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# Public preferences for health and non-health outcomes of Universal Basic Income and alternative income-based policies: A mixed-method feasibility study

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## Abstract

**Background:** The United Kingdom is experiencing worrying trends in population health. Policy needs to shift 'upstream' to address fundamental causes. Universal Basic Income has emerged as one response to tackling these health issues. A Universal Basic Income would provide a new form of societal safety net through a regular, unconditional cash payment to all individuals in society. However, with scarce public resources and competing upstream income-based policies, such as a Minimum Income Guarantee, implementing transformative initiatives, such as Universal Basic Income, without a public mandate is unlikely. Currently, we do not know the extent to which the general public value different income-based policies, including when wider impacts, such as health outcomes, are explicitly stated.

**Objective:** This feasibility study had two broad aims. First, to determine which income-based policies to select for valuation, based on their importance to stakeholders and coverage of a range of characteristics and outcomes; second, to design and test a framework, and associated methods, for stated preference elicitation.

**Design and methods:** Six income-based policy scenarios – Universal Basic Income, Minimum Income Guarantee, Negative Income Tax, Participation Income, Targeted Basic Income and Universal Credit – were identified and developed through literature searches, stakeholder interviews ($n$ = 13) and consultation with our General Public Panel. Policy scenarios were described in terms of five policy characteristics and impact described qualitatively based on three outcomes – overall population health, health inequality and income inequality. Three trade-off-based stated preference methods – choice, ranking and willingness to pay – were used to elicit preferences. All methods adopted a socially inclusive perspective. Think-aloud and open-ended interview questions were asked to explore respondents' understanding of the survey methods and explore the reasons for respondents' decisions.

**Participants:** For the main survey, 50 members of the general public were sampled across Glasgow and Newcastle using recruitment targets for age, gender, education, income, employment status, ethnicity, benefits, voting preferences and health status.

**Results:** Respondents understood the policy scenarios, the perspective they were asked to adopt when constructing their values and the task they were asked to complete in each of the survey methods. Relatively few respondents had fully inconsistent preferences, there was no evidence of a labelling effect and introducing information on outcomes did not impact preferences. The type of policy seems to matter, with respondents making trade-offs between policy type and the outcomes of improving overall health, health inequalities and/or income inequalities; there is also evidence of preference heterogeneity.

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**Limitations:** Our small sample precludes claims about the generalisability of the findings. We focused on a subset of policy characteristics, outcomes were described qualitatively across three levels and the size of the monetary payments from the policies was not explicitly stated.
**Conclusions:** Overall, results suggest it is feasible to elicit public preferences for income-based policies with different policy characteristics when health and non-health outcomes are made explicit, using trade-off-based stated preference questions.
**Future work:** This feasibility study has laid the groundwork for a larger, nationally representative study that could provide much-needed new insights to inform policymaking around implementing transformative policies for tackling health inequalities.
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## Background

The UK is experiencing worrying trends in population health. Life expectancy is now declining following a period of stagnation, healthy life expectancy is falling and health inequalities are widening.[1–3] While multiple interreacting reasons exist for these trends, austerity policies implemented following the Great Recession of 2009 appear to be a key driver.[4–6] Consequently, there are increased calls to shift the policy focus 'upstream' to address fundamental causes.[1,7,8] One policy proposal emerging as a response to these health issues is Universal Basic Income (UBI).[9,10] UBI aims to provide a new form of societal safety net through a regular unconditional cash payment to all individuals in society.[11] While UBI has never been implemented in a high-income country, available evidence – theoretical, scoping, piloting and modelling – suggests UBI would positively impact on population health and health inequalities.[12–16] However, implementing transformative policies, such as UBI, without a public mandate is unlikely, particularly with scarce public resources and competing upstream income-based policies, such as a Minimum Income Guarantee (MIG) that guarantees an income floor below which no one falls.[17–19] Currently, we do not know the extent to which the general public value different income-based policies, including when wider impacts, such as health outcomes, are explicitly stated. Utilising stated preference methods, through a public health economics lens, to estimate the economic value for upstream income-based policies and health outcomes could respond to this gap. This requires the development of a single valuation framework bringing together two separate strands of public preferences work and that accounts for the methodological complexities of using stated preference methods in this context.

### *Public health economics and economic value*

Public health economics is 'the science and art' (p. 1)[20] of informing decisions to improve population health and reduce health inequalities while minimising opportunity costs.[20,21] As health is determined by social, economic and environmental conditions, opportunity costs may arise within and across sectors.[22] This is important as trade-offs may exist between prioritising health or non-health outcomes, or between improving overall population health or reducing health inequalities. Economic evaluation compares the costs and benefits of different courses of action and involves *valuation* of outcomes arising from different policies or interventions.

Within economics, non-market goods are often valued using stated preference methods. This involves hypothetical questions asking what people would give up to achieve a particular policy or (set of) outcome(s). This maximum trade-off, or sacrifice, represents the *value* placed on that (those) outcome(s). The two most commonly used stated preference methods to estimate economic value are contingent valuation (CV) and discrete choice experiments (DCEs). Contingent valuation elicits maximum willingness to pay (WTP) for gains or minimum willingness to accept (WTA) compensation for losses of non-market goods. DCEs ask people to choose between different bundles of attributes (i.e. characteristics and/or outcomes) that describe a good. Inclusion of a money or price attribute enables the estimation of WTP or WTA.

Stated preference methods are well developed in health, transport and environmental economics, but not as common in public health economics.[23–26] When they are used, studies generally focus on *single* public health interventions, such as water fluoridation, smoking cessation, speed limits, salt reduction or avoiding food-borne illness.[27–31] Arguably, for resource allocation purposes, *relative values* are needed across multiple interventions, as explored in a public preference study for policies to reduce and prevent obesity.[32] To the best of our knowledge, no stated preference studies exist on specific interventions that impact on health, health inequalities and non-health outcomes. These studies also focus on traditional public health interventions, such as

smoking cessation, rather than more complex public health interventions operating across sectors. The main sources of evidence in this area focus on preferences for income-based policies only or for health outcomes only; so far, only two studies have elicited preferences for the characteristics and outcomes of income-based policies, with health outcomes only featured in one of these studies.[33–36]

### *Support for income-based policies and policy outcomes*

United Kingdom and European social attitude and public opinion surveys have found support for basic income and alternative income-based policies; some of these studies explore public support using vignettes or conjoint experiments that are either rating or choice-based (see Laenen[33] for a summary). Overall, context seems to influence public support for income-based policies, and the public prefer different policy characteristics related to, for example, who receives the policy and obligations attached to the policy.

'Inequality aversion' studies explore if, for example, the public will sacrifice total health for a more equal distribution across the population. Generally, evidence indicates that, on average, individuals are averse to inequalities in health between socioeconomic groups.[34,35] While inequality aversion studies are typically abstracted from real policy proposals, evidence suggests that preferences change when comparing abstract (i.e. unlabelled) and concrete (i.e. labelled) proposals, raising a question about the transferability of preferences to specific policy proposals.[37]

Only two income-based policy preference studies combine policy characteristics and outcomes. A two-stage rating-based vignette experiment in Belgium found that both non-health outcomes *and* policy characteristics influence preferences.[33] A UK DCE is the only study to include (physical and mental) health outcomes alongside other policy outcomes and characteristics.[36] While changes to health outcomes seem to influence preferences, overall, the main drivers of preferences were changes to poverty and rates of income tax to fund the policies. There was also limited evidence that preferences for different policy characteristics (i.e. means testing, conditionality and universality) influenced preferences.

### *Need for a single valuation framework and methodological complexities*

A single valuation framework focusing on estimating economic value through stated preference methods for income-based policies and health outcomes would build on the existing evidence base in two main ways. First, by providing new evidence on whether the public are willing to pay something to implement different income-based policies. This would provide insight on: what, if anything, people would sacrifice for these policies; the relative value of different income-based policies; and if new income-based policies are preferred to the current situation. Secondly, by providing further evidence about trade-offs between the characteristics of income-based policies and non-health and health (inequality) outcomes. While Nettle *et al.*[36] find certain policy characteristics do not strongly influence preferences, this runs counter to findings from the welfare deservingness research exploring who should get what from a welfare system and why, and the wider research on preferences for income-based policies.[33,38]

Using stated preference methods in this context is methodologically complex. A valuation framework would need to account for three main methodological complexities. First, there is a question of perspective and whether values should be framed as self-focused or other-regarding. Policies might be universal or targeted, and arguably, respondents might care as potential recipients and/or payers in different ways for themselves and/or others. Second, there are potential challenges expressing value using a money-metric as the benefits of income-based policies are manifested, at least partly, in terms of money. Lastly, the choice of payment vehicle might impact on preferences. In this context, and to avoid free-riding, it is intuitively appealing to frame the money-metric payment vehicle as an increase to income tax. But as this payment vehicle is not relevant to non-income taxpayers, some studies have focused on preferences *from taxpayers only*.[32] However, this would exclude those individuals likely to benefit the most from a new income-based policy.

