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In Pain and in Politics: Chronic Pain and Political Participation in the United States

Merita Limani

mlimani2@uwo.ca

Western University

Gillian Fennell

Boston University

Laura Stephenson

Western University

Anna Zajacova

Western University

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Abstract

Political participation is a central mechanism through which citizens influence democratic governance and public policy. Existing research suggests that individuals in poorer health often participate less in politics, particularly voting, but most studies rely on broad health indicators and focus narrowly on electoral participation. This study examines how chronic pain, a highly prevalent and consequential health condition, is associated with different forms of political participation among adults in the United States.

Using data from a nationally representative U.S. survey conducted in September 2024 (N = 4,666), we examine intentions to vote, volunteer, donate, and discuss politics on social media in the subsequent 12 months. Weighted logistic regression models estimate associations between chronic pain and intended political participation net of covariates; we also assess whether political interest helps explain observed relationships between chronic pain and political participation.

We find that associations between chronic pain and intended political participation vary across participation forms. Respondents with low-impact chronic pain were significantly more likely to report intentions to discuss politics on social media (OR = 1.28), while high-impact chronic pain was initially associated with lower intentions to vote (OR = 0.59) and donate to political campaigns (OR = 0.75), although these associations were attenuated after adjustment for socioeconomic characteristics. Political interest did not explain observed associations between chronic pain and political participation.

These findings suggest that chronic pain may shape how individuals participate politically rather than whether they participate politically at all.

1. Introduction

In recent years, scholars have increasingly recognized that health may be an important factor shaping political participation. Health influences individuals' capacity to engage in social and civic life and may therefore affect their ability to participate in political processes. A growing body of research demonstrates that individuals in poorer health are less likely to engage in certain forms of political activity, particularly voting (Couture & Breux, 2017; Denny & Doyle, 2009; Kirbiš et al., 2023; Mattila et al., 2013; McGuire, Gollust, et al., 2021; Strate, 1991). Poor health can reduce the physical, psychological, and social resources required for political engagement by limiting mobility, energy, and cognitive capacity while also weakening individuals' connections to social networks that facilitate recruitment and mobilization (Pacheco & Fletcher, 2015; Schur et al., 2002). Further, the impact of poor health is considerable and often comparable to traditional predictors such as education or employment status (Burden et al., 2017; McGuire, Rahn, et al., 2021; Tan, 2025). These findings suggest that health inequalities may translate into political inequalities by influencing who participates in democratic processes (Pacheco & Fletcher, 2015).

Despite growing interest in the relationship between health and political behavior, two important gaps remain in the literature. First, most existing studies rely on broad indicators such as self-rated health rather than examining specific health experiences which may obscure the effects of particular conditions that significantly impact individuals' daily functioning and social participation (Strate, 1991). Second, much of the empirical research focuses primarily on voter turnout, leaving other forms of political engagement relatively understudied (Denny & Doyle, 2009; Schur et al., 2002). Yet restricting analysis to voter turnout risks obscuring the full relationship, as health and political participation may be more complex than uniform disengagement (Bernardi et al., 2025). Poor health does not necessarily suppress all forms of political participation but may instead alter patterns of participation across different political acts (Kirbiš et al., 2023; Soderlund & Rapeli, 2015).

In this paper, we address these gaps using data from a unique 2024 survey of the U.S. population. Rather than assuming that health constraints uniformly reduce political participation, we examine how chronic pain, a specific and consequential health experience, may reshape participation across different political activities. We ask three questions: whether chronic pain is associated with individuals' likelihood of engaging in political participation; whether this relationship varies across forms of engagement; and whether political interest helps explain the relationship between chronic pain and participation. In doing so, we contribute to the literature on health and political behavior in three ways: by shifting attention from general health indicators to pain, by expanding the empirical focus beyond voter turnout to a broader repertoire of participation, and by examining political interest as a potential mechanism linking health to engagement.

