EXPERIMENTAL TESTS OF PUBLIC SUPPORT FOR DISABILITY POLICY

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EVIDENCE FOR POLICY

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ABBREVIATIONS

ABC1	Chief income earner is in a higher, intermediate or junior managerial/professional role
C2DE	Chief income earner is in a manual or casual work role or unemployed
CSO	Central Statistics Office
DPO	Disabled Persons' Organisations
ESRI	Economic and Social Research Institute
IHREC	Irish Human Rights and Equality Commission
NDA	National Disability Authority
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities

EXECUTIVE SUMMARY

MOTIVATION

Despite the right of disabled people to full social and economic inclusion, many face multiple day-to-day and systemic challenges. These include but are not limited to additional expenses, access to housing, and everyday accessibility difficulties. Surveys show the general public hold positive attitudes towards policies that seek to enable disabled people to overcome these challenges, but standard survey methods are susceptible to response biases that may overestimate this support. This study aimed to test whether two such biases influence support for disability policy in Ireland: social desirability bias (i.e. the tendency for survey respondents to alter their responses in order to present themselves in a positive light); and inattention to the implications of policy support (e.g. that welfare policies require funding). Together the survey experiments covered a range of policy issues and types of disability, as identified in previous research and in consultation with the disability advisory group for the project.

STUDY DESIGN

A nationally representative sample of 2,000 adults took part in the online study. One stage of the study used list experiments to test for social desirability bias in responses to three issues: (1) support for increased social welfare for disabled people, (2) support for prioritising disabled people for social housing and (3) how many people admit to parking in a disabled parking space without a permit. In each list experiment, participants were assigned at random to one of two groups. One ('control') group was presented with a list of items unrelated to the topic of interest (in this case, disability policy) and asked how many they agree with. The other ('treatment') group was presented with the same list but with the addition of an item about the topic of interest. Any difference in the average response between the groups can be attributed to the added item and gives an indication of support for that item when participants are provided full anonymity (because they are never asked directly about their support for that item). Allowing participants to respond anonymously minimises the influence of the desire to be viewed positively by others on responses.

Another stage of the study tested the influence of question detail on policy support. The policies in this stage related to (1) increased cost of living support for disabled people, (2) support for children with disabilities and (3) support for building wheelchair accessible infrastructure. Participants were randomly allocated to a group that was asked for support for a policy without any specified funding mechanism, or to a group that was asked about support for the same policy but with the funding mechanism specified, for example that the policy would be funded through a budget reallocation or a tax increase.

FINDINGS

Results show high levels of support for policies supporting disabled people in all experimental groups, regardless of how questions were asked, with relatively high agreement across socio-demographic subgroups. However, the additional anonymity provided by the list experiment and including details on how policies would be funded led to significant variation in support. The study produced the following results:

- 77 per cent supported increased social welfare for disabled people when directly asked using a standard survey question, but just 66 per cent of those provided more anonymity did so. The difference in support was greater among those with higher educational attainment compared to those with lower educational attainment.

- Support for prioritising disabled people for social housing was 61 per cent using standard survey methods. Support was higher (71 per cent) when participants were provided more anonymity. This difference could mean that people believe disabled people should be prioritised in some policy areas but do not reveal this belief in standard surveys, in order to be perceived as viewing all groups equally. Alternatively, the difference could indicate social desirability bias working against other groups (such as refugees, Irish Travellers or other ethnic minorities).

- There was no statistically significant difference in the proportion of drivers who admit parking in a disabled space without a permit when asked directly or when asked using a list technique (4 per cent vs. 4.8 per cent). However, the level observed implies 1 in 25 drivers will admit to having parked in disabled parking spaces without a permit when asked directly and almost 1 in 20 when given greater anonymity.

- Almost all participants endorsed greater financial support for disabled people (91 per cent) and for children with disabilities specifically (98 per cent) when asked using standard survey questions. Support was lower, at 78 per cent for financial support for disabled people and 85 per cent for children with disabilities, when the requirement for budget reallocation was included in the question. Participants with higher educational attainment showed larger differences in support when this funding mechanism was proposed. When the potential for a tax increase was specified, support among the full sample was even lower, at 42 per cent for financial support for disabled people and 64 per cent for children with disabilities.

- Without costs specified, most respondents (84 per cent) supported building more wheelchair accessible infrastructure, but again support was lower when potential trade-offs were specified: to 77 per cent when parking infrastructure

was to be replaced and 67 per cent when cycling infrastructure would not be built.

- A consistent finding across the study was that participants most familiar with disability issues showed more robust support for policies that benefit disabled people. For example, those whose partner, child or parent have a disability were equally supportive of social welfare increases, regardless of whether asked directly or anonymously in the list experiment (implying no social desirability bias in their standard survey responses). However, those who know no one with a disability showed a very large effect, with support ranging from 75 per cent in the direct question to 56 per cent in the list experiment. Similarly, participants who either had a disability themselves or had a partner, child or parent with a disability were more supportive of financial aid for disabled people and wheelchair accessible infrastructure than participants who knew nobody with a disability.

IMPLICATIONS AND CONCLUSION

The study shows that while the majority of people in Ireland support most policies that aim to enable disabled people to participate fully in society, standard surveys are likely to lead to inaccurate estimates of support. Approximately one-in-seven people are estimated to express support for some policies when asked directly but not when allowed to respond anonymously, with a similar change in support when funding mechanisms or policy trade-offs are made explicit. Support is stronger among those more familiar with disability issues, although further research is required to understand why. If those familiar with disability simply better understand the challenges associated with disability, this implies that enhancing public understanding of the challenges and costs of disability would strengthen support. If it is because they know someone who will directly benefit from the policy, further research on how people understand and recognise disability among people in their social networks may help. Complementing standard surveys with reliable experimental methods is recommended to avoid misperceptions of support for disabled people and to identify where potentially negative attitudes may need to be challenged.

CHAPTER 1

Background to the study

People with disabilities[1] should be supported to participate fully in their communities (UN Convention on the Rights of Persons with Disabilities, 2006). One major challenge in realising the right of people with disabilities to social, cultural and economic inclusion is the behaviour and attitudes of those they interact with. Understanding and challenging negative attitudes or prejudices they face is thus important to fulfilling disabled people's rights. Another challenge is ensuring public support for government policies that facilitate inclusion.

Survey research is one vital tool for understanding the attitudes and perceptions held by the general public towards minority groups. In addition to identifying negative attitudes towards disabled people and policies that would benefit them, surveys can highlight gaps between the attitudes of disabled people and the general public on influential aspects of their lived experience. Yet survey estimates are susceptible to response biases. These biases may help explain why low proportions of the general public report negative attitudes towards disabled people in surveys, but high proportions of disabled people report experiencing discrimination and negative attitudes from the public (see for example Banks et al., 2018; Moss and Frounks, 2022; Dixon et al., 2018). Survey biases also have important policy implications, as estimates of support may not materialise when policies are to be enacted. Our overall aim was to identify whether such response biases are present in surveys of attitudes towards policies that aim to support people with disabilities in Ireland. The study was commissioned and funded by the National Disability Authority (NDA), with input from an advisory board comprised of members from Disabled Persons' Organisations (DPOs) and the Irish Human Rights and Equality Commission (IHREC).

1.1   MOTIVATION FOR THE REPORT

The NDA is an independent statutory body tasked with providing evidence-based advice and research to government on disability policy and practice. Between 2001 and 2017, the NDA commissioned national surveys on public attitudes to disability in Ireland at five-year intervals. These surveys show a generally positive trend in attitudes towards disabled people. For example, 76 per cent of respondents in 2017 agreed that 'there are occasions or circumstances when it is all right to treat people with disabilities more favourably than others', compared to 68 per cent in 2011 (NDA, 2017). This apparent trend may reflect a true change in attitudes over

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[1]   We aim to follow recommendations from the NDA's (2022) *Advice Paper on Disability Language and Terminology*, whereby a flexible approach to both identity-first (e.g. 'disabled person') and person-first (e.g. 'person with a disability') is used throughout, except with reference to people with intellectual disabilities or mental health conditions where person-first language is preferred.

time, or it could instead reflect an increasing perception that positive responses to such questions are socially expected.[2] Our first aim was to identify the extent of 'social desirability', the tendency for survey respondents to alter their responses in order to present themselves in a positive light, in reported attitudes towards disability.

This report also comes at a time of substantial reform across many policy areas central to disabled people's lives. A report on the cost of disability (Department of Social Protection, 2021) has sparked public debate about how much of this cost should be covered by the State and how much should be met privately by individuals and families. Recent research on employment among disabled people shows that the COVID-19 pandemic had a particularly detrimental impact on this group, exacerbating an existing gap in employment prospects (Emerson et al., 2021; Eurofound, 2022). In education, the School Inclusion Model is designed to make Irish schools more inclusive, while social support and medical care for children with disabilities are also being reformed through the Progressing Disabilities programme. Overall, these and other policy developments aim to bring Ireland in line with its commitments under the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), adopted in 2006 and formally ratified by Ireland in 2018.

These reforms will chiefly affect disabled people, and their outcomes and experiences should be central to evaluation. However, they come with costs which will be met by the general public. Promoting a positive attitude towards these developments among the public is hence an important component of sustainable and effective change. Yet standard surveys prioritise simplicity of survey items and leave as implied that social policies entail costs. If respondents fail to consider the costs of policies, support in surveys may be artificially inflated. Hence, our second aim was to determine whether making different potential funding mechanisms of policies explicit in survey statements (e.g. a tax increase to fund the policy) influences public support for those policies.

At this juncture we note the variation in conceptualisation of disability. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) states that:

> *persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.*

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[2] For example Creighton et al. (2015) found that while directly-expressed support for immigration declined in the United States following the 2008 economic crash, anonymously expressed support did not change. It was thus the extent of social desirability in responding that changed.

The 2016 Census recorded whether respondents have a long-lasting difficulty or condition, but not necessarily whether any condition they have hinders their participation in society. Moreover, how disabled people are defined in law, research or policy may not be the same as how they identify themselves or how they are perceived by others. In particular, public perceptions of disability may centre on physical, visible disabilities, and exclude invisible conditions or mental health issues. The extent of this may also vary according to familiarity with disability. We return to this point in the concluding chapter.

The remainder of this chapter explores the motivation for the report in greater detail. First, some of the challenges faced by disabled people in Ireland are considered, followed by an exploration of existing literature on attitudes towards disabled people with a focus on research in Ireland where possible. Approaches used to elicit 'hidden' attitudes (i.e. attitudes that are held but not directly expressed in surveys) are then discussed. We highlight the few international studies that have employed these methods to investigate attitudes towards disability but our focus is on the 'list experiment', which we exploit for this report but, as far as we know, has not yet been used in this field of research anywhere in the world. Finally, we highlight relevant research from behavioural science on how people answer survey questions.

1.2   CHALLENGES FACED BY DISABLED PEOPLE IN IRELAND

According to 2016 Census data, 643,131 people or 13.5 per cent of the Irish population identify as having a long-lasting difficulty or condition or as experiencing difficulty with everyday activities (CSO, 2017). This proportion is projected to have increased by the 2022 Census data, as the total population grows and ages.[3] Disabled people thus represent a sizable minority group in Irish society who face many barriers to full and equal participation in society. These challenges include but are not limited to the cost of living, employment and access to the services needed to live a full and independent life. Importantly, disabled people represent a diverse group, with needs that depend on individual circumstances. That said, even those with lower levels of additional needs are at risk of economic disadvantage, stemming from increased cost of living, lower levels of employment, and difficulty accessing appropriate housing and education.

The Cost of Disability in Ireland Report (Department of Social Protection, 2021) highlights the additional spending needs faced by many people with disabilities. These include specialised care services and equipment, home adaptations, medicines and mobility costs (e.g. additional use of taxis), as well as more costly everyday expenditure, such as increased heating costs and specialised clothing.

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[3]   The 2022 data are likely to report change in disability prevalence beyond changes in the population as the wording of the relevant question was revised. Respondents in 2022 were asked whether each long-lasting difficult or condition impacts them to a great extent, to some extent or does not impact them, rather than a binary 'yes' or 'no' response to whether they have the condition as in 2016.

The extent of these costs varies from low to very high, depending on individual circumstances, but are estimated to be within the range of €9,482 to €11,734 per year on average. Other studies in Ireland estimate that households with members who have a disability face additional costs that equate to between 20 per cent and 37 per cent of the average household income (Cullinan et al., 2011). These costs are a direct result of having a disability.

The additional cost of living faced by disabled people is exacerbated by differences in employment outcomes. Census data from 2016 show that just one-third of working age, disabled people identified employment as their main economic status compared to two-thirds of non-disabled people. This figure varies by disability type, from 15 per cent of those with an intellectual disability to 46 per cent of those with deafness or a serious hearing impairment, but employment levels for individuals with all types of disabilities remain significantly below those for persons without disabilities (Kelly and Maître, 2021; see also Watson et al., 2013). Disabled people are at greater risk of poverty than non-disabled people. This applies both when comparing disabled people in employment with non-disabled people in employment, and when comparing disabled people not in employment with non-disabled people not in employment (Kelly and Maître, 2021).