## Aims and objectives

This feasibility study has two broad aims. First, to determine which income-based policies to select for valuation, based on their importance to stakeholders and coverage of a range of policy characteristics and outcomes; second, to design and test a framework, and associated methods, for stated preference elicitation.

To achieve these aims, and in line with the project protocol, the following specific research objectives (ROs) were developed:

1 To select and develop income-based policy scenarios for valuation.
2 To develop a valuation framework for eliciting public preferences for income-based policies.

3 To test the feasibility of eliciting public preferences for income-based policies using stated preference methods, in terms of whether:
   a. Respondents understand the income-based policies by expressing reasonable reasons for their preferences.
   b. Respondents think of benefits to themselves and others.
   c. Respondents understand the stated preference tasks by drawing on relevant information to answer the questions.
   d. Respondents who would financially benefit or who are unlikely to pay income tax can express their preferences through WTP questions.
   e. Preferences are consistent.
   f. Labelling policies impacts preferences.
   g. Introducing information on individual outcomes – overall population health, health inequalities and income inequalities – impacts preferences.

4 To examine whether the type of policy, in terms of policy characteristics, matters for improving overall population health, reducing health inequalities and income inequalities.

## Methods

The development of methods corresponds to ROs 1–2.

### *Patient and public involvement and equality, diversity and inclusion*

Equality, diversity and inclusion were important considerations in the design, accessibility and functioning of our General Public Panel (GPP). We recruited a diverse sample of 15 individuals for our GPP by advertising through the Scottish Community Development Centre (SCDC) and the Equal England Public Network and by using recruitment targets for income, gender, ethnicity, age, health status, employment status, benefit usage, voting preferences and views about UBI and health inequalities. The GPP met four times for 3 hours online. To maximise inclusion, the day and time of each meeting were selected by the panellists, panellists received a £150 payment per meeting and we also offered additional financial support for those with caring responsibilities. When a panellist could not make a panel, a member of the research team had an individual call with them to go through the material. The GPP design was informed by the UK Standards for Public Involvement.[39] Each meeting had a different focus: (1) Introduction to the GPP and project, training on the social model of health and health inequalities provided by SCDC; (2) selection and development of policy scenarios; (3) testing and discussion of stated preference questions; and (4) discussion of results, recommendations for future work. Two different GPP members were supported by the research team to join our Project Advisory Team (PAT), and received a £100 payment, each time it met. Two PAT meetings were held, each lasting for 2 hours.

### *Development of policy scenarios*

Income-based policies were identified using three approaches, firstly, through iterative searches of policy documents, reports, websites and academic literature.[11,15,16,40–44] Secondly, we undertook structured qualitative interviews with 13 purposively targeted UK-based policy stakeholders: eight academics, two members of charities and three members of think-tanks. Interviewees discussed similarities and differences between income-based policies, identified from initial literature searches, in terms of characteristics and outcomes and could suggest other policies (see *Report Supplementary Material 1* for topic guide). Lastly, we consulted our GPP using materials adapted from the policy stakeholder interviews. From these three activities, seven income-based policies were identified and six were retained: UBI, MIG, Negative Income Tax (NIT), Participation Income (PI), Targeted Basic Income (TBI) and Universal Credit (UC). Real living wage was excluded as it is employer-based while government would provide the other policies. Universal Credit is an existing policy; the other five policies are new.

Laenen's[33] framework describes 12 policy characteristics that vary between different basic income schemes (see *Appendix 1*, *Table 4*). Using two criteria, we selected a subset of five characteristics – conditionality, generosity, individuality, uniformity and universality – to describe the six income-based policies. Firstly, characteristics required to define any of the policies were selected. For example, UBI could not be described without including universality. Secondly, we included characteristics that generate debate in the literature. For example, people hold different opinions about whether policies should have obligations. We then describe each characteristic using different levels. For example, universality has two levels related to everyone receiving it or only those below a set poverty line. The selected characteristics, described in lay terms, and levels for each policy are shown in *Appendix 1*, *Table 5*. No other relevant vignette or conjoint experiment study has used this exact combination of characteristics.[33,36]

A wide variety of possible policy outcomes were identified. Two health outcomes (overall population health and health inequalities) and one non-health outcome (income inequalities) were selected (see *Appendix 1*, *Table 6*). The

former outcomes relate to the public health role of income-based policies, and the latter outcome corresponds to a primary focus of these policies. Evidence also suggests people feel differently about reducing income inequalities compared to health inequalities and income-based health inequalities.[45] One indicator was selected for each outcome: healthy life expectancy, difference in healthy life expectancy between the most and least healthy groups and difference in incomes between those with highest and lowest incomes. The current situation regarding each indicator was described using the latest statistics.[46–48] Impact was described qualitatively using three levels for each indicator. For example, increase, decrease or no change in healthy life expectancy; or narrow, widen or no change in the difference in healthy life expectancy or in income.

## *Development of valuation framework*

### Context

Respondents were asked to imagine the UK Government is thinking about introducing a new income-based policy that replaces the UC standard allowance. The introduction of a new policy would not impact on anyone's eligibility for additional benefits, such as child payments, child care costs, health and disability payments or help with housing costs, and the new policy would be combined with the existing benefit system so that no benefit claimants receive less money. Respondents were also told: there is an (unspecified) cost of implementing a new income-based policy which is exactly the same for all new policies.

### Survey design

Research objectives 3–4 were examined quantitatively via survey questions (*Table 1*) and qualitatively via think-aloud and open-ended interview questions asked throughout the survey to explore respondents' understanding of the questions and reasons for their decisions. The survey was split into four parts. Four types of survey questions were used: choice, benefit trade-off (BTO), ranking and WTP. The results of the choice, ranking and pooled WTP questions are reported here. Benefit trade-off (Questions 6b–e, 7b–e and 8b–e) and standard and incremental WTP results will be reported in other publications, as they do not directly correspond to the ROs. Questions presented different combinations of the six income-based policies. New policies were labelled (i.e. NIT, UBI) or unlabelled (i.e. Policy A, Policy B). Some questions only focused on policy characteristics with no outcome information; others presented information on one outcome only or all three outcomes. Respondents were asked to only think about the outcome(s) stated when answering the questions. The survey design shows the alignment of survey questions with RO(s).

### Perspective and elicitation procedures

All questions adopted a socially inclusive perspective so that respondents were asked to consider possible impacts to themselves and other UK residents when answering

**TABLE 1** Survey design

| Survey part | Survey question number | Question type | Label | Outcomes | Options | | | | ROs |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Choice | Unlabelled | No | TBI | PI | UC | | 3a–c, 3e |
| | 2 | | | | UBI | NIT | UC | | 3a–c, 3f |
| | 3 | | | | PI | TBI | UC | | 3a–c, 3e |
| | 4 | | Labelled | | NIT | UBI | UC | | 3a–c, 3f |
| 2 | 5 | | | | UBI | MIG | EA | RC | 3a–c, 3g, 4 |
| | 6a–e | Choice and BTO | | Population health | UBI | MIG | EA | RC | |
| | 7a–e | | | Health inequalities | UBI | MIG | EA | RC | |
| | 8a–e | | | Income inequalities | UBI | MIG | EA | RC | |
| 3 | 9 | Ranking | | Population health, health inequalities and income inequalities | Six policies: UBI, TBI, MIG, NIT, PI, UC | | | | 3a–c, 3e, 4 |
| 4a | 10–14 | WTP – standard | | | Up to five policies: UBI, TBI, MIG, NIT, PI | | | | 3a–d, 3e, 4 |
| 4b | | WTP – incremental | | | | | | | |

EA, equally attractive.

the questions. In this way, participants could express preferences for all policies, whether benefiting themselves, others or both.

### *Choice*

Two forms of choice questions were asked. The first elicited respondents' preferences for three policy options using a best-best approach (see *Table 1*, Questions 1–4). Respondents saw two new policies and UC, choosing their most preferred policy and then their most preferred from the remaining options. New policies were labelled and unlabelled. Only information on policy characteristics was provided.

In the second form, respondents chose one of four options: UBI, MIG, equally attractive (EA) and reject choice (RC) (see *Table 1*, Questions 5, 6a, 7a, 8a). Respondents chose a reason to explain a selection of 'RC'. The policies were labelled. Question 5 only provided information on policy characteristics, and an outcome was provided in Questions 6a, 7a, 8a. Respondents were told that UBI and MIG would either: increase healthy life expectancy (Question 6a); narrow the difference in healthy life expectancy (Question 7a); or narrow the difference in income (Question 8a). Impact occurred 1 year after policy implementation, and the size of impact was the same for both policies. UBI and MIG were selected due to UK policy interest in these policies.[40,41,49]

### *Ranking*

Respondents ranked the six income-based policies from most to least prefer (see *Table 1*, Question 9). Policies could be ranked equally. All policies were labelled, and outcome information was provided. All five new policies would: increase healthy life expectancy, narrow the difference in healthy life expectancy and narrow the difference in income. Impact occurred 1 year after policy implementation, and the size of impact was the same for all policies. No change to either of the three outcomes resulted from UC.

