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DOI: 10.1016/j.socscimed.2021.113977

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Citation for published version (Harvard):

Link to publication on Research at Birmingham portal
Eliciting a monetary threshold for a year of sufficient capability to inform resource allocation decisions in public health and social care

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Declarations of interest: none

Acknowledgements:

We would like to thank the Project Advisory Group for their suggestions, and in particular Professor Joanna Coast. Adia Sahor made a significant contribution to the project, in the form of administrative support. We would like to thank all of the research participants for their time and valuable input.

Funding Support:

Funding was received from the Medical Research Council [MR/N014790/1]. Grant holder: PK.
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Abstract:

Aim: To elicit a deliberative monetary value for a year of sufficient capability well-being (YSC) and a year of full capability (YFC), to inform decision-making in the contexts of social care and public health.

Methods: 69 members of the public, recruited from purposively selected electoral wards across the West Midlands Region of England, attended one of six deliberative workshops in 2017. Participants were informed about the nature of public health and social care, and the funding of these services by local authorities. Participants were then asked to report: their willingness to pay additional tax (ring-fenced for social care/public health services); and the maximum amount they would be willing to allocate for social care/public health services from an existing local authority budget. In both cases they were asked to assume that the funding would result in improved well-being equivalent to a YSC. The second task was repeated for improved well-being equivalent to a YFC. Representatives from the six initial workshops reconvened at a consensus workshop to arrive at a final arbitrated value for a YSC and YFC.

Results: Mean values elicited during the initial workshops increased after discussion (from £442 to £451 in the case of WTP additional tax). Almost half of participants changed their response post-discussion when reporting a societal (aggregated) WTP. The arbitrated value of a YSC was £33,500, with a range of £33,500 to £36,150 emerging as the value of a YFC.

Discussion: This is the first study to use a deliberative approach to elicit a monetary threshold for an additional YSC/YFC. Qualitative research supports the validity of responses to the taxation question. Deliberation appears to have influenced the societal (aggregated) values reported by participants.

Conclusion: Future research should explore the robustness of a monetary threshold of £33,500 for a YSC.
Keywords: ICECAP-A; Social Care; Public Health; Cost-Effectiveness Threshold; Deliberative Monetary Valuation; Sufficiency

1. Introduction

Definitions of social care, or ‘long-term’ care differ across different countries (Robertson, Gregory et al. 2014) and funding models for and regulation of care provision is often complex and fragmented even within countries, but across Europe it is common for responsibility for the provision of care services to fall at the regional or municipal level (Spasova, Baeten et al. 2018). Despite OECD countries spending a far smaller proportion of their GDP on social care than on health care, “social care expenditure is increasing at a faster rate than spending on health” (Robertson, Gregory et al. 2014, p7). OECD countries face similar challenges in relation to social care (regardless of the exact definition), in terms of lower welfare spending since the global financial crisis and ageing populations (Robertson, Gregory et al. 2014).

A more universal definition of public health is provided by the World Health Organisation (WHO) as: “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (Acheson (1988), cited by World Health Organisation 2020). Although arrangements for public health (also) vary considerably across the European region, a common challenge to public health provision identified by WHO is (also) under-resourcing (World Health Organisation 2012).

The spending power of local authorities, tasked with the provision/coordination of public health and social care services in England, fell by 18% between 2010 and 2020 (Institute for Government 2020), mainly due to reductions in grant income from central government (The Kings Fund 06 May 2020). Shrinking budgets have forced local authorities in England to attempt to protect spending on social
care by making cuts across other local authority funded services. Despite efforts by local authorities to protect spending on social care, such expenditure (as of 2020) is nearly £0.4 billion below the 2010/11 level, in real terms (The Kings Fund 06 May 2020). Simultaneously, local authorities have faced above inflation increases in payments for the provision of residential, nursing and home care, needed in order to “shore up” a fragile provider market (The Kings Fund 06 May 2020).

Economic evaluation is conducted in order to inform the distribution of scarce resources. Economic evaluation is comparative in its nature, typically relying on the calculation of cost per additional unit of benefit, resulting from a switch from usual care/practice to some new intervention/way of working. The result (an incremental cost-effectiveness ratio) is compared to a monetary threshold (McCabe, Claxton et al. 2008). The threshold used by the National Institute for Health and Care Excellence (NICE) in the UK (for an additional quality adjusted life year) is £20,000 to £30,000.

The NICE cost-effectiveness threshold has proved highly controversial, in terms of what it represents, it’s appropriate value, and in terms of whether NICE should take into account additional factors when reaching decisions (McCabe, Claxton et al. 2008). Attempts have been made to elicit monetary values for a QALY gain through preference-based methodologies (Baker, Bateman et al. 2010), with a range of resulting values from most models of between £18,000 and £40,000 (Donaldson, Baker et al. 2011). Alternatively, a threshold of £12,936 per QALY has been estimated through analysis of routinely available data (Claxton, Martin et al. 2013).

Reflecting differences in the objectives of social care (or long-term care), alternative conceptualisations of outcome (to quality-adjusted life years) are recommended for use in economic evaluations of social care by NICE in the UK (NICE 2013) and of long-term care by the Zorginstituut in the Netherlands (Zorginstituut Nederland 2016). Outcome measures common to both of these sets of guidelines are the ICECAP measures of capability well-being, which researchers are also increasingly using within health (including public health) research (Proud, McLoughlin et al. 2019,
Afentou and Kinghorn 2020). Developed for use in the UK, ICECAP measures are also increasingly being used in other English speaking countries, and translated for use across Europe.

