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Does the Process of Deliberation Change Individuals' Health State Valuations? An Exploratory Study Using the Person Trade-Off Technique

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ABSTRACT

Background: This article explores two gaps in the health state valuation literature: the effect of processes and the stability of health state valuations, and the existence of preexisting valuations. Stability in health state valuations over time depends on whether preferences are considered to be preexisting (axiom of completeness) and therefore can be gathered reliably, or are constructed during consideration and debate. Under the former, changes in revealed preferences are evidence of poor reliability; under the latter, it is a function of the deliberative process. **Methods:** This study explores the effect of deliberation on health state valuations elicited by using the person trade-off technique . Quantitative analysis was used to explore whether respondents changed their responses following deliberation and the impact of change on aggregate health state values. Qualitative methods were used to explore respondents' views on the elicitation process and the impact of deliberation on their responses. **Results:** Following discussion and deliberation, 74% of the participants changed their person trade-off valuations and this did have an impact on the aggregate valuations. The qualitative analysis lends some support to the construction of preference assumption. **Conclusions:** The results from this exploratory study challenge the notion that individuals have preexisting health state preferences and call for further detailed research in this area. Furthermore, it raises concerns over current practices around preference elicitation exercises, which have tended to be carried out as a solitary exercise without allowing time for respondents to reflect and deliberate on their decisions.

Keywords: decision making, deliberation, preferences, utility.

Introduction

In health economics, the techniques used in preference elicitation exercises are based on the underlying assumption that individuals are utility maximizers and that their preferences satisfy the axioms of expected utility theory [1], which is a normative theory of decision making that describes how people should behave under uncertainty and not how they do behave. Expected utility theory is an approximation to behavior under uncertainty that assumes that individuals have fully formed, highly articulated preferences that can be applied to any form of decision making. The expected utility theory axiom of completeness of preferences assumes that when presented with information on a commodity (in this case, health states), individuals can state their preferences for that commodity. Thus, under completeness, an individual can always express a preference or indifference when presented with two or more alternatives. There has been much debate around the extent to which people may not have well-articulated values, especially given the complex task of health state valuation [2–5]. Fischhoff [2] suggests that "individuals lack well differentiated values for all but the most familiar of evaluation questions … in other cases they must derive specific valuations from some basic values through an inferential process."

Preferences and Deliberation

There is growing concern that instant responses to a survey question do not reflect people's preferences as well as considered, reflective responses and that the sharing of information, experience, and deliberation may be a mechanism that allows respondents to make a more considered decision.

> Deliberation refers either to a particular sort of discussion … one that involves the careful and serious weighing of reasons for and against some proposition … or to an interior process by which an individual weighs reasons for and against courses of action. [6]

The purpose of the deliberation process in health state valuation exercises is to help individuals make more "informed" and/or considered decisions. Deliberation differs from debate, with the former helping individuals to reflect on their own and others' viewpoints and helping them to gain a greater understanding of the different propositions. In contrast, in a debate, participants keep deeply entrenched in their viewpoints and position [7]. Deliberation is an aid to thought, judgment, and

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better thinking [8] and can occur as an individual or group process. During deliberation, one may take time to think through a course of action or reflect on the different choices at hand. In a group setting, deliberation allows for the discussion of different viewpoints. Brookfield and Preskill [9] suggest that *group deliberation* refers to the "willingness of individuals to discuss issues as fully as possible by offering arguments and counter arguments … and by holding strongly to their views unless there are strong reasons not to."

Deliberation can help individuals in the "construction of preferences," with discussion and deliberation having an effect on the health state valuation process. Evidence suggests that individuals have difficulty in fully analyzing situations that involve economic and probabilistic judgments [10], and the more complex the task the more difficult this becomes for individuals. Therefore, individuals rely on heuristics or cognitive shortcuts, which can be biased; that is, individuals may ignore relevant and often important information when making their choices [11–13]. Allowing respondents time to discuss and deliberate could provide a more considered and valid response, closer to their *true* preference [14]. Fischhoff [2] argues that individuals may "try on" a value to see how it fits, and they then reflect on their answer, before providing a final response. Thus, the process of administration may actually aid the construction of preferences as well as elicit them [2,3,5,15,16], and discrepancies in results may be a function of a deliberative process of reflection rather than measurement error [17].