### *Willingness to pay*

Willingness-to-pay questions were only asked of policies ranked above or equal to UC (see *Table 1*, Questions 10–14). An ex ante WTP approach was used, with respondents asked their WTP per month while considering their household budget and present circumstances. The payment vehicle was an unspecified extra tax, ring-fenced to fund the income-based policy under consideration. If the policy was implemented, respondents would pay the extra tax at the amount they stated. Respondents first answered a binary choice question on whether they would be willing to pay something per month. Those selecting 'No' selected a reason why from a closed set of options. Those selecting 'Yes' were randomly allocated to one of two approaches – standard or incremental – to elicit their maximum WTP.

Both approaches used the payment card method. Policies were randomised in the standard approach. For each policy, respondents sorted 18 payment cards, ranging from 25p to £1000 into three piles – definitely would pay, maybe, definitely would not pay – then stated their maximum WTP. In the incremental approach, the ordering of policies reflected their ranking. The standard approach was then used until a WTP > £0 was elicited. For the following policies, respondents willing to pay something were asked how much more than the previous WTP amount they would be willing to pay for the new policy under consideration. An additional payment card of £0 was included, with sorting based on how much more they would be willing to pay. Respondents were then asked to state how much more they would be willing to pay per month. This amount was added to the maximum WTP amount of the previous policy, and respondents confirmed if this was their new maximum WTP. Following all WTP questions, respondents stated if they would financially benefit (or not) from the policy under consideration.

## *Piloting and data collection*

David Bomark and Neil McHugh piloted the questions through in-depth, face-to-face, one-to-one interviews with 23 respondents. Seventeen respondents based in Glasgow and Newcastle were purposively recruited through a market research company on the basis of income, employment status and benefit status. Piloting was also undertaken on six members of staff and postgraduate students from Glasgow Caledonian University (GCU), including individuals with topic knowledge or methodological expertise. Additionally, piloting was undertaken with our GPP. Piloting occurred in three tranches, focusing on the interpretation, design and wording of the questions and interview length. After each tranche, modifications were made to the presentation, wording and/or total number of questions. Piloting finished when no new suggestions were elicited, and respondents were perceived, through their quantitative and qualitative responses, as understanding the questions.

For the main survey, 50 respondents were sampled across Glasgow and Newcastle using recruitment targets for age, gender, education, income, employment status, ethnicity, benefits, voting preferences and health status. Surveys were administered in face-to-face, one-to-one interviews

in a private room on campus at GCU or Newcastle University. Respondents received a £50 incentive payment. All respondents provided informed consent. See *Report Supplementary Materials 2* and *3* for the final version of the survey questions.

## *Data analysis*

Quantitative analysis was undertaken in SPSS and R.[50,51]

### Choice data

For Questions 1–4, chi-squared tests examined whether any difference between the reported frequencies of each option (i.e. Policy A, Policy B and UC) for each choice (i.e. most preferred, second-most preferred, least preferred) and expected frequencies was due to chance. Responses to paired questions – Question 1 versus Question 3; and Question 2 versus Question 4 – across the three choices were explored with contingency tables. Consistency between paired questions was explored in two other ways. Firstly, Cohen's kappa (κ) determined the rate of agreement corrected for chance for each choice between Questions 1 and 3 and between Questions 2 and 4. The κ ranges from −1 to + 1 and is interpreted as: ≤ 0 poor, 0.01–0.2 slight, 0.21–0.40 fair, 0.41–0.6 moderate, 0.61–0.80 substantial, 0.81–1 almost perfect.[52] Second, respondents were categorised as: fully consistent (same choice pattern between the paired questions across all choices), partially consistent (same choice pattern for: most preferred, second-most preferred or least preferred choices) and fully inconsistent (different choice pattern across all choices between the paired questions).

For Questions 5, 6a, 7a, 8a, chi-squared tests for each question examined whether any difference between the reported frequencies for the most preferred choice (i.e. UBI, MIG, EA and RC) and expected frequencies was due to chance. Consistency was explored in three ways. First, Cohen's κ was calculated for pairs of questions (e.g. Question 5 vs. Question 6a, Question 5 vs. Questions 7a, etc.). Second, Fleiss' κ determined the rate of agreement corrected for chance across all questions (i.e. Question 5, 6a, 7a and 8a). Lastly, respondents were categorised as fully consistent (same choice pattern across all four questions), partially consistent (across different combinations of three and two policies) and fully inconsistent (different choice pattern across all four questions). Fleiss' κ is interpreted the same way as Cohen's κ.

### Ranking data

Ranking data were scored using competition ranking; policies ranked equally received the same ranking number with a gap, equal to the number of policies ranked equally minus one, left to the next policy. For example, if UBI and MIG were ranked equally and preferred to NIT, UBI and MIG score 1 and NIT scores 3. Fractional ranking was also used to explore if the scoring system impacted results. Fractional scoring involves calculating the mean rank of policies ranked equally with a gap left to the next policy as per competition ranking. From the above example, UBI and MIG would score 1.5 and MIG scores 3. The marginal frequency of each rank for each policy was calculated, showing how often each policy was ranked in each ranking position, along with measures of central tendency and standard deviation.

### Willingness-to-pay data

Mean, with 95% confidence intervals (CIs), and median WTP values were calculated for pooled WTP data. There is no agreed-upon definition of, or process for handling, 'protest zeros'.[53] £0 WTP were defined as 'protest zeros' when one of three reasons were selected: 'should not have to pay', 'disagree with introducing an extra tax' and indicating through the 'other' option that they 'don't trust taxes'. 'Protest zeros' were excluded from the analysis. As means are sensitive to extreme responses, it is common to exclude or censor outlier WTP amounts. Responses were classified as outliers only if the respondent was deemed not to have understood the question. Willingness-to-pay questions were only asked for policies ranked above or equal to UC. Consequently, for policies ranked below UC, individuals' WTP was categorised as £0. We assumed respondents would not be willing to pay anything for a policy they believe is not as good as the current situation. Frequencies were calculated between respondents' WTP responses and whether they believed they would financially benefit from the policy. Additionally, frequencies were calculated between respondents' WTP responses and selected combinations of respondents' characteristics that suggest they are less likely to be paying income tax (low income, on benefits, unemployed and retired). Paired *t*-tests compared mean WTP between different pairs of policies.

### Ranking and willingness-to-pay data

Consistency between ranking and WTP questions was explored for pairs of policies. Respondents were categorised as: fully consistent (same choice pattern for pairs of policies between ranking and WTP questions), partially consistent (prefer one policy in ranking or WTP and equally in the other question) and fully inconsistent (different choice pattern for pairs of policies between ranking and WTP questions).

### Qualitative analysis

All qualitative data were transcribed and pseudonymised at the point of transcription and analysed in NVivo 12.[54] Analysis identified common themes among respondents

and was undertaken for specific questions, using question codes and codes relating to question responses.[55]

## Results

### *Respondent characteristics*

Data were collected between January 2024 and February 2024 from 50 respondents (see *Appendix 2*, *Table 7*). The sample was diverse and, overall, had an even gender split, with representation of all categories of age, education, income, employment status, benefits, voting preferences and health status. The vast majority of respondents were White British.

### *Choice questions*

#### Test–retest

Questions 1 and 3 repeat the same question. *Appendix 2*, *Tables 8–10* summarise responses for the most preferred, second-most preferred and least preferred choices. No choices are statistically significantly different, indicating no clear preference for any policy. The most preferred option and second-most preferred option switches from TBI to PI (see *Appendix 2*, *Table 8*) and UC to TBI (see *Appendix 2*, *Table 9*). The policy selected most often as the least preferred across both questions is UC (see *Appendix 2*, *Table 10*). Preferences are consistent more often for the least preferred choice (72%) than for the most preferred (56%) and second-most preferred (54%). Similarly, Cohen's κ indicates moderate agreement for the least preferred choice but only fair agreement for the most and second-most preferred choices. Across all choices, 48% of respondents are fully consistent, 38% are partially consistent with the highest level of partial consistency for the least preferred choice and 14% are fully inconsistent (see *Appendix 2*, *Table 11*). Overall, there is no clear policy preference or preference ordering, although respondents seem more certain about their least preferred policies, nearly half the sample is fully consistent and only a small proportion is fully inconsistent.

#### Labelling effect

Questions 2 and 4 only vary in the labelling of policies. *Appendix 2*, *Tables 12–14* summarise responses for the most preferred, second-most preferred and least preferred choices. The most preferred choice in Questions 2 and 4 and the least preferred choice in Question 2 are statistically significantly different. This suggests NIT is the most preferred policy and is most likely not to be the least preferred choice (see *Appendix 2*, *Tables 12* and *14*). Preference ordering is the same for both questions across all three options, except for a tie between NIT and UBI in Question 4 for the second-most preferred choice (see *Appendix 2*, *Table 13*). There is also a high level of consistency, ranging from 66% (second-most preferred choice) to 78% (most preferred choice). Similarly, Cohen's κ suggests substantial agreement for the most preferred choice and moderate agreement for both the second-most preferred and least preferred choices. Across all choices, 60% of respondents are fully consistent, 40% are partially consistent and 0% are fully inconsistent (see *Appendix 2*, *Table 15*). Overall, there is no evidence of a labelling effect, as preference ordering is almost exactly the same across both questions, respondents seem clear about their most preferred policy and no respondents are fully inconsistent.