The risk of economic disadvantage for disabled people also extends to housing. Analysis of discrimination (i.e. less favourable treatment because of a protected characteristic)[4] in the housing market in Ireland shows that people with disabilities are twice as likely to report being discriminated against when compared to people without disabilities, while controlling for their employment status (Grotti et al., 2018). This discrimination is particularly pronounced among renters, in line with international research (e.g. Turner, 2005). Extending from the above, people with disabilities are at higher risk of experiencing discrimination in accessing housing and are over-represented among the homeless population (Grotti et al., 2018). Other analyses show that people with disabilities experience higher levels of housing deprivation and housing affordability issues[5] (Russell et al., 2021).

Gaps in socio-economic outcomes between disabled and non-disabled individuals appear to begin in childhood. While educational attainment of disabled people in Ireland is better than the EU average (42 per cent vs. 25 per cent hold at least a post-secondary education; Kelly and Maître, 2021) and there have been significant efforts made to improve resources and inclusivity in schools (Ring, forthcoming),

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[4] Gender, marital status, family status, age, disability, 'race' (skin colour or ethnic group), sexual orientation, religious belief, and/or membership of the Traveller Community are 'protected characteristics' under the legal definition of discrimination.

[5] Housing deprivation is defined based on features of a home, specifically accommodation characterised by one or more of these four items: leaking roof/damp walls or /window frames or floor rot; lack of central heating; lack of double glazing, and lack of light. Housing affordability problems are measured as, for example, those experiencing income poverty after housing costs (household income lower than 60 per cent of the median equivalised income after housing costs) or being in arrears on rent and mortgage repayments in the last 12 months (see Russell et al., 2021 for further details).

recent evidence highlights challenges faced by children with disabilities. Data from the *Growing Up in Ireland* (GUI) study show that young people with special educational needs and/or disabilities are less likely to like school, more likely to struggle academically and less likely to progress to higher education (Carroll et al., 2022)**.** Accessing supports both inside and outside of the classroom and even enrolling in an appropriate setting can also be a significant struggle for disabled young people, with adverse effects on their educational outcomes, general wellbeing and wider family (O'Brien, 2021). The educational challenges facing disabled children and young people are compounded by the fact that they are more likely to experience economic vulnerability and attend DEIS schools (schools which receive targeted supports as they serve areas with high concentrations of socioeconomic disadvantage) than their peers (Carroll et al., 2022b).

Beyond economic disadvantage and discrimination, many disabled people face everyday challenges in accessing services. Exact issues depend on individual circumstances and type of disability, but mobility and transport difficulties are widespread. For example, some use of public transport requires disabled people with particular impairments and accessibility needs to give notice 24 hours in advance, a requirement not necessary for others in society. Access to buildings and infrastructure is cited as one of the biggest issues facing physically disabled people (Irish Wheelchair Association, 2020). Three-in-four report poor access to public spaces due to steps being the only option at main entrances. While infrastructural change depends on policy, public attitudes and behaviour have further implications for accessibility. Anecdotal evidence and survey research by the Disabled Drivers Association of Ireland highlights illegal parking in disabled bays by those without permits as a major frustration in the disability community (Hutton, 2020).

1.3   ATTITUDES TOWARDS DISABLED PEOPLE

The NDA have conducted regular national surveys in Ireland on attitudes to disability (NDA, 2017). These surveys were carried out face-to-face with a nationally representative sample. Between 2001 and 2017, there was a general increase in the proportion agreeing that people with physical disabilities, intellectual disabilities and autism can participate fully in life. Agreement has generally been higher among younger people, suggesting there may be generational effects alongside a general shift in attitudes (*ibid*). The proportion of people who agree that people with disabilities are treated fairly in Irish society decreased from 44 per cent to 36 per cent between 2011 and 2017, although explaining this decrease is not straightforward. It could reflect a perceived deterioration in how disabled people are treated, or greater awareness of the extra supports needed for 'fair' outcomes, or a combination of both. Either way, people in Ireland generally appear to support measures that would help disabled people. In the most recent survey (2017), the majority (almost 80 per cent) endorsed increased welfare payments for disabled people and supported prioritising them

in social housing allocation and on hospital waiting lists.[6] A similar proportion agreed that there are some circumstances where it is right to treat disabled people more favourably than others.

Surveys like these allow for socio-demographic predictors of attitudes to be identified. The NDA (2017) survey shows that knowing someone with a disability predicts many positive attitudes towards disabled people, including reported comfort with having a work colleague or neighbour with a disability and belief that disabled people should have children if they wish. The importance of familiarity and contact with disabled people is replicated in multiple international studies and review papers, across multiple measures (Burke et al., 2013; Ju et al., 2013). For example, a US survey of attitudes to people with intellectual disabilities found that more frequent contact with someone who has an intellectual disability predicted greater support for the rights of people with intellectual disabilities and perceptions of their capabilities (McConkey et al., 2021). Similarly, a Swiss survey of pre-service teachers showed far more positive attitudes to disabled people among those who reported higher levels of prior contact with disabled people (Kunz et al., 2021).

The focus of surveys should not solely be on the attitude of the general public; research with samples of people with disabilities is vital for understanding their lived experience. The Quarterly National Household Survey (QNHS) in 2014 featured an equality module which probed experiences of discrimination in Ireland based on protected characteristics, including disability. Analyses of this module have shown that disabled people in Ireland are significantly more likely to report experiencing discrimination in workplaces, while seeking work, and in accessing public and private services than non-disabled people (McGinnity et al., 2017). The size of the difference is large, with disabled people more than twice as likely to report discrimination while seeking employment and in accessing public services (15.5 per cent and 7.2 per cent, respectively, vs. 6.7 per cent and 2.8 per cent among people with no disability). Further analyses suggest that disabled people are more adversely affected by discrimination when they experience it. Almost one-in-five people with a disability who experienced discrimination reported that it had a 'very serious' effect on them, compared to one-in-ten of those without disabilities (Banks et al., 2018).

More recent research in the UK found that 72 per cent of disabled people had experienced negative attitudes or behaviours in the last five years (Moss and Frounks, 2022; see also Dixon et al., 2018). These include assumptions about their disability and what they can do, impatience, dismissal of their condition or need for accommodations, accusation of faking or being lazy, exclusion and being patronised, along with many others. These attitudes and behaviours were most

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[6]   Although the prioritisation of disabled people is not currently a policy in housing or healthcare, nor is it a goal of the NDA.

commonly experienced from the general public, but also from employers, educators, public service staff and even friends and family members. Unsurprisingly, almost 90 per cent of those who experienced these behaviours said it had a negative effect on them, with higher proportions of 18-34 year olds and women reporting a negative effect.

It is difficult to gauge how likely experiences in the UK are to generalise to Ireland, as there are few similar measures recorded in both countries. Where comparisons can be made, attitudes towards disabled people in Ireland appear more positive, at least in employment settings. Whereas people in Ireland report being generally comfortable with the idea of working with a disabled person (rating a score of 8.9 out of 10 for a physically disabled person and 8.2 for a person with mental health difficulties; NDA, 2017), the British Social Attitudes survey (Cant and Bennet, 2022) reports that 'the public support equal chances for disabled people in the workplace but would not necessarily want to work with a disabled person' (p. 2). However, analysis of the QNHS Equality Module cited above has indicated that disabled workers are 65 per cent more likely to face workplace discrimination than non-disabled workers, with larger differences when seeking employment (McGinnity et al., 2017; Banks et al., 2018). Moreover, there are multiple international studies showing differences in reported attitudes towards employing people with disabilities and objectively measured hiring practices. Reviews show that employers tend to report positive attitudes towards the prospect of hiring someone with a disability (Bredgaard and Salado-Rasmussen, 2021; Burke et al., 2013; Ju et al., 2013), yet field experiments reveal high levels of likely discrimination. Audit experiments, in which researchers apply to job postings with fictitious CVs that vary systematically by features of interest (e.g. disability disclosure), have been run in the US, Canada and Norway. Findings show that people who disclose their disability on a job application are between 26 per cent to 50 per cent less likely to be called to interview, despite having otherwise equivalent applications (Ameri et al., 2018; Bellemare et al., 2018; Bjørnshagen, 2021). These findings point towards the importance of exploiting experimental methods to gain better insight into attitudes that may be concealed in standard surveys. The next section details some such methods for identifying concealed negative attitudes among the general public.

1.4   HIDDEN ATTITUDES AND METHODS TO ELICIT THEM

Surveys often struggle to accurately capture attitudinal data about controversial or sensitive issues. This section considers evidence of potential bias in survey responses on a range of topics and methods to address this. Estimates of attitudes about sensitive topics, such as immigration, racism and abortion, vary depending on the level of anonymity respondents are provided (Creighton and Jamal, 2015; Glynn, 2013; Kulinski et al., 1997; Rosenfeld et al., 2016). Reported prevalence of sensitive behaviours, such as plagiarism, shoplifting and sexual activity, also varies (Chuang et al., 2021; Coutts et al., 2011; Krumpal, 2013). Comparisons of time-use

diaries with survey responses show that people also sometimes over-report positive attributes, such as exercising and attending religious services (Brenner, 2011; Brenner and De Lamater, 2016). One explanation for the difference between what people report when asked directly and what they might express when offered anonymity is perceived pressure to give a response that is believed to be socially desirable and thus present themselves positively to others. A large body of research suggests that this type of misreporting of certain attitudes can lead to systematic errors. This survey bias is known as 'social desirability bias' (Krumpal, 2013).

One of the most straightforward ways to mitigate social desirability bias is through survey mode. Surveys administered in-person or over the phone with an interviewer tend to produce lower estimates of sensitive attitudes and behaviours than surveys that are self-administered or conducted online (Krumpal, 2013; Paulhus, 2002). Hence one way to measure sensitive opinions or behaviours more accurately is to administer surveys online in a way that assures respondents of their anonymity.

A number of innovative techniques have been used to further address social desirability bias, each drawing upon the experimental method. In a survey experiment, some participants see question formats in one way (e.g. a direct question) and other participants see the same question in another format (e.g. one that requires an indirect response and offers greater anonymity). Crucially, the question format that each participant sees is decided at random, meaning that any aggregate differences can be confidently attributed to the difference in question format and not to underlying differences between participants. For example, if response formats that provide greater anonymity show a higher prevalence of certain attitudes (e.g. racism), then researchers can be reasonably sure that some people conceal their true attitude when asked via standard survey questions. Experimental techniques have been widely used to measure attitudes in other fields (e.g. racism, safe sex practices), but few studies have tested social desirability effects in surveys about issues relevant to people with disabilities. This raises questions about the accuracy of responses to direct questions as reported in Section 1.3, and suggests there is a need to develop other methods to assess attitudes towards disability in Ireland.

Where international studies have assessed hidden attitudes to disability issues, they indicate some evidence of social desirability bias. Specifically in relation to attitudes towards inclusive education, Lüke and Grosche (2018) used an experimental design whereby the same survey was presented to four different groups as coming from four different organisations: a university, a group that opposed inclusion as it might lower general academic standards, a group that opposed inclusion as it threatened support for children with disabilities currently attending special schools and a group which supported inclusion. They found

evidence of stronger support for inclusive education in surveys purporting to be run by the pro-inclusion group, implying that surveys of disability issues may overestimate support if respondents are aware of the purpose of the survey.

Other experiments have sought to measure social desirability directly, although with potentially unreliable or potentially confusing methods. For example, the Implicit Association Test (IAT) tests how quickly and accurately people can associate positive and negative words with different groups of people (e.g. people with disabilities and people without disabilities). Differences in speed or precision in the categorisation are taken to reflect a difference in 'implicit associations' between the two groups. If people are slower to associate a disabled person with a positive characteristic than they are a non-disabled person, it is thought to reveal an implicit and perhaps unconscious negative attitude towards disability. One US study which used different types of IATs showed more negative implicit associations of disabled people than were reported in standard survey measures of attitudes (Thomas et al., 2014). The IAT method is, however, primarily focused on unconscious bias rather than deliberate concealing of negative attitudes and results cannot be easily compared to surveys of the general population. The IAT method itself is far from universally accepted (see for example Mitchell and Tetlock, 2017; Bartels and Schoenrade, 2022). It has poor methodological rigour, with the same people generating different scores on the same version of the test when taken again (Greenwald and Lai, 2020).

Ostapczuk and Musch (2011) used two approaches to estimate socially desirable responding to a survey item about feeling 'uneasy' in the presence of people with disabilities. One approach asked respondents to report what they believed was 'most people's' attitude rather than their own. Results showed a large discrepancy between this estimate of 'most people's' attitude and the response when participants were asked about their own attitudes (55 per cent vs. 8 per cent for negative attitudes towards physical disability and 79 per cent vs. 27 per cent for mental disability). The authors acknowledge, however, that the difference likely reflects respondents' overestimation of general negative sentiments rather than a projection of their own views onto others.

