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... take up thy bed, and vote: Measuring the relationship between voting behaviour and indicators of health

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**“...Take up thy Bed, and Vote”
Measuring the Relationship between Voting Behaviour and
Indicators of Health**

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“...Take up thy Bed, and Vote”

Measuring the Relationship between Voting Behaviour and Indicators of Health*

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Abstract

Individuals experiencing poor health are less likely to vote at election time, despite being the ones most affected by health policies implemented by the successful party. This paper investigates the relationship between health and voter turnout and political party choice in the 1979, 1987 and 1997 British general elections using the National Child Development Study (NCDS). It finds that poor health is associated with lower turnout, as the perceived costs of voting, such as the physical and mental effort involved, are greater than the perceived benefits, which are derived from the policy implications of the election outcome. In addition, the subset of unhealthy individuals who do vote at election time generally support Labour, as such voters are more likely to utilise the NHS and hence support parties that advocate public provision of health services. Given the low participation rates of the unhealthy, a political party which formulates an attractive policy package aimed at such potential voters could therefore mobilise a previously untapped source of the electorate.

Keywords: Health Status, Voter Turnout, Political Party Choice

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I. Introduction

Individuals experiencing poor health are more affected by changes in health policy than those who are well. Therefore one might expect the unhealthy to be more likely to turnout to vote at election time, since the health policies implemented by the successful party will influence them directly. It is important to investigate if this is indeed true, given that poor health may also act as a barrier to voting. Unhealthy non-voters, therefore, represent an untapped source of electoral support. If a political party formulates an attractive policy package aimed at the unhealthy it could succeed in mobilising a whole new set of voters.

While a number of studies have documented the relationship between health and voting behaviour at a constituency level,^{1 2} none to date have investigated whether this relationship persists at an individual level, that is, whether an individual's health influences their voting behaviour. This paper fills this gap by examining the association between health and two aspects of voting behaviour, participation in general elections and political party choice. Our indicators of health include a self-assessed measure of general health, an index of mental health and smoking and alcohol consumption.

It is likely that health status influences both voter turnout and political party choice. As voting requires a physical, and to some extent, a mental effort, poor health is likely to reduce the probability of voting. A study of voter turnout among the disabled finds that those with spinal cord injuries are 10% less likely to vote compared to otherwise similar individuals.³ Studies investigating the direct link between health and voter turnout within the general population are few, and have typically relied on aggregate level data. For example, a study of mortality rates and turnout at a constituency level in Britain, finds a negative correlation between the two.¹ Similar results have been found in a study of life expectancy and turnout in Russia, and self-reported general health and state level voter turnout in the US.^{4 5}

Health status may also influence political party choice. Voters with poor physical and mental health are likely to utilise health services, therefore, they will benefit from supporting a party which is favourable to the NHS. Two previous studies, which have

examined mortality and voting behaviour in Britain, find that constituencies that support Labour have higher mortality rates than constituencies that support the Conservatives.^{1 2} These results have been replicated in studies of America and Russia.^{6 7} In addition, a positive relationship is found between dissatisfaction with health, adverse lifestyle factors and support for left-wing parties in Ireland.⁸ Similarly, a study of outpatients with chronic mental health in Germany reveals that such individuals tend to support left-wing parties.⁹ Political party choice, therefore, is an indicator of voters' social policy preferences.⁸

This paper examines whether the relationship between health and voting behaviour found at the aggregate level can be replicated at the individual level. We relate health status to electoral participation and political party choice over the course of three British elections.

II. Data and Methods

The data for the analysis is based on the National Child Development Study (NCDS) which follows a cohort born in 1958. Our two variables of interest are voter turnout and political party choice in the 1979, 1987 and 1997 elections. We restrict party choice to support for the Conservatives, Labour and the Liberal Democrats (for comparability across elections this includes support for the Liberal party, Social Democratic Party, and the Alliance). The first health variable is a self-assessed measure of general health indicating whether the respondent reported excellent/good health, or alternatively, poor/fair health. The second variable, reflecting mental health, is the "malaise inventory score" developed by Rutter *et al* and is based on the Cornell medical index.¹⁰ This self-completed scale is derived from summing 24 psychological and somatic items, such as anxiety, sleeping problems, and irritability.¹¹ A score above 7 is associated with a high risk of psychiatric morbidity. The third health variable indicates whether the respondent is a smoker or not, and the final indicator measures the respondent's alcohol consumption. The measure of alcohol consumption is derived from the number of alcoholic drinks consumed in the week prior to the survey. The total number of units of alcohol consumed is found by summing the number of units of beer (1 pint=2 units), wine (1 glass of wine=1.5 units), spirits (1 measure=1 unit) and martini/sherry drinks (1 measure=1 unit) consumed in a week.

