

The Mediating Role of Depression in the Relationship Between News Consumption and Interparty Hostility During Covid-19

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This article examines the association between different kinds of news consumption and interparty hostility and how this relationship is mediated by individuals' levels of depression during the Covid-19 pandemic. In a study conducted in the United States, we found a significant correlation between consumption of news and feelings of depression that was mediated by political ideology: Conservatives who consume news from CNN, MSNBC, national network TV news, and social media reported higher levels of depressive symptoms than did Liberals. Depressive symptoms, in turn, were associated with increased hatred and intolerance toward ordinary members of a political out-group. We show that depression, catalyzed by news consumption, is a fundamental factor that could explain the implications of the Covid-19 pandemic for levels of animosity among ideological groups.

Keywords: news consumption, Covid-19, depression, interparty hostility

The Covid-19 pandemic, which spread around the world during 2019–2021 has been the most serious international health crisis in several decades. The challenges it has posed for societies worldwide are serious and broad in scope, including distress, fear, and concern about social and economic consequences. At a critical time like this, societal cohesion is of vital importance in coping with threats and preserving stability (Dovidio, Ickler, Kunst, & Levy, 2020; Van Bavel et al., 2020). For this reason, this pandemic has posed an even more significant challenge as it struck at a time when the United States (like many of the world's democratic countries—see Gidron, Adams, & Horne, 2018; Westwood et al., 2018) was dealing with increasing animosity and hostility across political out-groups (Finkel et al., 2020; Reiljan, 2019). Research has shown that this ideological and affective polarization has severe implications for both politics (e.g., Ward & Tavits, 2019) and interpersonal relations (for a review, see Iyengar, Leikes, Levendusky, Malhotra, & Westwood, 2019). The latter aspect is reflected not only in the growing dislike and even hatred among ordinary citizens but also in increased enmity toward supporters of an opposing party—which can easily evolve into full-fledged political intolerance and maybe even violence (Druckman & Levendusky, 2019;

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Iyengar et al., 2019). Such rifts among individuals across party lines impair societies' resilience and often lead to social and political instability (McCoy, Rahman, & Somer, 2018).

The phenomenon of interparty hostility during the Covid-19 pandemic has captured the attention of researchers since the onset of the health crisis. Most of the studies published since have focused on partisan differences in evaluations of the severity of the disease as well as in behavioral responses to the pandemic (e.g., Grossman, Kim, Rexer, & Thirumurthy, 2020; Painter & Qiu, 2020). Druckman and colleagues (2020a, 2020b) showed that it is interparty animosity, and not merely party identification, that affects partisans' attitudes about the pandemic and the way they evaluate the U.S. government's response to the crisis, and that propels them to turn a seemingly apolitical issue into a highly polarizing topic.

Altogether, it stands to reason that against the backdrop of such a dramatic health crisis, fundamental disagreements and hostility across party lines would shape people's reactions and sometimes also their political behavior. It is also quite obvious that increased interparty hostility creates a challenge in dealing with the health crisis. But is a reverse dynamic also possible? While no quantitative change in polarization has been documented between the periods before and after the pandemic (Boxell, Conway, Druckman, & Gentzkow, 2020), it is quite plausible that certain implications of the current crisis have contributed to the radicalization of people's affective reactions toward their ideological opponents.

We aim to contribute to the recent literature addressing interparty hostility during the coronavirus pandemic by focusing on two potentially interrelated factors: *news consumption* and *mental difficulty* (in the case in point, depression). As we detail below, previous research, published long before the pandemic, showed that news consumption tends to act as a precursor of intergroup hostility (O'Brien, Leidner, & Tropp, 2018). Notably, during the pandemic, studies have indicated a significant increase in news consumption (Casero-Ripolles, 2020; Krawczyk et al., 2020). Moreover, the consumption of several kinds of news during the pandemic was also found to be positively associated with symptoms of depression and other psychological distress (Bendau et al., 2021; Gao et al., 2020), which emerged as higher than population norms in the preceding years (Wanberg, Csillag, Douglass, Zhou, & Pollard, 2020).

Depression, in turn, provides a springboard for the development of negative thoughts and feelings, and these can be easily channeled toward meaningful out-groups. Some brain studies have already proffered initial evidence for the association between depressive symptoms, on the one hand, and the hate circuit, on the other (Greicius et al., 2007; Tao et al., 2013). Other studies, conducted among soccer fans, have revealed a positive correlation between depression and out-group hate (Shuv-Ami & Toder-Alon, 2021), and studies conducted within the political context have pointed at the relationships between psychological distress and out-groups' exclusionism (Canetti-Nisim, Halperin, Sharvit, & Hobfoll, 2009).

The current study is not the first to explore the association between psychological distress and media exposure (Albertson & Gadarian, 2015) or hate (Canetti-Nisim, et al., 2009). Yet, most existing studies in political psychology targeting the effect of psychological distress, for example, anxiety, on intergroup hostility have focused on a link within the same domain, such that the same group constituted the source of the anxiety and the target of the hate. For example, individuals from a majority group may fear or be anxious about members of a distinct minority group, and these feelings may trigger hostility or

hatred toward the latter (e.g., Canetti-Nisim, Ariely, & Halperin, 2008). Thus, Canetti-Nisim and colleagues (2009) found that psychological distress caused by exposure to media coverage of terrorism (in the context of the Israeli-Palestinian conflict) predicted exclusionist attitudes toward Israeli Palestinians. It appears that we hate and wish to exclude those who cause us psychological distress. In this study, however, we examine the relationships between symptoms of depression, which strengthened with exposure to news during Covid-19, and hostility toward a distinct political out-group that, ostensibly, should not be related to the source of the depression. Altogether, although previous studies have not directly established the association between depression and hate across political or ideological lines, existing evidence points to the plausibility of such a link. To the best of our knowledge, this is the first study that has theorized these leads and envisioned the possibility that the relationship between news consumption and depression could be germane to out-group hostility in the political sphere.

