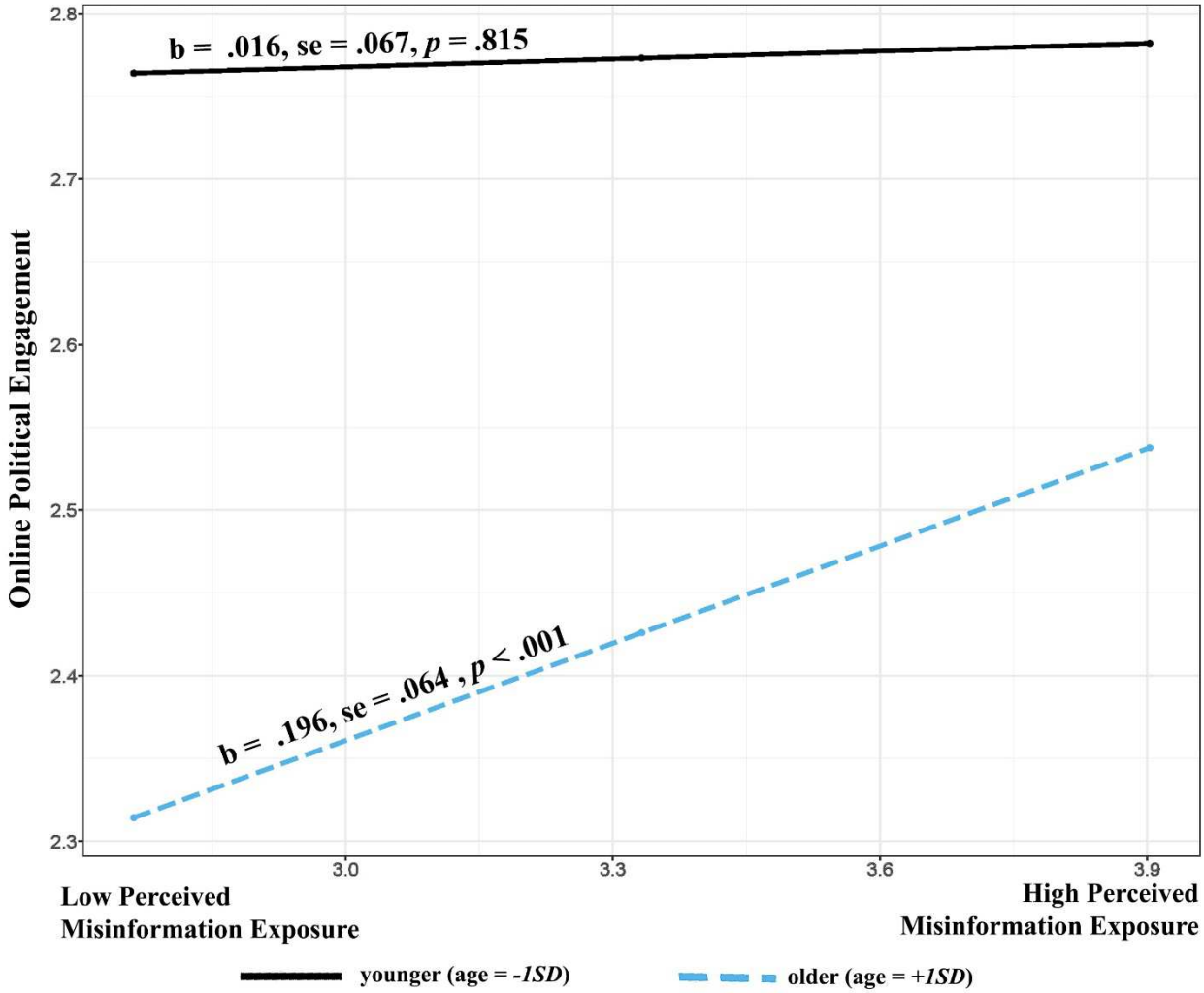
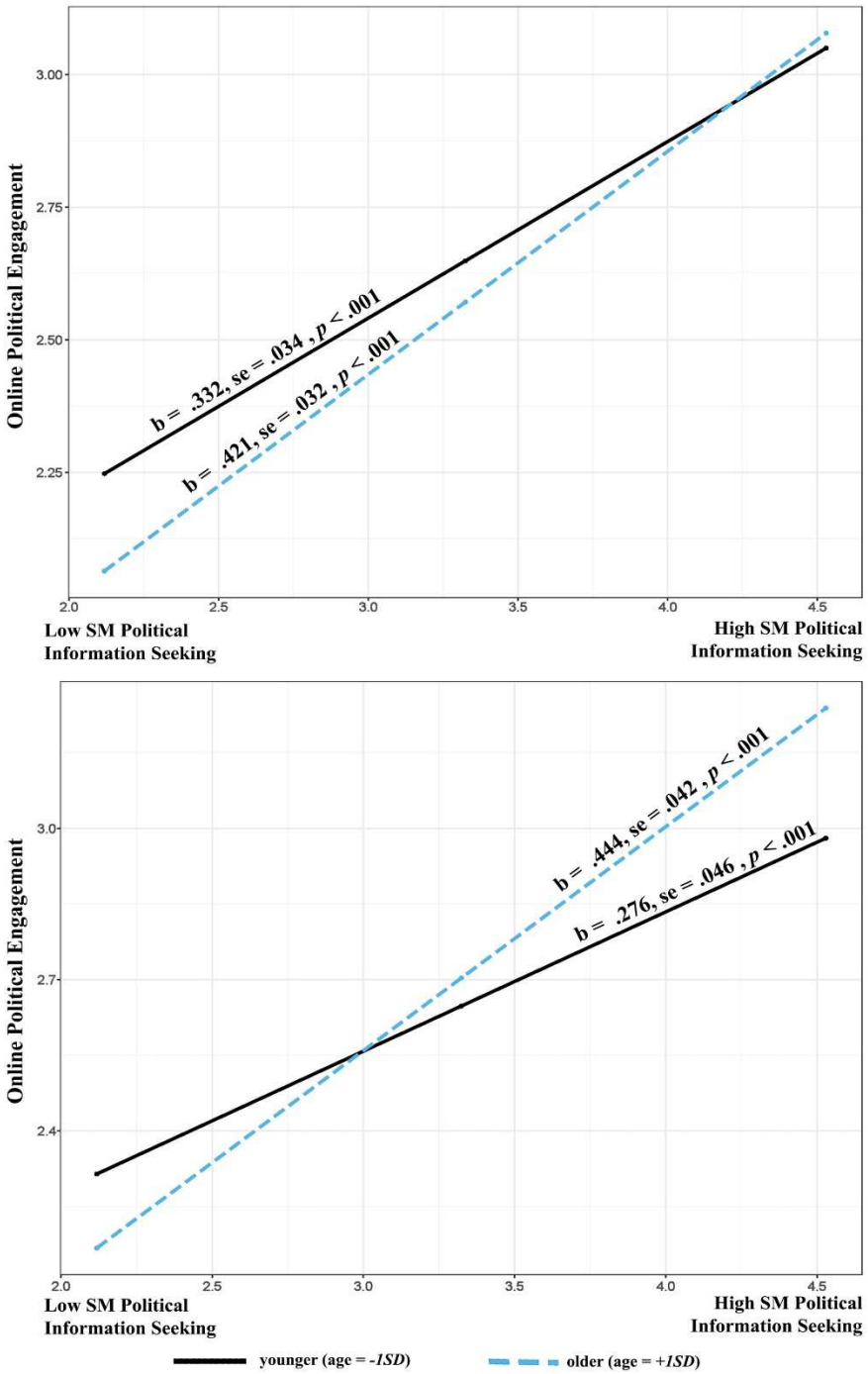


