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Can capabilities be self-reported? A think aloud study

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ABSTRACT

Direct assessment of capability to function may be useful in healthcare settings, but poses many challenges. This paper reports a first investigation of the feasibility of individuals self-reporting their capabilities and the meaning of the responses. The study was conducted in 2010, using think-aloud interviews with participants in the UK. The findings of the study suggest that the majority of participants were able to comprehend questions about their capabilities, felt able to judge their own capability wellbeing and provided responses in line with this judgement. In a number of cases, for example in relation to 'autonomy', participants highlighted that their capability was potentially greater than their functioning. The findings also show varying interpretations of the capability concept, with some participants finding the capability concept unintuitive in relation to specific aspects of life (in particular, 'attachment'). The findings suggest that guiding individuals in the process of identifying their capabilities may be important in generating consistent responses to capability questions.

Introduction

The notion of 'capabilities' as a metric for judging wellbeing is closely associated with the work of Amartya Sen (Sen, 1993, 2009). Capabilities are generally taken to represent the 'real opportunity' to achieve things in life that a person 'has reason to value' (Sen, 2009, p. 231). Nussbaum, another pioneering figure in this area, suggests that capabilities represent 'what people are actually able to be and do' (Nussbaum, 2000, p.5). What constitutes an important capability is open to debate, and is potentially dependent on the context (Sen, 2005). Nevertheless some distinction is drawn between basic capabilities, such as an ability to be well nourished and, higher, more complex capabilities, such as an ability to be socially integrated (Sen, 1993).

The focus on assessing what an individual is able to do, rather than what they end up doing, is intended to incorporate the importance of free choice into welfare assessment. The capability approach, pioneered in human development work (Nussbaum, 2000; Sen, 1987, 1999), has more recently been applied to study health policy issues. In the health field, for example, the capability approach has variously been used to examine the right to die (Anand, 2005), conceptualise health and disability (Law & Widdows, 2008; Mitra, 2006; Ruger, 2010) and understand treatment for, and recovery from, illness (Ferrer & Varela Carrasco, 2010; Hopper, 2007). In health economics there has also been recent interest in using the capability approach to measure the effectiveness and cost-effectiveness of healthcare interventions (Coast, Smith, & Lorgelly, 2008; Cookson, 2005; Entwistle, Firnigl, Ryan, Francis, & Kinghorn, 2012; Grewal et al., 2006; Lorgelly, Lawson, Fenwick, & Briggs, 2010).

To date, most efforts to measure capabilities have focused on measuring functionings (what people actually do) as proxies for what people can potentially do (Chiappero-Martinetti & Roche, 2009). Approaches that measure functioning provide valuable information on wellbeing and can often utilise existing datasets, but are clearly hampered by only being proxy measures of true capability. Recently interest has grown in developing tools that ask individuals to self-report their capabilities. Some of these tools seek to elicit individuals' capability in complex areas, such as 'attachment' or 'enjoyment' in life (Al-Janabi, Flynn, & Coast, 2012; Coast, Flynn, et al., 2008). Others focus on more specific capabilities, for example, Anand et al. (2009) developed over 50 capability indicators from the British Household Panel (now Understanding Society) Survey, which include questions, for example, about individuals' ability to eat certain food and access family planning interventions.

There are some reasons to be sceptical that capabilities can be meaningfully self-reported. Sen himself points out that self-reported data is subject to undesirable adaptation, with a key

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concern being that individuals with lower expectations of life will under-report problems with their wellbeing (Sen, 2002). In general terms, self-reported quality of life data can be subject to 'response shift' (Sprangers & Schwartz, 1999). Response-shift theory suggests that a catalyst, such as a period of poor health, acts on individuals' perceptions of their quality of life in a way that can induce a change in the way that individuals respond to quality of life questions (in addition to any 'real' change in their quality of life). Thus observed differences (between and within individuals) in reported quality of life cannot be attributed solely to 'real' change. A second concern with self-reported data is that individuals misunderstand terms in questionnaires and provide misleading answers as a result. Often, even with relatively simple terms, individuals' interpretations of the meaning can differ from that intended by the researcher (Schober, Conrad, & Fricker, 2004). Even apparently simple terms like 'ill' and 'healthy' can mean different things to different people (Donovan, Frankel, & Eyles, 1993; Mallinson, 2002).