In light of the above, we examine the relationship between different kinds of news consumption and interparty hostility during the Covid-19 pandemic, and how this connection is mediated by individuals' levels of depression. Moreover, within this relationship, we also examine the moderating role of political ideology. As will be elaborated below, it would be reasonable to assume that media consumption, depression during the Covid-19, and interparty hostility may not be evenly distributed across ideologies (e.g., Iyengar & Hahn, 2009; Jost et al., 2007; Painter & Qiu, 2020).

Importantly, this study was conducted in the United States under extreme sociopolitical circumstances—two weeks after the storming of the U.S. Capitol, several days before the inauguration of President-elect Joe Biden, and during an escalation in Covid-19 casualties. In this situation, all news reports were likely to be emotionally charged. This timing is motivated by our assumption that these circumstances served to exacerbate the interparty hostility brought about by the pandemic.

News Consumption and Interparty Hostility

During the Covid-19 pandemic, both traditional (Krawczyk et al., 2020) and online (de Melo & Figueiredo, 2021) media outlets focused on the outbreak and the dynamic of contagion as well as on the various other aspects of the ongoing crisis. A large portion of both airtime and articles has been devoted to these issues, which largely pushed aside other topics, thus making it almost impossible for citizens to ignore or filter out pandemic-related reports. On the flip side, over the same period, studies indicated a significant increase in news and information seeking on the part of individuals (Casero-Ripolles, 2020). The upshot is that people searched and were exposed to information more frequently than before. To the extent that media consumers tend to choose information sources from both traditional (Garrett, 2009; Iyengar, 2019) and social (Levy, 2021) outlets selectively, based on their ideological dispositions, we claim here that this increase in news intake may have destructive implications for interparty attitudes. The plausibility of this supposition is further bolstered by people's tendency to process content more easily when it supports their existing views and often reject information that opposes their proclivities (Feldman, 2011). Such selective exposure and processing of media content often leave media users with a one-sided and inaccurate perspective on different issues.

A question that arises in this regard is whether it is exposure to media in general or to specific media outlets that increases polarization. Evidence adduced in existing literature regarding this question is rather mixed. Some scholars suggest that exposure to media that are congruent with one's beliefs further polarizes one's views (Garrett et al., 2014; Levendusky, 2013), while others demonstrate a similar trend resulting from exposure to cross-partisan media (Bail et al., 2018), via motivated reasoning and disconfirmation bias (Taber & Lodge, 2006). For example, Levendusky (2013) showed that when partisans were exposed to cross-partisan media, their intolerance for a political out-group increased significantly.

At the same time, recent research has indicated that the coverage of political polarization has also increased substantially over time, starting long before the health crisis, with more frequent and detailed depictions of the gloomy animosity between partisans and political groups, thus significantly exacerbating dislike among political out-groups (Levendusky & Malhotra, 2016). To sum up, due to the polarized nature (Hart, Chinn, & Soroka, 2020; Levendusky, 2013) and divisive role (Mutz, 2007) of news today, exposure to news is generally seen by scholars as a precursor of political intolerance and hostility (O'Brien et al., 2018).

News Consumption and Depression

Why would the increase in news consumption during the current health crisis breed intergroup animosity? Are there additional forces that may be at work, catalyzing the ongoing process? We argue that central among such mechanisms is the heightened levels of psychological distress, and specifically depression—a factor that thus far has not been sufficiently explored. Unsurprisingly, depressive symptoms during the pandemic were found to be higher than population norms in the preceding decades (Ahmed et al., 2020; Gao et al., 2020; Huang & Zhao, 2020; Lei et al., 2020; Nguyen et al., 2020; Ni et al., 2020; Shevlin et al., 2020; Wanberg et al., 2020). In fact, a meta-analysis of 12 studies suggested that the rates of depression among the general population have risen sevenfold during the Covid-19 outbreak (Bueno-Notivol et al., 2021). Within the United States, Wanberg and colleagues (2020) showed, based on population norms, that depressive symptoms during the Covid-19 pandemic were higher than previously noted.

In this context, the role of the media in perpetuating depression levels has become quite essential, on several counts. First, they are important sources of information on topics that are directly and indirectly related to the virus (e.g., infection rates, government measures, public health authorities' recommendations, or the economic and social situation). Several studies demonstrated that individuals' health-related attitudes and behavior were significantly influenced by interpretations and surmises in the media coverage during previous pandemics, with emphasis, *inter alia*, on the heightened risk of mood disorders, as well as by the frequency of such and other pandemic-centered reports (Yan, Tang, Gabriele, & Wu, 2016). Corroborative evidence was also obtained from pre-pandemic studies attesting to either significant psychological strain or distinct mental conditions resulting from crisis-related media coverage (Holman, Garfin, & Silver, 2014; Schlenger et al., 2002).

We point here at three possible components of the mechanisms behind the correlation between news consumption and depression. First, media tend to cover adverse events or negative aspects of everyday occurrences more than positive events (Niven, 2000; Trussler & Soroka, 2014). Taking count of this trend in news coverage, we add the negativity bias of individuals, who tend to attribute more importance to negative information than to positive information (Sheafer, 2007; Soroka & McAdams, 2015). Lastly, in uncertain times,

people turn to the news for information that can help make sense of a given situation (Casero-Ripolles, 2020; Van Aelst et al., 2021). Naturally enough, during the pandemic, news reports have been more negative than before, and people have consumed more of these contents (Casero-Ripolles, 2020; Krawczyk et al., 2020).

Likewise, not surprisingly, in the current pandemic, evidence indicates that topic-specific media reporting has led to a high level of stress among the vast majority of the population (Veer et al., 2020). A study conducted in China on a sample of more than 4,000 adult citizens, which addressed the influence of exposure to Covid-19 media coverage on stress-related mental symptoms, found a significant and positive correlation between the frequency of such social media exposure and symptoms of depression (Gao et al., 2020). In Germany, Bendau and colleagues (2021) found that, during Covid-19, frequency, duration, and diversity of media exposure were all positively associated with heightened symptoms of depression. In the United States, as well, Olagoke, Olagoke, and Hughes (2020) reported an indirect relationship between exposure to Covid-19 news on mainstream media and depressive symptoms.