The ICECAP-A is a measure of capability well-being for use with the general adult population (Al-Janabi, Flynn et al. 2012). The measure covers five broad areas of well-being (each covered by one question/attribute): Attachment (love, friendship and support); Stability (feeling settled and secure); Achievement; Enjoyment; and Autonomy (independence). Each question has four response levels; the ‘best’ level is coded as 4 for the purposes of data entry, and the ‘worst’ level is coded as 1. This coding system can be used to define 1,024 unique states. Scores for the measure (or rather for the resulting states) range from 1 (full capability) to 0 (no capability) (Flynn, Huynh E et al. 2014).

Recently, work was undertaken to establish a sufficient state (or level) of capability, as defined by ICECAP-A (Kinghorn 2019). Sufficiency explicitly introduces equity into the decision-making framework; distribution is a primary consideration, in contrast to the primary objective of efficiency achieved through maximisation (Mitchell, Roberts et al. 2015). Sufficiency applies a principle that those most in need should be prioritised for support and participants in the previous work by Kinghorn (2019) were tasked with considering a level (state) of well-being that is adequate or acceptable such that a person can be ‘left’ in that state without claim to publicly funded support. Sufficiency asserts that positive societal value is associated with improvements in the capability well-being of people with a starting well-being below the sufficient state, up to a point where the sufficient state is achieved. Inequality above the sufficient level is not of interest to policy-makers (Kinghorn 2019). Hence, there is no societal value associated with improvements in capability well-being beyond the sufficient level.

The sufficient state of capability identified by Kinghorn (2019) was 3,3,3,3,3 (I am able to feel settled and secure in many areas of my life; I can have quite a lot of love, friendship and support; I am able to be independent in many things; I can achieve and progress in many aspects of my life; I can have quite a lot of enjoyment and pleasure). Researchers using ICECAP-A can therefore present results
from economic evaluation in terms of either cost per Year of Full Capability (YFC) –using the original values elicited by Flynn et al (2014)– or in terms of cost per Year of Sufficient Capability (YSC), using recalibrated tariff values such that the lower anchor of 0 still represents no capability, but the upper anchor of 1 is the sufficient state of 3,3,3,3,3 (Mitchell, Roberts et al. 2015, Goranitis, J et al. 2017, Kinghorn 2019).

A previous study by Himmler et al. (2020) estimated a monetary value for a year of full capability (defined by ICECAP-A) for the UK, using a well-being valuation approach, with an estimated value of £66,597. Our study primarily sought to elicit the value of a year of sufficient capability, using a deliberative approach, although a value for a YFC was also elicited. Given previous work to establish a sufficient level of capability well-being used ICECAP-A, ICECAP-A will also be used to define the evaluative space in this study.

With no history of centrally conducted economic appraisal in social care, it was not deemed feasible to estimate a threshold based on analysis of existing data. Budgets for social care, certainly over the period since 2010/11, could also be considered to be unsustainable, as illustrated by evidence of spending cuts outlined earlier in this introduction; a threshold based on historical data risks perpetuating a culture of under-funding social care (and public health), without evidence of public support for doing so.

Instead, a societal value for a year of sufficient capability (and full capability) was elicited using deliberative methods for value elicitation. The approach adopted involved combining conceptualisations of deliberative monetary valuation (introduced in section 2) with experience of conducting deliberation from the health services literature (section 3).

2. Deliberative Monetary Valuation:
Traditional willingness to pay approaches have been criticised for “assuming well formed and informed preferences” and excluding a range of concerns such as rights, fairness and equity (Spash 2007, p690). In light of this criticism, deliberative monetary valuation (DMV) has been used and advocated by some in the discipline of environmental economics (Jacobs 1997, Sagoff 1998, Spash 2007).

In presenting results from a literature review of studies using DMV, Spash (2007) distinguishes between individual (disaggregated) and societal (aggregated) monetary values (table 1), although Spash doesn’t use the term aggregated to refer to the sum of individual WTP values, but instead the total amount an individual feels that society should pay to provide an intervention or policy (in its entirety). Disaggregated monetary values are traditionally expressed from a consumer perspective, where an individual is asked to report their own private willingness-to-pay, referred to as the “exchange price”, but can alternatively be reported from a citizen perspective. In the literature identified by Spash, when a citizen perspective was encouraged, willingness-to-pay was framed as willingness to make a charitable contribution. Willingness-to-pay a charitable contribution was either elicited from respondents expressing an entirely independent view, or following respondents’ participation within a group discussion.

Likewise, an aggregated value for a public (or publicly provided) good can either be elicited from individuals independently (classified by Spash as ‘speculative value’) or from individuals following group discussion, which Spash assumes will result in a more informed view (“expressed WPT”).

Finally, a group may decide collectively either upon the social value of the intervention in its entirety (an arbitrated aggregate value), or suggest a fair price that individuals should pay towards provision of the good (a disaggregated value).

[INSERT TABLE 1 HERE]
Within health economics, Olsen and Donaldson (1998) asked respondents their willingness-to-pay additional tax, to be earmarked for one of three healthcare programmes. Because respondents in that study were interviewed individually the framing and elicitation of the value can be classed in Spash’s table as an individual disaggregated value (italics are used in table 1 for additions to the suggestions by Spash). Such framing could also be used when eliciting individual values from participants within a group setting. A fair amount of tax could also be elicited by way of a group decision (similar to Spash’s fair price), although this would be a complicated and potentially problematic concept in terms of how the group could be expected to account for differences in income (ability to pay) and other issues of equity.

As there is no gold standard in terms of the framing and elicitation of deliberative monetary values, the study reported in this paper adopted two approaches: (i) willingness to pay additional tax (a disaggregated value); (ii) an aggregated social value (in the form of allocation of existing public funds). In both cases, the aim was to elicit a value for an improvement in well-being equivalent to a year of sufficient capability.