Outside of the health economics literature, the focus of deliberation has tended to be around deliberation in relation to democratic decision making or as part of other priority-setting exercises, in relation to stakeholder inclusion and around legitimacy in decision making [18–20]. In our study, deliberation was not used to determine a consensus view within a group, but as an element to allow individuals to discuss and reflect (within a group setting) on the choices offered and to come to a more considered individual response. In terms of health economics, there are very few studies that have explored the impact of deliberation on valuations [21,22]. Of the four studies that explored deliberation, two studies found that individuals changed responses following discussion and deliberation, which seems to provide some support for the "construction of preferences" assumption [14,23]. The experimental study undertaken by Cabasés et al. [24] did not show statistically significant differences between individual and group interviews, although the researchers suggested that using group interviews may be a more efficient procedure.

The study undertaken by Stein et al. [5] suggests that deliberative changes had little or no effect on the aggregate utility elicited by using the standard gamble technique. In contrast, Sanderson and Andrews [23] found that discussion did have a significant effect on the elicited person trade-off (PTO) utilities. They suggest that this was due to the complexity of the PTO technique, and validity was increased following discussion and deliberation [23]. Sheill et al. [14] state that the size and selection of their sample make it difficult to draw strong conclusions; however, there is evidence to suggest that the assumption of completeness cannot be taken for granted. Oliver [25] challenges this conclusion, asserting that greater stability of values over time is probably due to a learning effect of the standard gamble technique rather than completeness. The effect of discussion and deliberation on aggregate utility is unclear and important because it could affect the cost-effectiveness result and ultimately the funding decision.

There has been a call for more detailed work around the role of discussion and deliberation in health state valuation, with a particular focus being given to the effects of the elicitation process on both individual and aggregate heath state valuations [5,7,14,18,21,23]. This article makes an empirical contribution to that debate by exploring the effect of deliberation on health state valuations elicited by using the PTO technique. This exploratory study uses quantitative analysis to test whether there was a change in responses, at both the individual and aggregate (group) levels, following discussion and deliberation. It then uses qualitative techniques to explore a number of relevant themes identified from the literature including the following:

- Deliberation gives a more considered response closer to "true" preferences.
- The process of administration can aid the construction of preferences, with the process helping respondents to develop their values and not just express them.
- The impact of the group membership on final responses—with particular focus on the extent to which individuals decide to follow others and imitating group behaviors rather than deciding independently (the *herding effect* [26]).

Methods

Research and Questionnaire Design

The preference elicitation exercise that is reported in this article forms part of the English contribution to the European Disability Weights (EDW) Project [27]. Details of the methods used during the preference elicitation exercise are outlined below, and further details of the EDW project can be found in Essink-Bot et al. [27]. The subsequent qualitative analysis was an additional investigation undertaken by the authors and did not form part of the EDW project.

The valuation work was conducted in six panel sessions that followed a standardized protocol that allowed for a structured group process. Such structured or "analytical deliberation" processes do not exclude open discussion, but strive to make discussions more effective by imposing a framework to guide them, allowing individuals to engage more fully in deliberations [28]. All sessions were guided by a trained facilitator whose role was to ensure that sessions allowed for openness and inclusiveness and that all stages of the process were completed. In addition, the use of a trained facilitator is important in ensuring that coalitions are not formed within groups [29]. An observer was also present during the sessions; his or her role was to note any deviations from the standardized protocol and record any observations that may prove helpful when interpreting the final results obtained during the preference elicitation process. An overt approach to observation was undertaken; that is, the panel members were aware of the observer's presence and his or her role. The process was designed to enhance discussion and deliberation, and participants had the opportunity to change their individual responses following panel discussions (see Fig. 1 for further details).

While statistical techniques can explore quantitative issues such as reliability and comparability between different methods, they do not shed light on the way respondents interpret or answer the question. It was therefore considered that a mix of quantitative and qualitative approaches was appropriate for addressing the research question. Semi-structured interviews were used to explore a number of themes relating to the process of eliciting valuations and how respondents make their choices. One such area is the use of individual and group deliberation and that is of interest for this article. Interviews explored respondents' feelings with regard to the group process with particular focus on aspects of deliberation and its possible effects on their overall response.