The above findings show that the increased news consumption during Covid-19 may partly account for the higher levels of depressive symptoms among the population. Specifically, the combination of frequent exposure to Covid-19 reports and the general negativity bias builds up to an increase in levels of depression.

Of salience in predicting the path between news consumption and depressive symptoms is the issue regarding the distribution of depressive symptoms induced by Covid-19 across ideologies. To the best of our knowledge, no study thus far has directly compared the levels of depression among Liberals and Conservatives during the pandemic. Evidence has accrued, however, that compared with Liberals, Conservatives believe the disease to pose less of a risk (e.g., Painter & Qiu, 2020). To the extent that Conservatives are less responsive than Liberals to the threat of the pandemic, they might also experience less severe symptoms of depression. However, the interaction between political ideology and exposure to different types of news outlets may change that dynamic. According to Jost and colleagues (2007; see also Hibbing, Smith, & Alford, 2014), Conservatives have a high need to avoid ambiguity and uncertainty and also a high need for structure. Outlets that contradict their perception that the risks of the disease are not alarming and endorse uncertainty may be at variance with these propensities. Exposure to such outlets may potentially lead to psychological distress, which could be manifested in depressive symptoms. It stands to reason, therefore, that political ideology may play a moderating role in the relationships between different kinds of news exposure and depressive symptoms.

As we have already discussed, there are reasons to assume that psychological distress in general, and depression in particular, would amplify existing levels of interparty animosity and hate. Given the increased centrality and saliency of the ideological tension within various democratic societies (e.g., Finkel et al., 2020), one could make the case that depressive symptoms, intensified by news consumption, may translate to increased hostility and animosity specifically within the interparty context.

Thus far, these relationships have not been tested either in regard to interparty hostility or during the Covid-19 pandemic, nor specifically with reference to news consumption and depressive symptoms. In what follows, we present a correlational study conducted in the United States under extreme sociopolitical circumstances pertaining to not only the days of the U.S. Capitol storming and the inauguration of Joe Biden

in January 2021 but also when Covid-19 casualties amounted to an average of 3,076 deaths per day (a 29% increase over December). We examine the relationship between various types of news consumption (Liberal news outlets such as CNN and MSNBC; Conservative news outlets such as Fox; and outlets with mixed ideologies such as national network TV news, social media, and talk radio news) and expressions of hostility, both emotional (i.e., hatred) and policy oriented (i.e., political intolerance), toward ordinary people from the political out-group. Crucially, we introduce and empirically examine a new mechanism that can explain how this relationship is mediated by individuals' levels of depression, contingent on news consumption. Within that dynamic, in the relationship between each type of news consumption targeted and (a) depression and (b) interparty hostility, we test for the moderating role of political ideology (Liberal vs. Conservative).

At this point, a caveat is in order: Due to the correlational nature of our study, no conclusions can be drawn about the direction of the relationship between news consumption and either depression or intergroup hostility. It is possible that depression leads to an increase in news consumption, and not the other way around. Focusing on anxiety (rather than depression), Albertson and Gadarian (2015) argued that such feelings tend to increase attention to information, particularly of the kind that provides or helps arrive at solutions. At the same time, these authors showed that searching for information to lower anxiety could, in some cases, be counterproductive. In their quest for information, individuals are liable to concentrate on disquieting facts because this kind of intelligence may seem more relevant to the source of threat (Albertson & Gadarian, 2015). Thus, among individuals targeted in the current study, those who reported depressive symptoms may have consumed more news than had been their habit before the pandemic, and the news is likely to have been more negative to boot (Casero-Ripolles, 2020; Krawczyk et al., 2020). Such an increase in the consumption of predominantly negative news may have worked to strengthen their depressive symptoms. In a correlational study such as ours, all paths should be tested.

Method

Participants

Seven hundred and fifty-seven participants (51.7 female; mean age 41.60, SD = 14.17) were recruited during mid-January 2021, using Amazon's Mechanical Turk (MTurk). As already explained, the data were collected under unique sociopolitical circumstances. All participants were Americans from the general population, and the survey was conducted in English. Education level was measured using five values, ranging from 1 = Less than high school to 5 = Advanced degree ($M = 3.73$, $SD = .90$). Yearly income was measured using five values, from 1 = Less than \$30,000 to 5 = More than \$200,000 ($M = 2.56$, $SD = 1.10$). In political orientation, 48.4% of the respondents defined themselves as Democrats, 40.1% as Republicans, and 11.5% as independents. The political out-group set for Democrats was Republicans and vice versa. Those who identified as independents were presented with the following question: "If you had to choose, would you think of yourself as closer to the Democratic or the Republican Party?" Overall, 38.6% stated they were closer to Democrats and 61.8%, to Republicans, and all were assigned an out-group accordingly (for a similar approach, see Druckman & Levendusky, 2019).

Measures

News consumption (independent variable) was measured based on eight separate indicators (used by Pew Research Center, see Olagoke et al., 2020; Shearer, 2018). Participants were presented with the following instructions: For each of the outlets below, please indicate, on a scale of 1 = Never to 6 = Very often, how frequently in the past week you got news and information from (1) national network TV news; (2) CNN; (3) Fox News; (4) MSNBC; (5) talk radio news; (6) Facebook and Twitter; (7) Telegram; (8) Parler.

As it proved statistically unfeasible to aggregate all the types of news consumption tested into one index ($\alpha = .61$), we aggregated news across political lines, combining CNN and MSNBC ($\alpha = .70$), both of which are considered to be Liberal leaning (Iyengar & Hahn, 2009; Yang & Yun, 2020). Fox News, on the other hand, is regarded as Conservative (Iyengar & Hahn, 2009). None of the other outlets lends itself to a clear classification with regard to ideology.

Level of depression (mediator) was measured using the Patient Health Questionnaire (PHQ) inventory (Kroenke, Spitzer, & Williams, 2001, 2003). Participants were told:

You will now be presented with a list of feelings that you may have experienced due to the outbreak of the Covid-19 pandemic. You are kindly requested to estimate how often, over the last two weeks, you have felt that way. Please take your time answering this item.