3. Deliberation:

Public deliberation aims to elicit informed views on complex and value-laden issues (Siegel, Waddell Heering et al. 2013, Carman, Mallery et al. 2015). Siegel et al. outline four core elements of public deliberation: First they refer to a “sponsor” convening a group, with this sponsor “framing the questions of interest, motivating participants, and ensuring the effective implementation of the deliberative sessions” (Siegel, Waddell Heering et al. 2013, p56). The second and third elements involve informing participants about relevant issues and participants deliberating these issues. Participants are “asked to give reasons for their opinions and preferences with the goal of clarifying underlying values” (Siegel, Waddell Heering et al. 2013, P56); there should be an exchange of views
between participants. The result (the final element) is some form of record or summary to inform policy-makers. This is a record of values, ethics, reasoning and proposed options.

In this study, economic thinking around the framing and labelling of monetary values set out by Spash (primarily from the environmental economics literature) are combined with the conceptual understanding of public deliberation, as set out by Siegel et al, Carman et al and others from the health services research literature. Hence, in this study the vague notion of ‘group discussion’ referred to by Spash is formalised to align with principles of deliberation that are accepted within health services research.

4. Methods:

A series of one day deliberative workshops (Citizens’ Workshops) were held across the West Midlands region during 2017. At the workshops, monetary values were elicited from participants via two tasks. The first task elicited individual willingness-to-pay an additional yearly amount of taxation (disaggregated value); the second involved allocating resources from an existing local authority budget (elicitation of an aggregated social value). In all workshops the tasks were completed in the same order. A consensus workshop then brought together representatives from each of the initial groups to reach a final decision, and this final arbitrated value represents the principal research finding. Information and resources used to inform participants focused on the funding, provision and impact of social care and public health in the English context.

4.1 Recruitment and Ethics

Ethical approval was granted by the Science, Technology, Engineering and Mathematics Ethical Review Committee (ERN_17-0284) at the [Redacted for peer review]. Participants were predominantly recruited via invitation letters posted to named addressees from the edited (or open)
electoral register. Electoral registers were obtained from local authorities for purposively selected electoral wards. Letters were also sent to pharmacies, sports and religious groups and large employers within the selected electoral wards; these organisations were asked to display a poster and/or circulate details of the research amongst their members/employees/customers.

Wards were selected on the basis of achieving a mix of: urban and rural locations and high, mid and low deprivation locations (as assessed by the Index of Multiple Deprivation, published in 2015 by the Department for Communities and Local Government). The intention was therefore to recruit from six locations (urban with high deprivation, urban with low deprivation, e.t.c.), and to recruit up to 12 participants per location. Targeted electoral wards fell within five different counties of the West Midlands region.

Most of those expressing interest were invited to attend a workshop; individuals were only excluded if there was already significant over-representation of invitees of the same age and sex (to avoid workshops being highly homogenous in their composition). Written confirmation was posted to selected invitees and they also received text message and/or email reminders. Participants received a modest financial incentive.

Because of the novelty and potential complexity of the valuation tasks, a pilot workshop was held in advance of the six planned workshops, with a separate sample of 11 public participants, also recruited from within the West Midlands region. The pilot workshop confirmed the feasibility of the tasks, although encouragement of participants in the pilot workshop to agree a fair amount of tax was dropped for later workshops.

4.2 Facilitation

Venues were chosen for the workshops within the selected electoral wards, on the basis that they were accessible (in terms of physical access, public transport and parking). Each workshop was attended by: a lead (the Principal Investigator); a facilitator (an MSc or PhD student); and an
administrator. The lead is a health economist with previous experience of qualitative research and deliberative methods. Facilitators did not necessarily have social science backgrounds. Facilitators were tasked with: ensuring that participants were made to feel welcome; supporting individual participants if they had questions or difficulty understanding tasks or background information; supporting participants should they become distressed whilst discussing emotive or personal issues. The administrator noted who was speaking during discussion, to ensure accurate transcription.

4.3 Information provision & Discussion of Social Issues

Following introductions by the research team, participants were asked to introduce themselves and to give some indication as to their motivation for attending the workshop. Participants were then asked about their starting knowledge/understanding of public health and social care. The lead then used PowerPoint and printed workbooks to present formal definitions of social care and public health (Appendix A). There followed an introduction to the funding and provision of social care and public health, then an introduction to how economic evidence (typically) informs decision-making by NICE. Participants were told that NICE permits the use of ICECAP-A to capture outcomes for inclusion in economic evaluations of social care. An explanation was given as to the sufficient level of capability well-being that had been derived through previous research (stressing the involvement of members of the public in identifying the sufficient level, and the implications of the sufficient level for resource allocation). The sufficient level of capability well-being was described in lay terms as a ‘good enough level of quality of life’. Finally, before moving on to the two valuation tasks, the lead differentiated between the notions of cost, price and value (Appendix A), with instruction that participants should focus on value from that point onwards. Questions and points of clarification were invited from participants. No explicit knowledge check was used.

4.4 Valuation tasks
WTP Additional Tax

Participants were asked to imagine a hypothetical situation in which 100 people (with a starting well-being equal to or above the sufficient threshold) pay an additional amount of tax. Participants were asked to imagine that 1 in 100 of the individuals would experience a serious decrement in their well-being – they would immediately ‘fall’ down to state 1,1,1,1,1 on ICECAP-A. There is no way of predicting who will experience the decrement in well-being. The remaining 99 people in the group would experience no change in their well-being. The additional tax revenue raised would be ring-fenced such that the full amount would be used to provide support and services to bring the one individual ‘back up’ to at least the sufficient state of 3,3,3,3,3; the sufficient state of well-being would then be sustained for a duration of one year. It was not specified by the research team what would happen to the person after that year had ended.

