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Political orientation, political environment, and health behaviors in the United States

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ABSTRACT

Political orientation (Republican/Democrat and conservative/liberal) and political environment (geo-spatial political party affiliated voting patterns) are both associated with various health outcomes, including mortality. Modern disease etiology in the U.S. suggests that many of our health outcomes derive from behaviors and lifestyle choices. Thus, we examine the associations of political orientation and political environment with health behaviors. We used the Annenberg National Health Communication Survey (ANHCS) data, which is a nationally representative U.S. survey fielded continuously from 2005 through 2012. The health behaviors studied include health information search, flu vaccination, excessive alcohol consumption, tobacco consumption, exercise, and dietary patterns. Democrats/liberals had higher odds of cigarette smoking and excessive drinking compared to Republicans/conservatives. Whereas, Republicans/conservatives ate fewer servings and fewer varieties of fruit and vegetables; ate more high fat and processed foods; and engaged in less in-depth health information searches compared to Democrats/liberals. Also, conservatives had lower odds of exercise participation than liberals; whereas Republicans had lower odds of flu vaccination. Greater Republican vote share in the 2008 and 2012 presidential elections at the state and/or county levels was associated with higher odds of flu vaccination and smoking cigarettes and lower odds of avoiding fat/calories, avoiding fast/processed food, eating a variety of fruits and vegetables, and eating more servings of fruit. We use the distinct cognitive-motivational styles attributed to political orientation in discussing the findings. Health communication strategies could leverage these relationships to produce tailored and targeted messages as well as to develop and advocate for policy.

1. Introduction

In the U.S., political orientation and political environment are related to various health outcomes (Bor, 2017; Kondrichin and Lester, 1998; Pabayo et al., 2015; Shin and McCarthy, 2013; Subramanian and Perkins, 2009). Here, "political orientation" is used as an individual (micro) level term to refer to: (1) *political party affiliation* (i.e. association with Republican or Democratic parties) and (2) *political ideology* (i.e. affinity toward philosophical themes, such as resistance to change, in-group loyalty, and acceptance of hierarchy, that delineate liberals and conservatives). "Political environment" is used as an ecological (macro) level term to refer to the ideological and policy milieu of geographical regions within the country, often measured by political party vote share. At the individual level, Republicans report better self-rated health and experience lower mortality rates compared to Democrats; whereas, conservatives, compared to liberals, experience higher mortality rates (Pabayo et al., 2015; Subramanian and Perkins, 2009). At the ecological level, voting districts with a higher Republican vote share were associated with lower mortality rates during the 1980 presidential election (Kondrichin and Lester, 1998); whereas, between 1980 and 2014, counties experiencing decline or stagnation in longevity saw an increase in Republican vote share between 2008 and 2016 (Bor, 2017). And, in 2012, county-level support for the Republican presidential candidate was positively associated with obesity prevalence (Shin and McCarthy, 2013).

These studies relate political orientation and political environment with morbidity and mortality. Modern disease etiology in the U.S. suggests that much of our morbidity and mortality derive from health behaviors and lifestyle choices to a greater extent than medical care, environmental conditions, social circumstances, or genetics (Schroeder, 2007; McGinnis et al., 2002; McGinnis and Foege, 1993; Mokdad et al., 2004; Danaei et al., 2009). Because political orientation and political environment are associated with morbidity and mortality, we hypothesize that these predictors could also be associated with health-related behaviors.

Our proposal that political orientation is associated with various

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health behaviors conforms with previous findings relating political orientation to other non-voting attitudes and behaviors. For example, conservatives and liberals prefer different types of art, jokes, films, music, and food (Carney et al., 2008; Glasgow et al., 1985; Wilson, 1990; Wilson et al., 1973; Wilson and Patterson, 1969; Jost et al., 2008). They differ in the number and variety of books and CDs they possess (Carney et al., 2008). They differ in their appreciation of poetry, jazz, tattoos, high school, fishing, and watching television (Jost et al., 2008). They differ in the décor; display of maps, calendars, and flags; and amount of cleaning supplies, stamps, and stationary occupying their living and office spaces (Carney et al., 2008). They differ in their patronage of institutions such as fraternities, sports, and the military (Jost et al., 2008). Political orientation relates to differences in acceptance of new technology, work innovation, task variety, and job insecurity as well as complex, ambiguous, unfamiliar, and abstract representations in music, poems, paintings, and literary texts (Jost et al., 2003). Conservatives and liberals also respond differently to disgust, fear of death, mortality salience, perceptions of a dangerous world, and threatening messages and words; and they value sensation-seeking, stimulation, and imaginativeness differently (Jost et al., 2003; Inbar et al., 2009).

Our proposal that health behaviors differ by political environment already has empirical backing in the example of tobacco; conservative areas of the country have lower cigarette taxes and/or lenient smoke-free air laws as well as higher rates of smoking behavior (Adams et al., 2012; Fox et al., 2017). Other health behaviors may be similarly affected since Republican and Democratic politicians differ in their support for many policies affecting health behavior. For example, states are less likely to introduce a bill and enact social policies addressing childhood obesity if the governor is a Republican or if the legislature is controlled by Republicans (Cawley and Liu, 2008; Welch et al., 2012).