1.1 The Political Consequences of Chronic Pain

Political participation is a central mechanism through which citizens influence democratic governance and inform public policy (Anderson & Stephenson, 2021). Contemporary scholarship increasingly conceptualizes political participation as a multidimensional phenomenon (Alvarez et al., 2017; Oser, 2021) that encompasses both observable political actions (such as volunteering for a party or candidate, attending a rally, or voting) and less visible forms of political engagement (such as making a political donation or participating in political discussions online). The connecting element across types of political participation is the desire to express preferences and influence political outcomes – "in van Deth's (2014, 354) words, "a voluntary activity by citizens in the area of government, politics or the state" (van Deth, 2014)."

Although political participation is fundamental to giving citizens input into how they are governed, we know that political participation is not equally distributed across populations. Classic research in political behavior demonstrates that engagement varies depending upon individuals' access to resources, political motivation, and opportunities for mobilization (Blakely, 2001; Kulachai et al., 2023; Verba et al., 1995). Individuals with greater time, financial resources, civic skills, and organizational ties are more likely to engage in political activities, while those facing resource constraints participate less frequently.

While not in the original formulations of these arguments, health naturally enters into the conversation about participation when resources are considered, and a body of research demonstrates its significance (Couture & Breux, 2017; Denny & Doyle, 2009; Kirbiš et al., 2023; Mattila et al., 2013; McGuire, Gollust, et al., 2021; Strate, 1991). Health conditions that affect daily functioning may have implications for political engagement. For example, consider how the act of voting or attending a rally may be impacted for someone who has mobility restrictions. Consider also someone who may have substantial medical bills, or be unable to work – their access to financial resources to donate, for one, would be constrained. Yet, individuals facing constraints on specific types of participation may remain politically attentive and engaged even when they participate less in more resource-intensive political activities. Because there are myriad ways to express political preferences and many different types of participation (van Deth, 2014), simply taking a blanket approach to the relationship between health and participation misses important nuance. Further, on the flip side, health concerns might have a positive impact on participation in terms of political interest and civic skills. Consider someone dealing with a serious disease, for whom scientific advances are crucial. They may be mobilized to engage *more*, in ways that express preferences for helpful policies (Gollust & Rahn, 2015; Soderlund & Rapeli, 2015). Therefore, there are two ways that health might impact the resources one has available for political participation – negatively, by creating constraints on money and mobility, and positively, by creating an incentive for political interest.

Evidence from research on disability illustrates these mechanisms clearly. Individuals with physical disabilities consistently exhibit lower voter turnout and participation in some political activities, largely because functional limitations and accessibility barriers increase the costs of participation rather than because disabled citizens lack political interest or democratic commitment (Schur & Adya, 2012). Similar findings have been observed in cross-national research, where individuals reporting poorer health are less likely to vote across diverse political contexts (Mattila et al., 2013).

Other evidence supports a positive effect of poor health on engagement. Individuals with specific chronic conditions, particularly cancer, have been found to be more likely to vote, suggesting that direct exposure to health risks heightens the perceived stakes of political decisions (Gollust & Rahn, 2015). This mobilization may also operate through disease-specific identities and social networks that foster collective awareness and engagement around health-related policies. Similarly, cross-national evidence shows that individuals in poor health are more active in certain forms of participation, such as contacting officials and engaging in demonstrations, reflecting a “reversed health gap” in more expressive or policy-oriented activities (Soderlund & Rapeli, 2015).

In this paper we focus specifically on one health experience – chronic pain – widely recognized as one of the most significant determinants of population health because of its broad and persistent effects on individuals’ physical functioning, psychological well-being, and social lives (Cohen et al., 2021; Goldberg & McGee, 2011; James et al., 2018; Zajacova et al., 2021). Building on research linking health and political behavior, we conceptualize chronic pain as an embodied condition that may alter the resources individuals bring to political participation. In the United States, chronic pain affects approximately one in

five adults, with about 6–7% experiencing high-impact chronic pain that substantially limits daily activities (Rikard et al., 2023). Depending upon its severity, persistent pain can limit mobility, reduce energy, disrupt sleep, impair concentration, and affect individuals' ability to maintain employment and social relationships (Breivik et al., 2006; Dahlhamer et al., 2018; Fennell et al., 2024; McCarthy et al., 2021; Pitcher et al., 2019); further, it is typically more prevalent and difficult to manage among socially disadvantaged groups (Limani & Zajacova, 2024; Zajacova et al., 2023). As such, chronic pain can influence not only physical health but also the psychological and social dimensions of everyday life, often impacting individuals' daily activities and broader patterns of social participation (Goldberg & McGee, 2011). These consequences imply that chronic pain is likely to have complex consequences for individuals' participation in social and civic life.

