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Sex, self-interest and health care priorities

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ABSTRACT

In this questionnaire study, individuals were asked to prioritise publicly provided preventive health care services, one of which would be unavailable to them by virtue of their sex. The aim was to establish whether men and women would exhibit different degrees of self-interest when making a constrained choice. Around 1800 subjects from east-central England prioritised three different types of cancer screening. Most also provided written explanations for their rankings and these were classified into explanatory themes. Logistic regressions using socio-demographic and attitude data predicted the type of screening chosen as first priority. The analysis revealed that many men and women did indeed assign similar priorities to the different types of screening and, even when the priorities differed, these were often justified by similar arguments relating to technical aspects of the interventions and to self-interest. However, women were far more likely than men to prioritise a type of screening from which they themselves would benefit directly and the variations in preferences and explanations between the sexes occurred primarily because of differences in other-regarding attitudes. The bias towards screening of females was driven by women's greater worries about the disease in question and by men's "benevolent sexism" with respect to women's wellbeing.

1. Introduction

All developed economies have mixed systems of health care finance and provision, although the exact balance between public and private varies. Whilst the private provision of care is conditioned by market principles, publicly supplied health care is a common-pool resource. The distribution of public health care services amongst a country's citizens is therefore the result of an essentially political decision process, undertaken by the government or its approved agents. The opinions of citizens on priorities for public health care services are by no means homogeneous. Surveys reveal that some people believe the first call on public health care resources should be from those most seriously ill or those with dependants. Others sympathise with the traditional economic rule of selecting a portfolio of services to maximise expected total health benefits in relation to the resources available. Still others attach greater value to the potential health gains of the young than to those of the elderly, or deem it appropriate to sacrifice system efficiency in order to improve the wellbeing of the disadvantaged (Dolan et al., 2005; Shah, 2009).

When individual opinions on rationing and priorities move from general principles to specific circumstances, an element of self-identification and self-interest becomes apparent (Kangas, 1997). Espoused priorities for receiving care are associated with personal circumstances or attitudes: individuals tend to prioritise people like themselves. Thus, an Australian study (Anderson et al., 2011) found that non-smokers were significantly more likely than smokers to attach a lower priority to offering public care services to tobacco smokers. Equivalent results were reported for characteristics such as education level, sexual orientation, drug use, economic value and religious disposition. UK studies have observed that, *inter alia*, more-deprived people are more likely to prioritise care for the more-deprived (Charny et al., 1989), whilst people with children are more likely to prioritise interventions for children (Bowling, 1996). In spite of widespread support for prioritising the young over the old in principle, most elderly people, when asked, are not willing to surrender to younger people their own places on a treatment waiting list (Bowling et al., 2002; Mariotto et al., 1999).

Gender is one of the least-studied personal characteristics in relation to health care priorities, in spite of its ostensible relevance. For example, public health insurance requires individuals to make financial contributions to support care finance and/or provision, thereby entitling them to consume whenever the need arises. Throughout the industrialised world, the balance between contribution and use clearly swings towards women. Men

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receive higher average incomes and, via the tax system, contribute proportionately more to the health insurance funds. However, men consume fewer health care resources each year, on average, over shorter expected lifetimes (Forget et al., 2008; Ladwig et al., 2000; Redondo-Sendino et al., 2006). Whether this *de facto* redistribution in favour of women accords with men's conscious preferences remains a moot point. Furthermore, sex defines an instance where the financial obligation to contribute to public health care and the opportunity to consume must remain forever unmatched. It is employment status and income, not sex, which determine how much a man or a woman contributes to social insurance. Whilst citizens of either sex might reasonably anticipate being treated for cardiac arrest or an ulcer, as necessary, no woman will ever claim for treatment for testicular torsion, nor will any man expect to be funded for a hysterectomy. By its very nature, therefore, a member of the ineligible sex could never prioritise a sex-specific service on the basis of narrow self-interest. Of course, this would not prevent the service being prioritised as a result of motives other than self-interest, were such motives to exist.

This study was designed to assess the symmetry of men's and women's self-interest and other-regarding interest in their choice of publicly provided health care services. Individuals were asked to rank three similar health care services in priority order, one of which they would be unable to access by virtue of their sex. Strict self-interest, we presumed, would lead to each sex attaching the highest priorities to the two accessible services. Priorities departing from sex-defined eligibility would represent a form of self-sacrifice and would therefore be altruistic in the conventional sense (Frey et al., 2010). The results would indicate whether men and women assigned different priorities to each service and whether they offered different explanations for their choices. Thereafter, the analysis of rankings and associated explanations would allow us judge whether the significance of self-interest in rationing differed between the sexes.