Figure 2. Visualization of the conditional effect of perceived exposure to misinformation at different values of age in explaining online political engagement.



Note: Visualizations of the conditional effec of social media political information seeking on online political engagement as a function of age and perceived misinformation exposure. The top plot shows the relations at average (mean) levels of misinformation exposure and the bottom plot shows the relations at high (+1SD) levels of misinformaton exposure. The simple slope test results are also included. These plots are based on Table 3.

Figure 3. Three-way moderation effect between social media political information seeking, perceived exposure to misinformation, and age in predicting online political engagement.

Appendix A

Post-stratification analysis details: To calibrate our data, we used cross-classifications of gender and age group (18 to 34; 35 to 50; over 50) based on population projections for 2015 by the United Nations, and geographic distribution data (counties in Kenya, states in Nigeria, and provinces in South Africa) from the most recent national census in each country. To generate the weights, we relied on the R "survey" package (Lumley, 2004), which uses the procedures described in Valliant (1993) for post-stratification through raking. As recommended in DeBell and Krosnick (2009), to strike a balance between variance in the weights and accuracy of the estimates, we trimmed our weights so that no observation would have a weight higher than 3. The results of the weighted data are presented below:

Table A1: Predicting online political engagement with weighted data

Variables	β
Control Variables	
Kenya [d]	.012
Nigeria [d]	.060
Gender (males)	.079*
Education	-.057
Political efficacy	.409***
Traditional media news use	.194***
Internet news use	.068*
Mainstream media content trust	-.038
Social media content trust	.127***
Total R-sq (%)	32.2