Our investigation into the political consequences of chronic pain considers multiple ways that individuals may engage with politics. While most of the existing research on health and participation looks at voting, the work that has considered engagement more broadly has found interesting variation in terms of health impacts (Alvarez et al., 2017; Kirbiš et al., 2023; Oser, 2021; Soderlund & Rapeli, 2015). We are interested in better understanding variation in engagement as it relates to chronic pain, and in particular whether the patterns are logically connected to the way that chronic pain influences the resources citizens have available to them. Individuals experiencing pain may participate less in some forms of political activity while remaining engaged through others that require fewer physical or logistical resources. Further, this may vary depending upon the severity of the pain itself.

Based upon the literature and the above discussion, we therefore hold the following expectations:

1. Political engagement will decrease as daily impact of chronic pain increases.
2. The impact on political engagement will vary depending upon the nature of the activity, such that activities involving physical mobility and/or financial contribution will be reduced.
3. The impact of chronic pain on political participation will be partially explained by political interest and orientation, particularly among those with severe pain.

2. Data and Methods

Data come from the Social Wellbeing and Pain Survey (SWAP), a nationally representative survey of U.S. adults conducted by YouGov in September 2024. YouGov, a leading academic survey research company, draws respondents from a large volunteer online panel rather than a probability-based sampling frame; matching and weighting procedures are used to approximate a representative sample of U.S. adults. Panel members were matched to a synthetic sampling frame constructed from the American Community Survey, Current Population Survey, and voter files; matched cases were then weighted using propensity scores and post-stratified on key demographic variables. The present analyses were based on respondents with complete data on study variables.

2.1 Dependent Variables: Political Participation

We examine four survey items capturing respondents' likelihood of engaging in distinct forms of political activities during the next 12 months. Respondents were asked whether they intended to vote in the upcoming presidential election, volunteer for a political party or candidate, discuss politics on social media, or donate money to a political campaign. We dichotomized each item into "Not at all likely" (0) versus "somewhat likely," "likely," or "very likely" (1).

We additionally examined four measures of past political behavior as supplementary analyses. Because the data are cross-sectional, these prior behavior variables could present a problematic temporal ordering if they precede the onset of pain for some respondents. However, examining prior political activities provides an additional assessment of whether observed associations extend beyond intended participation and offers further insight into variation in participation across political activities. Respondents reported whether they had done any of the following over the prior 12 months (yes/no): attended a rally or protest, volunteered for a political party or candidate, or donated money to a political campaign. Respondents were also asked whether they voted in the 2020 U.S. presidential election. All past participation measures were coded dichotomously (yes/no).

2.2 Primary Independent Measure: Chronic Pain

We used two survey items about pain to define three clinically meaningful categories for our primary independent variable. Respondents were asked "In the past three months, how often did you have pain?" Respondents who said "never" or "some days" were categorized as not having chronic pain, versus "most days" or "every day." Respondents with chronic pain were next asked "Over the past three months, how often did your pain limit your life or work activities?". Chronic pain that limited activities "never" or "some days" was categorized as low-impact chronic pain while pain that limited activities on "most days" or "every day" was categorized as high-impact chronic pain. This categorization has been validated in prior national studies (Pitcher 2019).

2.3 Covariates

Our models sequentially adjust for key demographic, socioeconomic, and political variables. Demographic covariates included age, gender, race and ethnicity, and having at least one child under the age of 18 in the household. Age was measured in single years and top-coded at 80 because respondents aged 81–94 comprised less than 2% of the analytic sample. Gender included self-identification as a man (reference group), woman, or non-binary individual. Race and ethnicity were measured using standard self-reported categories and coded into mutually exclusive groups: White (reference), Black, Hispanic, Asian, Native American, two or more races, and other.

