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Abstract
Health issues are an integral part of the political agenda in Ireland. Yet no study to date has examined the direct impact of health concerns on political outcomes. This study investigates the impact of health, both physical and psychological, and perceptions of the health service on voter turnout in Ireland using the European Social Survey in 2005. The results show that individuals with poor subjective health are significantly less likely to vote in a General Election. Dissatisfaction with the health service is also associated with a lower probability of voting. However these effects interact: those with poor health and who are dissatisfied with the health service are more likely to vote. Psychological well-being has no effect on voter turnout. The health effects identified in this study are large. Therefore, given the PR electoral system in Ireland, small changes in voter turnout could have dramatic consequences for electoral outcomes.

Keywords: voter turnout, self-rated general health, WHO-5

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Introduction

Health issues are an integral part of the political agenda in Ireland. There is significant public concern about hospital waiting lists, the A&E 'crisis' and hospital closures. These negative perceptions are corroborated by the Euro Health Consumer Index for 2006 which ranks Ireland 25th out of 26 European countries in regards the quality of the health system.[1] Few studies to date have quantified this link between health issues and voting behaviour. A study of mortality rates and turnout in Britain finds a negative correlation between the two.[2] Similar results have been found in studies of Russia and the US.[3,4] These studies however were conducted at a constituency level. An individual-level analysis using British cohort data finds that poor general and mental health are associated with lower turnout.[5] The literature also identifies a relationship between poor health and left-wing voting.[6,7,8] The only study of this nature in Ireland finds a positive relationship between dissatisfaction with health, adverse lifestyle factors and support for left-wing parties.[9] This study therefore presents the first analysis of the impact of individual health and dissatisfaction with the health system on voter turnout in Ireland.

Methods

The data used is the second wave of the European Social Survey, collected in 2004/05.[10] This is a random sample of individuals over the age of 15. The response rate in Ireland was 59.7% giving a sample of 2286. The sample available for the data analysis is smaller due to missing values. The dependent variable is whether the individual voted in the previous General Election - the 2002 election in this case.

The three variables of interest are a measure of subjective health, a measure of well-being and the respondent's opinion of the state of the health service. The self-assessed measure of general health indicates whether the respondent reported excellent/good health, or alternatively, poor/fair health. 15.6% of the sample has bad health. Psychological health is measured by the World Health Organisation Well-Being Index (WHO-5) scale, which ranges from 0 to 25 and has been shown to perform well in screening for depression.[11] A score below 13 is used as an indication for further testing for depression. The mean for the sample was 17. Respondents were also asked their opinion of the health service, from 0 (extremely bad) to 10 (extremely good). A binary variable equalling one was created if they gave an answer between 0 and 4 (inclusive) as a measure of dissatisfaction with the health service. 57% of the sample are dissatisfied using this criterion.

The control variables included are commonly used in the voting literature: education (measured in years), sex, age (entered as a quadratic), whether an individual is a member of a trade union, a self-assessed measure of political ideology on the left/right continuum from 1 (left) to 10 (right) and a binary indicator of whether the respondent's household is living comfortably on its present income.

Statistical analysis

Maximum likelihood probit models of the probability of an individual turning out to vote are estimated. The sample weights provided are used to correct for over/under sampling. The coefficients reported are the marginal effects. These show the effect of a unit change in the independent variables on the probability that an individual votes. All estimation is with *Stata*, version 9.2 using the *dprobit* routine.

Results

The results are presented in Table 1. Model 1 includes the subjective measure of health and the measure of well-being along with the additional controls. An individual who reports bad health is 6.7% (i.e. 6.7 percentage points) less likely to vote. This coefficient is significant at the 5% level. The effect of good mental health/well-being while positive is not statistically significant. The other coefficients are in line with the international literature in general, voting increase with age but this effect declines as one gets older. More educated people are more likely to vote, with each additional year of education increasing the probability of voting by 1%. Trade union members and individuals placing themselves on the right of the ideological scale also have a greater probability of voting.