The list comprised the following states of mind ($\alpha = .88$): Little interest or pleasure in doing things; Feeling down, depressed, or hopeless; Trouble falling or staying asleep or sleeping too much; Poor appetite or overeating; Trouble concentrating while reading the newspaper, watching television, or on other activities. The answer options were: 1 = Not at all, 2 = Several days, 3 = More than half the days, and 4 = Nearly every day. The sum of the responses to all the above items was taken to indicate the overall level of depressive symptoms. The PHQ has been shown to have a high 48-hour test-retest reliability and construct validity as a diagnostic measure both previously (Kroenke et al., 2001, 2009) and during the coronavirus pandemic (Bueno-Notivol et al., 2021; Nguyen et al., 2020; Ni et al., 2020; Shevlin et al., 2020). It is important to emphasize that the indicators of depression measured here were totally unrelated to either ideology or politics. Furthermore, participants rated the above items before they were asked about their political identity.

Emotional hostility—hatred toward political out-group (dependent variable)—was measured by asking participants to indicate, on a scale of 1 = Not at all to 7 = Very much, to what extent they felt hatred toward ordinary Republicans/Democrats.

Policy-oriented hostility—political intolerance (dependent variable)—was measured based on three indicators (Gibson, Claassen, & Barceló, 2000). Participants were asked to indicate, on a scale of 1 = Totally disagree to 6 = Totally agree, to what extent they agreed with each of the following statements regarding their political out-group: (1) I would prefer that Democrats/Republicans be prevented from holding rallies and demonstrations; (2) I would prefer that Democrats/Republicans be banned from television appearances or speeches; and (3) I would prefer that Democrats/Republicans be disallowed to visit college campuses to register potential voters ($\alpha = .94$).

Political Leaning

Participants were asked to describe their political ideology on a scale of 1 = Very Liberal to 7 = Very Conservative.

Covariates

We included various sociodemographic variables, such as age, gender, income, and level of education, to examine whether news consumption affects hostility toward the political out-group and depression. We likewise ruled out alternative explanations such as ideological-identity strength and, of course, political leaning, which studies have identified as a predictors of out-group animus and intolerance (Finkel et al., 2020; Goren, 2005; Goren, Federico, & Kittilson, 2009).

Ideological-identity strength was measured based on five indicators (Bankert, Huddy, & Rosema, 2017). Participants were asked to respond, based on a scale of 0 = Not at all to 100 = To the highest degree, to the following items: (1) How important to you is your political identity? (2) How accurately does the term Democrat/Republican describe your ideological stance? (3) When talking about Democrats/Republicans, do you tend to use “we” instead of “they”? (4) To what extent is your political identity salient to how you define yourself? And (5) To what extent is the strength of your political identity on par with the strength of your position on other issues? ($\alpha = .91$).

Results

Table 1 displays means, standard deviations, and correlations among the main variables. With regard to their preferred news sources, participants reported using the national network TV news the most frequently, followed by social media, CNN and MSNBC, Fox News, talk radio news, Parler, and Telegram, in that order. By and large, these findings align with existing reports on the popularity of various news outlets (Dhanani & Franz, 2020; Shearer, 2018). The strongest correlation between political identification and news consumption emerged for Fox News, whose users were predominantly Conservatives, as represented by higher values. CNN and MSNBC news consumption correlated with lower political-identification scores, indicating that these outlets were more popular among Liberals—which was to be expected based on the nature of their content and is also in keeping with previous reports (Floridi, 2021; Iyengar & Hahn, 2009; Yang & Yun, 2020). Furthermore, Table 1 shows a significant correlation among all outlets but two (national network TV news and Fox News) and the mediator, that is, depression, as well as the first dependent variable, that is, hatred, toward the political out-group. Similarly, a significant correlation emerged among all outlets but one (national network TV news) and the second dependent variable, that is, political intolerance. Additionally, the two dependent variables, that is, hatred and intolerance, were positively correlated with depression and with each other. Of special note is the negative correlation (although low) obtained between depression and political identification, which indicates that, during the coronavirus crisis, Liberals were overall more depressed than Conservatives. Additionally, the positive correlation that emerged between political identification and intolerance shows that Liberals expressed feelings of intolerance toward Conservatives more than the other way around.

Table 1. Means, Standard Deviations, and Inter-Correlations of Study Variables.

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12
		Hatred	PI	Depres	CN-MS	Fox	NN	TR	SM	Teleg	Parler	PIN	IIS
1. Hatred	3.05 (2.03)	1.00											
2. PI	2.57 (1.84)	.46***	1.00										
3. Depres	1.83 (.78)	.20***	.14***	1.00									
4. CN-MS	2.61 (1.52)	.15***	.09**	.14***	1.00								
5. Fox News	2.32 (1.62)	-.00	.17**	.01	.09**	1.00							
6. NN	3.27 (1.82)	-.01	.05	.06	.45***	.18***	1.00						
7. TR	2.08 (1.59)	.08**	.17***	.15***	.03	.24***	.00	1.00					
8. SM	3.22 (1.76)	.07*	.15***	.12***	.17***	.11***	.08*	.07	1.00				
9. Teleg	1.31 (.97)	.17***	.30***	.24***	.21***	.30***	.09**	.30***	.22***	1.00			
10. Parler	1.35 (1.00)	.16***	.29***	.19***	.10**	.29***	.02	.28***	.16***	.68***	1.00		
11. PIN	3.95 (1.92)	-.05	.12***	-.08*	-.38** *	.44***	-.11**	.20***	-.03	.15***	.24***	1.00	
12. IIS	57.20 (24.28)	.31***	.24***	.11**	.14***	.17***	.14***	.17***	.11***	.18***	.20***	.04	1.00

Note. CN-MS: CNN-MSNBC; Depres: depression; IIS: ideological identity; NN: national network TV news; TR: talk radio news; PI: political intolerance; PIN: political identification; SM: social media; Teleg: Telegram.

*p < .05; **p < .01; ***p < .001.