Socioeconomic covariates included educational attainment, financial hardship, and employment status. Educational attainment categories included less than high school (reference), high school diploma, some college, two-year degree, four-year degree, and post-graduate degree. Financial hardship was coded as the frequency with which the respondent struggled to cover basic living expenses in the last 12 months from "never" to "always." Employment status captures whether respondents are employed (reference), not working, retired, or students.

Political covariates included party identification and political interest, both of which could motivate political participation. Respondents indicated whether they identified as Independent (reference), Democrat, Republican, or other/unsure. Political interest was measured using a self-reported item asking respondents to indicate their general interest in politics on a scale from 0 (= no interest at all) to 10 (a great deal of interest). This variable is conceptualized as a potential explanatory factor in the relationship between chronic pain and political participation.

2.4 Analytic Strategy

To assess the relationship between chronic pain and distinct forms of political participation, we first characterized the demographic, socioeconomic, and political profile of the sample by pain status.

Second, we conducted a set of three weighted logistic regression models estimating the association between pain status and intended political participation outcomes, including the intention to vote in the 2024 US presidential election, volunteering for a political party or candidate, discussing politics on social media, and donating money to a political campaign. The first regression Model 1 controlled for demographic characteristics, Model 2 further adjusted for socioeconomic characteristics, and Model 3 for political orientation and political interest.

Third, we examined the respective associations between pain status and the past political participation items outlined in the Measures section using the same three-part sequential modeling strategy. These results are presented in Supplemental Tables S1–S8.

All models were conducted as complete case analyses and estimated using survey weights to account for the sampling design. Results are presented as odds ratios (ORs) with corresponding standard errors. Statistical significance was evaluated using two-tailed tests at conventional thresholds ($\alpha = .05$). All analyses were conducted using Stata 19.

3. RESULTS

3.1 Descriptives

The analytic sample includes 4,666 American adults (50.7% women; 66.2% White; mean age 47.6 ± 17.8 years). Over a third of the sample had a college degree or higher, 51% were employed, and 21.4% were retired. The mean political interest score was 6.5 out of 10, with 36% of the sample identifying as Democrats, 30% as Republicans, and 25% as Independent. Approximately 90% reported that they were “somewhat likely” to “very likely” to vote in the 2024 presidential election, compared to 53%, 35%, and 31% reporting at least some intention to volunteer for a political party or candidate, discuss politics on social media, and donate to a political party or candidate, respectively.

Approximately one-fifth of participants reported low-impact chronic pain (LICP) (20.5%), and 16.8% reported high-impact chronic pain (HICP). Relative to respondents without chronic pain, individuals in the LICP and HICP subgroups were older and included more women and White participants. They were also

more likely to be unemployed/retired and experiencing more frequent financial hardship. Individuals with HICP reported lower levels of educational attainment than respondents without chronic pain. Politically, respondents with LICP or HICP were less likely to identify as Democrats and somewhat more likely to identify as Independents relative to respondents without chronic pain. Full descriptive results are presented in Table 1.

3.2 Primary Models

Associations between chronic pain and intended political participation varied across participation forms (Fig. 1). Chronic pain was inconsistently associated with intended political participation depending on the behavior, type of pain, and factors controlled. Individuals with HICP were 41% and 25% less likely to express intentions to vote in the 2024 election and donate to a political campaign than those with no pain, respectively, in demographic adjusted models (OR = 0.59; OR = 0.75; Fig. 1, Supplemental Tables 1 & 2).

LICP was not associated with intentions to vote or donate in any model, and the negative associations observed for HICP were no longer statistically significant following adjustments for socioeconomic characteristics. Moreover, neither LICP nor HICP were associated with intentions to volunteer for a political campaign or party in the next 12 months (Fig. 1, Supplemental Table 3). However, relative to those with no chronic pain, individuals with LICP were significantly more likely to report intentions to discuss politics on social media over the subsequent 12 months (Fig. 1, Supplemental Table 4). This positive association, corresponding to a 28% increase in the odds of intended political discussion on social media among respondents with LICP in the fully adjusted model, was not sensitive to included covariates (OR = 1.28).