The second approach they employed was the 'Randomised Response Technique', in which participants are instructed to answer the sensitive item either truthfully or to give a specific response based on an irrelevant rule of a known probability (e.g. to answer 'yes' if their mother was born in February, March or April, regardless of the question content). As researchers have no insight into the participant's experimental condition, the approach offers a layer of anonymity. There is thus no way of knowing whether an individual is answering the question or giving a directed response, but the proportions of answers to the question at the overall sample level can be estimated. Responses recorded by Ostapczuk and Musch (2011) were not statistically different from the direct question condition

(11 per cent reported unease around a physically disabled person and 24 per cent for mental disability). The study showed high levels of respondents not answering as instructed by the randomisation device, which the authors infer as 'cheating' and hence some evidence of social desirability bias. However, others have observed that the Randomised Response Technique can lead to high non-response rates due difficulty understanding the instructions (Rosenfeld et al., 2016).

We could locate no other studies that have sought to measure social desirability in surveys about disability issues, yet there are other techniques that could be exploited. The 'list experiment' or item count technique has been frequently used to gauge social desirability in both sensitive attitudes and sensitive behaviours in other domains (see above). Like the Randomised Response Technique, list experiments provide respondents with 'permanent' anonymity by not asking them directly for their response (Chuang et al., 2021).[7] However, it is simpler to employ and has lower non-response rates (Rosenfeld et al., 2016). As it does not yet appear to have been used in relation to attitudes or behaviours towards disability, in the following section we explain its logic and explore its use in relation to other issues.

1.4.1 List experiments

In a list experiment, respondents are provided with a list of items, and they are asked how many of them they agree with. Crucially, they are not asked which of the items they agree with, simply how many. A control group, selected at random, is given a list of three items covering issues other than the one of interest, such as attitudes to education, health and the environment. The treatment group are presented with the same list, but with the addition of a focal item – in this case a potentially sensitive item related to disability. Because both samples are presented with the same control list and are randomly assigned, any difference between the average response of the two groups is due to the additional sensitive item. The technique has been most widely used in political science research on voting and research on racism and attitudes to immigration (Krumpal, 2013; Ehler et al., 2021).

There have been two list experiments fielded in Ireland to date. The first investigated attitudes to immigration of Black and Muslim groups (McGinnity et al., 2020). Results showed greater support for Black than Muslim immigration when respondents were asked using standard survey techniques, but no difference when respondents were provided greater anonymity; 15 per cent of individuals were estimated to have concealed a negative attitude towards Black immigration when asked directly. The second investigated compliance with COVID-related

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7   Permanent anonymity refers to the fact that researchers can never identify a specific individual's response because of how the list experiment is designed. This is both a strength and a limitation of the method. For the respondent, it means they are not asked directly about their attitude and hence are not motivated to respond in a socially desirable way. For the researcher, this means that it is not possible to deduce, at an individual level, who was concealing undesirable attitudes; the method relies on comparisons of group differences between direct responses and anonymous responses for this. Note that, in our study, all respondents were anonymous such that no personally identifiable data were collected.

public health behaviours during the pandemic (Timmons et al., 2020). The study showed that approximately 10 per cent of participants over-reported their compliance with hand-washing and social distancing advice when asked using standard survey questions compared to when asked using a list.

The extent to which participants may conceal their true attitude or behaviour varies according to the issue in question and the participant's characteristics. McGinnity et al. (2020) observed concealed negative attitudes towards Black immigration was highest among those with a university degree (replicating research in the US; Janus, 2010) and among younger respondents. In addition, women were shown to be more likely to conceal negative attitudes towards Muslim immigration than men, but men were more likely to mask negative attitudes towards Black immigration (McGinnity et al., 2010). Timmons et al. (2020) similarly show gender differences in COVID-19 mitigation behaviours, where men over-reported hand-washing when asked directly compared to the list, but there was no such difference for women.

Use of the list experiment technique to gain more accurate survey estimates has been validated against objective benchmarks. List estimates of votes by a sample of voters in an abortion referendum in the US were significantly closer to the real vote count than estimates from standard survey questions (although some underestimation remained; Rosenfeld et al., 2016). Moreover, multiple independent meta-analyses show no evidence for publication bias with list experiments, meaning that list experiments that show social desirability bias are as likely to be published as those that do not, further strengthening the evidence in favour of the method (Blair et al., 2020; Ehler et al., 2021; Li and van den Noortgate, 2022; Rosenfeld et al., 2016). It is likely to be a more reliable way to estimate social desirability than other methods used to date for disability issues (e.g. the IAT). The technique specifically targets social desirability, has a lower non-response rate than other methods and is less cognitively demanding for participants than the Randomised Response Technique (Rosenfeld et al., 2016).

That said, the robustness of the method depends on certain design considerations. Control lists should be sufficiently long to avoid participants suspecting the focus of the experiment but short enough to limit cognitive demand (Blair et al., 2019). Lists should also be designed to preserve anonymity; any participant who responds with the minimum or maximum response has revealed their responses. As such, lists should be constructed such that at least some control items have negative correlations or that one item is expected to generate high levels of endorsement and another low levels. There are also statistical tests that are required to determine whether the presence of the sensitive items alters the pattern of responding to the control items (known simply as a 'design effect'; Blair and Imai, 2012). Experiments should also be designed such that participants do not suspect the focus on the sensitive item (Chuang et al., 2021). For example, McGinnity et al.

(2020) embedded their experiment in a wider survey on general consumer sentiment. Finally, inattentive participants can lead to high levels of noise in estimates, which is particularly problematic for list experiments due to the nature of the analysis required to identify social desirability bias. These inattentive participants should be excluded where doing so does not affect the representativeness of the sample (Agerberg and Tannenberg, 2021).

Hence our first aim was to employ the list experiment technique to measure attitudes towards disability issues in Ireland and to follow best practice in doing so. However, there are limits to the number of items that can be covered in a list experiment compared to a standard survey. As such, we had a secondary aim, to test whether other ways in which surveys are constructed may lead to response biases.

1.5   INATTENTION TO POLICY COSTS AND TRADE-OFFS

Another potential source of response error in surveys is from how items are constructed. In order to generate an answer, survey respondents must first *interpret* the question and deduce its intent, *retrieve* relevant information from their memories*, integrate* that information into a judgement and then *translate* that judgement into a response (Krosnick and Presser, 2010; Schwarz and Strack, 1985). All steps in this process depend on the cognitive resources respondents are willing and capable of exerting. Researchers may hope that all respondents are motivated to exert maximum effort and 'optimise' their response to their true opinion. However, many people are instead likely to 'satisfice', providing the first response that they deem acceptable (Krosnick, 1991).

For example, if asked about whether there should be greater supports for disabled people in meeting the extra cost of living, a survey respondent may:

1.   Interpret the question as a policy to provide greater financial aid to disabled people;

2.   Retrieve their existing knowledge of someone with a disability (e.g. their brother-in-law);

3.   Integrate this information and form a judgement that extra financial aid for their brother-in-law would be a good thing, and;

4.   Respond positively to the survey item.

However, in this process the respondent has not considered the wider implications of such a policy, such as the need to fund it. If the question instead specified that budget reallocation would be required, or a tax increase would need to be imposed, Step 2 in their decision process is likely to change. For example, they may factor in the potential reduction in their pension if a budget reallocation is proposed, or the change to their daughter's income if a tax is to be imposed, and hence their judgement and response may vary too.

Survey items rarely include detail such as funding mechanisms or potential costs. Instead, conventional wisdom for survey design is to generate items that are as simple as possible (Krosnick and Presser, 2010). Yet it is unlikely that respondents will spontaneously consider all relevant information when making a judgement. People are well established to be 'cognitive misers', avoiding demanding, deliberation where possible in favour of simple, intuitive thinking (Evans, 2008; Kahneman, 2011; Taylor and Fiske, 1978). This tendency is often rational; deliberating over every possible outcome of a choice would leave little time for anything else.

Perhaps the best example of peoples' reliance on intuition rather than deliberation when completing surveys is the widespread evidence for 'framing effects'. Framing effects describe how emphasising certain aspects of an issue can shape people's interpretation of that issue (e.g. Druckman, 2001; Tversky and Kahneman, 1980). For example, Republicans in the US, who have historically opposed climate change mitigation, have been shown to be more supportive of pro-climate policies when they are framed as energy security or air pollution reduction policies than when the same policies are framed as climate action ones (Feldman and Sol Hart, 2018). Framing has been shown to alter public support for policies in multiple domains, including health and social inclusion (Gollust et al., 2013; Hurwitz and Peffley, 2005; McCaffrey and Baron, 2004).

Framing works by directing limited cognitive resources towards certain features of decisions. This 'rational inattention' to other decision features influences choices in other ways, including in support for policy (Sims, 2003). Voters rarely seek additional information to inform their opinion on the proposed policies of political candidates, instead relying on the information presented explicitly to them (Martinelli, 2007). This tendency is observed even when not voting is costly (Lopez de Leon and Rizzi, 2014). Applied to support for specific policies, this tendency to be inattentive to wider implications may lead to a contradiction between responses to simple survey questions and the level of support when funding mechanisms come into play.

There has been little research on how inattention to the unstated implications of various policies influences support, but some relevant experimental studies show that standard survey items tend to overestimate support. Adding detail to survey items about public policies reduces perceived understanding of policy and diminishes support compared to standard, simple survey items (Porumbescu et al., 2017). There is also evidence for the converse: reducing the level of policy detail in surveys can elicit stronger public support, all else being equal (Mu et al., 2021). Unsurprisingly, highlighting potential costs of policies or adding statements to clarify the nature of the cost leads to significant variation in support (Ardanaz et al., 2013; Chen et al., 2021). A meta-analysis of 36 experimental surveys shows that

doing so can reduce support by approximately 10 percentage points (Reynolds et al., 2020).

Hence, another aim of this study was to determine the extent to which support for disability policies varies when funding mechanisms and potential costs are added to standard survey items. We predicted that specifying in the survey item that budget reallocation or tax increases would be required to fund a policy would lead to reduced support compared to standard survey items. We also hypothesised that adding in other potential trade-offs (e.g. removing parking spaces in order to install wheelchair accessible infrastructure) would lead to diminished support. By assigning participants at random to see variations of the same policy, we can be sure that any differences in support are driven by the presence of these additional details.

1.6   STUDY OVERVIEW

We use two experimental methods to measure attitudes to disability policy in Ireland. Our focus is on policies that seek to mitigate discrepancies between the everyday experiences of people with disabilities and people with no disability, informed by the existing research and through discussions with an advisory board comprised of members from DPOs (described below). We use the list experiment method to investigate attitudes towards increased welfare payments and housing access, as well as behaviour that has implications for physical accessibility – parking in disabled car parking bays.[8] We use more standard experimental designs to test for the effects of highlighting the funding mechanisms and trade-offs of policies in survey items relating to cost-of-living support, support for children with disabilities and building wheelchair accessible infrastructure. We also include an exploratory item on attitudes towards disabled people working, given widely documented differences between directly expressed attitudes towards employment of disabled people and their objective labour market outcomes. Experimental techniques also allow for estimates of differences between socio-demographic groups. Hence we also aimed to test for differences between groups (e.g. those with higher educational attainment) in their support for disability policy but also the likelihood they conceal negative attitudes. We were particularly interested in differences between those familiar with disability issues and those less familiar, given the findings above that contact with a disability is associated with positive attitudes towards disability.

The next chapter describes the method, survey materials and data collection procedure in detail.

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8   Although we acknowledged early in the study design that investigating such behaviour would be difficult as the population prevalence is likely to be low, it was seen by the advisory group and the NDA as worth investigating as it has such a negative impact on disabled people.

CHAPTER 2

Data collection and experimental design

The study was programmed in Gorilla Experiment Builder (Anwyl-Irvine et al., 2020) and proceeded over three stages. Here we report findings from the first and third stages, which contained list experiments and a set of policy statements, respectively. Results from the second stage, which requested participants to make judgements to a series of vignettes, are reported in Timmons et al. (forthcoming). Data were collected between 11 and 26 August 2022. This study involved primary data collection with non-vulnerable adults on topics other than their health and the requirement for approval by the ESRI Research Ethics Committee was therefore waived. Our research questions, hypotheses and analysis plan were pre-registered (https://osf.io/b9mfx).

2.1 DATA COLLECTION: PARTICIPANTS

Two thousand participants were recruited from a large online panel held by a leading market research and polling company.[9] Timmons et al. (2020) provide details on how recruitment from this panel compares to a probability sample. Conducting the study online presents a more stringent test of the presence of social desirability bias than standard telephone or door-to-door sampling methods. Even respondents in control conditions are provided more anonymity than in standard face-to-face or telephone surveys, which involve sharing the information verbally with another person rather than entering it into a digital device, and therefore should exhibit less social desirability bias (Schwarz et al., 1991).

Participants were paid €3 for undertaking the study, which took ten minutes on average. In order to complete the study, participants had to correctly answer an instructed response attention-check question[10] (which was failed by 39 additional participants, who were thus excluded and did not count towards to the target sample size). Attrition during the stages reported here was low (n = 19 during the list experiment and n = 7 during the policy frames) and consistent across experimental groups.