In the absence of any national level data on ICECAP-A scores in England, or any way of using ICECAP-A scores to predict use of social care/public health services (or vice versa), 1 in 100 was used as a crude approximation of the proportion of adults in England with significant care needs and who are in receipt of care services, based upon Social Care returns for England for the 2015/16 financial year (NHS Digital 2017).

The decrement and subsequent recovery (improvement) in well-being were extreme; an alternative would have been to calculate the value of a YSC from the value associated with a marginal improvement in well-being. However, we wanted to avoid the need for retrospective statistical adjustment to participants’ responses, instead opting to be transparent about the meaning and significance of the sufficient state and of improvements equivalent to a YSC.

Some examples of common expenses that may be incurred by households/taxpayers were presented to individuals. These expenses ranged from £30 (approximately the cost of a vehicle safety inspection or ‘MOT’) to £832 (equivalent to £16 per week, which the Office for National Statistics estimates as average household expenditure on communication, including mobile phone
and broadband contracts). The intention was to highlight that any additional tax contributed by participants would impact upon their disposable income and perhaps necessitate a reduction in their own expenditure.

The willingness-to-pay question was open-ended; participants wrote down their individual willingness-to-pay, based upon their own personal circumstances, prior to any group discussion. Because willingness to pay is expected to relate to ability to pay, individuals were not asked to reveal their individual response to the group; instead, the lead jotted down each of the individual responses (direct from the participant’s workbook) and reported the range of values and mean value back to the group. Participants were also told how much would be available to fund services for the one individual if 100 individuals paid the average additional tax calculated from their responses. These numbers were used as a prompt for group reaction/discussion.

Following discussion, participants were asked once again to record their own personal willingness-to-pay in their workbooks. Participants were told they were free to change their earlier value or report the same value again. Mean values, range and standard deviation are reported. T-tests and ANOVA are used to test for statistically significant differences in pre-discussion mean values, across sample sub-groups.

Social WTP

Participants were asked to imagine that they were allocating funds from an existing local authority budget to cover the costs of social care and/or public health intervention(s) to improve the well-being of one additional service user/care recipient from the worst possible level (as assessed by ICECAP-A) to the sufficient level of well-being, and sustain this improvement for a period of one year. The task was then repeated for an improvement in well-being equivalent to a year of full capability (i.e. with improvements to state 4,4,4,4,4).
By way of background to the task, to give participants a point of reference, they were given the estimated approximate costs of unrelated public services, on the basis that spending more money on public health or social care would be associated with an opportunity cost elsewhere. These services ranged from street lighting (with the cost of lighting 20 streetlights for one year being £2000), through to operating an on-call fire engine (at a cost of £49,500 for six months). Such costs were crude approximations based on sources such as newspaper articles, publicly available responses to freedom of information requests and local authority websites. The information was presented in terms of alternative services that the money could, potentially have provided, participants were not asked, for example, “how may street lights would you switch off?”.

WTP was elicited using an open-ended question. Participants were asked to write down an individual (speculative) value, pre-discussion. For this task, participants were asked to share their value with the group. The lead wrote responses on a flipchart as they were reported by participants and calculated the mean value; this information was used to trigger discussion. Participants then had an opportunity to revise their initial value, if they wished to do so (this was recorded in the workbook as their ‘expressed value’). Descriptive statistics will be reported, along with results from T-tests and ANOVA.

4.5 Consensus Workshop

Participants from the initial workshops were approached to further participate in a consensus workshop, held in September 2017. An attempt was made to: represent a variety of viewpoints; ensure the consensus workshop was attended by participants of different ages; ensure a reasonably even balance of male and female participants. Those selected and agreeing to participate in the consensus workshop were sent a summary of findings from the initial workshops in advance; they could identify results from their specific workshop, as well as those from other workshops.
Participants were reminded of definitions used during the initial workshops and were reminded of the two tasks that they had previously completed. Findings from the initial workshops (which had been circulated in advance) were presented orally by the research team, together with a summary of key qualitative themes from the initial workshops. Potentially controversial statements were formulated from discussion at the initial workshops, using similar language to that used by participants. These were presented to highlight the diversity of views from the initial workshops.

Participants then shared their own experiences and reflections relating to the initial workshop, noting key areas of discussion and debate from their group, if they were able to recall these.

An iterative process followed: participants wrote down values for a YSC and YFC, shared these with the group, the mean was calculated by the research team, and participants voted on whether they would support the use of that mean value in future decision-making. If participants wanted to change their response, the process was repeated. The intention was to achieve majority support for final arbitrated values.

4.6 Qualitative Analysis

Workshops were audio recorded and transcribed verbatim (excluding lunch and coffee breaks and information provision by the lead). A Health Economist [Redacted for peer review] initially coded the transcripts, with a coding matrix being formulated with [Redacted for peer review] as the process of coding progressed. [Redacted for peer review] identified themes through a process of Framework Analysis, developing a narrative account of the themes, which was reviewed by both authors. Qualitative themes provide some indication as to the ways in which participants approached the tasks and the range of views underpinning their responses. Quotations are used to illustrate qualitative themes; the symbol ‘>’ is used to denote that one quotation immediately followed as a response or reaction to another. Phrases which do not add meaning, such as “you know” and “erm” are omitted from quotations.
5. Results

Characteristics of workshop participants are presented first (section 5.1), followed by findings (quantitative and qualitative) from the first valuation task (section 5.2) and then findings from the second valuation task (section 5.3). Qualitative themes of a general nature are then reported in section 5.4. Findings from the consensus workshop (the primary research findings) are reported in section 5.5.