Figure 1. Adjusted odds ratios estimating the effect of pain on (A) intention to vote, (B) volunteer, (C) discuss politics on social media, and (D) donate across three sequential logistic regressions.

[insert Fig. 1]

*All odds ratios are relative to individuals with no pain. The error bars are 95% confidence intervals. Model 1 adjusted for demographic factors including age, gender, race, and having at least one child under the age of 18 in the household. Model 2 additionally controlled for socioeconomic factors (educational attainment, financial hardship, and employment status). Model 3 further adjusted for political factors (political orientation and political interest).

3.3 Secondary Models

The regressions modeling past political participation showed similar patterns for voting, donating, and volunteering (Supplementary Tables 5–7). The only substantive differences were that HICP remained negatively associated with voting in the fully adjusted model (OR = 0.78), and respondents with LICP were 23% more likely than those with no chronic pain to have made a political donation in the prior year (OR = 1.23). Individuals with HICP were significantly more likely to have rallied or protested in the prior 12

months than those with no chronic pain, but the association was no longer statistically significant after adjustment for political interest (Supplementary Table 8).

4. DISCUSSION

This study examined whether chronic pain is associated with political participation intentions among American adults and whether political interest helps explain these relationships. Our findings suggest that associations between chronic pain and political participation vary across participation forms rather than reflecting uniform political disengagement. Our findings partially support our expectations. While chronic pain was not consistently associated with lower political participation overall, associations varied substantially across participation forms. Respondents with high-impact chronic pain (HICP) demonstrated lower intentions to vote and donate in demographic-adjusted models, although these associations were attenuated after accounting for socioeconomic characteristics. In contrast, respondents with low-impact chronic pain (LICP) were consistently more likely to report intentions to discuss politics on social media. Political interest did not appear to explain these relationships. Together, these findings suggest that chronic pain may shape how individuals participate politically rather than whether they participate at all. More broadly, our results reinforce the importance of conceptualizing political participation as multidimensional, with different forms of participation involving distinct resource demands, accessibility barriers, and opportunities for engagement (Alvarez et al., 2017; Dalton, 2008; Oser, 2021; van Deth, 2014).

These findings contribute to a growing literature examining the relationship between health and political participation. Much of the existing research has documented lower voter turnout among individuals in poorer health, often interpreted through resource-based models of political participation (Denny & Doyle, 2009; Mattila et al., 2013; Pacheco & Fletcher, 2015; Schur et al., 2002). According to this perspective, health conditions may constrain participation by limiting physical mobility, energy, financial resourses and access to social networks that facilitate political mobilization (Brady et al., 1995; Verba et al., 1995). Our findings partially align with this literature. Respondents with high-impact chronic pain (HICP) initially demonstrated lower intentions to vote and donate to political campaigns, although these associations were attenuated after adjustment for socioeconomic characteristics. This attenuation suggests that socioeconomic disadvantage may play an important role in shaping political participation among individuals experiencing more severe and functionally limiting pain. Respondents with HICP in our sample were more likely to experience unemployment, retirement, financial hardship, and lower educational attainment, all of which are well-established predictors of lower political participation (Brady et al., 1995; Verba et al., 1995).

At the same time, our findings also support emerging scholarship suggesting that health conditions may alter patterns of participation rather than simply suppress it (Bernardi et al., 2025; Kirbiš et al., 2023; Soderlund & Rapeli, 2015). The clearest example in our analysis was political discussion on social media. Relative to respondents with no chronic pain, individuals with LICP were consistently more likely to report intentions to discuss politics on social media, and this association remained robust across all

model specifications. One possible explanation is that social media discussion represents a comparatively accessible form of political participation for individuals experiencing chronic pain. Unlike volunteering or donating, online political discussion does not require physical mobility, sustained organizational involvement, or financial contribution. Individuals experiencing chronic pain may therefore remain politically engaged through forms of participation that are more flexible and compatible with pain-related limitations in mobility, energy, or daily functioning (Breivik et al., 2006; Goldberg & McGee, 2011). In this sense, our findings support theories emphasizing that citizens engage politically through diverse repertoires of political action rather than through a single mode of participation (Dalton, 2008; Ekman & Amnå, 2012; Oser, 2021).