Model 2 extends this analysis by including the measure of dissatisfaction with the health service and finds that it is associated with a lower probability of voting. To test whether dissatisfaction with the state of the health service is moderated by one's own personal health situation an interaction between the subjective health variable and the dissatisfaction variable is included in Model 3. There is a well determined positive interaction between the two. Hence for someone who is satisfied with the state of the health service, being in poor health lowers the probability of voting by over 14% whereas if that person is dissatisfied with the health service then the probability is only about 7% lower. The additional covariates remain largely unchanged in the three models.

Discussion

This study finds that personal health and the state of the health service is an important issue for Irish voters. The results show that poor health is a contributory factor to individuals not engaging in political participation. Those experiencing poor health have greater incentives to vote as they are more likely to be users of the health system and favour public provision of health services. Yet poor health may also act as a barrier which affects the voters' physical, psychological and recruitment resources. As voting requires a physical, and to some extent, a mental effort, poor health may impair these resources, consequently making it more difficult to vote. 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.[12]

Adverse health may also decrease turnout as one must concentrate on '*holding body and soul together, not on remote concerns like politics*[13] which will lead to a reduction in psychological resources such as political interest, political efficacy and civic values. Yet this study finds that poor mental health, as characterized by the WHO-5, does not lead to a reduction in voter turnout. This is contrary to a previous study of mental health and turnout in Britain[5], and may be explained by the fact that Ireland scores relatively high on the WHO-5 ratings within Europe (with high scores indicating high levels of well-being).[14] Ill health may also affect voters' recruitment potential. As individuals in poor health are typically more isolated than others they may engage in less social activity and are less likely to be recruited by political activists. Overall given that turnout is lower among those in ill health this suggests that the perceived costs of voting are greater than the perceived benefits for the unhealthy.

The study also finds that individuals who are dissatisfied with the health service are less likely to turn out to vote. This result is somewhat surprising. Rather than being motivated to vote by their unhappiness with the health system, it would appear that some

voters are sufficiently disillusioned with the health service as to discourage them from voting. Yet the inclusion of the interaction term between personal health and dissatisfaction with the health service indicates that this perception is mediated by one's own personal health - if one is healthy and therefore less likely to utilize the health service then the state of the health service may be of less concern. Indeed the results suggest that if one believes their personal health is bad *and* that the health service is bad then these effects combine to increase the probability of voting. This result may also indicate differences in the level of information about the health service. Those in ill health have to utilize health services, and subsequently they have more information about the state of the health service than others. As they are more informed this may act as a trigger for their political mobilisation.

Electoral participation is one form of social capital and the level of voting is an important barometer of the health of civil society. A number of studies have noted the importance of social capital for generating both community and individual well-being.[15,16,17] Understanding the relationship between public health and political participation is therefore important. This study shows that poor health leads to lower voter turnout, which suggests that the interests of the unhealthy are less likely to be represented in government. Unhealthy non-voters, therefore, represent an untapped source of electoral support. 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. This study also finds that the size of these health effects is large. Therefore, given the PR electoral system in Ireland, small changes in voter turnout could have dramatic consequences for electoral outcomes.

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Table 1: Estimates of probit models of voter turnout in 2002 Irish General Election

	1	2	3
WHO-5 measure of well being	0.001	0.001	0.001
	(0.45)	(0.46)	(0.52)
Personal health bad	-0.067*	-0.068*	-0.144**
	(2.19)	(2.21)	(2.96)
Health service bad	~	-0.042*	-0.056
		(2.14)	(2.60)**
Personal health bad * Health service bad	~	~	0.076*
			(1.97)
Education in years	0.01**	0.01**	0.01**
	(2.66)	(2.69)	(2.66)
Household income comfortable	0.021	0.02	0.021
	(1.05)	(1.03)	(1.09)
Male	-0.017	-0.018	-0.018
	(0.89)	(0.95)	(0.97)
Age	0.022**	0.022**	0.021**
	(7.11)	(7.30)	(7.22)
Age squared/100	-0.016**	-0.016**	-0.016**
	(5.11)	(5.34)	(5.23)
Union member	0.042	0.045*	0.045*
	(1.89)	(2.06)	(2.09)
Placement on left-right scale	0.017**	0.016**	0.017**
	(2.79)	(2.73)	(2.79)
Observations	1691	1681	1681

Notes: All models estimated using probit. Marginal effects and robust z statistics (in parenthesis) are reported. * significant at 5%; ** significant at 1%