Based on this, a variable indicating whether the respondent (1) abstains from drinking, (2) is a moderate drinker or (3) is a heavy drinker, is derived. Moderate drinking is defined as consuming 14 or less units per week for a woman and 21 for a man, while consuming above these units corresponds to excess drinking.

As turnout is a binary outcome a probit regression model¹² is estimated for each election, with the four health indicators as covariates, in addition to a range of demographic and socio-economic controls. As our measure of political party choice is categorical, that is, the choice between Conservative, Labour or Liberal Democrats, we estimate a multinomial logit model¹². The empirical analysis is estimated using Stata, version 9. The tables report marginal effects: the effect of a unit change in the covariates on the probability of a given outcome.

III. Results

Table 1 reports the results of the voter turnout model for each election. Controlling for additional socio-economic and demographic factors, poor general health, poor mental health, smoking and abstaining from drinking are all associated with lower turnout. Individuals with poor general health are about 4% less likely to vote both in the 1979 and 1997 elections. Similarly, smokers are 4% less likely to vote in the 1979 and 1997 elections and 3% less likely to vote in the 1987 election compared to non-smokers. There is also a negative relationship between mental health and turnout in the first two elections. While this effect varies slightly over time, it is quantitatively rather small: a one standard deviation increase in the malaise score is associated with at most a 1.5% lower probability of voting. In addition, moderate drinkers are more likely to vote in all three elections than non-drinkers, while heavy drinkers have a greater probability of voting in the 1979 and 1997 elections.

Table 2 reports the results of the political party choice model. Vote choice across all three elections appears to be influenced by health. While overall the unhealthy are less likely to turnout to vote, the subset of those who do vote consistently show less support for the Conservatives. This generates higher support for the other main parties, particularly Labour. Similarly, those with poor mental health show less support for the Conservatives and greater support for Labour in each election, while

again having little impact on support for the Liberal Democrats. Being a smoker consistently increases support for Labour in each election, while it has the opposite effect on support for the Conservatives in 1987 and 1997. Smokers are less likely to support the Liberal Democrats in all three elections. The amount of alcohol consumed has no impact in 1979, however both moderate and heavy drinking are positively associated with support for the Conservatives in the latter two elections and negatively associated with support for Labour in 1997 and the Liberals in the 1987 and 1997 elections. Additional analysis, not shown here, reveals that Labour voters are associated with beer drinking, while Conservatives are associated with wine and spirit drinking.

IV. Discussion

Electoral participation may be viewed as one form of social capital. A number of studies have noted the importance of social capital for generating both community and individual well-being.^{13 14 15} Understanding the relationship between public health and political participation is therefore important. Previous work which has examined the relationship between health and voting behaviour has mainly relied on aggregate data at the constituency level. The type of health measures available at this level are quite restrictive, for example, most studies use either mortality rates or life expectancy, which may be viewed as extreme measures of ill health. In addition, some argue that such aggregate studies may suffer from the ecological fallacy.¹ This paper develops the literature by using individual level survey data to examine mental and physical health and two key determinants of health: smoking and alcohol consumption.

Our results are consistent with the hypothesis that poor health is a contributory factor to individuals not engaging in political participation. As turnout among those with ill health is lower than those in good health, this suggests that the perceived cost of voting for unhealthy individuals, in regards the physical and mental effort involved in going to the polls, is greater than the perceived benefits of voting, which are derived from the policy implications of the election outcome. This may indicate that the main political parties do not differ enough in their policy positions on health to induce the unhealthy to turn out to vote for one party over another. If there were significant

differences in the parties' health policies, then the perceived benefits of voting may exceed the perceived costs and turnout among the unhealthy would be greater. Alcohol consumption is an exception to the bad health/low turnout hypothesis, in that *higher* consumption predicts a higher probability of voting. It is unclear why this is so. One might speculate that non-drinkers are, on average, less sociable and hence less likely to engage in pro-social activities such as voting. Without more detailed data on peoples' drinking behaviour, we cannot test this hypothesis.