Socio-demographic characteristics of the 2,000 complete respondents are summarised in Table 2.1. They are within 2 percentage points of the latest CSO estimates on each characteristic. An exception is disability status, where more participants reported having a long-lasting condition that affects their day-to-day life than the CSO's 2016 estimates for the adult population (18.9 per cent vs.

15.9 per cent), although the question wording differed.[11] Another difference is the potential for Long COVID (also known as 'Post COVID-19 condition') to lead to a higher proportion of people in 2022 with a long-lasting condition. Conservative estimates suggest 3 per cent of the adult population in Ireland have Long COVID (Timoney, 2022).

TABLE 2.1   SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

		n	%	Population % (Census 2016)[a]
Gender	Men	961	48.1	48.9
	Women	1,029	51.5	51.1
	Non-Binary[b]/Other	10	0.5	-
Age	18-39 years	786	39.3	40.4
	40-59 years	696	34.8	35.1
	60+	518	25.9	24.5
Educational Attainment	Below Degree	1,175	58.8	58.0
	Degree or above	825	41.3	42.0
Employment	In Labour Force	1,339	67.0	65.2
	(Of Which, Employed)	1,276	95.3	(95.2)
	(Of Which, Unemployed)	63	4.7	(4.8)
	Not in Labour Force	661	33.1	34.8
Living Area	Urban	1,274	63.7	63.3
	Rural	726	36.3	36.7

Source: Authors' analysis.
Note: a. Population estimates are based on 2021 Central Statistics Office (CSO) data where possible and 2016 Census data otherwise, except for Employment which is based on Q2 2022 data from the EU Labour Force Survey.
b. There are currently no population estimates for non-binary individuals.

2.2   SELECTION OF ISSUES TO INVESTIGATE

The challenges faced by any person with a disability depends on their individual circumstances. Different disabilities – for example hearing or vision impairments, limited mobility, speech difficulties, mental health problems, autism, chronic pain – will lead to people experiencing different day-to-day issues that require different supports. There is further variation within specific impairments depending on personal characteristics like age, socio-economic status and family circumstances. However, finite respondent time in studies such as this means that only some issues can be surveyed. It is therefore a difficult task to identify which issues to include to reflect this variation in experience and challenges. The issues we selected were identified through themes used in previous research commissioned by the NDA (2017), discussions with officers from the NDA and input from an advisory board comprised of members from DPOs (As I Am, Disabled Women Ireland and Voice of Vision Impairment) and the Irish Human Rights and Equality Commission (IHREC). Discussion with the advisory board pointed towards interest

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[11]   Participants gave a Yes or No response to the question 'Do you have a long-lasting condition or difficulty that affects your ability to carry out day-to-day activities? (e.g. a physical or sensory impairment, a mental health problem, an intellectual disability or a chronic illness)' whereas the Census required specific conditions to be selected from a list.

in identifying whether the public are willing to take on costs to enable disabled people to participate fully in society. The final issues included in the full study (i.e. including the vignettes reported in Timmons et al., forthcoming) related to cost of living, education, employment, housing, infrastructure, institutions, relationships, transport and welfare. Survey items were then drafted through an iterative process with feedback from relevant stakeholders. The final items for the list experiment and policy statements reported here pertain to social welfare, housing, infrastructure and employment. Items that featured in previous surveys were prioritised for the list experiment to allow between-survey comparisons.

2.3   MATERIALS AND DESIGN

To minimise social desirability, we sought to conceal the study's focus on disability, in line with best practice. The logic here was that if participants suspected the main focus was on disability, they may be more likely to alter their responses from their true beliefs. Instead, it was presented to participants as relating to 'their opinion of different policy issues' and contained non-disability policy questions.[12] Participants were informed that there were no right or wrong answers.

2.3.1   List experiments

The first stage contained four list experiments. The list experiment method works by presenting respondents with a list of items and asking how many of them they agree with. Crucially, respondents are not asked which of the items they agree or disagree with, just how many. First the sample is divided at random into treatment and control groups.

The control group is given a list of three items and the treatment group is presented with this same list, but with the addition of a *sensitive* item that asks about support for disability. For example, to estimate support for prioritising disabled people for social housing, the control group were asked how many of the following items they agree the government should do:

> *Do more to tackle climate change*
> *Decriminalise illicit drug use*
> *Make COVID-19 boosters mandatory, including for children*

Reponses varied from 0 to 3. The treatment group were shown these three items with the addition of the sensitive item (Figure 2.1A), in this case:

> *Prioritise disabled people for social housing.*

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12   A question later in the study probed participants' thoughts on the nature of the survey and showed that a small minority (n = 43; 2.2 per cent) mentioned disability. Results are the same if these individuals are excluded.

Responses varied from 0 to 4. Because both samples are presented with the same control list items, any difference between the average response to the control and treatment is due to the additional (sensitive) item. At the group level, simply subtracting the average response to the control from the average response to the treatment offers a way to ascertain support for the sensitive item among those in the treatment group (i.e. in Figure 2.1A, prioritising disabled people for social housing). An additional step, which is taken in this experiment, is to ask the control group to *directly express* their support for sensitive items (e.g. prioritising disabled people for social housing) via standard survey questions after the list experiment. The difference between directly expressed support on these questions and the estimate of *anonymously expressed* support is interpretable as a measure of the extent to which support for these issues is over- or under-stated (see Figure 2.1A). The key to the success of the list experiment is that respondents in the list treatment are never asked to articulate support or report on behaviour regarding any specific item in the list, which guarantees permanent anonymity from the interviewer at the individual level.[13]

FIGURE 2.1A   EXAMPLE LIST EXPERIMENT DESIGN (SOCIAL HOUSING)

Control Group
The Government should:
- Do more to tackle climate change
- Decriminalise illicit drug use
- Make COVID-19 boosters mandatory, including for children

How many of the above do you agree with?
$$0 - 1 - 2 - 3$$

List Group
The Government should:
- Do more to tackle climate change
- Decriminalise illicit drug use
- Make COVID-19 boosters mandatory, including for children
- Prioritise disabled people for social housing

How many of the above do you agree with?
$$0 - 1 - 2 - 3 - 4$$

Source: Authors.
Note: Because the control items are the same for both groups, any difference in average responses can be attributed to support for the sensitive item. For example, if the average response for the control group is 1.5 items and the average response for the list group is 2.3 items, 80 per cent anonymously endorsed the sensitive item in the list group (2.3 − 1.5 = 0.8).

In our study, the software assigned participants at random to the treatment group (hereafter the 'list' group; n = 1,248) or the control group (hereafter, the 'direct question' group; n = 752). We pre-registered a randomisation ratio of 5:3 in favour of the list treatment, due to statistical power requirements of list experiments. Participants remained in the same treatment for each list. All participants saw four lists of items and were asked how many on each list they agreed with or applied to them. They selected a response from a drop-down menu. The first two lists contained policy statements and the last two contained behaviours (see Figures 2.1a to 2.1d). For participants in the list treatment, both policy lists and one

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[13]   Under conditions of permanent anonymity the person's opinion is not recorded. The survey interviewer never knows which of the items on the list the respondent supports.

of the behaviour lists contained a sensitive item about disability issues: welfare payments, social housing and disabled parking,[14] respectively. The control group were asked *directly* about their support for prioritising disabled people for social housing and increasing welfare payments for people with a disability, as well as whether they have ever parked in a disabled space at the end of the survey (see Figure 2.1a).

The other behaviour list, about frequency of exercise, was a filler list designed to prevent participants from suspecting the focus of the study was disability issues and altering their responses as a result.

FIGURE 2.1B   WELFARE PAYMENTS LIST EXPERIMENT

Control Group	List Group
The Government should:	The Government should:
• Do more to address the cost of living crisis	• Do more to address the cost of living crisis
• Raise taxes on meat	• Raise taxes on meat
• Hold of a referendum on a United Ireland	• Hold of a referendum on a United Ireland
	• Increase welfare payments for disabled people
How many of the above do you agree with? 0 − 1 − 2 − 3	How many of the above do you agree with? 0 − 1 − 2 − 3 − 4

Source: Authors.

FIGURE 2.1C   'FILLER' LIST EXPERIMENT

Control Group	List Group
• I often walk/cycle/use public transport instead of travelling by car	• I often walk/cycle/use public transport instead of travelling by car
• I have regular contact with someone born outside of Ireland	• I have regular contact with someone born outside of Ireland
• I have taken childcare leave from work (e.g., maternity/paternity)	• I have taken childcare leave from work (e.g., maternity/paternity)
	• I usually exercise at least three times per week
How many of the above apply to you? 0 − 1 − 2 − 3	How many of the above apply to you? 0 − 1 − 2 − 3 − 4

Source: Authors.
Note: This list was not of analytic interest and did not have a corresponding direct question.

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[14]   While 'accessible parking' is the preferred term of the research team, 'disabled parking' was used in the survey as it was felt that this term would be more familiar to the general population.

FIGURE 2.1D   PARKING LIST EXPERIMENT

Control Group	List Group
• I have broadband internet in my home • I regularly attend religious services (e.g., Mass) • I refused the first dose of my COVID-19 vaccine	• I have broadband internet in my home • I regularly attend religious services (e.g., Mass) • I refused the first dose of my COVID-19 vaccine • I have parked in a disabled parking spot without a permit
How many of the above apply to you? 0 – 1 – 2 – 3	How many of the above apply to you? 0 – 1 – 2 – 3 – 4

Source: Authors.

Items on lists were presented in randomised order. To minimise the potential for maximum or minimum responses to the lists, which would invalidate the anonymity lists afford, the control items were constructed such that we expected one item to generate high levels of agreement, one to generate low levels of agreement and one to be supported by approximately half of participants, following best practice in the design of list experiments (Blair and Imai, 2012).

2.3.2   Policy trade-offs

After completing the vignettes (reported separately in Timmons et al., forthcoming), participants saw four policy statements and were asked whether they agreed with each one ('Yes', 'No' or 'Don't Know'). The four issues were selected from a wider set of eight, four of which concerned disability issues (wheelchair accessible infrastructure, cost of living supports, supports for children with disabilities and employment) and four concerned other issues (refugees, parental leave, the environment and further education). Each participant saw two disability and two non-disability issues, selected at random. The focus of this report is on the disability-related items. These are presented in Table 2.2.

TABLE 2.2   POLICY STATEMENTS

	Version 1	Version 2	Version 3
A. Cost of Living	*Control:* More should be done to support disabled people in meeting the extra costs of living related to having a disability.	*Budget:* More of the Government's budget should be allocated to helping disabled people in meeting the extra costs of living related to having a disability.	*Tax:* A tax increase should be used to put more money towards supporting disabled people in meeting the extra costs of living related to having a disability.
B. Supports for Children	*Control:* Children with disabilities should get the supports they need.	*Budget:* More of the Government's budget should be allocated to making sure children with disabilities should get the supports they need.	*Tax:* A tax increase should be used to put more money towards making sure children with disabilities should get the supports they need.
C. Wheelchair accessible infrastructure	*Control:* Local Councils should prioritise building more wheelchair accessible infrastructure.	*Parking:* Local Councils should prioritise building more wheelchair accessible infrastructure, even if parking infrastructure needs to be removed to do so.	*Cycle:* Local Councils should prioritise building more wheelchair accessible infrastructure instead of cycling infrastructure.
D. Employment	*Control:* Disabled people should work, in jobs which they are capable of doing.	*Support:* Disabled people should be supported in working, in jobs which they are capable of doing.	*Incentive:* Disabled people should be incentivised to work, in jobs which they are capable of doing.

Sources: Authors.

The idea of these policy questions was to elicit depth of support for progressive disability policies, by varying whether the potential funding mechanisms or trade-offs of policies were made explicit and the nature of the policy proposed. It is well-established that people are often 'rationally inattentive', and hence are unlikely to spontaneously consider the wider implications of policies where they are implicit (e.g. Sims, 2003). For example, the public may support a policy that proposes to increase welfare payments for disabled people in principle, but support may be weakened when attention is drawn to the costs of such a policy (see also discussion in Section 1.5). For each issue, we constructed three versions and participants were assigned with balanced randomisation by the software to see one version. Table 2.2 shows the exact wording of each statement and their variants. For three of the disability issues, the versions varied by a funding mechanism or trade-off that was made explicit in the question. For the fourth (about employment), the variants presented slight variations of the nature of the statement. The non-disability issues were again designed to reduce the potential for participants suspecting the main focus of the study. Policies were presented two per page in randomised order, with the constraint that two disability issues were not presented on the same page.

Participants finished the study by completing questions about background characteristics, including age, gender, educational attainment, employment status, and living area, the results of which are shown in Table 2.1, as well as whether they themselves had a disability or whether they knew anyone with a disability.