#### Outcome information

Questions 5, 6a, 7a and 8a only vary in relation to the information provided about outcomes. When outcome information is presented, UBI and MIG have the same impact on the stated outcome. The results across all four questions are statistically significantly different (see *Appendix 2*, *Table 16*), suggesting the most preferred option is MIG (52%), followed by UBI (28–32%), with 10–14% regarding policies as EA and a small number rejecting the choice. Consistency between pairs of questions range from 76% to 84%, and Cohen's κ suggests substantial agreement for all pairs of questions (see *Appendix 2*, *Table 17*). Fleiss' κ suggests substantial overall agreement across all four questions, almost perfect agreement for UBI and substantial agreement for MIG (see *Appendix 2*, *Table 18*). Seventy per cent of respondents are fully consistent across all four questions, 10–12% are partially consistent across a combination of three or two different questions and 8% are fully inconsistent (see *Appendix 2*, *Table 19*). Overall, the results suggest MIG is most preferred and that introducing information on outcomes for both policies does not influence preferences as there is a high level of consistency across all, and between pairs of, questions.

#### Reasons for inconsistency

Qualitative data from Questions 1 versus 3 and Questions 2 versus 4 indicate partially consistent and fully inconsistent respondents can interpret the policy scenarios and justify choices. Inconsistency seems to relate to respondents seeing the merits of different characteristics across the policies.

> *[T]he main difference between Policy A and Policy B is that B is open to everybody, but needs to be seeking paid employment, doing voluntary work, and/or having care responsibilities, whereas A … doesn't require obligations. I actually find it quite difficult to choose between A and B. I kind of almost want to switch those*

*obligations around between each of them. I suppose I need to decide which aligns more with my values.*
*Respondent 16, partially consistent, Question 1 vs. 3*

*I like some things in Policy A, I like some things in Policy B and I like Universal Credit as well.*
*Respondent 9, partially consistent, Question 1 vs. 3*

These are also the first questions respondents see and the first time reading the policy characteristics for the different policies. Inconsistency may partly emerge from respondents still processing the information and forming an opinion. This could explain the higher levels of inconsistency for Questions 1 and 3 compared to Questions 2 and 4 and Questions 5, 6a, 7a and 8a (see *Appendix 2*, *Tables 11*, *15* and *19*).

Across Questions 5, 6a, 7a and 8a, qualitative data indicate that inconsistent responses emerge for different reasons. Like the previous questions, seeing the merits of different characteristics in different policies causes some preference uncertainty among respondents. But, for others, neither UBI nor MIG is liked, and respondents vary in choosing EA or RC. Questions 6a, 7a, and 8a also provide outcome data for the first time. A few respondents struggle to believe that MIG and UBI narrow income inequalities to the same extent as everyone receives the same payment amount from UBI and information on the funding of policies is not provided. Similarly, information about income inequalities influences preferences for MIG, as it targets those below a poverty line. A few respondents did not believe that a monetary payment would impact on health either because people cannot control their health or that people would not change their bad habits, whereas, narrowing income inequalities can be controlled and actually remedied. Finally, even though both policies would have the same impact, a couple of respondents associate a particular policy with one outcome and change their preferences depending on whether they believe the impact would affect them (i.e. changes to overall health) or others (i.e. health inequalities).

*I'm not sure how … a Universal Basic Income would narrow the difference [in income inequalities].*
*Respondent 27, fully inconsistent*

*So, … increase health expectancy … it's not believable … but narrowing the difference in the income … that's believable. I think it could happen. It's a thing that you can control as well.*
*Respondent 9, partially consistent*

## *Ranking questions*

### Quantitative results

*Table 2* shows the marginal frequency of rankings and descriptive statistics for the ranking data when respondents are presented with all policies together. All policies are ranked in all possible positions. Participation Income (28%), NIT (26%) and UBI (24%) are ranked as

**TABLE 2** Marginal frequency of rankings and descriptive statistics (competition scoring)

| | Full sample | | | | | | |
|---|---|---|---|---|---|---|---|
| | | UBI | PI | TBI | MIG | NIT | UC |
| Ranking | 1 | 24% | 28% | 6% | 12% | 26% | 8% |
| | 2 | 16% | 16% | 16% | 32% | 20% | 4% |
| | 3 | 12% | 8% | 34% | 16% | 26% | 6% |
| | 4 | 8% | 18% | 22% | 14% | 18% | 12% |
| | 5 | 20% | 24% | 18% | 24% | 4% | 4% |
| | 6 | 20% | 6% | 4% | 2% | 6% | 66% |
| Total | | 50 | 50 | 50 | 50 | 50 | 50 |
| Mean | | 3.44 | 3.12 | 3.42 | 3.12 | 2.72 | 4.98 |
| Median | | 3 | 3 | 3 | 3 | 3 | 6 |
| Mode | | 1 | 1 | 3 | 2 | 1 & 3 | 6 |
| Standard deviation | | 1.92 | 1.73 | 1.25 | 1.45 | 1.44 | 1.65 |

the most preferred policy most frequently. Negative Income Tax has the lowest mean ranking followed by PI and MIG jointly, TBI, UBI and UC. The distributions of rankings differ. The rankings for NIT are right-skewed, as fewer people rank it in the bottom positions. Universal Basic Income has a bi-modal distribution, with the same proportion of respondents ranking it in the top and bottom two positions; UBI also has the highest standard deviation, indicating the rankings are more spread out. Respondents, similarly, react positively or negatively to PI, although few people ranked it as least preferred. Targeted Basic Income has a normal distribution, with most respondents ranking it in the middle two positions. Minimum Income Guarantee has a relatively flat distribution before tailing off at the end. Universal Credit is highly left-skewed, as fewer people rank it in the top positions. The distributions of UBI and TBI explain why TBI has a slightly lower mean than UBI despite UBI's mode (1) being less than TBI's (3). Finally, despite UC not changing any of the three outcomes, 34% of respondents preferred it to at least one other policy and 8% preferred it to all other policies. The above results are not substantively different when using fractional scoring (see *Appendix 2*, *Table 20*).

### Reasons for preferring policies

Three main reasons help explain why UC is not ranked last despite being the only policy leaving the three outcomes unchanged. First, respondents liked characteristics of the policy, in particular that recipients have to do something to receive the money. Second, changing the current system will generate unwanted problems and costs. Lastly, one respondent believed that UC is working well and had not heard any complaints about it.

> *But Universal Credit again has been working and it's not been in any newspapers or in the headlines or anything that people are complaining about. And my opinion then seems to be it's doing a good job, otherwise we would have all this about it's not going well … and it would be the cost involved to then change all this as well.*
>
> *Respondent 11, ranked UC first place, not on benefits*

> *Since it's already implemented [reference to UC], if you change it you will have problems.*
>
> *Respondent 19, ranked UC second place, on benefits – Personal Independence Payments*

As the five new policies all impacted the three outcomes in the same way, respondents distinguished between them on the basis of policy characteristics. As the ranking data indicate, an almost equal split of respondents ranked universal policies (UBI and PI) or targeted policies (NIT, MIG, TBI and UC) in first place. Respondents reasoned that universal policies could not be construed as policies for the poor, and UBI is valued for its simplicity. Obligations (PI) would encourage people to give something back rather than creating a society where people get something for nothing that generates unwanted behaviours, such as laziness. Policies providing more to those in need (NIT and MIG) are considered fairer. Respondents generally distinguished between these two policies on the basis of the cohabitation criteria, with it being viewed as either fair or unfair.

> *I don't like a poverty judgement being made on this.*
>
> *Respondent 5*

> *Obligation to receive payment … undertaking employment for … I like having some sort of goal for it as well. Otherwise people are just going to sit around and get money.*
>
> *Respondent 3*

## *Willingness-to-pay questions*

### Quantitative results

*Table 3* shows the WTP for all policies. The proportion of respondents stating £0 for each policy ranged from 30% to 40%: PI received the highest, and NIT the lowest, proportion. The majority of £0 payments related to ranking policies lower than UC: 28% of respondents ranked UBI in this way compared to 12% doing the same for MIG (see *Appendix 2*, *Table 21*). Smaller proportions of respondents gave other reasons for £0 payments. A small number of protest zeros are identified for each policy. No response is defined as an outlier. The pattern of mean and median WTP amounts are broadly similar across the full sample and with protest zeros excluded. Participation Income (£38.01) and UBI (£34.23) have the highest mean WTP amounts followed by NIT and MIG (approximately £20) and TBI (£17.12) when excluding protest zeros. However, these results are not statistically significantly different, and the median WTP amounts are equal (£10) across all policies. The CIs of PI and UBI are also much wider than the other policies, indicating greater uncertainty around the mean WTP. This is caused by one WTP amount for each policy having a ≥ 10% effect on the mean.