Our findings also suggest that chronic pain may function as a politically salient life experience. Chronic pain is persistent, often difficult to treat, and closely connected to interactions with health care systems, workplace policies, and social support structures (Cohen et al., 2021; Zajacova et al., 2023). Individuals experiencing chronic pain may therefore feel a stronger sense of personal stake in political and policy issues related to healthcare access, disability policy, or social welfare (D'Eer et al., 2022; Tan, 2025). While we did not find evidence that chronic pain was associated with higher levels of general political interest, individuals experiencing chronic pain may nonetheless feel compelled to remain politically engaged in ways that align more closely with a sense of duty, given their physical disabilities and socioeconomic constrains. This interpretation is broadly consistent with research suggesting that health experiences can shape political engagement by influencing individuals' policy concerns, social experiences, and perceptions of political relevance (D'Eer et al., 2022; Gollust & Rahn, 2015; Tan, 2025).

Importantly, political interest did not appear to explain observed associations between chronic pain and political participation. Political interest is widely recognized as a central predictor of political participation (Verba et al., 1995), and previous research suggests that health conditions may influence participation by shaping political interest or efficacy (Pryor, 2023). In our analyses, however, levels of political interests differed only modestly across pain groups, and associations between chronic pain and participation remained largely unchanged after adjustement for political interest. In only one case, previous rally or protest behaviour, did including political interest reduce the significance of reported pain. These findings suggests that chronic pain may shape political participation less through generalised political motivation and more by the practical realities and lived experiences associated with managing chronic health conditions.

Taken together, these results emphasize the importance of conceptualizing political participation as a multidimensional phenomenon. Political participation encompasses a wide range of activities, including both manifest participations, such as voting, donating, and volunteering, and more latent forms of engagement such as political discussion and attentiveness to political issues. Studies focusing exclusively on the act of voting risk overlooking important ways in which individuals remain politically engaged despite constraints that may limit participation in political processes (Dalton, 2008; Ekman & Amnå, 2012). Our findings suggest that individuals experiencing chronic pain may remain politically attentive and engaged even when their participation takes different forms.

From a political behavior perspective, these findings have implications for understanding inequalities in democratic participation. Because chronic pain is widespread and socially patterned (Limani & Zajacova, 2024; Rikard et al., 2023), differences in participation across political activities may influence whose experiences and policy priorities are most visible in political processes. Prior research demonstrates that inequalities in political participation can translate into unequal political influence and policy responsiveness (Blakely, 2001; Brady et al., 1995; Pacheco & Fletcher, 2015). If individuals experiencing chronic pain participate differently across political activities, this may shape how health-related concerns and policy priorities are articulated within democratic policies.

Several limitations should be considered when interpreting these findings. First, the cross-sectional design limits causal inference and prevents assessment of temporal ordering between chronic pain and political participation. Second, measures of intended political participation may not fully translate into realized political behavior, although political intentions are commonly used as predictors of subsequent engagement. Third, despite adjustment for a broad range of demographic, socioeconomic, and political factors, unobserved confounding remains possible. Factors such as political efficacy, personality traits, advocacy network involvement, or healthcare experiences may influence both pain experiences and political participation. Finally, citizenship status was not measured in the survey, limiting our ability to distinguish political disengagement from ineligibility to vote or account for potential differences in comfort with political engagement among some respondents.

5. CONCLUSIONS

To our knowledge, this is the first population-based study to examine how chronic pain, including distinctions between low and high-impact chronic pain is associated with political participation in the United States. By focusing on chronic pain as a specific and graded health experience, this study extends research on health and political behavior beyond broad indicators such as self-rated health, disability, or chronic illness. Our findings suggest that chronic pain may shape how individuals participate politically rather than whether they participate at all.

More broadly, the results highlight the importance of considering health as a factor that may influence citizens' capacity to participate in democratic processes. They also underscore the value of examining multiple forms of political participation, as focusing solely on voting may overlook important ways individuals remain politically engaged despite health-related constraints. Because chronic pain is widespread and socially patterned, differences in political participation associated with pain may have broader implications for democratic voice, representation, and the visibility of health-related policy concerns within political processes.