CHAPTER 3

List experiment results

In this chapter we first present tests of list experiment design assumptions, including analysis of fully anonymised response rates and the presence of design effects (Blair and Imai, 2012). To compare list endorsement of sensitive items to direct question responses, we use the item-count technique with Welch's t-tests to account for unequal variances between list and control treatments (Tsai, 2019). We use logistic regression models to test for differences between sociodemographic subgroups. We test for differences by gender, age, living location (urban or rural) and socio-economic indicators. Socio-economic indicators were educational attainment and 'social grade', a classification system based on the occupation of the chief income earner in the household. We compare those in households where the chief income earner is in a higher, intermediate or junior managerial/professional role ('ABC1') with ones where the chief income earner is in a manual or casual work role or unemployed ('C2DE'). We use Student's t-tests and tests of proportions for follow-up tests where models suggest significant differences. We also compare responses to direct questions to estimates from the most recent NDA survey on disability attitudes using tests of proportions (NDA, 2017).

3.1   TESTING DESIGN EFFECTS

List experiments need to be designed such that the presence of the sensitive item does not alter how participants respond to other items in the list. We tested for design effects on each list using the *kict* package in Stata (Blair and Imai, 2012; Tsai, 2019). Results for each list showed suitable joint distributions and no indication of design effects (Tables A.1-A.3 in the Appendix). Response distributions to list experiments should also show few participants answering with the minimum or maximum response and thereby revealing their opinion. Figure A.1 in the Appendix shows no evidence for problematic ceiling or floor effects.

Lastly, we tested for any differences between the groups on socio-demographic characteristics, which should be prevented by randomisation. Chi-square tests showed that there was no difference in allocation of different socio-demographic groups to the list or direction condition, as signalled by the p value being much greater than 0.05 (Table 3.1). This implies that the randomisation was effective and there were no significant differences in these groups in terms of these socio-demographic characteristics.

TABLE 3.1 **CHI-SQUARE TESTS OF LIST EXPERIMENT RANDOMISATION**

	χ²	p
Gender	0.19	.660
Age	0.87	.647
Educational Attainment	0.03	.866
Working Status	0.16	.925
Socio-Economic Grade	0.24	.888
Living Area	1.11	.292
Disability Status	2.27	.132

Source: Authors' analysis.

3.2 INCREASED WELFARE PAYMENTS

When asked directly, 77 per cent of participants endorsed increased welfare payments for disabled people. This figure is the same as the level of support in response to the same question, estimated from the 2017 NDA survey on disability attitudes (N = 1,294), (77 per cent) Z = 0.00, p = .998 (see Figure 3.1). Estimates of support from the list responses were lower (66 per cent), t (1,620.69) = 2.70, p = .007. This difference implies that 14 per cent (11 percentage points) of people who endorse increasing welfare payments for disabled people may do so only to present themselves in a positive light. They do not support increasing welfare payments when provided anonymity in the list experiment (Figure 3.1).

Table 3.2a presents model coefficients from logistic regressions predicting support for increasing welfare payments for different socio-demographic groups of participants. The table also shows results from a non-linear least-squares estimation of support within the list treatment (see Blair and Imai, 2012; Tsai, 2019).

Table 3.2a shows that, compared to those without degrees, participants with higher educational attainment were less likely to endorse increased welfare payments for disabled people when asked in the list condition,[15] but there was no evidence for a difference when both groups were asked directly.[16]

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[15] Direct t-test: t (1237.76) = 1.99, p = .047.
[16] Test of proportions: Z = 0.74, p = .458.

TABLE 3.2A   LOGISTIC REGRESSION MODELS PREDICTING DIRECT RESPONSES AND LIST RESPONSES TO INCREASING WELFARE PAYMENTS

Increase Welfare Payments	Direct	List
Man	0.11	0.01
(Ref: Woman)	(0.17)	(0.35)
Aged 45+ years	0.12	-0.36
(Ref: <45 years)	(0.18)	(0.36)
Degree	0.00	-0.86**
(Ref: Less than Degree)	(0.20)	(0.40)
ABC1 Social Grade	-0.27	0.38
(Ref: C2DEF)	(0.19)	(0.39)
Urban	0.00	-0.36
(Ref: Rural)	(0.18)	(0.37)
Constant	1.22	1.27
N	746	2,000

Sources: Authors' analysis and NDA (2017).
Note: $*p < .10$, $** p < .05$, $*** p < .01$. Standard errors are in parentheses.
The sample size for the Direct model varies from the control condition sample size because subgroups in which each individual responded in the same way are excluded. The sample size for the List model is the full sample because the model requires responses from both the control list and the treatment list to estimate the proportion who endorsed the target item within each subgroup.

To test for educational attainment differences in social desirability bias, we repeated the item-count analysis for both groups. Those with degrees displayed a social desirability bias, with a higher percentage endorsing an increase when asked directly (75.6 per cent) compared to when asked in the list treatment (58.8 per cent), $t (799.04) = 3.76$, $p < .001$. The difference for those with lower educational attainment was in the same direction but not statistically significant (78.0 per cent vs. 71.1 per cent, respectively), $t (949.51) = 1.30$, $p = .195$. Hence, the results imply that individuals with higher educational attainment are less likely to endorse an increase in welfare payments for people with a disability, and that this difference may not be detected using standard survey methods.

3.3   HOUSING

Support for prioritising disabled people for social housing showed a large decline in 2022 compared to 2017, when participants were asked directly (61.4 per cent in 2022 vs. 78.0 per cent in 2017), $Z = 8.04$, $p < .001$ (see Figure 3.1). The list condition showed *higher* levels of support compared to the direct condition (70.7 per cent), $t (1,619.65) = 1.96$, $p = .050$, but still marginally lower than in 2017, $t (1,247.13) = 1.68$, $p = .094$. Note that, contrary to our predictions, the direction of the difference between the direct and list treatment implies that prioritising disabled people on social housing waiting lists is judged as less socially desirable than opposing it.

Table 3.2b shows that lower social grade was a predictor of direct support for housing prioritisation. Analysis of responses within these groups showed that while

66.5 per cent of those in the C2DE (skilled and unskilled manual workers, non-employed) social grades supported prioritising disabled people for social housing, just 56.9 per cent of those in the ABC1 (professional, managerial, administrative) grades did.[17] However, the list model in Table 3.2b shows no difference between social grades in the list treatment.[18]

We investigated the relationship between social grade and social desirability further by repeating the item-count analysis by subgroups. Those in the C2DE social grades did not display a list effect, with 72.0 per cent supporting in the list condition, t (768.20) = 0.78, p = .437, but those in the ABC1 grades showed higher support in the list condition (69.6 per cent), t (848.47) = 1.98, p = .047. Hence, the results imply that standard survey measures may indicate a difference in support for housing prioritisation depending on social grade that does not exist when respondents are offered greater anonymity. Importantly, social desirability may lead to *lower* support for disabled people among groups in higher social grades. One possibility is that, during a housing crisis where there are high levels of competition for limited social housing, some of those in higher social grades perceive prioritising any group to be socially undesirable.

TABLE 3.2B   LOGISTIC REGRESSION MODELS PREDICTING DIRECT RESPONSES AND LIST RESPONSES TO PRIORITISING DISABLED PEOPLE FOR SOCIAL HOUSING

Housing Priority	Direct	List
Man	0.20	0.25
(Ref: Woman)	(0.15)	(0.44)
Aged 45+ years	-0.03	0.08
(Ref: <45 years)	(0.15)	(0.44)
Degree	0.21	-0.05
(Ref: Less than Degree)	(0.17)	(0.48)
ABC1 Social Grade	-0.52***	-0.09
(Ref: C2DEF)	(0.17)	(0.47)
Urban	0.13	0.18
(Ref: Rural)	(0.16)	(0.45)
Constant	0.49	0.73
N	751	2,000

Sources: Authors' analysis.
Note: *p < .10, ** p < .05, *** p < .01. Standard errors are in parentheses.
The sample size for the Direct model varies from the control condition sample size because subgroups in which each individual responded in the same way are excluded. The sample size for the List model is the full sample because the model requires responses from both the control list and the treatment list to estimate the proportion who endorse the target item within each subgroup.
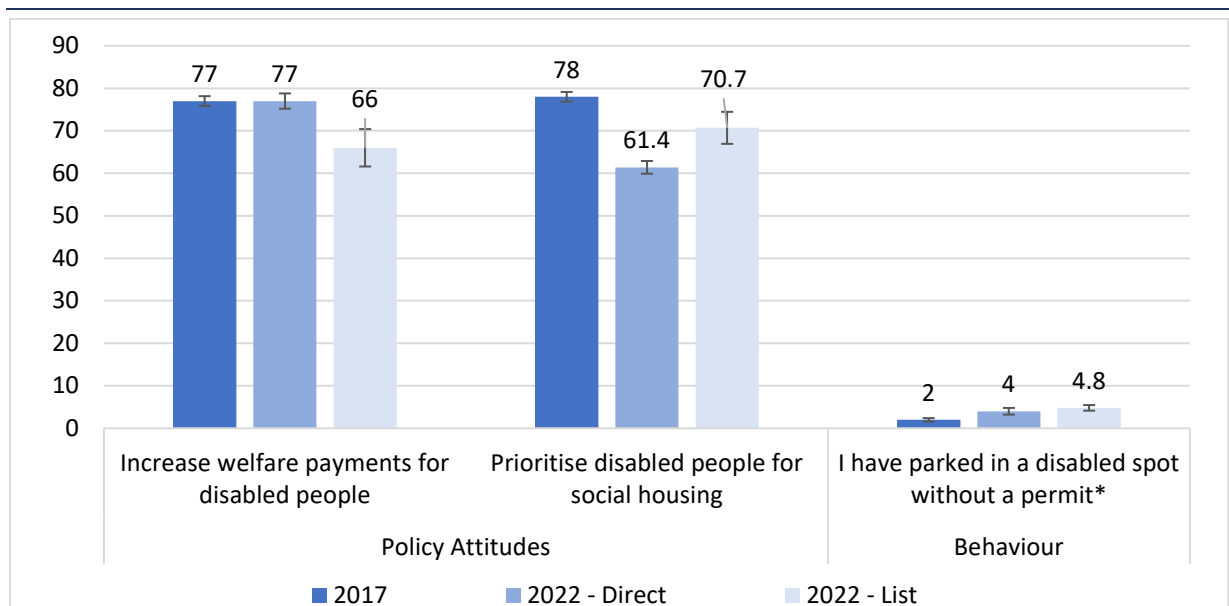
3.4   PARKING

In the 2017 NDA survey, just 2 per cent of respondents reported that they judge parking in a disabled parking space without a permit is acceptable. As we were interested in behaviour rather than attitudes for this issue, in the 2022 survey

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[17]   Test of proportions: Z = 2.69, p = .007.
[18]   T-test: t (1246) = 0.26, p = .798.

respondents were asked whether they had parked in a disabled parking space without a permit. For the analysis, we include only those who later in the survey reported that they drive (n = 1,674). When asked directly in our study, 4 per cent of drivers admit having done so in the past and this difference is statistically significant, Z = 2.57, p = .010 (see Figure 3.1). The estimate from responses to the list items (4.8 per cent) is not statistically different to the proportion who admitted parking in a disabled space without a permit to direct question, t (1162.94) = 0.22, p = .830. The number of people who reported parking in a disabled space without a permit is too low to permit analysis of differences by socio-demographic subgroups.

FIGURE 3.1   PERCENTAGE OF PARTICIPANTS ENDORSING SENSITIVE ITEMS IN THE THREE LIST EXPERIMENTS

Sources: Authors' analysis and NDA (2017).
Note: Error bars are the standard error of the proportion. *The parking question contains only those who reported driving (n = 1,674). The comparison with NDA (2017) is to a question about the acceptability of parking in a disabled space without a permit rather than a behaviour question.

3.5   FAMILIARITY WITH DISABILITY

We were interested in the extent to which contact with disabled people or experience with disability is associated with attitudes to the policy support. We pre-registered exploratory analyses of the association between knowing someone with a disability or having a disability oneself and support for disability policy.[19] We ran further logistic regression models predicting policy endorsement using an ordinal variable for familiarity. Participants were asked at the end of the study whether they or any of a list of people they knew had a disability or long lasting condition that affects their ability to carry out day-to-day activities.[20] They were

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[19]   For this analysis also, the number of people who reported parking in a disabled spot without a permit is too low for subgroup comparisons.

[20]   The response options were Spouse/Partner, Child, Parent, Brother/Sister/Other relative, Friend, Neighbour, Colleague/work contact, Not sure/don't know, None. Participants could select as many as applied to them.

coded according to whether they themselves have a disability or long-lasting condition (n = 377; 18.9 per cent); their spouse/partner, child or parent has a disability (n = 280, 14.0 per cent); another relative has a disability (n = 126, 6.3 per cent); a friend, neighbour or colleague has a disability (n = 127, 6.3 per cent); or no one they know has a disability or long-lasting condition (n = 1,090; 54.5 per cent).[21] For participants who reported knowing people with a disability in multiple categories, they are coded according to their most 'familiar' (e.g. if an individual reported their child and a work colleague has a disability, they are categorised into the first 'most familiar' group only).