Independent Variables	
Age	-.053+
Social Media political information seeking	.442***
Perceived exposure to misinformation	.058**
Total R-sq (%)	16.2
Model 2: Two-way moderation	
Age x social media political information seeking	.170*
Age x perceived exposure to misinformation	.305*
R-sq change (%)	.60
Total R-sq (%)	49.0
N	901

Notes: To mitigate the contextual influence, [d] dummy variables for all experimental conditions were also included in all the models; + $p = .052$, *** $p < .001$; ** $p < .01$; * $p < .05$

Appendix B

Table B1: Three-way interaction predicting online political engagement

Interaction term	β
Age x social media political information seeking x Perceived exposure to misinformation	1.072*
Total R-sq (%)	49.3
N	901

Notes: Prior blocks include all variables and interactions included in Table A1 and pre-requisite two-way interactions between age, social media political information seeking, and misinformation exposure (i.e., social media political information seeking x misinformation exposure and age x misinformation exposure). Entry is a standardized coefficient after controlling for the prior blocks. * $p < .05$.

Appendix C

Education was measured by asking respondents to indicate the highest level of education they had completed (1 = no formal education to 10 = post-graduate) ($M = 7.92$, $SD = 1.33$. *Median* = attended university).

Political efficacy was measured by asking respondents about their level of agreement with four statements (a) I feel that I have a pretty good understanding of the important political issues facing our country, b) I consider myself to be well qualified to participate in politics, c) I feel I could do as good a job in public office as most other people and d) I think I am better informed about politics and government than most people) on a seven-point scale (1 = strongly disagree to 7 = strongly agree). An index of political efficacy was created by averaging the four items ($M = 5.06$, $SD = 1.23$, $\alpha = .81$).

Traditional news use was measured by asking respondents how often they get news from each of the following a) television, b) radio, c) print newspaper and d) print magazines. The responses were recorded on a five-point scale (1 = never to 5 = every day). An index of traditional media news use was created by averaging the four items ($M = 3.07$, $SD = .91$, $\alpha = .67$). Similarly, Internet news use was measured by asking respondents how often they get their news from Internet sources ($M = 4.76$, $SD = .67$).

Mainstream media content trust was measured by asking respondents how much (1 = not at all to 4 = a lot), they trust the information they get from a) national news organizations b) local news organizations and c) international news organizations. An index was created by averaging the three items ($M = 2.87$, $SD = .60$, $\alpha = .69$).

Trust in social media content was measured by asking respondents how much (1 = not at all to 4 = a lot), they trusted the information they get from social media sites such as Facebook or Twitter ($M = 2.44$, $SD = .79$).

Appendix D

Table D1: Predicting online political engagement

	β
Control Variables	
Kenya [d] (ref: South Africa)	-.018
Nigeria [d] (ref: South Africa)	.015
Condition 1[d] (ref: condition 6)	-.024
Condition 2[d] (ref: condition 6)	-.042
Condition 3[d] (ref: condition 6)	.012
Condition 4[d] (ref: condition 6)	-.001
Condition 5[d] (ref: condition 6)	-.050
Gender (males)	.072*
Education	-.013
Political efficacy	.397***
Traditional media news use	.211***
Internet news use	.039
Mainstream media trust	-.022
Social media trust	.127***
R-sq change (%)	30.0
Independent Variables	
Age	-.055*
Social Media political information seeking	.432***
Perceived exposure to misinformation	.059*

R-sq change (%)	15.9
Two-way moderation	
Age x social media political information seeking	.178*
Age x perceived exposure to misinformation	.306*
R-sq change (%)	.50
Total R-sq (%)	46.4

Notes: *** $p < .001$; ** $p < .01$; * $p < .05$.

Appendix E

Table E1: Predicting perceived exposure to misinformation

	β
Control Variables	
Kenya [d] (ref: South Africa)	.120*
Nigeria [d] (ref: South Africa)	.089*
Condition 1[d] (ref: condition 6)	.021
Condition 2[d] (ref: condition 6)	.003
Condition 3[d] (ref: condition 6)	.050
Condition 4[d] (ref: condition 6)	.031
Condition 5[d] (ref: condition 6)	.033
Gender (males)	.014
Education	.064
Political efficacy	.069
Traditional media news use	.061
Internet news use	.087*
Mainstream media trust	-.102***
Social media trust	.027
R-sq change (%)	6.5
Independent Variables	
Age	-.014
Social Media political information seeking	.075*

R-sq change (%)	.50
Total R-sq (%)	6.9

Notes: *** $p < .001$; ** $p < .01$; * $p < .05$.