Willingness-to-pay amounts of £0 or > £0 are elicited from financial and non-financial beneficiaries for almost all policies; no non-beneficiaries stated a £0 WTP for UBI (see *Appendix 2*, *Table 22*). The proportion of non-beneficiaries willing to pay increases from 9–15% for universal policies (UBI and PI) to 55–62% for targeted policies (TBI, MIG and NIT). For all income-based policies, some people unlikely to be paying income tax expressed a WTP of > £0 using the extra tax payment vehicle (see *Appendix 2*, *Table 23*).

**TABLE 3** Willingness to pay, including policies ranked lower than UC

| | | | | Full sample | | Protest zeros excluded | |
|---|---|---|---|---|---|---|---|
| Policies | *n* | WTP = O (%) | Protest zeros | Mean WTP (CI) | Median WTP | Mean WTP (CI) | Median WTP |
| UBI | 50 | 20 (40%) | 1 | £33.55 (£5.05 to £62.05) | £8.50 | £34.23 (£5.17 to £63.30) | £10.00 |
| PI | 50 | 21 (42%) | 4 | £34.97 (£4.61 to £65.32) | £6.50 | £38.01 (£5.06 to £70.95) | £10.00 |
| TBI | 50 | 19 (38%) | 3 | £16.09 (£9.64 to £22.54) | £7.50 | £17.12 (£10.35 to £23.88) | £10.00 |
| MIG | 50 | 19 (38%) | 4 | £18.48 (£10.41 to £26.55) | £6.00 | £20.09 (£11.45 to £28.72) | £10.00 |
| NIT | 50 | 15 (30%) | 2 | £19.89 (£12.15 to £27.63) | £10.00 | £20.72 (£12.74 to £28.70) | £10.00 |

There are no statistically significant differences in mean WTP between pairs of policies (see *Appendix 2*, *Table 24*). UBI and PI have higher mean WTP compared to all other policies, for example, the mean WTP is £15.29 higher for UBI than for MIG; TBI has a lower mean WTP in all its pairings. However, no results are statistically significantly different.

Overall, on the basis of WTP, there is no clear preference for any income-based policy, respondents appear to think not only of benefits to themselves but also to others, financial beneficiaries and respondents unlikely to be paying income tax are still able to express their preferences through WTP questions.

### Reasons for willingness to pay

In addition to reasons for preferring different policy characteristics, as outlined above, issues relating to the monetary payment, outcomes and cost influenced respondents' WTP amounts. As instructed in the setup, respondents focused on how much they could afford to pay based on their present circumstances. This demonstrates that respondents drew on relevant information to answer the questions. However, their valuation is complicated by the potential size of the monetary payment from each policy and whether or not they would financially benefit from the policy. For example, a number of respondents recognised that due to their financial circumstances, they did not need the monetary payment received from universal policies (UBI and PI). While not necessarily valuing these policies more than targeted policies, they are willing to pay more for them as they accounted for receiving the monetary payment when expressing their WTP. Relatedly, a few respondents wanted to know the payment size to assess what WTP amount they could provide and still have a financial net gain. Finally, unlike in the ranking question (which provided the same information on outcomes), some respondents did not differentiate between the policies in terms of providing different WTP amounts for each policy, as they focused only on achieving positive impacts on the three stated outcomes, assuming the same size of impact achieved by each policy and that all policies cost the same.

> *[T]he reason I was saying I would end up paying more when we were benefitting, it's a basic income for everybody, let's just say everybody gets a £1000 a month … but I don't need that. So, I will be willing to pay a little of the majority of that back essentially in tax for that to fund other people … But essentially, we would benefit from it, so we should be paying more because we don't need it. Whereas for the other one, the vast majority of people … are not going to benefit from it, so there is that kind of limit to what you pay for it.*
>
> *Respondent 10*

> *To me it would seem a waste of time because you're just paying to receive it. Because in this circumstance you would be receiving it also. So, it's like taking out of one hand and giving to the other. So, I would say no, nothing. [In response to being asked about the certainty of this response] It would depend on if it had a benefit to you. So, for example if you were going to get … say you contributed five and got ten back, is it going to benefit you and you may want to contribute towards it. So, I'm not sure, it would probably be dependent on circumstances'.*
>
> *Respondent 15*

> *Interviewer: you ranked those policies differently, so UBI first, Participation Income second, and three in joint third, but you gave the same willingness to pay amount for all five policies. Can you just say why?*
> *I think because all five of those policies have the same kind of overall effects … and that is really what these policies are here for, to affect a kind of levelling things*

> *up … and that is the main focus. And if they all cost the same amount, then that is probably my main thing that I focus on.*
>
> *Respondent 16*

Reassuringly, respondents also thought of benefits to themselves and others when deciding on their maximum WTP, including when they would not receive a monetary benefit from the policy.

> *So, the judgement I have to make is, how much am I prepared to deprive my family of in order to implement this social benefit for other people? Is actually what it boils down to for me, I won't get a benefit from this, others will, so it's how much I'm prepared to pay to benefit others.*
>
> *Respondent 5*

> *I was … thinking about mainly how much tax I am already paying as it is, and National Insurance … it is in my mind that I can live comfortably, and I do feel that I should give what I can, but also understanding that I have two children to feed and things like that as well. So, I can't give everything away that I have … the only benefit to myself is kind of knowing that I am helping to … level things up a bit. That is a kind of nice feeling.*
>
> *Respondent 15*

### Ranking and willingness-to-pay consistency

Across all policy pairings, 41–68% of preferences are fully consistent between ranking and WTP questions, 24–51% of preferences are partially consistent and 3–18% of preferences are fully inconsistent (see *Appendix 2*, *Table 25*). Almost all partially consistent responses occur from respondents preferring one policy more in the ranking question and valuing the policies equally in the WTP question. Fully inconsistent preferences are generally higher when policies only differ on one policy characteristic (UBI vs. PI, MIG vs. NIT and NIT vs. TBI) or with pairings, including UBI.

## Discussion

In what follows, we set out the lessons learnt, limitations and areas for future research.

### *Lessons learnt*

Overall, results suggest it is feasible to elicit public preferences for income-based policies with different policy characteristics when health and non-health outcomes are made explicit using trade-off-based stated preference questions. The use of WTP questions is also encouraging, with future developments focusing on addressing limitations (see below), particularly, around the interpretation of WTP amounts.

Income-based policies were identified and scenarios developed for valuation alongside a valuation framework (RO1–2). Respondents displayed an understanding of the policy scenarios (RO3a), the perspective they were asked to adopt when constructing their values (RO3b) and the stated preference questions (RO3c) by drawing on relevant information and justifying their responses using relevant rationales. Specifically, in relation to the WTP questions, financial beneficiaries and respondents unlikely to be paying income tax could express their preferences through WTP questions (RO3d). Relatively few respondents were fully inconsistent in relation to test–retest questions and between ranking and WTP questions (RO3e), there was no evidence of a labelling effect (RO3f) and introducing information on outcomes did not impact preferences (RO3g).

The type of policy seems to matter, in terms of the policy characteristics explored in this study, with respondents making trade-offs between policy type when improving overall health, health inequalities and/or income inequalities (RO4). Minimum Income Guarantee is preferred to UBI when both policies have the same outcome. When respondents rank order the six income-based policies, assuming impacts on outcomes for the five new policies are the same, NIT is the most preferred policy. The rankings also suggest preference heterogeneity; respondents have different preferences for different characteristics, such as universal policies or those with obligations, and different forms of the same characteristic, such as universal or targeted policies, obligation or obligation-free policies and policies with uniform or non-uniform payments. Willingness-to-pay data also suggest preference heterogeneity as there is no clearly preferred policy. These data are also more difficult to interpret, for the reasons outlined in the following section. Given these findings, the methodological purposes of the study and the small sample on which they are based, we cannot draw firm conclusions about public preferences for income-based policies that impact on health.

Our study advances research on preference studies for income-based policies in three main ways. First, this is the only study eliciting individuals' WTP for income-based policies. This feasibility study provides the basis for large-scale surveys to explore what people are willing

to give up for the introduction of UBI and other income-based policies. Second, we add to the small number of studies which elicit preferences for a combination of policy characteristics and outcomes of income-based policies.[33,36] Our results suggest people care about policy characteristics. This is in line with the findings of Laenen[33] and research on welfare deservingness[38] and counter to Nettle *et al.*[36] More research is needed to unpick whether people care more about attributes not included in our study (e.g. changes to poverty and income tax rates) or whether methodological issues, such as the complexity of choice tasks, may help to explain the different findings in this emerging literature. Lastly, and perhaps most importantly, this is the first study in this context to combine stated preference and qualitative questions to test whether respondents, to stated preference studies, understand and respond to the tasks in the way that the researchers intended. Our qualitative findings help strengthen confidence in the use of stated preference methods by illustrating that respondents understood both the policy scenarios and questions, and that they could provide rationales for their preferences.