Although there is a wealth of experimental literature demonstrating that preferences and choices differ between the sexes, whether one sex is intrinsically more or less altruistic than the other remains uncertain. The studies to date have produced conflicting results, primarily because women's attitudes and behaviours appear to be far more dependent on the specific context and construction of the experiment than are those of men (Croson and Gneezy, 2009). With respect to self-perception, one dictator game experiment exposed an implicit expectation that women's preferences would be driven less by self-interest than would those of men, and that women believed themselves to be the more generous (Aguiar et al., 2009). In such experiments, considerably more attention has been paid to the sex of the perpetrator of the altruism than that of the recipient. The results of another dictator game have suggested that women may be less generous towards another women than they are towards a man (Ben-Ner et al., 2004), although these findings pertain to individuals rather than to the sex in general.

2. Method

Our selection of the health care services to be ranked by our subjects was dictated by a desire to minimise the risk of bias. Ideally, the services in question would be equally familiar and acceptable to both sexes, given that familiarity *per se* can influence declared preference (Salkeld et al., 2000). In addition, a legitimate comparison would require substantive differences between the male and the female service to be small. Accordingly, we selected screening for cancer, a range of services which differ in method but not in purpose. By virtue of the nature of the disease, screening for prostate or testicular cancer is confined to men. Screening for breast, cervical or ovarian cancer would be confined to women, although screening for bowel or lung cancer could be appropriate for either sex. At least some of these screening modalities are available in most real-world social insurance schemes. In terms of meeting our familiarity criterion, a trans-Europe survey (Gigerenzer et al., 2009) has indicated that public confidence in cancer screening is not sex-specific; women and men systematically overestimate the potential benefit from breast and prostate screening, respectively. Although men do not undertake routine breast screening, evidence from Ireland (McMenamin et al., 2005) and Switzerland (Chamot and Perneger, 2002) suggests that they are at least as well informed and supportive of the programme as women. In the UK, the enthusiasm for bowel cancer screening, as judged by the participation rate, is the same for both sexes (Evans et al., 2005).

This study was conducted in east-central England. England's National Health Service (NHS) presently offers citizens zero-price screening for bowel, breast, cervical and prostate cancers, proving us with the opportunity to offer subjects a choice between an existing men-only, a women-only and a sex-non-specific screening service. Of the two services for women, we chose breast as the representative in preference to cervical, for two reasons. First, breast screening targets older people, as do bowel and prostate screening. Second, breast cancer is one of the principal causes of cancer mortality in England, as are bowel and prostate cancers. In contrast, cervical screening is offered to younger women also and, possibly as a result of the long history of screening, cervical cancer is now only a very minor contributor to overall cancer mortality.

Our data were obtained via a survey, using an instrument designed for self-completion without supervision. The instrument was sent to registered patients, aged between 30 and 70 years, of two large general practices. The prioritisation task formed one part of a questionnaire intended to identify men's and women's knowledge of, and attitudes towards, cancer and screening more generally. The overall design of the survey, the socio-demographic characteristics of the sample, and that part of the questionnaire pertaining to knowledge about cancer, have been described more fully elsewhere (Sach and Whynes, 2009). To assess their awareness of cancer, subjects had been asked to identify the most common cancers in the UK. The findings of the study's knowledge component corroborated those of previous investigations. It appeared that neither sex had the monopoly of accurate information about cancer risks or prevalence, although the two sexes did appear to have different varieties of misconception. Both sexes were equally supportive of cancer screening in principle.

The section of the questionnaire relevant to the present study opened with paragraphs describing briefly bowel, breast and prostate cancers and screening. Eligibility for screening by sex was emphasised in each case. Subjects were asked whether they had already been screened for any of these three cancers, whether they would wish to take a test if one was offered, and whether they believed it appropriate for the NHS to offer cancer screening services. The first stage of the rationing task entailed subjects selecting the service to be provided under the supposition that the NHS could afford to fund only one of the three types of screening. The second stage required making a choice assuming that two of the three types of screening were affordable.

Subjects were invited to provide a verbal explanation for their chosen ranking. The written commentaries were subsequently formalised into classes of explanation using the conventional grounded theory approach (Murphy et al., 1998). Acting independently, the two authors analysed large sub-samples of the statements to establish content and theme. Categories of response were refined and debated until a stable classification emerged. Finally, all of the commentaries were classified accordingly. The identity of the cancer in question was deemed irrelevant as a classification criterion; indeed, it was not uncommon to find the same explanation being offered by different people championing different types of screening. Explanations involving references to facts