5.1 Participant Characteristics

From the 3,500 invitations, there were 130 initial expressions of interest (3.7%). Of those 130, 96 (74%) were sent confirmation, with the remainder being screened out. 69 people participated in full (72% of those sent confirmation), 25 did not attend (26%) and two attended part of a workshop, but then withdrew (2%). Characteristics of those 69 individuals who fully participated are reported in table 2, with a breakdown of characteristics by workshop.

[INSERT TABLE 2 HERE]

5.2 Willingness-to-Pay Additional Tax

Monetary values are reported first (5.2.1), with qualitative observations relating to this task being presented in section 5.2.2.

5.2.1 Monetary Values
Willingness-to-pay values are reported in table 3. Three of the 69 participants gave a zero response before discussion, with four giving a zero response after discussion. Eight participants gave a response of £1,000 or more; the highest response (£5,200) was reported in workshop E. In three workshops, the mean value increased after discussion; whereas in workshop F, the mean value fell after discussion. Both the highest mean value (workshop D) and the lowest mean value (workshop F) were reported from workshops conducted in high deprivation areas.

Fourteen participants (20%) changed their response following discussion, with most (n=10) reporting a higher post-discussion value. The largest change was +£500, the smallest change was +£16. Just over half of the changes (n=8) brought the participant’s revised response closer to the initial (pre-discussion) group mean.

There are no statistically significant differences (at the 5% level) in initial WTP responses between male and female participants (p=0.509), between age groups (18-44 years; 45-64 years; 65+) (p=0.371), or between participants reporting their own well-being above/below the sufficient level of 3,3,3,3,3 (p=0.241).

5.2.2 Qualitative Themes Relating to Task One

In four of the six groups, participants made some explicit link between the additional tax that they were prepared to pay and their own financial situation and ability to pay. In one case this was phrased in terms of reporting an amount that the participant “wouldn’t miss” (Workshop D). In some cases, such as in Workshops A and E, participants sought verification that they had understood the task correctly, in terms of reporting an amount that they were personally willing and able to
contribute, versus suggesting a fixed amount to be paid by everyone in society. There was also evidence of participants considering the existing tax burden, with recent increases in council tax influencing (and seemingly moderating) responses in Workshop A.

...it is a financial choice we have to make, but is that financial choice based upon our own personal income or is this a financial choice based upon an ideal? (A16)

... I've got a much lower figure than that, but I am living on a pension (E08)

Haven't we just have a rise in council tax to offset some of this? (A09)

When some participants referred to income or to specific population groups (for example, pensioners), they appear to have been invoking concepts of fairness.

Is it progressive? Do we pay as pensioners? (B01)

5.3.1 Allocation of Existing Local Authority Funds

In five of the six workshops, the mean monetary value increased following group discussion (table 4), the exception being workshop E. Mean values varied from £18,727 (workshop F) to £42,708 (workshop D). There was sizeable variation in the values reported by participants, from £500 to £70,000 (post-discussion).

Almost half (n=34) of the 69 participants gave a post-discussion response which differed from their pre-discussion response; most (29 of the 34) increased their value post-discussion. 18 of the 34 participants who changed their response reported a post-discussion value which was closer to the initial (pre-discussion) group mean. For this task, the highest change was +£40,000; the smallest change was +/-£500.

There were no statistically significant differences between the pre-discussion mean values across subsamples defined by age (p=0.182), sex (p=0.215) or a cut-off of own well-being above/below the sufficient level (p=0.706).
Mean values for an improvement in well-being equivalent to a YFC were only £372 (1.19%) higher than those for a YSC. Only three participants changed their initial responses relating to a YFC following discussion, with changes being of a modest magnitude (+£1,000 to +£1,437).

[INSERT TABLE 4 HERE]

5.3.2 Qualitative Themes Relating to Task Two

Two common themes emerged, relating specifically to the second valuation task: the concepts of value and cost, and difficulty viewing the reported monetary value as a maximum amount. Linked to both of these struggles was a desire to be given information about a specific individual needing support and what the nature of that support would be. The quotations presented directly below illustrate the struggle that participants experienced in terms of reporting a value without having knowledge of costs. Some participants shared information about costs that their own family members were paying for social care services; a minority appear to have researched what they considered to be politically relevant costs prior to attending the workshop.

   Doesn’t it depend such a lot on what’s wrong and what needs to be done for this person?
   (A01)

   No I haven’t got a clue; how much would I be prepared to pay? How much would it cost?
   (E08)

   There’s a benchmark with this; to keep a prisoner in United Kingdom it’s about £40,000 per prisoner (E02)

Again, linked to the idea that cost would depend upon the specific circumstances of the person in need, some participants struggled with the concept of a maximum willingness to pay (reflecting
value), suggesting instead that they were thinking of an average cost, or fearing that every person in need would be given the maximum amount, which would result in wastage.

...if it so happens that they need more then £17,000 are you willing to put in anymore? (F11)

> Well that’s the question I am asking you. So on this basis you would stop at £17,000.

That will be as much as would be allocated for them. (Lead)

Every situation is different, some might need only £10,000 to get up to [the sufficient level of capability] or some might need £75,000 and so it’s very difficult (D11)

5.4 Qualitative Themes Common to Both Valuation Tasks

Contextually, there were frequent references within the workshops to ‘austerity’, a period of strict control over and cuts to government spending following the global financial crisis, intended to reduce the amount of UK government debt. Several participants stressed that austerity was a political choice, which led to scepticism about public budgets truly being finite. There was a common perception amongst participants that public funds were being wasted and current institutions failed to competently manage budgets and ensure value for money.