Overall, the differences in news exposure between Liberals and Conservatives aligned with our expectations. Thus, we found that Liberals had been exposed significantly more frequently to CNN and MSNBC ($M = 3.29$, $SD = 1.49$) than Conservatives ($M = 1.90$, $SD = 1.25$; *mean differences*, henceforth $MD = 1.38$, $SD = 0.10$, $p = .001$). Conversely, Conservatives had been exposed significantly more frequently to Fox News ($M = 3.02$, $SD = 1.78$) than Liberals ($M = 1.78$, $SD = 1.27$; $MD = 1.23$, $SD = 0.11$, $p = .001$). Differences were likewise found as regards other outlets, although with lower mean differences than for the ones above. To the national network TV news, Liberals had been more frequently exposed ($M = 3.57$, $SD = 3.04$) than Conservatives ($M = 3.04$, $SD = 1.81$; $MD = 0.53$, $SD = 0.14$, $p = .001$). Conversely, Conservatives consumed their news more frequently than Liberals from talk radio ($M = 2.26$, $SD = 1.69$ and $M = 1.89$, $SD = 1.46$, respectively) and Parler ($M = 1.46$, $SD = 1.12$ and $M = 1.26$, $SD = .86$, respectively), with the mean differences for these two outlets being significant, although quite low ($MD = .38$, $SD = 0.12$, $p = .006$ and $MD = -.20$, $SD = 0.07$, $p = .027$, respectively). No differences were found in the consumption of social media (Facebook and Twitter) and Telegram (for the full results, see Table S1 in the Online Appendices: <https://www.dropbox.com/s/sq57jcz6271m682/Online%20Appendices.%20The%20mediating%20role%20of%20depression.doc?dl=0>).

The Mediating Role of Depression in the Relationship Between News Consumption and Intergroup Hostility, Moderated by Political Ideology

The mediating role of depression was estimated using the OLS regression model to probe indirect relationships. Figures 1 through 7 present Americans' levels of hatred (DV1) and political intolerance (DV2) toward ordinary people from the political out-group as the dependent variables; different kinds of news consumption during Covid-19 as the independent variables (IV); level of depressive symptoms as mediator (M); and political ideology as moderator (W). We employed the procedure developed by Hayes (2013), namely, PROCESS bootstrapping macro (Model 8; 5,000 iterations). Put differently, we tested whether the links between different kinds of news consumption during Covid-19 and self-reported hatred and intolerance toward political out-group members were mediated by feelings of depression, and within that relationship, whether political ideology (Liberal vs. Conservative) played the role of moderator.

Figures 1, 2, and 3 show that news consumption via CNN and MSNBC, national network TV news, and social media (Facebook and Twitter) are significantly associated with symptoms of depression. However, this relationship is asymmetric as it is positively moderated by political ideology (1 = Liberal to 7 = Conservative). In other words, Conservatives with a higher level of exposure to CNN and MSNBC, national network TV news, and social media demonstrated a higher level of depressive symptoms than Conservatives with a lower level of exposure to these outlets and also compared with Liberals who used the same outlets with the same level of exposure. These symptoms, in turn, are related to a higher level of hatred toward ordinary members of the political out-group and a higher level of intolerance toward them. We should note that all models account for all control variables (the full results for the models, controlling for demographic and background measures, are presented in Tables S2–S8, in the Online Appendices: <https://www.dropbox.com/s/sq57jcz6271m682/Online%20Appendices.%20The%20mediating%20role%20of%20depression.doc?dl=0>).

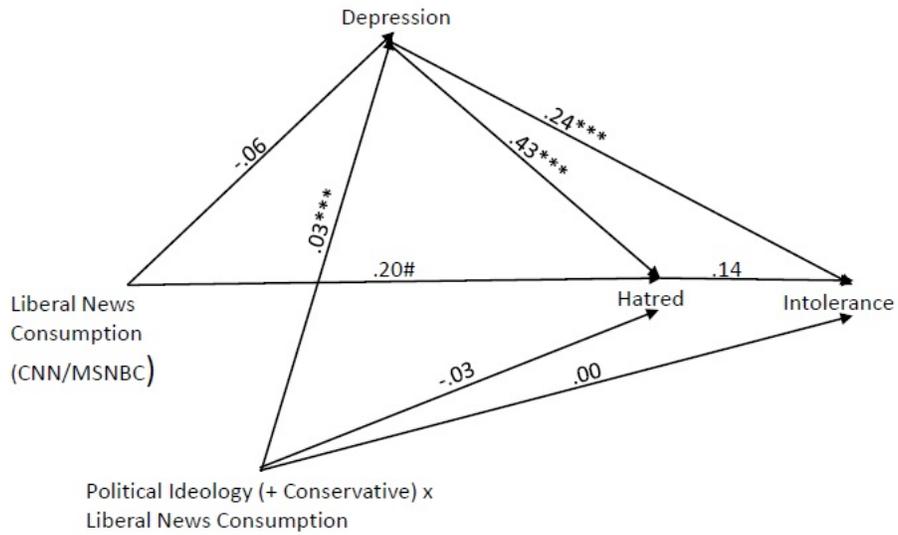


Figure 1. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: CNN-MSNBC (Liberals).
 * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

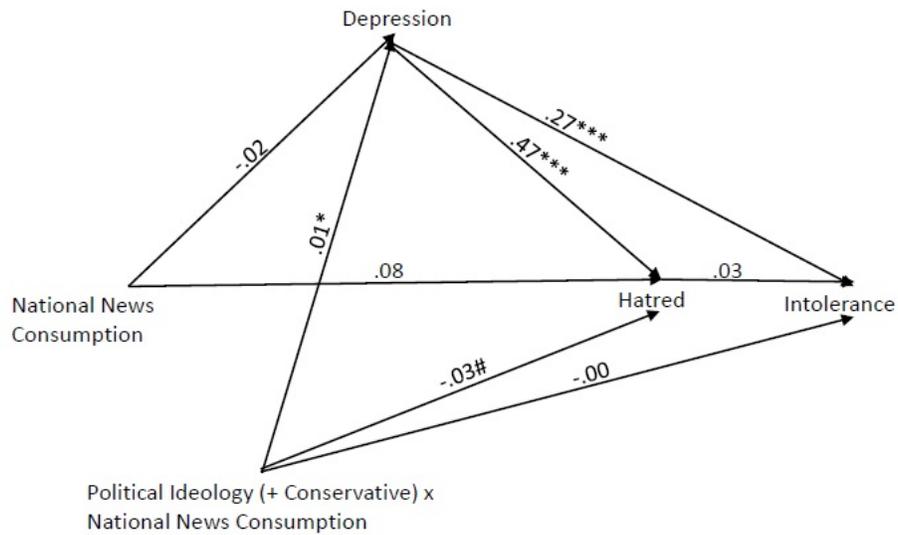


Figure 2. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: National network TV News.