The main takeaway for decision-makers is that our quantitative and qualitative data show that people support different income-based policies for different reasons even when all new policies have the same outcome. Individual preferences were influenced in different ways, by whether policies were targeted at individuals with low incomes, had a form of conditionality and/or provided payments of different sizes to people in different situations, such as being in a couple or having a lower income. Different conceptions of fairness were also often used to justify choices. These insights are important for decision-makers in the health sector who often focus on maximising health outcomes.

### *Limitations and future research*

This study has a number of limitations that should be addressed in future research. First, our small sample size precludes claims about the generalisability of our findings. Thus, we cannot say which policy is likely to achieve the most public support. Future research should focus on examining the level, and strength, of public support for different income-based policies among nationally representative samples.

Second, test–retest questions had lower levels of consistency than other questions in which an aspect of the question changed. Using example activities before valuation tasks for familiarity and preference formation could help improve preference consistency.

Third, individuals may have preferences for different policy characteristics not included in our design and for different combinations of policy characteristics that do not neatly align with our policy scenarios. We only utilised one version of each income-based policy with five policy characteristics. This enabled us to test whether the policy type matters for improving different outcomes. However, there are up to 12 policy characteristics over which people may have different preferences.[33] Utilising an experimental design with a wider variety of policy characteristics and levels would enable insight into preferences for different combinations of policy characteristics, although the value of this approach should be weighed up against increasing the complexity of the questions and the possibility of implausible combinations.

Fourth, we focused on three, qualitatively described, outcomes, each of which had three levels. This enabled us to explore the impact of providing outcome information on preferences and if respondents made trade-offs between policies even when the policies had the same outcomes. Future research which quantitatively describes outcomes across a greater number of levels and varies the levels of the different outcomes would enable the measurement of trade-offs between outcomes, in addition to characteristics. While income-based policies are associated with other outcomes, such as employment and education, the complexity of including more outcomes should also be considered in relation to the purpose of a future study.

Fifth, monetary payments from income-based policies were described qualitatively rather than stating an explicit monetary amount as there is debate about these payment sizes and we could not vary payment size across the policy scenarios in this small-scale study. While WTP amounts were provided, interpreting this was difficult for financial beneficiaries and non-beneficiaries. Future research should stipulate the monetary payment size and vary the amounts. This would enable measurement of how WTP varies with different monetary payment sizes and respondents to interpret whether they would win or lose financially, and improve the interpretation of WTP amounts from financial beneficiaries and non-beneficiaries. Further research should also consider a bespoke design presenting different information to people contingent on their income or tax bracket.

Sixth, to simplify the design of this small-scale survey, respondents were asked to assume that all new income-based policies cost the same. While this information was accepted by respondents, qualitative data suggest that if costs varied, as they would in practice, some

respondents may make different decisions. A future design could use a plausible range of costs across the policies. This would need to account for the relationship between costs, monetary payment size and impact on outcomes and a possible interaction between costs and WTP amounts.

Lastly, to gain insight into preferences for new policies versus the current situation (i.e. UC), we linked our ranking and WTP questions. However, as a number of respondents ranked policies less than UC, we were forced to assume that these respondents would only be willing to pay £0 for those policies. This is a conservative assumption that they might be willing to accept payment (pay less tax) for a policy less preferred than UC. Future research could explore different designs to reduce the number of £0 WTP amounts.

## Conclusion

Currently, we do not know what people would give up for the introduction of different income-based policies when wider impacts, such as health outcomes, are explicitly stated. Arguably, without such insight, implementing transformative policies to tackle health inequalities is unlikely. This mixed-methods study has demonstrated the feasibility of asking the general public trade-off-based stated preference questions to elicit their preferences for income-based policies, such as UBI, when the health and non-health outcomes are made explicit. Specifically, this study identified a range of income-based policy options, developed policy scenarios describing them in relation to their characteristics and outcomes, and empirically tested the feasibility of eliciting preferences for these policies using stated preference methods with a sample of 50 respondents. This has laid the groundwork for a larger, nationally representative study that could provide much-needed new insights to inform policymaking around implementing transformative policies for tackling health inequalities.

## Additional information

### CRediT contribution statement

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All data requests should be submitted to the corresponding author for consideration. Access to anonymised data may be granted following review.

### Ethics statement

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### Disclosure of interests

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## List of supplementary material

**Report Supplementary Material 1** Topic guide

**Report Supplementary Material 2**
Survey questions

**Report Supplementary Material 3** Showcards

Supplementary material can be found on the NIHR Journals Library report page (https://doi.org/10.3310/ALDS8846).

Supplementary material has been provided by the authors to support the report and any files provided at submission will have been seen by peer reviewers, but not extensively reviewed.

Any supplementary material provided at a later stage in the process may not have been peer reviewed.

## List of abbreviations

| | |
|---|---|
| BTO | benefit trade-off |
| CV | contingent valuation |
| DCE | discrete choice experiment |
| EA | equally attractive |
| GCU | Glasgow Caledonian University |
| GPP | General Public Panel |
| MIG | Minimum Income Guarantee |
| NIT | Negative Income Tax |
| PAT | Project Advisory Team |
| PI | Participation Income |
| RC | reject choice |
| RO | research objective |
| SCDC | Scottish Community Development Centre |
| TBI | Targeted Basic Income |
| UBI | Universal Basic Income |
| UC | Universal Credit |
| WTA | willingness to accept |
| WTP | willingness to pay |

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## Appendix 1 Policy scenario development

**TABLE 4** Laenen's (2023) framework of 12 policy characteristics

| | | |
|---|---|---|
| **Accumulation:** *extent to which payment combined with other sources of earnings* | **Administration:** *how and who administers payment* | **Conditionality:** *obligations attached to the benefit receipt* |
| **Duration:** *period over which it is received* | **Financing:** *mechanisms used to fund it* | **Frequency:** *regularity of payments* |
| **Generosity:** *level of payment* | **Individuality:** *unit at which payment targeted* | **Integration:** *position of it within welfare system* |
| **Modality:** *form taken by payment* | **Uniformity:** *how payment level determined* | **Universality:** *who is entitled and eligible* |

Adapted from Laenen, 2023.[33]

**TABLE 5** Income-based policies

| | NIT | UBI | MIG | TBI | PI | UC |
|---|---|---|---|---|---|---|
| Who is eligible to receive the payment: | Only adult UK residents below a set poverty line and under State Pension age | Every adult UK resident, no matter their income, under State Pension age | Only adult UK residents below a set poverty line and under State Pension age | Only adult UK residents below a set poverty line and under State Pension age | Every adult UK resident, no matter their income, under State Pension age | Only adult UK residents below a set poverty line and under State Pension age |
| Who receives the payment: | All eligible adults | All eligible adults | All eligible adults | All eligible adults | All eligible adults | One adult from an eligible household receives the combined payment of a household |
| The payment size: | Enough money for some basic needs | Enough money for some basic needs | Enough money for some basic needs | Enough money for some basic needs | Enough money for some basic needs | Enough money for some basic needs |
| How the payment size is determined | Higher payments as individual income decreases | Same for everyone | Higher payments as household income decreases<br>Lower payments for cohabiting couples | Same for everyone | Same for everyone | Higher payment if 25 or over<br>Higher payment as household earnings decrease<br>Lower payment for cohabiting couples |
| Obligations required to receive the payment: | None | None | None | None | Undertaking paid employment, voluntary work and/or having caring responsibilities | Looking for work (if unemployed) or ways to increase earnings (if already working) |

**TABLE 6** Policy outcomes

| Outcome | Indicator | Current situation in UK | Impact |
|---|---|---|---|
| Population health | Healthy life expectancy: *number of years someone is expected to live in good health* | On average, the number of years lived in a healthy condition is approximately 63 years | Increase healthy life expectancy<br>No change in healthy life expectancy<br>Decrease healthy life expectancy |
| Health inequalities | Difference in healthy life expectancy: *difference in the number of years someone is expected to live in good health between those living in the best and worst-off areas* | On average, a person from the best-off areas can expect to live in a healthy condition for approximately 70 years, which is about 20 years longer than someone from the worst-off areas who can expect to live in a healthy condition for approximately 50 years | Narrow the difference in healthy life expectancy<br>No change in the difference in healthy life expectancy<br>Widen the difference in healthy life expectancy |
| Income inequalities | Difference in the amount of income between those with highest and lowest incomes: *how much of income in society is going to those with the highest and lowest incomes* | On average, a person from the best-off group has an income after tax of approximately £59,000, which is about 4 times higher than someone from the worst-off group whose income after tax is approximately £15,000 | Narrow the difference in income<br>No change in the difference in income<br>Widen the difference in income |