The goal of this study is to examine the independent associations of political orientation and political environment with health behaviors. This line of research offers potentially helpful insights for public health campaigns. With this information, health communicators could take advantage of the vast research revealing ideologically distinct cognitive-motivational styles (Jost et al., 2003; Haidt, 2012; Hibbing et al., 2014; Lakoff, 2010; Tuschman, 2013) to understand partisan health behavior patterns and to tailor public health messages relevant to the needs of specific political orientations. Messages can be strategically deployed in blue or red areas of our increasingly, politically-segregated landscape (Bishop and Cushing, 2009; Motyl, 2016; Motyl et al., 2014). Research also exists on the types of language preferred by conservatives and liberals, which can be used in designing messages (Cichocka et al., 2016). Additionally, understanding health behavior adoption at both the individual and ecological political levels could inform strategies in crafting and advocating for public health policy (Matthews et al., 2017).

2. Methods

We obtained a nationally representative adult sample from the Annenberg National Health Communication Survey (ANHCS), which was fielded *continuously* from 2005 through 2012 (Annenberg Schools for Communication, 2013). The survey was created by the Annenberg Schools for Communication. GfK Custom Research recruited participants and administered the survey; they produced an online panel designed to be representative of the entire U.S. adult population using a combination of random digit dialing (RDD) and address-based sampling (ABS) from the U.S. Postal Service's Delivery Sequence File. Households without the required technology were provided a free home computer and internet access. Using RDD, excluded phone numbers consisted of disconnected and non-residential telephone numbers and those with no directory listing. Use of ABS permitted sampling of 98% of US households and better aligned the sample with the US population demographics.

2.1. Dependent variables

The health behaviors examined are: health information search, flu vaccination, excessive alcohol consumption, tobacco consumption, exercise, and five dietary patterns. Larger values of these dependent variables correspond to doing the behavior or doing more of the behavior.

Health information search: Indicates how deeply participants search for information about a *specific* health concern or medical problem over the past thirty days: “a lot,” “some,” “a little,” or “not at all.” These searches could use any of seven sources: television, daily newspaper, general magazines, medical magazine, internet, family and friends, and doctor.

Flu vaccination: Indicates whether or not the participant obtained the flu vaccine.

Excessive alcohol consumption: Indicates whether or not, in the past thirty days, the participant had 5 or more alcoholic drinks in one day.

Tobacco consumption: Indicates whether or not, in the past seven days, the participant had smoked any cigarettes.

Exercise: Indicates whether, in an average week, the participant exercises “Never,” “Less than once a week,” “1–2 times a week,” “3–5 times a week,” or “6 or more times a week.”

Diet: Five items capture dietary patterns as experienced in the past week – whether the participant (1) avoided food high in fat and/or calories, (2) avoided fast, processed, canned, or frozen foods, and (3) ate a variety of fresh fruits and vegetables, “Rarely or none of the time (less than 1 day),” “Some or a little of the time (1–2 days),” “Occasionally or a moderate amount of time (3–4 days),” “Most or all of the time (5–7 days)” – and whether the participant ate or drank (4) fruit, fruit juice, and fresh, frozen or canned fruits and (5) green salad, vegetables, vegetable juice, and fresh, frozen or canned vegetables “Less than one serving per day,” “1 serving per day,” “2 servings per day,” “3 servings per day,” “4 servings per day,” “5 or more servings per day.” The five dietary behaviors were analyzed separately as they each tap into distinct dietary recommendations.

2.2. Independent variables

Our goal is to examine the independent relationships of political orientation at the individual level and political environment at the ecological level with health behaviors. Political orientation is operationalized using both political party affiliation (Republican versus Democrat) and political ideology (liberal versus conservative). The ANHCS asks participants if they identify as Strong Republican/Democrat, Not strong Republican/Democrat, Leans Republican/Democrat, and Independent, Undecided, Other. Respondents were also asked whether they saw themselves as Extremely Liberal/Conservative, Liberal/Conservative, Slightly Liberal/Conservative, or Moderate/middle of the road.

We performed two analyses for each health behavior, one examining political party affiliation and the other examining political ideology. Both analyses include political environment. In order to clearly contrast left and right political orientations, observations that designate their political orientation as “Not strong,” “Leans,” “Slightly,” “Independent,” “Undecided,” and “Other” are assigned to a middle category. Strong Democrats serve as the reference group for the political party affiliation models for which the comparison groups include strong Republicans and independents (composed of: not strong Republican/Democrat, leans Republican/Democrat, and independent, undecided, other). Liberals (composed of: extremely liberal and liberal) serve as the reference group for political ideology models for which the comparison groups include conservatives (composed of: extremely conservative and conservative) and moderates (composed of: slightly liberal/conservative, or moderate/middle of the road).