Declarations

Author Contribution

ML: literature review, conceptualization, methodology, interpretation of findings, writing original draft, figures, tables. GF: conceptualization, methodology, data analysis, visualization, writing—review and editing.LS: conceptualization, data interpretation, methodology, writing—review and editing.AZ: conceptualization, writing—review and editing.All authors reviewed the manuscript, provided feedback, approved the final version, and agreed to its submission.

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Table 1

Table 1 is available in the Supplementary Files section.

Figures

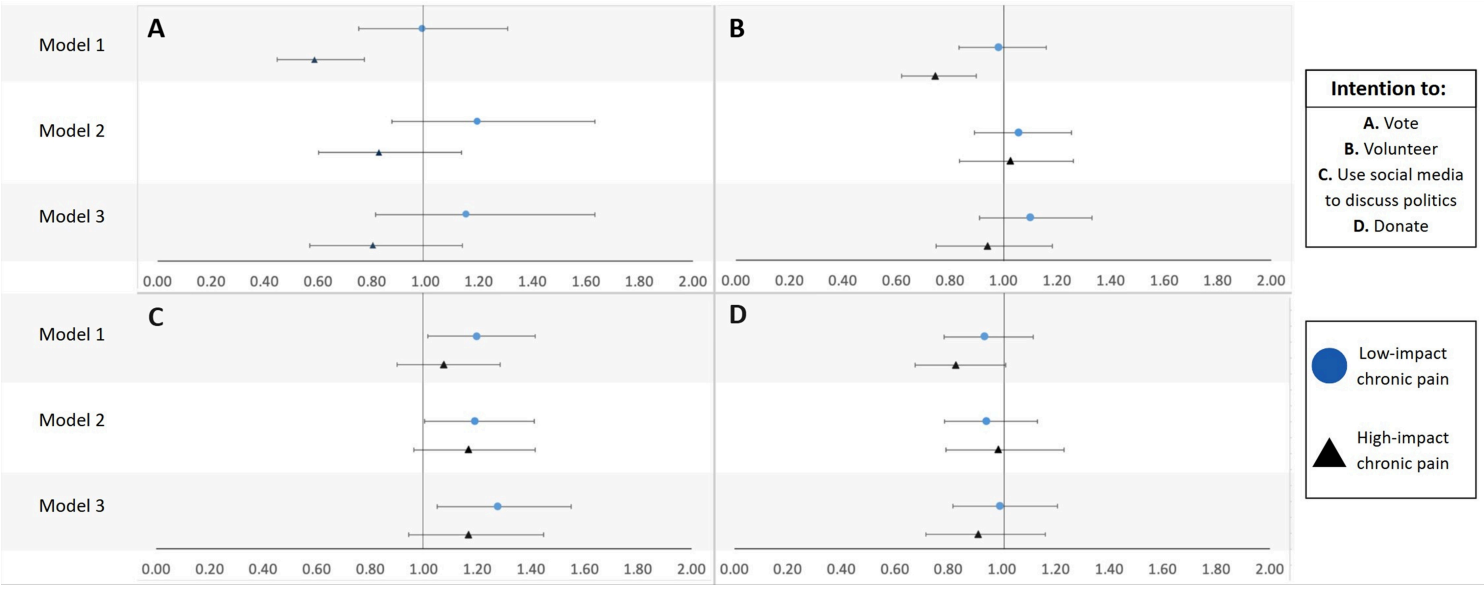


Figure 1

Adjusted odds ratios estimating the effect of pain on (A) intention to vote, (B) volunteer, (C) discuss politics on social media, and (D) donate across three sequential logistic regressions.

*All odds ratios are relative to individuals with no pain. The error bars are 95% confidence intervals. Model 1 adjusted for demographic factors including age, gender, race, and having at least one child under the age of 18 in the household. Model 2 additionally controlled for socioeconomic factors (educational attainment, financial hardship, and employment status). Model 3 further adjusted for political factors (political orientation and political interest).

Supplementary Files

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- Table1.docx
- SupplementaryAppendixTablesS18.docx