...this only becomes necessary because of political decisions. And it’s a political choice... the money, in actual fact, is there, it’s how it’s divided, and it’s how it’s spent (A08)

You see I don’t agree because I don’t think the money around is finite. I think we’re told it is.

I think it’s the way it’s managed (B02)

[That the money would be managed by the local authority is] a very worrying thought (laughter), when look at our local council and the mess they’ve made of the road system, would you want those people in charge of your life care? (C04)
Such views led some participants to suggest, in the context of the first valuation task, that they would be willing to pay more tax if they had greater control over how it was spent, or if the money was to be managed by an agency independent of local authorities and central government. In the context of the second valuation task, a minority of participants rejected the idea that savings would need to be made against other council services in order to increase spending on social care/public health. Some suggested instead that funds should be diverted to social care/public health from defence or overseas aid budgets, generated through greater efficiencies, or that the money should be raised instead through increased taxation (i.e. as per task one).

...at this point –where we are all fed up with austerity and things– ... you’re just saying we’ve got to now decide which more services we are willing to drop (D10)

Some participants expressed the view that an adequate initial investment in services would reduce the need for additional future costs, or more specifically, that an investment in improving the lives of individuals would enable those individuals to make a positive contribution back to society in the future.

And that’s what we need to do for this one extra person... make sure they don’t keep needing that amount of money every year to stay at [attribute level] 3 (A12)

What you’re trying to say is the cheap man pays twice (B01)

A common view expressed across the workshops was simply that social care in particular involves meeting complex needs, sometimes with intensive support, and that services may be very costly. Whilst this does relate to the theme identified and reported above (namely, a desire to understand what the cost of support would be in order to set a budget accordingly), the quotations reported here are predominantly participants’ reflections on the mean value from their group. Participants reflected on personal experiences and wanted to be realistic about the fact that things in life, in general, often cost more than initially expected. Participants appeared wary of underfunding social care and public health because of naivety.
I think you might be right, it might be slightly more because things in life tend to cost more than you think ... thirty five might not be enough, if we look at the worst case scenario it won’t be enough (C05)

A small number of participants from three workshops were intuitively drawn to an average salary as the appropriate threshold value, with a sense of unfairness at the prospect of an individual being given support that is valued more highly than the wages earned by other people who are working hard.

What’s the average salary in UK? [interjection from E09 of “25k, 26k”] ... 25k, so basically what you’re saying is, somebody goes to work, pays their taxes, 5 days a week, gets 25 thousand, it’s hard to say [somebody needing care services] should get 30, 40, 50 [thousand pounds]... (E02)

Participants also debated the role of family in providing support (and the burden this places upon them), the need for individuals to take responsibility for their own actions, and the scope for community and charity organisations to offer support cheaply. Views differed on each of these topics.

5.5 Arbitrated Value from the Consensus Workshop

Ten participants further participated in the consensus workshop: at least one participant from each of the six initial workshops and a representative from the pilot workshop. There were two representatives from three of the workshops (B, E and F).

The mean reported value for a YSC was £33,500, with values ranging between £20,000 and £75,000. Participants were asked whether they would be happy to support the use of the mean value of £33,500 as the final decision of the group. Seven of the 10 voted to support the group mean. Two participants felt that the group mean was too high, and one felt that the group mean was too low.
Participants were then asked if they would feel more comfortable supporting a range, rather than a single value. A range was calculated using a lower limit set 10% below the group mean and then an upper limit set 10% above the group mean. The range received no greater support and so a decision was reached within the group to opt for the single value of £33,500.

Although five of the ten participants reported the same value for an improvement in well-being equivalent to a year of full capability well-being as they had for an improvement equivalent to a year of sufficient capability, the mean value did increase to £36,150. The maximum value reported for a YFC was £50,000 (less than the maximum reported value of £75,000 for an improvement equivalent to a YSC, although participants were now using the value of £33,500 for a YSC as their reference point). None of the five participants who reported the same value as for a YSC agreed that they would be willing to support the group mean of £36,150 (i.e. they were unwilling to support a higher value for a YFC than for a YSC).

It was therefore not possible to achieve majority support for a single value in the case of a year of full capability (YFC) well-being, but there was some support for a modestly higher value for a YFC than for a YSC.

6. Discussion

This is the first study to elicit a monetary threshold for a year of sufficient capability. It is also the first study to elicit a monetary threshold for a year of full capability using a combination of conceptualisations of deliberative monetary valuation and principles of public deliberation.

A mean value of £442 was elicited as willingness-to-pay additional tax (a disaggregated value); the value increased to £451 after discussion. Qualitative work suggests that participants accounted for ability to pay and existing taxes when considering their responses. The mean value of a YSC, elicited
as an aggregated value during the initial workshops, was £27,104 pre-discussion and £31,140 post-discussion.

Discussion was therefore observed to drive up mean WTP responses. A greater number of participants changed their response on the second task than on the first, which may reflect the personal nature of a tax contribution. The fact that almost half of participants changed their initial response following discussion on the second task suggests that the deliberative process was influential in supporting participants to form an expressed social WTP.

The principal research finding is the arbitrated monetary value (the value which received majority support at the Consensus Workshop) for a year of sufficient capability well-being, of £33,500. It was not possible to achieve majority support for single value for an increase in well-being equivalent to a year of full capability, and so a range of £33,500 to £36,150 is suggested for use in future research.