## Appendix 2 Results

**TABLE 7** Respondent characteristics (*n* = 50)

| Respondent characteristics | | Glasgow | Newcastle | Total |
|---|---|---|---|---|
| Gender | Male | 14 | 11 | **25** |
| | Female | 11 | 14 | **25** |
| Age | 30 and below | 4 | 6 | **10** |
| | 31–65 | 18 | 15 | **33** |
| | ≥ 65 | 3 | 4 | **7** |
| Education | Low qualifications | 7 | 15 | **22** |
| | Middle qualifications | 8 | 4 | **12** |
| | High qualifications | 10 | 6 | **16** |
| Income | Low income | 8 | 9 | **17** |
| | Middle income | 10 | 12 | **22** |
| | High income | 7 | 4 | **11** |
| Employment status | Employed | 18 | 16 | **34** |
| | Retired | 3 | 4 | **7** |
| | Unemployed | 4 | 4 | **8** |
| | Looking after home | 0 | 1 | **1** |
| Ethnicity | White British | 19 | 22 | **41** |
| | Non-White British | 6 | 3 | **9** |

continued

**TABLE 7** Respondent characteristics (*n* = 50) (*continued*)

| Respondent characteristics | | Glasgow | Newcastle | Total |
|---|---|---|---|---|
| Benefits | Yes | 8 | 7 | **15** |
| | No | 17 | 18 | **35** |
| Voting next general election | Labour | 11 | 13 | **24** |
| | Conservative | 0 | 5 | **5** |
| | Green party | 2 | 0 | **2** |
| | Liberal democrats | 2 | 0 | **2** |
| | Scottish National Party | 7 | 0 | **7** |
| | Other | 3 | 7 | **10** |
| Health status | Excellent | 5 | 2 | **7** |
| | Very good | 5 | 6 | **11** |
| | Good | 7 | 12 | **19** |
| | Fair | 6 | 5 | **11** |
| | Poor | 0 | 2 | **2** |

**TABLE 8** Questions 1 vs. Question 3: most preferred

| | | Question 3 | | | |
|---|---|---|---|---|---|
| | | TBI (%) | PI (%) | UC (%) | Total |
| Question 1 | TBI (%) | *10 (20%)* | 9 (18%) | 3 (6%) | **22** |
| | PI (%) | 2 (4%) | *14 (28%)* | 3 (6%) | **19** |
| | UC (%) | 2 (4%) | 4 (8%) | *4 (8%)* | **9** |
| | **Total** | **14** | **26** | **10** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.316 (95% CI 0.113 to 0.519); $p < 0.001$.

**TABLE 9** Questions 1 vs. Question 3: second-most preferred

| | | Question 3 | | | |
|---|---|---|---|---|---|
| | | TBI (%) | PI (%) | UC (%) | Total |
| Question 1 | TBI (%) | *10 (20%)* | 1 (2%) | 2 (4%) | **13** |
| | PI (%) | 9 (18%) | *4 (8%)* | 4 (8%) | **17** |
| | UC (%) | 4 (8%) | 4 (8%) | *13 (26%)* | **20** |
| | **Total** | **22** | **9** | **19** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.316 (95% CI 0.125 to 0.50), $p < 0.001$.

**TABLE 10** Questions 1 vs. Question 3: least preferred

| | | Question 3 | | | |
|---|---|---|---|---|---|
| | | TBI (%) | PI (%) | UC (%) | Total |
| Question 1 | TBI (%) | *10 (20%)* | 4 (8%) | 1 (2%) | **15** |
| | PI (%) | 4 (8%) | *8 (16%)* | 2 (4%) | **14** |
| | UC (%) | 0 (0%) | 3 (6%) | *18 (36%)* | **21** |
| | **Total** | **14** | **15** | **21** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.573 (95% CI 0.389 to 0.757); $p < 0.001$.

**TABLE 11** Questions 1 vs. Question 3: consistency across all choices

| Level of consistency | *n* | % |
|---|---|---|
| Fully consistent | 24 | 48 |
| Partially consistent – most preferred | 4 | 8 |
| Partially consistent – second-most preferred | 3 | 6 |
| Partially consistent – least preferred | 12 | 24 |
| Fully inconsistent | 7 | 14 |
| **Total** | **50** | **100** |

**TABLE 12** Questions 2 vs. Question 4: most preferred

| | | Question 4** | | | |
|---|---|---|---|---|---|
| | | UBI (%) | NIT (%) | UC (%) | Total |
| Question 2*** | UBI (%) | *10 (20%)* | 4 (8%) | 0 (0%) | **14** |
| | NIT (%) | 3 (6%) | *24 (48%)* | 4 (8%) | **31** |
| | UC (%) | 0 (0%) | 0 (0%) | *5 (10%)* | **5** |
| | **Total** | **13** | **28** | **9** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.609 (95% CI 0.403 to 0.814); $p < 0.0005$.

**TABLE 13** Questions 2 vs. Question 4: second-most preferred

| | | Question 4 | | | |
|---|---|---|---|---|---|
| | | UBI (%) | NIT (%) | UC (%) | Total |
| Question 2 | UBI (%) | *8 (16%)* | 2 (4%) | 1 (2%) | **11** |
| | NIT (%) | 5 (10%) | *8 (16%)* | 2 (4%) | **15** |
| | UC (%) | 2 (4%) | 5 (10%) | *17 (34%)* | **24** |
| | **Total** | **15** | **15** | **20** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.479 (95% CI 0.283 to 0.674), $p < 0.0005$.

**TABLE 14** Questions 2 vs. Question 4: least preferred

| | | Question 4 | | | |
|---|---|---|---|---|---|
| | | UBI (%) | NIT (%) | UC (%) | Total |
| Question 2*** | UBI (%) | *20 (40%)* | 3 (6%) | 2 (4%) | **25** |
| | NIT (%) | 1 (2%) | *1 (2%)* | 2 (4%) | **4** |
| | UC (%) | 1 (2%) | 3 (6%) | *17 (34%)* | **21** |
| | **Total** | **22** | **7** | ***21*** | **50** |

**Note**
Consistent responses in italics. Chi-squared test *** 1% significance, ** 5% significance. Cohen's κ = 0.595 (95% CI 0.414 to 0.776); $p < 0.001$.

**TABLE 15** Questions 2 vs. Question 4: consistency across all choices

| Level of consistency | *n* | % |
|---|---|---|
| Fully consistent | 30 | 60 |
| Partially consistent – most preferred | 9 | 18 |
| Partially consistent – second-most preferred | 3 | 6 |
| Partially consistent – least preferred | 8 | 16 |
| Fully inconsistent | 0 | 0 |
| **Total** | **50** | **100** |

**TABLE 16** Questions 5, 6a, 7a and 8a: most preferred option

| | UBI (%) | MIG (%) | EA (%) | RC (%) | Total |
|---|---|---|---|---|---|
| Question 5*** | 14 (28%) | 27 (52%) | 5 (10%) | 4 (8%) | **50** |
| Question 6a: population health*** | 16 (32%) | 27 (52%) | 5 (10%) | 2 (4%) | **50** |
| Question 7a: health inequalities*** | 16 (32%) | 27 (52%) | 6 (12%) | 1 (2%) | **50** |
| Question 8a: income inequalities*** | 15 (30%) | 27 (52%) | 7 (14%) | 1 (2%) | **50** |

**Note**
Chi-squared test *** 1% significance, ** 5% significance.

**TABLE 17** Questions 5, 6a, 7a and 8a: consistency between pairs of questions

| | Question 6a | | Question 7a | | Question 8a | |
|---|---|---|---|---|---|---|
| | Consistent | Cohen's κ | Consistent | Cohen's κ | Consistent | Cohen's κ |
| Question 5 | 84% | 0.736 (95% CI 0.58 to 0.89); $p < 0.01$ | 84% | 0.736 (95% CI 0.58 to 0.89); $p < 0.01$ | 76% | 0.606 (95% CI 0.43 to 0.78); $p < 0.01$ |
| Question 6a | | | | 0.730 (95% CI 0.56 to 0.90); $p < 0.01$ | 80% | 0.665 (95% CI 0.49 to 0.84); $p < 0.01$ |
| Question 7a | | | | | 82% | 0.698 (95% CI 0.53 to 0.86); $p < 0.01$ |

**TABLE 18** Questions 5, 6a, 7a and 8a: consistency across all questions

| Choice | Fleiss' κ (95% CI) | Significance |
|---|---|---|
| UBI | 0.882 (0.77 to 1) | < 0.01 |
| MIG | 0.732 (0.62 to 0.85) | < 0.01 |
| EA | 0.394 (0.28 to 0.51) | < 0.01 |
| RC | 0.219 (0.11 to 0.33) | < 0.01 |
| **Overall agreement** | **0.695 (0.614 to 0.776)** | **< 0.01** |

**TABLE 19** Questions 5, 6a, 7a and 8a: consistency across all questions (categories)

| Level of consistency | *n* | % |
|---|---|---|
| Fully consistent | 35 | 70 |
| Partially consistent – 5, 6a and 7a | 4 | 8 |
| Partially consistent – 5, 6a and 8a | 1 | 2 |
| Partially consistent – 6a, 7a and 8a | 0 | 0 |
| Partially consistent – 5 and 6a | 2 | 4 |
| Partially consistent – 5 and 7a | 1 | 2 |
| Partially consistent – 5 and 8a | 1 | 2 |
| Partially consistent – 6 and 7a | 0 | 0 |
| Partially consistent – 6 and 8a | 1 | 2 |
| Partially consistent – 7 and 8a | 1 | 2 |
| Fully inconsistent | 4 | 8 |
| **Total** | **50** | **100** |