*p ≤ .05, **p ≤ .01, ***p ≤ 0.

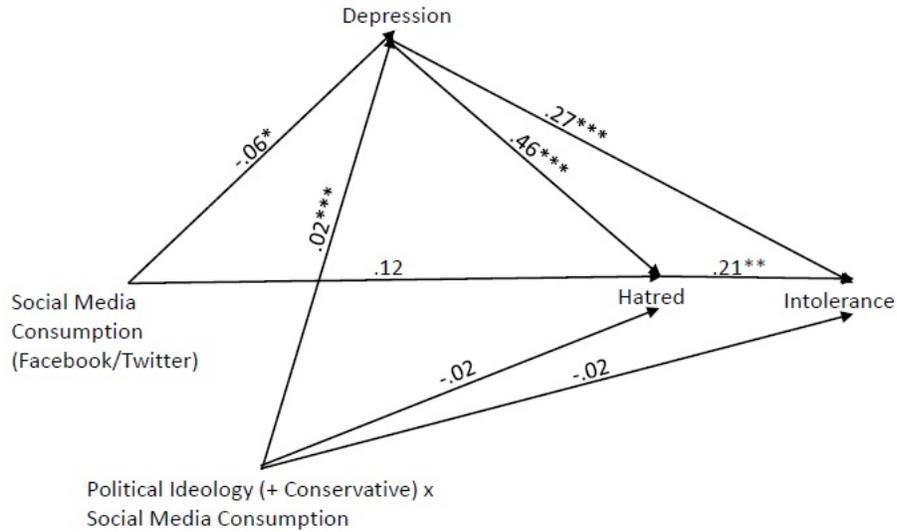


Figure 3. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: Social media (Facebook, Twitter).

* $p \leq .05$, ** $p \leq .01$, *** $p \leq 0$.

Figure 4 shows that news consumption via Fox News yielded no direct relationships, either moderated or mediated, between news consumption and either hatred or intolerance. It appears that, during Covid-19, exposure to Fox News, whether among Liberals or Conservatives, was related neither to symptoms of depression nor to hatred or intolerance.

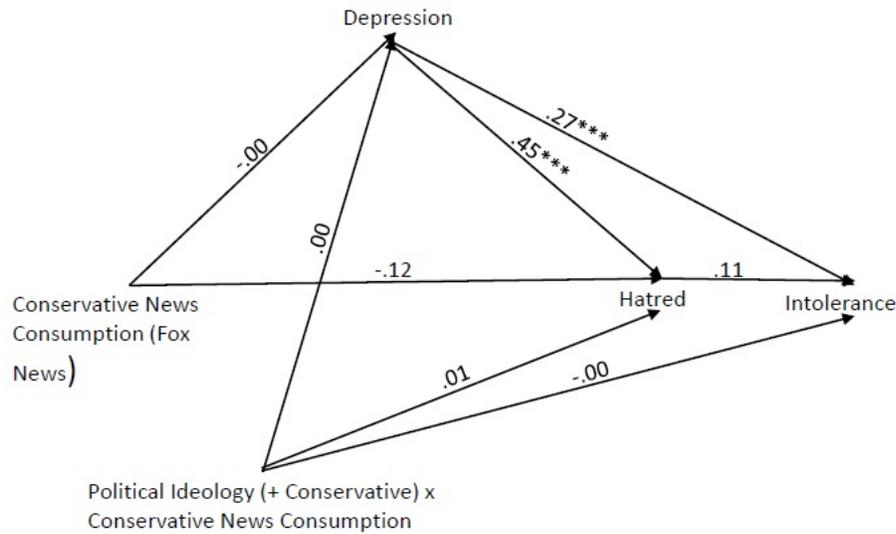


Figure 4. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: Fox News (Conservatives). * $p \leq .05$, ** $p \leq .01$, *** $p \leq 0$.

Findings regarding the other outlets examined in the study are shown in Figures 5, 6, and 7. As per Figure 5, news consumption through talk radio news was significantly and symmetrically associated with symptoms of depression, with no obvious moderating role of political ideology. As in all the other cases, depressive symptoms were related to higher levels of hatred and intolerance. As per Figures 6 and 7, no relationship emerged, among either Liberals or Conservatives, between consumption of news via Parler or Telegram and depressive symptoms. However, an inverse relationship was found between political intolerance and the interaction of news consumption via Parler with political ideology, indicating that Liberals with higher levels of exposure to Parler were more intolerant toward Conservatives than Liberals with lower levels of exposure to that outlet and as compared with Conservatives' intolerance toward Liberals (given the same levels of exposure to Parler). In contrast, Conservatives with higher levels of exposure to Telegram reported higher levels of hatred toward Liberals than Conservatives with lower levels of exposure to that outlet and compared with Liberals' hatred toward Conservatives (given the same levels of exposure to Telegram).