Both these adaptation and comprehension issues are potential problems, whether the aim is to assess capabilities or other conceptualisations of health, quality of life or wellbeing. However, for individuals to provide information on their capabilities requires a judgement to be made by the individuals, *ex ante*, about their ability to do something, rather than *ex post*, about what they currently do. This creates extra complexity in the process of self-reporting the information. Although some piloting of capability questions has been undertaken (Anand et al., 2009; Coast, Flynn, et al., 2008; Coast, Smith, et al., 2008; Lorgelly, Lorimer, Fenwick, & Briggs, 2008), investigations of the response process to capability questions and lay interpretations of the capability concept are lacking. Given the recent interest in assessing capability in healthcare, this study set out to investigate these issues and to draw lessons for future capability measurement work.

Methods

The feasibility of self-reporting capability was examined by studying responses to the ICECAP-A measure (Al-Janabi et al., 2012). The ICECAP-A measure (reported in the Appendix A) is designed so that individuals can self-report their capabilities across five dimensions of life: 'stability', 'attachment', 'autonomy', 'achievement' and 'enjoyment'. The measure provides a useful tool for the study reported here because it is designed for completion by the general adult population (rather than a specific group). As a comparator, participants also completed a commonly-used self-reported health (functioning) measure – the EQ-5D (Brooks, 1996). Think-aloud interviews (Ericsson & Simon, 1980; Willis, 2005), followed by a semi-structured interview, were used to investigate the completion of the capability and health measures with a sample of the general public. Think-aloud interviews are one method from a wider family of cognitive survey techniques used to study the way in which "audiences understand, mentally process, and respond to the materials we present – with a special interest in breakdowns in this process" (Willis, 2005, p. 3). In think-aloud interviews, participants are asked to verbalise their thoughts while completing a task. The verbal information then provides an insight into the process of completing the task; potentially enabling the identification of the point at which any problems are encountered. Think-aloud (or cognitive) interviews have been used to explore the process of task completion, initially in relatively complex, multi-step tasks, such as playing chess or unscrambling an anagram (Willis, 2005), but increasingly in understanding the completion of survey questionnaires (Collins, 2003; Ryan, Watson, & Entwistle, 2009; Westerman et al., 2008). The study reported here study used concurrent think-aloud interviews, whereby participants are required to verbalise their thoughts during task completion. Concurrent think-aloud interviews have been shown to generate more information and insights into decision-making processes than retrospective methods (Kuusela & Paul, 2000).

Sampling

To generate an initial pool of potential participants, an invitation and simple screening questionnaire were sent to 600 randomly-selected individuals from four geographical wards in the UK in 2010. The wards were chosen for maximum socio-economic diversity. The individuals who responded to the invitation (and provided consent) were boosted in the pool by 24 individuals (from the same wards) who had been identified as potential participants in earlier research. No reminders were sent as the initial objective was simply to identify a pool of interested respondents. The resulting pool was purposively sampled on the basis of their responses to the screening questionnaire to ensure diversity in terms of age, sex, ethnicity, health and socio-economic status in the final interview sample. The study protocol was approved by the University of Birmingham's Life and Health Sciences Ethical Review Committee (ERN_08-93).

Interview conduct

Interviews were conducted in November and December 2010. All but one participant was interviewed in their own home. Participants performed two simple 'warm up' think-aloud tasks to familiarise themselves with the technique. In the first task they were asked to count the number of windows in their home (Willis, 2005), thinking out loud as they went. In the second task, participants completed a single five-point question on their general health or life satisfaction. Each participant then received both the ICECAP-A measure and the EQ-5D measure and was asked to complete them thinking out loud as they went (with the order of the questionnaires alternating between participants). Both measures contain five domains referring to an individual's capabilities (in the case of ICECAP-A) and health status (in the case of the EQ-5D). To prompt participants to think aloud, a standard protocol, based on one used by Gilhooly and Green (1996), was then read out, asking participants to verbalise their thoughts during completion of the measures. Participants were not interrupted, but if they were silent for a period of 10 s or more (which was very rare), they were asked to keep thinking aloud. Digital recording was supplemented by written notes on any problems participants encountered or raised while completing the measures.

Following the think-aloud interviews, a semi-structured interview was conducted with each participant. The follow-up interview began with questions to explore the thoughts participants had expressed whilst completing the measures. For example, if participants had queried the relevance of a question, or appeared to struggle to answer it, this issue was explored in the semi-structured interview. After this initial exploration, a topic guide formed the basis for asking further questions to assess whether participants found any aspects of the questionnaire challenging and if so, why. All interviews were transcribed verbatim.

Interview analysis

The think-aloud portion of each interview was divided into 11 segments; 5 representing the items on the ICECAP-A measure and 6 representing the items on the EQ-5D (including the visual analogue scale question). Four raters then coded the transcripts with the aim of identifying segments of the interview where the participant encountered a problem in the process of completing each question. The survey response model proposed by Tourangeau, Rips, and