**TABLE 20** Marginal frequency of rankings and descriptive statistics (fractional scoring)

| | Full sample | | | | | | |
|---|---|---|---|---|---|---|---|
| | | UBI | PI | TBI | MIG | NIT | UC |
| Ranking | 1 | 22% | 28% | 6% | 12% | 26% | 6% |
| | 1.5 | 2% | 0% | 0% | 0% | 0% | 2% |
| | 2 | 14% | 16% | 12% | 28% | 18% | 4% |
| | 2.5 | 2% | 0% | 4% | 4% | 2% | 0% |
| | 3 | 12% | 8% | 28% | 12% | 20% | 6% |
| | 3.5 | 0% | 0% | 2% | 0% | 2% | 0% |
| | 4 | 8% | 18% | 26% | 18% | 22% | 12% |
| | 4.5 | 0% | 2% | 0% | 0% | 0% | 2% |
| | 5 | 20% | 22% | 18% | 24% | 4% | 2% |
| | 5.5 | 0% | 0% | 4% | 2% | 0% | 2% |
| | 6 | 20% | 6% | 0% | 0% | 6% | 64% |
| | Total | 50 | 50 | 50 | 50 | 50 | 50 |

continued

**TABLE 20** Marginal frequency of rankings and descriptive statistics (fractional scoring) (*continued*)

| | Full sample | | | | | |
|---|---|---|---|---|---|---|
| | UBI | PI | TBI | MIG | NIT | UC |
| Mean ranking | 3.46 | 3.11 | 3.47 | 3.17 | 2.78 | 4.97 |
| Median | 3.00 | 3.00 | 3.25 | 3.00 | 3.00 | 6.00 |
| Mode | 1.0 | 1.0 | 3.0 | 2.0 | 1.0 | 6.0 |
| Standard deviation | 1.90 | 1.72 | 1.19 | 1.43 | 1.46 | 1.62 |

**TABLE 21** Reason for £0 WTP

| Policies | Cannot afford to spend money on funding a new income-based policy | Don't think should have to pay to fund new income-based policy | Disagree with introducing an extra tax to fund a new income-based policy | Other | | | Total |
|---|---|---|---|---|---|---|---|
| | | | | Don't like policy | Don't trust taxes | Prefer UC | |
| UBI | 3 | 0 | 1 | 2 | 0 | 14 | **20** |
| PI | 3 | 1 | 3 | 2 | 0 | 12 | **21** |
| TBI | 3 | 0 | 1 | 4 | 2 | 9 | **19** |
| MIG | 4 | 0 | 4 | 5 | 0 | 6 | **19** |
| NIT | 3 | 0 | 2 | 2 | 0 | 8 | **15** |
| **Total** | **16** | **1** | **11** | **15** | **2** | **59** | **45** |

**TABLE 22** Perceptions of financially benefiting from policy and WTP responses, protest zeros excluded

| | | UBI | | PI | | TBI | | MIG | | NIT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | £0 | > £0 | £0 | > £0 | £0 | > £0 | £0 | > £0 | £0 | > £0 |
| Financially benefit from policy | No | 0 (0%) | 5 (15%) | 2 (6%) | 3 (9%) | 3 (8%) | 21 (57%) | 6 (16%) | 21 (55%) | 2 (6%) | 21 (62%) |
| | Yes | 5 (15%) | 24 (71%) | 3 (9%) | 26 (76%) | 4 (11%) | 9 (24%) | 3 (8%) | 8 (21%) | 3 (9%) | 8 (24%) |
| | **Total**[a] | **34** | | **34** | | **37** | | **38** | | **34** | |

a These questions were only asked in relation to policies ranked equal to or higher than UC. There are six missing responses.

**TABLE 23** Characteristics of respondents and WTP responses

| | UBI | | PI | | TBI | | MIG | | NIT | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Characteristics** | **£0** | **> £0** | **£0** | **> £0** | **£0** | **> £0** | **£0** | **> £0** | **£0** | **> £0** |
| Low income | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 1 |
| Low income and benefits | 2 | 3 | 3 | 2 | 4 | 1 | 4 | 1 | 3 | 2 |
| Low income, benefits and unemployed | 3 | 4 | 4 | 3 | 4 | 3 | 5 | 2 | 3 | 4 |
| Benefits | – | 1 | – | 1 | – | 1 | – | 1 | – | 1 |
| Benefits and unemployed | – | 1 | – | 1 | – | 1 | – | 1 | – | 1 |
| Benefits and retired | – | 1 | – | 1 | – | 1 | – | 1 | – | 1 |
| Retired | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 2 | 1 | 3 |
| Low income, retired | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |

**TABLE 24** Paired *t*-tests, including policies ranked lower than UC and protest zeros excluded

| | | | 95% CI | | |
|---|---|---|---|---|---|
| **Pairings** | ***n*** | **Mean** | **Lower** | **Upper** | ***p*-value** |
| UBI vs. MIG | 46 | £15.29 | −£12.74 | £43.33 | 0.28 |
| UBI vs. NIT | 48 | £13.19 | −£14.68 | £41.06 | 0.35 |
| UBI vs. PI | 46 | −£2.63 | −£9.86 | £4.61 | 0.47 |
| UBI vs. TBI | 47 | £17.51 | −£9.53 | £44.55 | 0.20 |
| MIG vs. NIT | 46 | −£1.53 | −£5.08 | £2.01 | 0.39 |
| MIG vs. PI | 45 | −£18.32 | −£49.97 | £13.34 | 0.25 |
| MIG vs. TBI | 45 | £2.63 | −£1.87 | £7.13 | 0.24 |
| NIT vs. PI | 46 | −£16.39 | −£48.17 | £15.40 | 0.30 |
| NIT vs. TBI | 47 | £4.02 | −£1.65 | £9.69 | 0.16 |
| PI vs. TBI | 45 | £20.97 | −£10.01 | £51.96 | 0.18 |

**Note**
*** 1% significance, ** 5% significance, *10% significance.

**TABLE 25** Level of consistency for pairs of policies between ranking and WTP questions

| Level of consistency | X vs. Y: Preferred policy | | UBI vs. NIT | UBI vs. MIG | UBI vs. PI | UBI vs. TBI | MIG vs. NIT | MIG vs. PI | MIG vs. TBI | NIT vs. PI | NIT vs. TBI | PI vs. TBI | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | WTP | | | | | | | | | | | |
| Fully consistent | X | X | 12 (36%) | 11 (33%) | 5 (15%) | 13 (39%) | 6 (14%) | 8 (23%) | 9 (23%) | 9 (26%) | 9 (23%) | 15 (44%) | **97** |
| Fully consistent | Y | Y | 7 (21%) | 5 (15%) | 10 (29%) | 4 (12%) | 10 (24%) | 14 (40%) | 6 (15%) | 14 (41%) | 4 (10%) | 8 (24%) | **82** |
| Fully consistent | X = Y | X = Y | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 3 (7%) | 0 (0%) | 3 (8%) | 0 (0%) | 3 (8%) | 0 (0%) | **9** |
| Partially consistent | X | X = Y | 5 (15%) | 8 (24%) | 7 (21%) | 5 (15%) | 3 (7%) | 7 (20%) | 9 (23%) | 4 (12%) | 13 (33%) | 5 (15%) | **66** |
| Partially consistent | Y | X = Y | 3 (9%) | 5 (15%) | 8 (24%) | 5 (15%) | 14 (33%) | 5 (14%) | 10 (26%) | 5 (15%) | 5 (13%) | 4 (12%) | **64** |
| Partially consistent | X = Y | X | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | **0** |
| Partially consistent | X = Y | Y | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | **1** |
| Fully inconsistent | X | Y | 2 (6%) | 1 (3%) | 2 (6%) | 3 (9%) | 2 (5%) | 0 (0%) | 0 (0%) | 1 (3%) | 4 (10%) | 1 (3%) | **16** |
| Fully inconsistent | Y | X | 4 (12%) | 3 (9%) | 2 (6%) | 3 (9%) | 4 (10%) | 1 (3%) | 1 (3%) | 1 (3%) | 1 (3%) | 1 (3%) | **21** |
| **Total** | | | **33** | **33** | **34** | **33** | **42** | **35** | **39** | **34** | **39** | **34** | **356** |
| Overall fully consistent | | | 58% | 48% | 44% | 52% | 45% | 63% | 46% | 68% | 41% | 68% | |
| Overall partially consistent | | | 24% | 39% | 44% | 30% | 40% | 34% | 51% | 26% | 46% | 26% | |
| Overall fully inconsistent | | | 18% | 12% | 12% | 18% | 14% | 3% | 3% | 6% | 13% | 6% | |