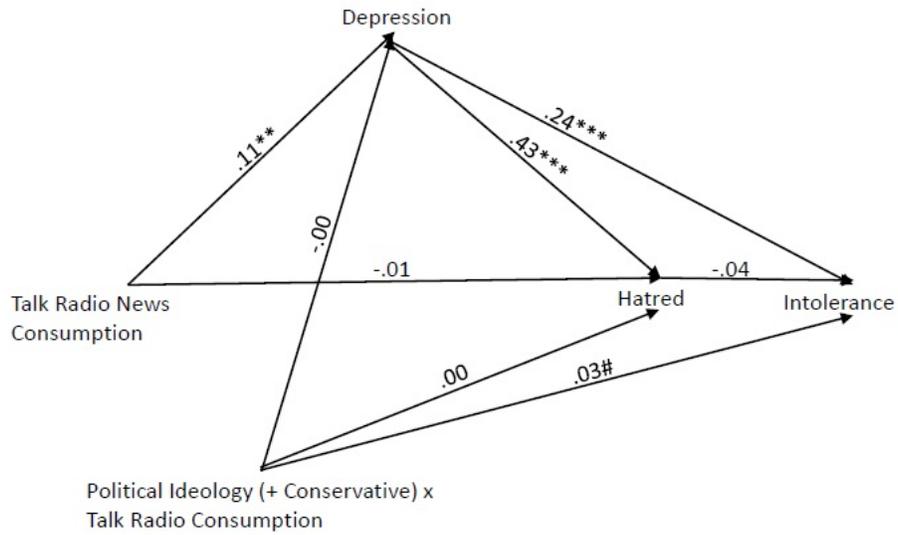


Figure 5. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: talk radio news.
 *p ≤ .05, **p ≤ .01, *** p ≤ 0.

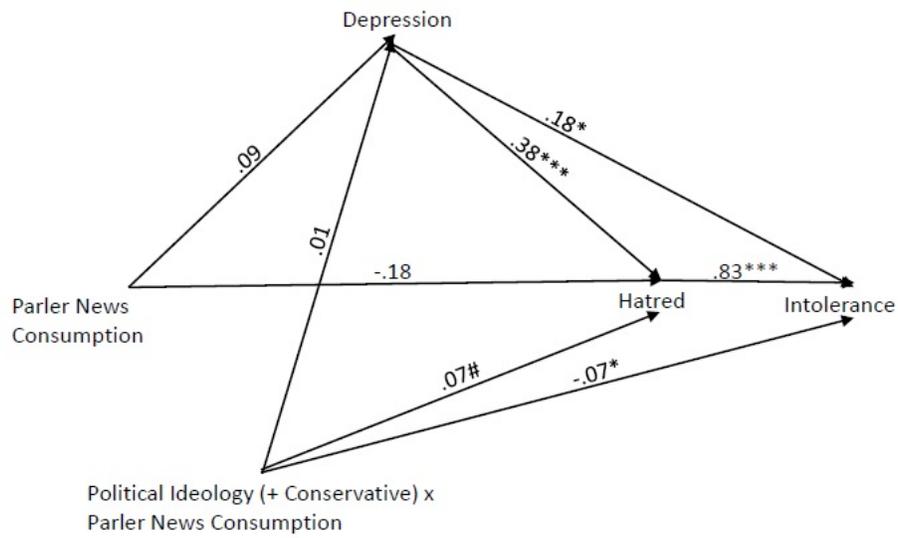


Figure 6. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: Parler.

*p ≤ .05, **p ≤ .01, ***p ≤ 0.

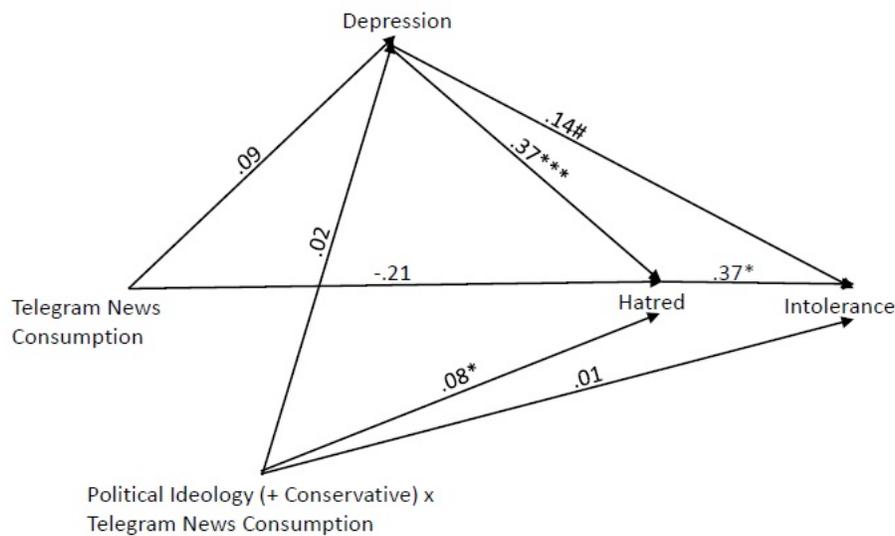


Figure 7. Depression during Covid-19 mediates the association between level of news consumption and intergroup hostility, moderated by political ideology: Telegram.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq 0$.

As stated, this is a correlational study, and therefore no conclusions can be drawn about causality. One may plausibly argue that depressive symptoms could lead to a step-up in news consumption, which may in turn exacerbate interparty hostility. Yet it is difficult to establish with any degree of certainty the direction of the relationship between news consumption and depressive symptoms. That said, Models 1 through 7 clearly point to a significant association between depressive symptoms and both hatred and intolerance. On the other hand, news consumption of any kind was not significantly related to hatred; however, for three news media outlets (Facebook/Twitter, Parler, and Telegram), it was positively related to intolerance.

Discussion

An extensive body of research published around the world during the past several months, in the midst of the Covid-19 pandemic, attests to an increase in symptoms of depression among the population at large (e.g., Ahmed et al., 2020; Bueno-Notivol et al., 2021; Gao et al., 2020; Ni et al., 2020). Among the factors catalyzing this process, studies have pointed out frequent exposure to news reports as a major predictor of depressive symptoms (Bendau et al., 2020; Gao et al., 2020; Olagoke et al., 2020). The implications of this finding in terms of people's mental health are self-evident. But the story does not end there. The results of the current study show that not only do the effects go beyond the individual level but they are also far-reaching, posing a threat to the entire social fabric, including relationships among political or ideological groups.