For party choice we find that those characteristics that reduce the probability of turning out to vote increase the probability that an individual votes for Labour over the Conservatives. This confirms previous work that finds a positive relationship between ill health and support for left-wing parties. We also find that smokers are more supportive of Labour. That smokers identify with left-wing parties could reflect the traditional stereotype of working class Labour voters, however as we control for social background it appears that smoking has an independent influence. Our results therefore imply that voters with poor physical and mental health have different policy preferences to the healthy, specifically, unhealthy voters tend to favour parties that advocate greater public provision of health services. Indeed, further analysis of the data shows that Conservative voters are more in favour of private health insurance than Labour voters. As with turnout, alcohol is an exception to this principle: the more you drink the more likely you are to be a Conservative voter. However this is true for moderate (as well as heavy) levels of drinking which are not necessarily associated with poor health. That the Conservatives derive greater support from drinkers compared to smokers is unsurprising, as during the period 1979-1997 while the Conservatives were in power, taxes on cigarettes consistently rose, while taxes on alcohol either fell or remained unchanged.¹⁶

Voting is one barometer of the health of civil society, it is therefore important to know the extent to which individuals' health constrains their political behaviour. This paper shows that poor health leads to lower electoral participation, which suggests that the interests of the unhealthy are less likely to be represented in government. A political party which succeeds in attracting the unhealthy non-voters into the electorate, by presenting a suitably targeted policy package, could help to minimise this inequality.

Table 1 Modelling Voter Turnout

	1979	1987	1997
Poor General Health	-0.039** (0.017)	-0.013 (0.014)	-0.046*** (0.013)
Poor Mental Health	-0.005*** (0.002)	-0.006*** (0.002)	-0.003** (0.001)
Smoker	-0.041*** (0.010)	-0.031*** (0.010)	-0.039*** (0.010)
Moderate Drinker	0.027** (0.011)	0.035*** (0.010)	0.045*** (0.011)
Heavy Drinker	0.025* (0.013)	0.014 (0.013)	0.028** (0.012)
Observations	11217	8638	8801

Note: All models estimated using probit. The following variables are included but not reported – region of residence, gender, age left full-time education, whether stayed in school beyond 16, parental social class at birth and whether the respondent is married, has children, is unemployed or self-employed at the time of each election. Marginal effects and standard errors (in parentheses) are reported. Significance levels: * : $p < 0.1$. ** : $p < 0.05$. ***: $p < 0.01$

Table 2 Modelling Political Party Choice

	Conservatives	Labour	Liberal Democrats
		1979 Election	
Poor General Health	-0.069*** (0.024)	0.044* (0.025)	0.025 (0.018)
Poor Mental Health	-0.010*** (0.003)	0.009*** (0.003)	0.002 (0.002)
Smoker	-0.016 (0.013)	0.040*** (0.014)	-0.023** (0.009)
Moderate Drinker	0.020 (0.016)	-0.021 (0.017)	0.001 (0.011)
Heavy Drinker	-0.009 (0.019)	0.018 (0.020)	-0.009 (0.013)
Observations		7076	
		1987 Election	
Poor General Health	-0.093*** (0.022)	0.075*** (0.022)	0.019 (0.017)
Poor Mental Health	-0.009*** (0.003)	0.008*** (0.002)	0.002 (0.002)
Smoker	-0.067*** (0.015)	0.098*** (0.015)	-0.031*** (0.011)
Moderate Drinker	0.039** (0.016)	-0.012 (0.015)	-0.027** (0.011)
Heavy Drinker	0.049** (0.021)	-0.005 (0.020)	-0.044*** (0.013)
Observations		6353	
		1997 Election	
Poor General Health	-0.065*** (0.017)	0.051*** (0.019)	0.014 (0.014)
Poor Mental Health	-0.004* (0.002)	0.006*** (0.002)	-0.002 (0.001)
Smoker	-0.038*** (0.014)	0.055*** (0.015)	-0.017* (0.010)
Moderate Drinker	0.038** (0.016)	-0.039** (0.017)	0.001 (0.011)
Heavy Drinker	0.061*** (0.018)	-0.036* (0.019)	-0.025** (0.012)
Observations		6410	

Note: All models estimated using multinomial logit. The following variables are included but not reported – region of residence, gender, age left full-time education, whether stayed in school beyond 16, parental social class at birth and whether the respondent is married, has children, is unemployed or self-employed at the time of each election. Marginal effects and standard errors (in parentheses) are reported. Significance levels: * : $p < 0.1$. ** : $p < 0.05$. ***: $p < 0.01$

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