Only five of the ten participants in the consensus workshop were prepared to support a higher value for a YFC than for a YSC and in the initial set of workshops, the mean value for a YFC (£31,512), was only 1.19% higher than the mean value for a YSC. This does not imply that participants associated a move from 3,3,3,3,3 to 4,4,4,4,4 as being of no value to either themselves or to others on a personal level, but it instead should be interpreted as participants being unwilling to allocate public funds to improve the well-being of individuals beyond the sufficient state of 3,3,3,3,3.

Although values for a YFC/YSC ranged around the £20,000 to £30,000 QALY threshold used by NICE, at no point prior to or during data collection were participants informed of the value of the NICE threshold. It should be noted that ICECAP-A defines a very different evaluative space than that defined by EQ-5D (from which QALYs are typically calculated in the UK), and the NICE threshold was not elicited through survey methods with the public, and so scope for comparison is limited. There is also significant difference in anchoring: QALYs are anchored at dead (0), whereas ICECAP-A is anchored at ‘no capability’ (0), and hence a QALY gain implies saving a life, in a way in which a YFC/YSC do not.
The value of a YFC elicited here is approximately half as large as the value of a year of full capability elicited by Himmler et al. (2020), at £66,597. Himmler et al. calculated the level of income needed to compensate for a loss of capability well-being. Our study elicited the threshold directly from participants, with transparency around what the values meant and how they can potentially be used, and the ability to discuss and form values within a group context. Participants considered the opportunity cost in terms of publicly funded services. Our task two findings are not, therefore, an indication of how much participants would pay from their own funds to directly improve their own well-being, or how much they would need in financial compensation for well-being losses.

A limitation of the research is that the sample is not closely representative of the general population: women and older adults were over-represented at the workshops. Difficulty recruiting a representative sample has been observed in other studies where there is a high demand on participants in terms of time and cognitive involvement (Kinghorn, Canaway et al. 2017, Kinghorn 2019). It may be possible to achieve a more representative sample in future research by offering greater incentives for participation, although researchers have previously focused on achieving a range of viewpoints as a sampling strategy for citizens’ forums, rather than achieving a sample strictly representative in terms of demographic characteristics (Bijlmakers, Jansen et al. 2020). A narrow focus on demographic characteristics is somewhat simplistic, as it overlooks the importance in deliberative research of exposure to different viewpoints.

There was fair opportunity for those randomly selected from the electoral register to participate in the workshops and recruitment therefore followed democratic principles. Citizens self-selected into the study who felt that the topic and/or the research topic was important and are thus likely to have participated more actively than those participating purely for financial gain.

Common household expenditures were presented to participants prior to them completing the first valuation task. This was intended to emphasise the fact that the more participants contribute as tax the less they will have remaining for other household expenditures. It is possible that these
reference values biased responses towards a fixed range. The range of common household expenditures presented to participants ranged from £30 to £832, and although the range of responses from participants ranged from £0 to £5,200, the maximum reported WTP value in group A was £832 and the maximum value in Group F was £800, suggesting some WTP responses were guided by the range of reference expenditures. Likewise, prior to reporting an aggregated monetary value in task two, participants were presented with a list of local authority services, ranging in approximate cost from £2,000 to £49,500, which may have encouraged responses within this range. Values reported by participants in the six workshops ranged from £500 to £75,000, although the maximum value in some workshops of £50,000 is close to the £49,500 example. Some participants introduced alternative reference points, such as an average salary.

For task one, participants were asked to value a significant improvement in well-being and it is possible that for an improvement of this scale, ability to pay would have constrained their responses. Had the value of a YSC been calculated from a marginal change in well-being reported tax contributions may have been higher.

The strength of this study was the use of novel deliberative methods to elicit a societal value, from participants who were informed about key contextual information and had the opportunity to form their responses through discussion and exposure to diverse and potentially competing viewpoints. There was transparency with respect to the final arbitrated value, what it represented and how it can be used by decision-makers.

7. Conclusion

Deliberation appeared to inform participants’ responses, with values increasing post-discussion. The arbitrated value for an additional year of sufficient capability (elicited at the consensus workshop) was £33,500. Participants at the Consensus Workshop failed to agree on the value of an additional year of full capability and hence a range is suggested of £33,500 to £36,150.
Further research should explore the robustness of the monetary finding, given that younger adults were under-represented at the workshops, and perhaps to explore the impact of presenting participants with a higher upper range of reference costs in both valuation tasks.

References:


Table 1: Framing of willingness to pay within deliberative and non-deliberative contexts

<table>
<thead>
<tr>
<th>Value Provider</th>
<th>Terms in which the value is specified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual (Disaggregated value)</td>
</tr>
<tr>
<td></td>
<td>Social (aggregated value)</td>
</tr>
<tr>
<td>Individual (adopting a consumer perspective)</td>
<td>Exchange Price (Would rely on retrospective aggregation of individual responses)</td>
</tr>
<tr>
<td>Individual (adopting a citizen perspective)</td>
<td>WTP a charitable contribution WTP additional tax Speculative value</td>
</tr>
<tr>
<td>Individual in a group setting (adopting a citizen perspective)</td>
<td>WTP a Charitable contribution WTP additional tax Expressed social WTP</td>
</tr>
<tr>
<td>Group</td>
<td>Fair price Fair tax Arbitrated social WTP</td>
</tr>
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</table>