The current study was conducted in the United States during one of the most marked peaks in the Covid-19 death toll, an average of 3,076 per day, and when ideological tensions had also reached a new high. Findings demonstrate a significant correlation between consumption of various types of news (CNN/MSNBC, national network TV news, social media, and talk radio news) and symptoms of depression, and also—crucially—that the dynamic between these two factors correlated to higher levels of hatred and intolerance toward ordinary members of a political out-group. In other words, our analysis has demonstrated that depressive symptoms are strengthened by news consumption, leading to hatred and political intolerance toward the political “other.”

Interestingly enough, according to our results, these relationships are not symmetric across political ideologies. Conservatives who consume more frequently news specifically via CNN and MSNBC, national network TV news, and social media reported higher levels of depressive symptoms than Conservatives with less frequent exposure to these outlets, as well as than Liberals with the same frequency of exposure to them. At first glance this may seem counterintuitive, especially as previous research concluded that compared with Liberals, Conservatives tend to believe the disease to pose less of a risk (e.g., Painter & Qiu, 2020). Moreover, our analysis revealed a correlation indicating that, during the coronavirus crisis, Liberals have overall been more depressed than Conservatives. Why, then, do Conservatives who consume CNN and MSNBC, national network TV news, and social media tend to be more depressed than Liberals on the same media diet? As we pointed out in the literature review, previous studies found Conservatives to be more sensitive to uncertainty (Hibbing et al., 2014; Jost et al., 2007) and to dislike ambivalence (Jost et al., 2007). It is possible that these propensities were stymied by consumption of cross-partisan media news outlets. Such information must have come at odds with Conservatives’ tendencies to downplay the risk of the pandemic and highlighted the uncertainties of the situation. Based on psychology literature, feelings of ambivalence and uncertainty are generally related to psychological distress such as depression (Chigwedere & Moran, 2022; Moberly & Dickson, 2018), and especially so in the context of Covid-19 (Bakioğlu, Korkmaz, & Ercan, 2021; Rettie & Daniels, 2020).

This rationale is supported by our finding that higher levels of exposure to Fox News were not associated with depressive symptoms among Conservatives. The information released by this outlet probably aligned with their own perceptions and thus did not give rise to ambivalence or uncertainty—feelings that would probably have contributed to depressive symptoms. Future research should test this conjecture using experimental design.

As for the relationship between interparty hostility (hatred and intolerance) and the interaction of political ideology and news exposure, none was found in most of the cases. Exceptions are Parler and Telegram: Our data indicate that the relationship between news consumption via Parler and political intolerance was stronger among Liberals than among Conservatives. Conversely, the relationship between news consumption via Telegram and hatred was stronger among Conservatives than among Liberals. But other than in these two cases, no correlation was found between news consumption via outlets on either side of the political spectrum and levels of hatred or intolerance. This evidence contradicts some previous reports in which partisans exposed to media that are congruent with their beliefs displayed greater out-party animosity than partisans exposed to non-biased media (Garrett et al., 2014; Levendusky, 2013). Other studies have also made the case that exposure to cross-partisan media has the potential to increase

animosity among ideological groups (Bail et al., 2018; Taber & Lodge, 2006). Neither of these conclusions has found definitive support in our findings.

Theoretically, ideological and interparty animosity can be explained by a variety of factors. For example, partisan animosity has been attributed to the partisan-ideological sorting of Liberals to the Democratic Party and Conservatives to the Republican Party (Levendusky, 2009) as well as to the social sorting that has led to more demographically homogenous parties (Mason, 2016). Other changes in elite behaviors (Gentzkow, Shapiro, & Taddy, 2019), as well as increasing elite polarization (Lelkes, 2019; Rogowski & Sutherland, 2016), have also been mentioned in this connection as catalysts of interparty radicalization. In today's reality, however, additional accounts are in order, specific to the situation at hand—when, together with the rest of the world, the U.S. population is faced with the most serious health and social crisis of the last decades. Previous literature has pointed out that mental difficulties can have destructive implications for countries' social fabric (Balmas, Harel, & Halperin, 2022).

Previous studies, in different contexts, have already revealed a positive correlation between depression and out-group hate (Shuv-Ami & Toder-Alon, 2021), and studies conducted within the political context have pointed at the relations between psychological distress and out-group exclusionism (Canetti-Nisim et al., 2009). The present study, however, is the first to examine the dynamics between news consumption and mental difficulties (in case in point, symptoms of depression) in the context of interparty hostility and during the Covid-19 pandemic.

The study has several limitations. First, it is based on a single-shot observational research design, hence no conclusions can be drawn about a *causal* relationship between news consumption, on the one hand, and depression, intergroup hostility, and political intolerance, on the other. As stated, it is possible that depression leads to news consumption and not the other way around. Indeed, as already mentioned, previous research investigating anxiety (rather than depression) argued the case that anxiety tends to increase attention to information (Albertson & Gadarian, 2015). Establishing the direction of the association demonstrated in the current work would require an experiment that manipulates news consumption. Second, our dependent measures are limited to tapping short-term relationships. This issue can likewise be addressed and elucidated through further investigation.

Notwithstanding these weaknesses, the present study provides evidence that, during the Covid-19 pandemic, people's depressive symptoms have been augmented through news consumption, with implications for intergroup relations. Scholars have argued that one of the leading challenges countries worldwide have faced in the recent decade is the increasing animosity among ideological groups (Druckman et al., 2020a; Iyengar et al., 2019). Today, societies need to deal concomitantly with an additional threat—the Covid-19 pandemic. While the current study shows that mental difficulties, intensified by news consumption, can contribute to interparty hostility, a question that remains to be explored in future research is whether an extreme challenge, such as a global pandemic, can have the opposite effect as well. Can an external threat arrest the rivalry among ideological groups and impel them to unite? Can it create the kind of shared goals and identities that would mitigate animosity, and if so, under what conditions? If such a reverse process is at all feasible, the struggle against the pandemic could be channeled into reducing polarization, thereby promoting tolerance and respect in the political sphere.

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