Table 3.3 presents the models, controlling for other socio-demographic characteristics. The Direct models show that participants who themselves have a disability were more supportive of both policies compared to those who know no one with a disability (Welfare: 86.0 per cent vs. 74.8 per cent; Housing: 72.1 per cent vs. 60.9 per cent). Results presented in Table 3.3 also show that, for participants in the list treatment, those whose partner, child or parent has a disability were far more likely to endorse an increase in welfare payments than those who did not know anyone with a disability, t (353.79) = 3.83, p < .001, while there was no difference between these groups when asked directly, Z = 1.46, p = .143. Those who do not know anyone with a disability showed significantly higher support when asked directly compared to in the list treatment, t (887.93) = 3.33, p < .001, suggesting a strong social desirability effect in responses. These effects are large (Figure 3.2). The difference among those who have a close relative with a disability was in the opposite direction, although not statistically significant, t (240.05) = 1.18, p = .241.

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[21] Note that the proportion who know no one with a disability is higher than estimates from NDA (2017) of 27 per cent. This may result from differences in the question asked, as in NDA (2017) interviewers asked respondents 'Who do you know who has a disability?' which likely led to respondents engaging in more extensive memory retrieval.

TABLE 3.3 **LOGISTIC REGRESSION MODELS PREDICTING POLICY SUPPORT FROM FAMILIARITY WITH DISABILITY**

	Increase Welfare Payments		Housing Priority	
	Direct	List	Direct	List
Familiarity with Disability Issues (Ref: Knows No One)				
Friend/Neighbour/Colleague	-0.43 (0.32)	0.73 (0.74)	-0.23 (0.31)	-0.69 (0.71)
Brother/Sister/Other Relative	-0.02 (0.35)	0.72 (0.80)	-0.23 (0.30)	-0.02 (0.75)
Spouse/Partner/Child/Parent	0.31 (0.27)	1.92* (1.06)	-0.15 (0.22)	0.38 (0.74)
Has a Disability Themselves	0.67** (0.28)	0.64 (0.48)	0.43* (0.23)	-0.39 (0.56)
Socio-Demographic Controls[a]	Yes	Yes	Yes	Yes
Constant	1.08	0.93	0.44	0.60
N	746	2,000	751	2,000

Source: Authors' analysis.
Note: *$p < .10$; **$p < .05$; ***$p < .01$.
a. Socio-demographic controls include gender, age, educational attainment, social grade and living area.
The sample size for the Direct model varies from the control condition sample size because subgroups in which each individual responded in the same way are excluded. The sample size for the List model is the full sample because the model requires responses from both the control list and the treatment list to estimate the proportion who endorsed the target item within each subgroup.

FIGURE 3.2 **SUPPORT FOR INCREASING WELFARE PAYMENTS FOR DISABLED PEOPLE BY FAMILIARITY WITH DISABILITY AND EXPERIMENTAL TREATMENT**
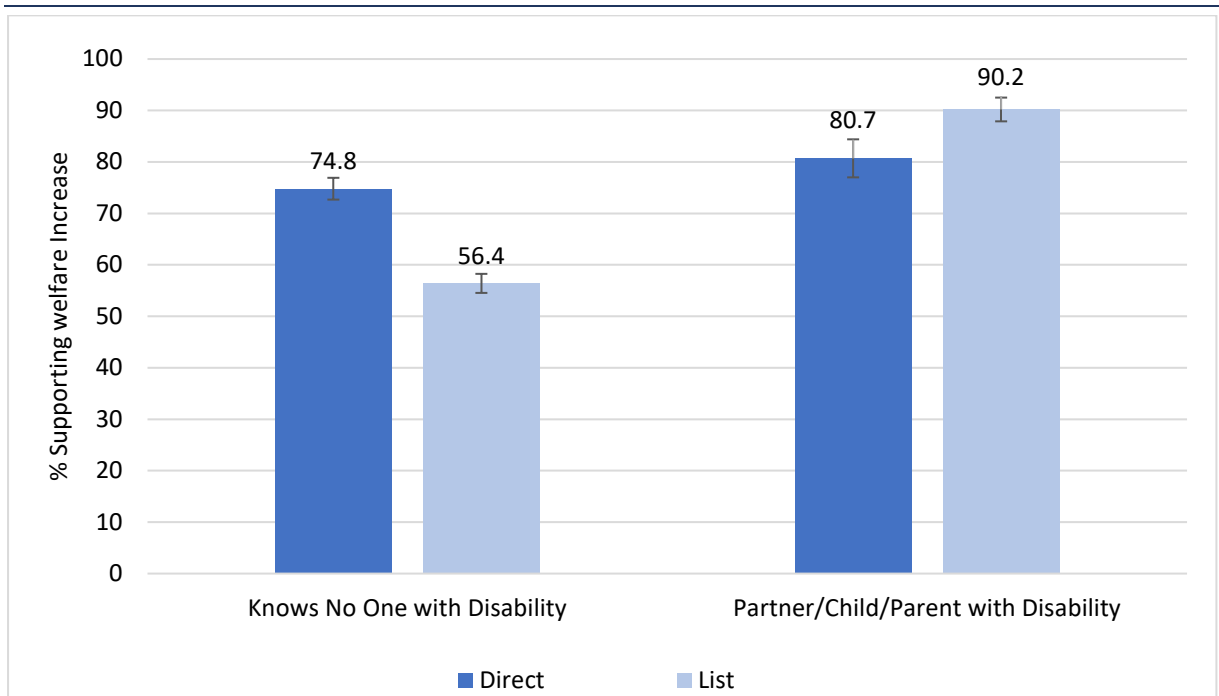
Source: Authors' analysis.
Note: The chart shows only those who do not know anyone with a disability (n = 1,090) and those who have a partner, child or parent with a disability (n = 280).

CHAPTER 4

Policy trade-offs results

The focus in this chapter is on the extent to which respondents' support for certain policies changes when funding mechanisms are specified or when faced with explicit trade-offs (see Section 2.3.2). To analyse differences in support for policy statements across versions, we first use Chi-Square tests followed by binomial proportion comparisons between the Yes responses where the Chi-Square test is significant. We test for socio-demographic differences using logistic regressions on a dummy variable for whether the participant supported the policy (1 = 'yes', 0 = 'no' or 'don't know') and report descriptive percentages where differences are significant.

4.1   COST OF LIVING SUPPORT

Figure 4.1 shows the levels of support for Policy A, about providing disabled people with assistance for the extra cost of living associated with having a disability. Support varied across the versions, χ^2 (4) = 207.89, p < .001. More participants endorsed the policy in the Control version (v1), when no trade-off was made explicit, compared to the other two groups, Z_{Budget} = 4.74, Z_{Tax} = 13.45, both ps < .001. Support was stronger in Budget version (v2) than in the Tax version (v3), Z = 9.46, p < .001. These effects are large: the results imply that 15 per cent of people withdraw their endorsement of extra supports for disabled people when the need for budget allocation is highlighted, with over half (54 per cent) doing so if the supports are proposed to be funded by a tax increase.

FIGURE 4.1   SUPPORT FOR INCREASED COST OF LIVING ASSOCIATED WITH HAVING A DISABILITY BY VERSION
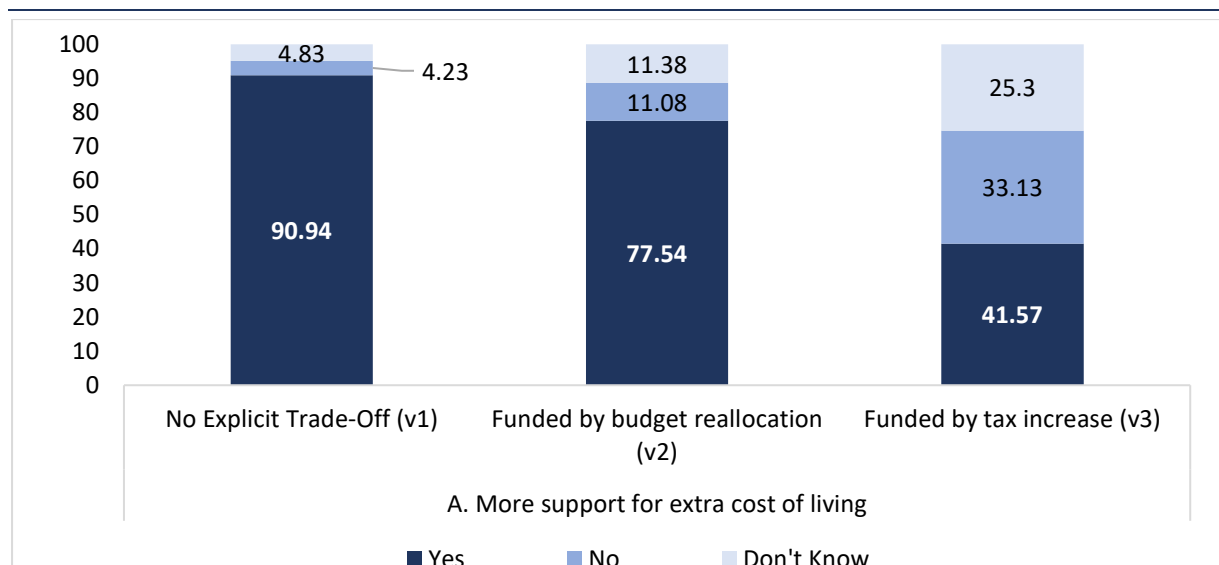
Source: Authors' analysis.

Does this experimental effect vary for different groups? Table 4.1 presents logistic regression models, predicting support for the policy statement in the different experimental conditions from various socio-demographic characteristics. Results show that respondents over 60 years old showed greater endorsement of extra cost of living supports than under 40s when it was proposed to fund the policy through a tax increase (Version 3; 53 per cent vs. 37 per cent), but the difference was not statistically significant for the control statement (Version 1; 95 per cent vs. 89 per cent) or when a budget allocation was proposed (Version 2; 80 per cent vs. 76 per cent). A difference based on educational attainment, where those with a third-level degree showed stronger support than those without, was observed only for the control statement (Version 1; 94 per cent vs. 88 per cent, respectively). When the policy was proposed to be paid for through a budget allocation (Version 2), the direction of the difference reversed but was not statistically significant (75 per cent vs. 80 per cent). There was no difference when a tax increase was proposed (Version 3; 43 per cent vs. 41 per cent). Participants in higher social grades showed less support on the control (Version 1) and budget allocation (Version 2) models, although the only statistically significant difference was between the DE and C1C2 grades on budget allocation (Version 2; 88 per cent vs. 73 per cent).

TABLE 4.1   LOGISTIC REGRESSION MODELS PREDICTING SUPPORT FOR INCREASED COST OF LIVING SUPPORTS

Cost of Living	Control Version (v1)	Budget Version (v2)	Tax Version (v3)
Male	0.35	0.19	0.18
(Ref: Female)	(0.40)	(0.27)	(0.23)
Age			
(Ref: 18-39 years)			
40-59 years	0.23	0.04	-0.05
	(0.44)	(0.31)	(0.29)
60+ years	0.95	0.03	0.72**
	(0.59)	(0.36)	(0.30)
Degree	1.07**	-0.14	0.26
(Ref: No Degree)	(0.50)	(0.29)	(0.26)
Social Grade			
(Ref: DE)			
C1C2	-0.36	-0.98**	0.34
	(0.55)	(0.41)	(0.30)
AB	-0.64	-0.72	-0.09
	(0.65)	(0.47)	(0.35)
Urban	-0.29	-0.39	-0.35
(Ref: Rural)	(0.41)	(0.29)	(0.25)
Intercept	2.05***	2.17***	-0.66*
	(0.63)	(0.47)	(0.34)
N Yes Responses	301	259	138
Total N	329	333	332

Source: Authors' analysis.
Note: *$p < .10$, ** $p < .05$, *** $p < .01$. Standard errors are in parentheses.

4.2   SUPPORTS FOR CHILDREN WITH DISABILITIES

The variation in support observed for cost of living supports by statement version is similar for policy B, about providing extra supports for children with disabilities, χ^2 (4) = 146.63, p < .001 (Figure 4.2). Support was significantly stronger when there was no explicit trade-off (Version 1) than the other conditions, Z_{Budget} = 6.15, Z_{Tax} = 11.42, both ps < .001, and budget reallocation (Version 2) was supported more strongly than the tax increase (Version 3), Z = 6.37, p < .001. Again, effects were large, with a 13 per cent reduction in support if funding was proposed from budget allocation and a 35 per cent reduction if funding was proposed through a tax increase.

Logistic regression models (Table 4.2) show that men were less supportive of reallocating Government budget to support children with disabilities than women (88 per cent vs. 82 per cent) (Version 2) but there were no differences on the control statement (Version 1; 98 per cent of both groups supported) or when a tax increase was proposed (Version 3; 62 per cent of women vs. 65 per cent of men supported). Older participants were generally more in favour of supports than those under 40 years old, but the difference was only statistically significant for those who read the budget reallocation statement (Version 2) (88 per cent of over 60s and 89 per cent of 40-59 year olds vs. 79 per cent of under 40s).