Adapted from (Spash 2007, p696)
## Table 2: Participant Characteristics

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Number of Participants</th>
<th>Male / Female</th>
<th>Number reporting well-being above/below sufficient level</th>
<th>Age Profile</th>
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<tbody>
<tr>
<td>A</td>
<td>15</td>
<td>M: 5 F: 10</td>
<td>Above: 11 Below: 4</td>
<td>18-44: 7</td>
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<td>45-64: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64+: 5</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>M: 4 F: 7</td>
<td>Above: 10 Below: 1</td>
<td>18-44: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45-64: 3</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>64+: 7</td>
</tr>
<tr>
<td>C</td>
<td>9</td>
<td>M: 3 F: 6</td>
<td>Above: 4 Below: 5</td>
<td>18-44: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45-64: 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64+: 3</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
<td>M: 4 F: 8</td>
<td>Above: 10 Below: 2</td>
<td>18-44: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45-64: 6</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>64+: 5</td>
</tr>
<tr>
<td>E</td>
<td>11</td>
<td>M: 4 F: 7</td>
<td>Above: 11 Below: 0</td>
<td>18-44: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45-64: 5</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>64+: 4</td>
</tr>
<tr>
<td>F</td>
<td>11</td>
<td>M: 4 F: 7</td>
<td>Above: 8 Below: 3</td>
<td>18-44: 4</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>64+: 3</td>
</tr>
<tr>
<td>Whole sample</td>
<td>69</td>
<td>M: 24 (34.8%) F: 45 (65.2%)</td>
<td>Above: 54 (78.3%) Below: 15 (21.7%)</td>
<td>18-44: 17 (24.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45-64: 25 (36.3%)</td>
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<td></td>
<td></td>
<td></td>
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<td>64+: 27 (39.1%)</td>
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</table>

LD: Low Deprivation; MD: Mid-deprivation; HD: High Deprivation
<table>
<thead>
<tr>
<th>Workshop</th>
<th>Pre-discussion Mean Value (SD; min/max)</th>
<th>Changes between pre- and post-discussion values</th>
<th>Post-discussion Mean Value (SD; min/max)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of changes bringing post-discussion value towards pre-discussion mean</td>
<td>No. of participants increasing value post-discussion</td>
</tr>
<tr>
<td>A</td>
<td>£299 (£249; £52 to £832)</td>
<td>3 of 3 (100%)</td>
<td>2 of 3 (67%)</td>
</tr>
<tr>
<td>B</td>
<td>£433 (£371; £52 to £1,200)</td>
<td>1 of 5 (20%)</td>
<td>4 of 5 (80%)</td>
</tr>
<tr>
<td>C</td>
<td>£438 (£377; £0 to £1,000)</td>
<td>0 of 0</td>
<td>0 of 0</td>
</tr>
<tr>
<td>D</td>
<td>£688 (£1013; £25 to £3,800)</td>
<td>3 of 3 (100%)</td>
<td>3 of 3 (100%)</td>
</tr>
<tr>
<td>E</td>
<td>£629 (£1542; £0 to £5,200)</td>
<td>0 of 0</td>
<td>0 of 0</td>
</tr>
<tr>
<td>F</td>
<td>£194 (£259; £0 to £800)</td>
<td>1 of 3 (33%)</td>
<td>3 of 3 (100%)</td>
</tr>
<tr>
<td>Whole Sample</td>
<td>£441.88 (£779; £0 to £5,200)</td>
<td>8 of 14 (57%)</td>
<td>10 of 14 (71%)</td>
</tr>
</tbody>
</table>
### Table 4: Societal (Aggregated) Value

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Pre-Discussion Mean Value (SD; min/max)</th>
<th>No. of changes bringing post-discussion value towards initial mean</th>
<th>Number of participants increasing value post-discussion</th>
<th>Post-discussion Mean Value (SD; min/max)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YSC</td>
<td>YFC</td>
<td>YSC</td>
<td>YFC</td>
</tr>
<tr>
<td>A</td>
<td>£24,819 (£8,340; £12,300 to £45,000)</td>
<td>£28,259 (£7,209; £20,000 to £45,000)</td>
<td>4 of 6 (67%)</td>
<td>0 of 0</td>
</tr>
<tr>
<td>B</td>
<td>£27,600 (£13,954; £2,000 to £54,000)</td>
<td>£29,111 (£15,720; £2,000 to £60,000)</td>
<td>2 of 2 (100%)</td>
<td>0 of 0</td>
</tr>
<tr>
<td>C</td>
<td>£32,028 (£15,446; £7,200 to £50,000)</td>
<td>£42,667 (£11,678; £12,000 to £50,000)</td>
<td>3 of 8 (38%)</td>
<td>0 of 1</td>
</tr>
<tr>
<td>D</td>
<td>£31,083 (£15,387; £1,000 to £50,000)</td>
<td>£42,292 (£18,626; £500 to £70,000)</td>
<td>2 of 9 (22%)</td>
<td>0 of 0</td>
</tr>
<tr>
<td>E</td>
<td>£31,364</td>
<td>£29,227</td>
<td>2 of 3 (67%)</td>
<td>0 of 0</td>
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<tr>
<td></td>
<td>(£17,812; £15,000 to £75,000)</td>
<td>(£12,469; £15,000 to £50,000)</td>
<td>(£12,469; £15,000 to £50,000)</td>
<td>(£12,469; £15,000 to £50,000)</td>
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<td>------------------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>£17,136 (£7,342; £1,000 to £27,500)</td>
<td>£19,000 (£5,099; £9,000 to £27,000)</td>
<td>5 of 6 (83%)</td>
<td>2 of 2 (100%)</td>
</tr>
<tr>
<td><strong>Whole Sample</strong></td>
<td>£27,104 (£13,785; £1,000 to £75,000)</td>
<td>£31,461 (£14,528; £500 to £70,000)</td>
<td>18 of 34 (53%)</td>
<td>2 of 3 (67%)</td>
</tr>
</tbody>
</table>