FIGURE 4.2   SUPPORT FOR INCREASED SUPPORTS FOR CHILDREN WITH DISABILITIES BY STATEMENT VERSION

B. More support for children with disabilities
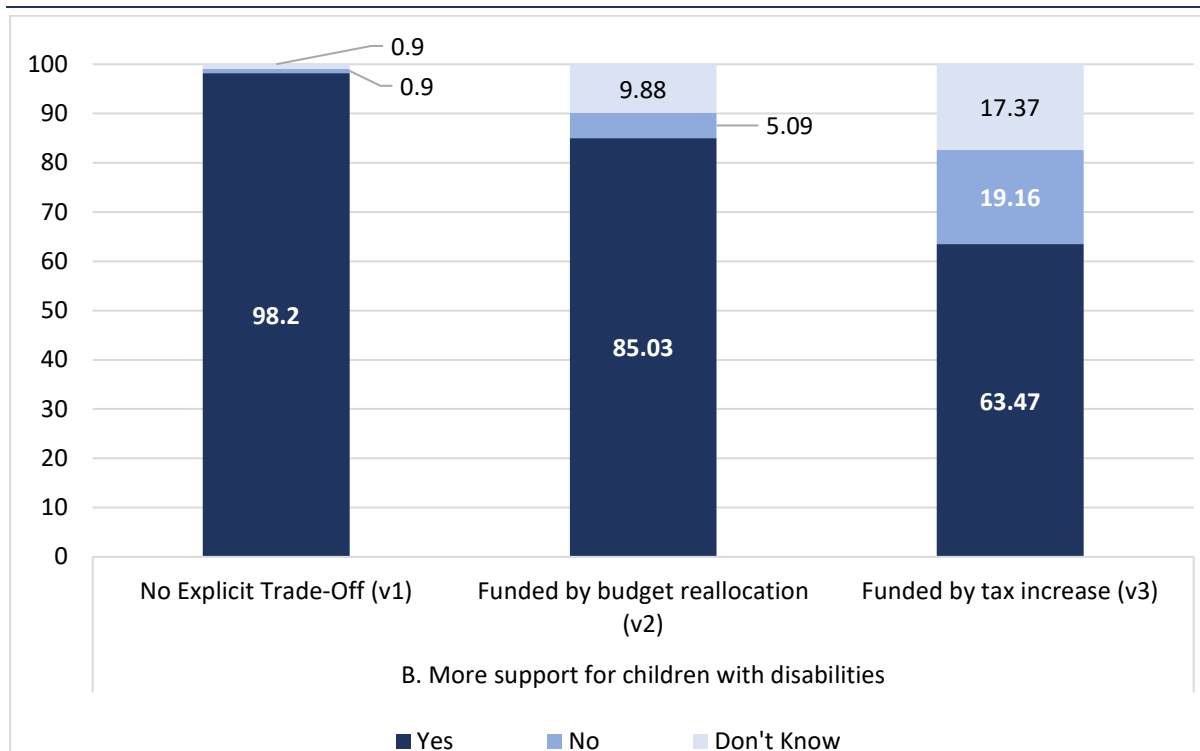
Source: Authors' analysis.

TABLE 4.2   LOGISTIC REGRESSION MODELS PREDICTING SUPPORT FOR INCREASED CHILD SUPPORTS

Table 4.2 Logistic Regression Models Predicting Support for Increased Child Supports	Control[a] (v1)	Budget (v2)	Tax (v3)
Male (Ref: Female)	-0.11 (0.84)	-0.57* (0.32)	0.11 (0.23)
Age (Ref: 18-39 years)			
40-59 years	-0.59 (0.95)	0.85** (0.38)	0.06 (0.28)
60+ years	0.11 (1.27)	0.70* (0.41)	0.37 (0.30)
Degree (Ref: No Degree)	-0.99 (0.94)	0.10 (0.36)	0.09 (0.26)
Social Grade (Ref: DEF)			
C1C2	-0.35 (1.19)	-0.09 (0.40)	-0.02 (0.28)
AB	-0.44 (1.31)	-0.34 (0.48)	0.41 (0.35)
Urban (Ref: Rural)	-	-0.01 (0.35)	-0.30 (0.25)
Intercept	5.12*** (1.33)	1.67*** (0.43)	0.45 (0.35)
N Yes Responses	329	284	212
Total N	334	333	334

Source: Authors' analysis.
Note: *p < .10, ** p < .05, *** p < .01. Standard errors are in parentheses.
a. All except for six of the 334 participants in this model supported the policy, all of whom lived in an urban area. Hence, living area is not included as a predictor in this model.

4.3   BUILDING WHEELCHAIR ACCESSIBLE INFRASTRUCTURE

Support for policy C on building more wheelchair accessible infrastructure also varied across conditions, χ^2 (4) = 34.82, p < .001. Support was strongest when no trade-off was made explicit (Version 1) but declined when the proposal required removing parking infrastructure, (Version 2) Z = 2.36, p = .018, or for it to be built at the expense of cycling infrastructure, (Version 3) Z = 5.15, p < .001. Support was stronger if parking spaces were to be removed than if cycling infrastructure would not be built, (Version 2 vs. Version 3) Z = 2.85, p = .004.

FIGURE 4.3   SUPPORT FOR BUILDING WHEELCHAIR ACCESSIBLE INFRASTRUCTURE
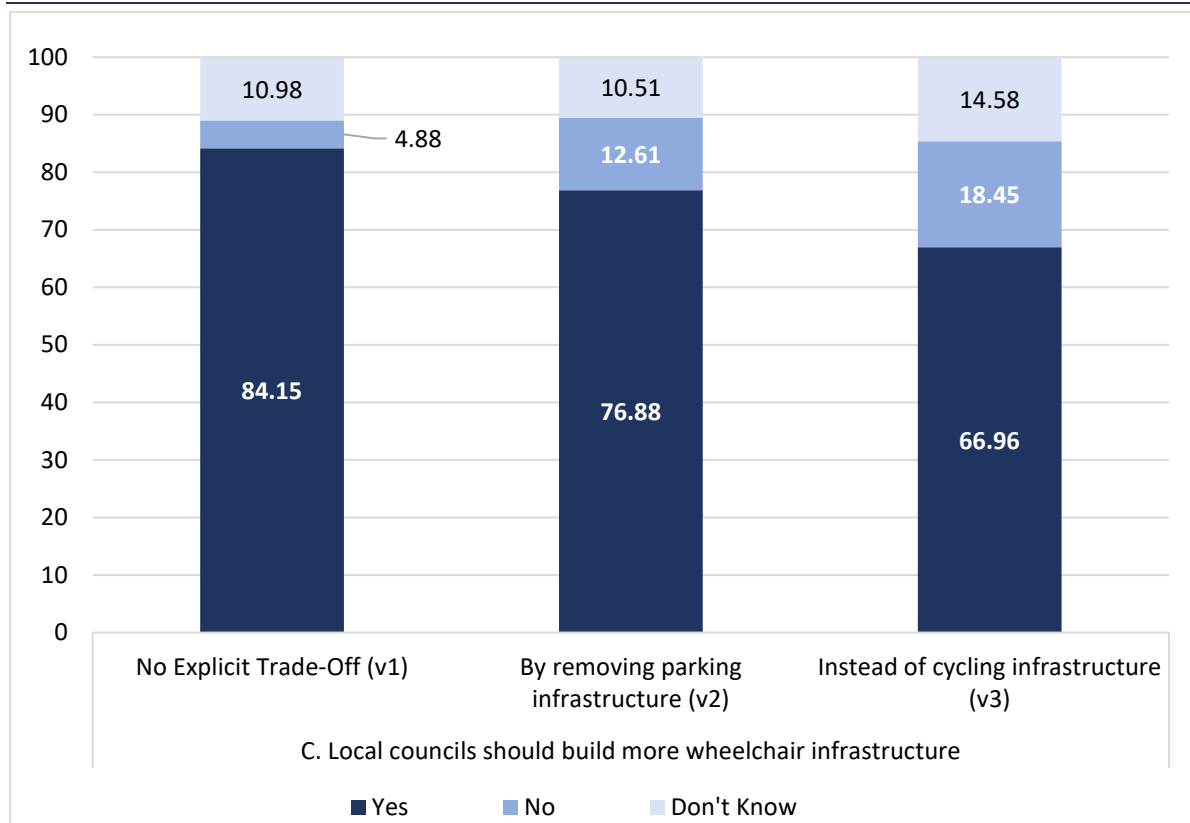
Source: Authors' analysis.

Across all models of support (Table 4.3), men were less in favour than women (71 per cent vs. 81 per cent) and older participants were more supportive of wheelchair accessible infrastructure than younger participants (83 per cent of over 60s, 77 per cent of 40-59 year olds and 71 per cent of under 40s). Higher socio-economic grades were less supportive than the lowest grade groups when trade-offs were made explicit (71 per cent of the AB group and 69 per cent of the C1C2 group vs. 81 per cent of the DEF group), whereas there was no difference when the trade-off was not explicit (86 per cent of the AB group and 82 per cent of the C1C2 group and 86 per cent of the DEF group).

TABLE 4.3   LOGISTIC REGRESSION MODEL PREDICTING SUPPORT FOR BUILDING WHEELCHAIR ACCESSIBLE INFRASTRUCTURE

| Wheelchair accessible infrastructure	Control (v1)	Parking (v2)	Cycle (v3)
Male (Ref: Female)	-0.84*** (0.32)	-0.34 (0.27)	-0.51** (0.25)
Age (Ref: 18-39 years)			
40-59 years	0.10 (0.36)	0.47 (0.32)	0.47* (0.28)
60+ years	1.09** (0.51)	0.32 (0.35)	0.82** (0.33)
Degree (Ref: No Degree)	-0.40 (0.35)	0.44 (0.30)	-0.44 (0.27)
Social Grade (Ref: DEF)			
C1C2	-0.17 (0.40)	-0.83** (0.38)	-0.38 (0.33)
AB	0.30 (0.50)	-0.57 (0.44)	-0.42 (0.39)
Urban (Ref: Rural)	0.16 (0.33)	0.06 (0.27)	0.44* (0.26)
Intercept	1.97*** (0.52)	1.54*** (0.42)	0.87** (0.38)
N Yes Responses	276	256	225
Total N	327	332	336

Source: Authors' analysis.
Note: *p < .10, ** p < .05, *** p < .01. Standard errors are in parentheses.

4.4   EMPLOYMENT

Unlike the previous policies, the versions for the final policy frame (policy D) did not vary by whether potential costs or funding mechanisms were made explicit. Instead, the policies, which aimed at encouraging disabled people to work in jobs they are capable of doing varied depending on how that encouragement was phrased. Version 1 assessed a general belief that people with disabilities should work ('Disabled people should work, in jobs which they are capable of doing'), whereas Version 2 described disabled people being supported to work ('Disabled people should be supported in working, in jobs which they are capable of doing'), and Version 3 implied that working should be motivated by financial incentives ('Disabled people should be incentivised to work, in jobs which they are capable of doing'). Results showed an overall effect of policy version, $\chi^2 (4) = 35.78$, p < .001. When framed with general support in Version 2, more people endorsed the policy than when asked about their general belief in Version 1, Z = 4.41, p < .001, or when support was implied to be purely financial in Version 3, Z = 5.75, p < .001. There was no difference between Version 1 and Version 3, Z = 1.53, p = .126.

FIGURE 4.4   BELIEFS THAT PEOPLE WITH DISABILITIES SHOULD WORK
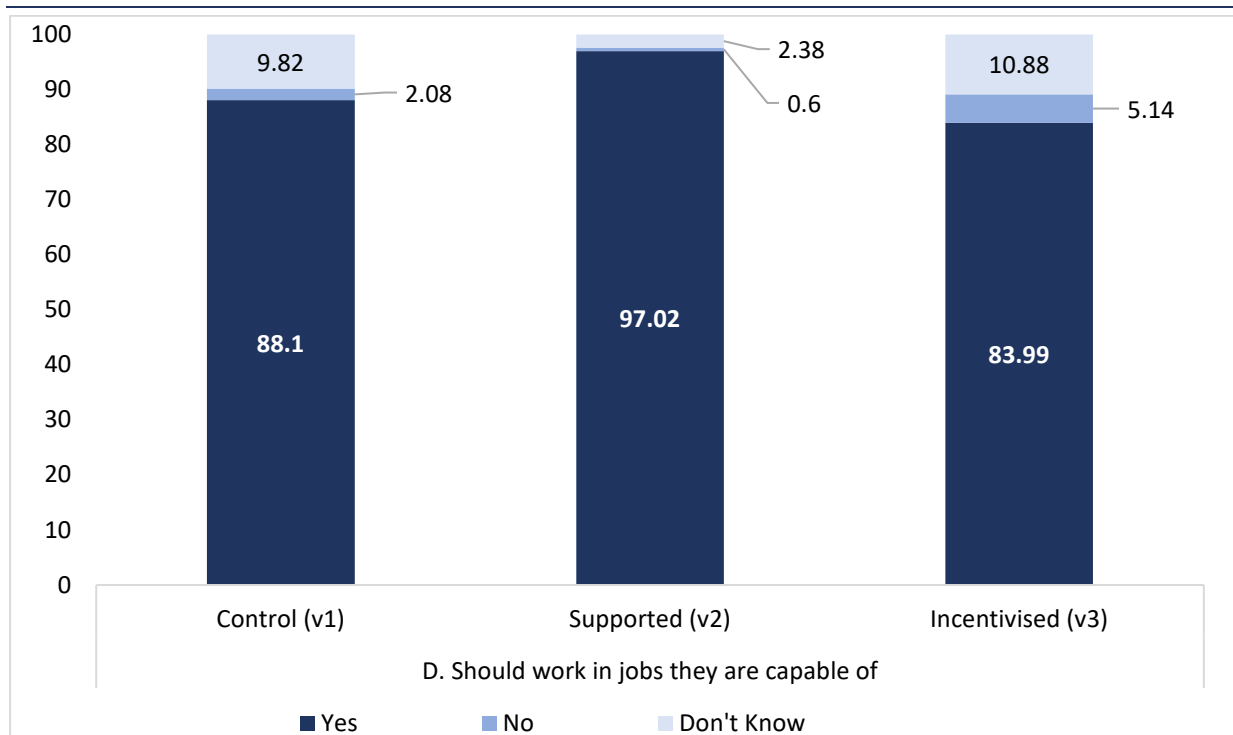
Source: Authors' analysis.

Socio-demographic differences in endorsing policies aimed at encouraging disabled people to work showed similar differences by age, social grade and disability status across each version of the statement (See Table 4.4). Those aged over 60 more strongly endorsed the policies than younger respondents (96 per cent vs. 88 per cent of 40-59 year olds and 87 per cent of under 40s) and those in the AB and C1C2 groups more strongly endorsed the policies than those in the DEF group (92 per cent of both groups vs. 83 per cent, respectively). Younger respondents and those in the DEF group show response patterns most similar to those with a disability, where 82 per cent endorsed the policies compared to 92 per cent of those without a disability.

TABLE 4.4   LOGISTIC REGRESSION MODELS PREDICTING POLICY SUPPORT FROM SOCIO-DEMOGRAPHIC CHARACTERISTICS

Employment	Control (v1)	Support (v2)	Incentive (v3)
Male **(Ref: Female)**	-0.62* (0.35)	-0.26 (0.67)	0.03 (0.33)
Age **(Ref: 18-39 years)**			
40-59 years	0.11 (0.38)	1.14 (0.853)	0.12 (0.35)
60+ years	1.31** (0.54)	1.59 (1.10)	1.85*** (0.58)
Degree **(Ref: No Degree)**	0.28 (0.41)	0.05 (0.71)	0.23 (0.37)
Social Grade **(Ref: DEF)**			
C1C2	0.42 (0.40)	1.14 (0.71)	1.39*** (0.37)
AB	0.41 (0.53)	1.58 (1.16)	0.79* (0.48)
Urban **(Ref: Rural)**	0.50 (0.35)	0.10 (0.69)	0.08 (0.33)
Intercept	1.31** (0.48)	2.11*** (0.74)	0.48 (0.37)
N Yes Responses	296	326	278
Total N	333	335	330

Source: Authors' analysis.
Note: *p < .10, ** p < .05, *** p < .01. Standard errors are in parentheses.

4.5   FAMILIARITY WITH DISABILITY

As before, we conducted exploratory analyses of the association between familiarity with disability and support. Table 4.5 presents logistic regression models using the same familiarity variable as before on whether the participant endorsed the policy. The models include controls for socio-demographic characteristics and the version of the policy the participant saw. Our focus on this section is on differences between those who know no one with a disability, those whose partner, child or parent has a disability and those who have a disability themselves, as the number of participants in the other groups are too low for reliable estimates but are shown in Table 4.5 for completeness (friend/neighbour/colleague ns = 60 to 67;[22] brother/sister/other relative ns = 56 to 70).

Results show that participants who themselves have a disability were more likely to endorse more cost-of-living supports (policy A) than those who know no one with a disability (Figure 4.5). Tests of coefficients showed there was no difference between those with a disability themselves and those whose partner, child or parent has a disability, $\chi^2 = 1.46$, $p = .226$. The pattern is similar on policy D about whether disabled people should work. Those with a disability and those whose partner, child or parent has a disability were less supportive of statements that

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[22]   Number of observations per policy varies because of randomisation to see two of the four policies.

disabled people 'should work' than those who know no one with a disability, but there was no statistically significant difference between these two groups, χ^2 = 0.15, p = .670. This may suggest a gap between disabled people's attitudes towards and experiences of seeking employment and non-disabled people's attitudes towards disabled people seeking employment.

TABLE 4.5   LOGISTIC REGRESSION MODELS PREDICTING POLICY SUPPORT FROM FAMILIARITY WITH DISABILITY

	A. Cost of Living	B. Support for Children	C. Wheelchair accessible infrastructure	D. Employment
Familiarity with Disability (Ref: Knows No One)				
Friend/Neighbour/Colleague	-0.01 (0.34)	0.01 (0.36)	0.08 (0.33)	0.33 (0.63)
Brother/Sister/Other Relative	-0.28 (0.34)	0.17 (0.36)	0.91** (0.42)	0.39 (0.56)
Spouse/Partner/Child/Parent	0.29 (0.23)	0.05 (0.29)	0.40* (0.24)	-0.70** (0.32)
Has a Disability	0.64*** (0.23)	0.33 (0.26)	0.24 (0.22)	-0.83*** (0.26)
Socio-Demographic Controls	Yes	Yes	Yes	Yes
Constant	2.18 (0.31)	3.89 (0.49)	1.73 (0.29)	2.79 (0.43)
N	997	1,003	997	1,001

Source: Authors' analysis.
Note: *p < .10; **p < .05; ***p < .01

On policy C about wheelchair accessible infrastructure, those related to someone with a disability were more supportive than those who know no one with a disability and there was no difference between the partner/child/parent group and those with a disability themselves, χ^2 = 0.33, p = .567. There were no differences on policy B about supporting children with disabilities, reflecting the high level of endorsement across all socio-demographic subgroups for this policy.

Looking across the policies (Figure 4.5), there was no evidence for a difference in opinion between those with a disability themselves and those closest to someone with a disability (i.e. a partner, child or parent has a disability).

FIGURE 4.5   SUPPORT FOR POLICIES BY FAMILIARITY WITH DISABILITY
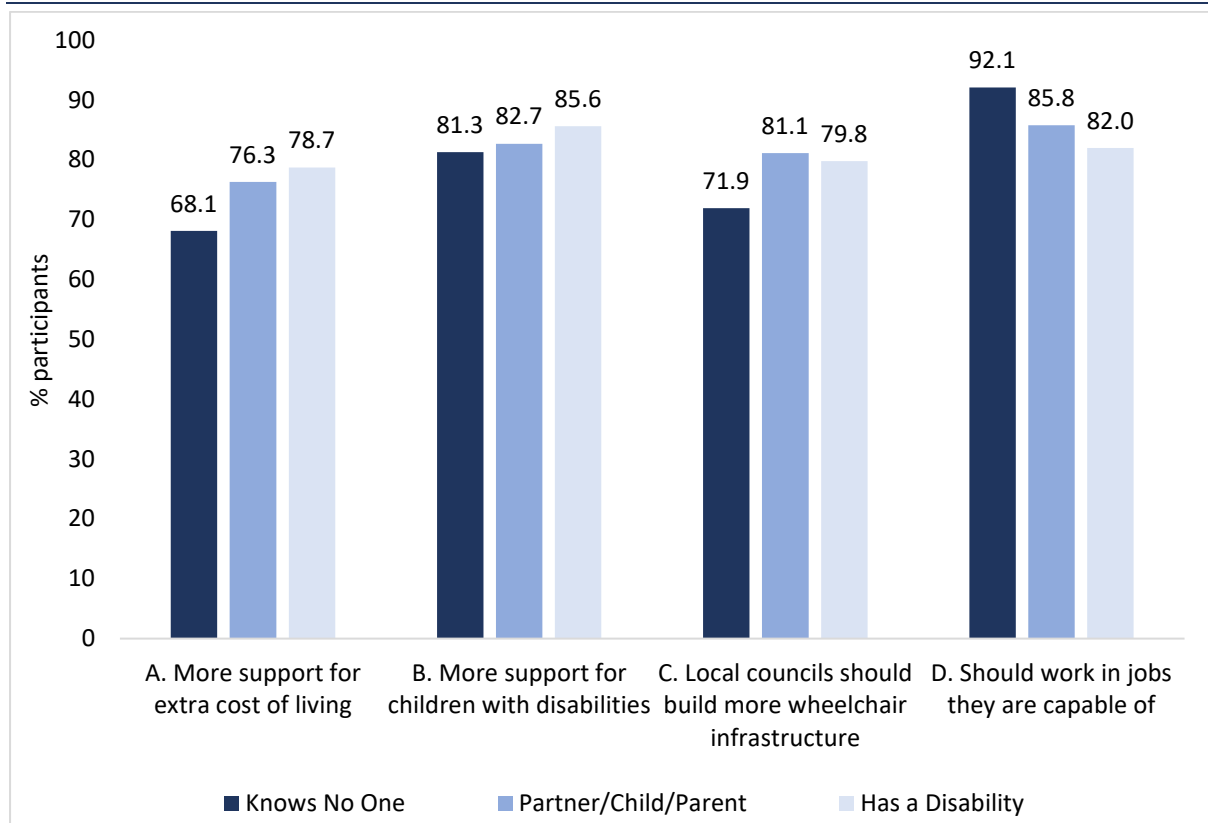
Source: Authors' analysis.

CHAPTER 5

Discussion and implications

The majority of people in Ireland support most policies that aim to enable people with disabilities to participate fully in society, even when provided complete anonymity in answering the question or when funding mechanisms of policies are made explicit. This support is observed across cost-of-living, access to housing, and day-to-day accessibility policies, and is consistent across socio-demographic subgroups. However, the degree of support can vary depending on how surveys are implemented and the level of detail provided in survey questions. In this chapter, we summarise the main results from both stages of the study, make note of some limitations and highlight the policy implications from the findings.

5.1   SUPPORT FOR SOCIAL WELFARE

The additional cost of having a disability is estimated to be €9,482 to €11,734 per year (Department of Social Protection, 2021). Our results suggest that, although they may not be aware of this figure, most people in Ireland acknowledge the financial challenges of living with a disability and are supportive of stronger government assistance. When asked using standard survey techniques, 77 per cent of people agree that welfare payments for disabled people should be increased and most (91 per cent) agree that more should be done to support disabled people to meet their extra cost of living. However, support varies as a function of survey anonymity and whether funding mechanisms are included in the survey item. When endorsement for increased welfare payments is elicited using a list technique, whereby respondents give their views under conditions of permanent anonymity, support is 14 per cent lower (11 percentage points) at 66 per cent. This difference means that one-in-seven who would have supported the policy if asked directly do not support the policy when offered greater anonymity. The difference in support for extra cost-of-living assistance is similar (15 per cent lower) when the policy is proposed to be funded through budgetary reallocation compared to when no detail is given on the funding mechanism. The alternative to budget reallocation, a tax increase, leads to a more drastic difference in support (54 per cent lower than when no funding mechanism is specified), with only 42 per cent in favour of more support in this group.

This variation in support for financial assistance for disabled people depending on how questions are asked is greater among those with higher educational attainment. Results from the list experiment showed that, when provided permanent anonymity, support among those educated to degree level or above was 22 per cent lower. Support among those educated below degree level was just 9 per cent lower and was not statistically significantly different from support when asked directly. Similarly, statistical models showed that the difference in support

for extra cost-of-living assistance through budget reallocation compared to when no mechanism was specified was more pronounced among those educated to degree level or above (20 per cent lower) than those without degrees (9 per cent). Importantly, standard survey techniques may overstate support among those with higher educational qualifications for socially desirable measures (Janus, 2010; McGinnity et al., 2020). In this study, the direct question on increased welfare payments failed to detect differences by educational attainment, whereas results from the list experiment found those with higher educational attainment to be *less* supportive of increased welfare payments. The control condition of the policy statement experiment, which would be a more typical formulation, suggested those with higher educational attainment are more supportive of assistance with the cost of living than their peers with lower educational attainment, whereas when presented the budget allocation trade-off the groups did not differ. These differences by educational attainment may reflect a greater tendency for those on higher incomes to oppose redistributive fiscal policies in general (Müller and Regan, 2021).

Children with disabilities are especially reliant on additional support in order to achieve full inclusion (e.g. Carroll et al., 2022a), and almost everyone (98 per cent) across all socio-demographic subgroups endorses such supports when funding mechanisms are not specified. As with general cost-of-living support, however, support is lower when funding mechanisms are included in survey items, with larger differences for tax increases (35 per cent lower) than for budget reallocation (13 per cent lower). It is worth noting that the proportion in favour of a tax increase to help children with disabilities (63.5 per cent) is much larger than the level of support for tax increases for other social issues that have high levels of in-principle support, such as climate change (40-47 per cent; Leahy, 2021; Timmons and Lunn, 2022) and a United Ireland (22 per cent; Sheahan, 2021).

5.2   ACCESSIBILITY AND INFRASTRUCTURE

Day-to-day accessibility issues further contribute to challenges to the rights of disabled people, including, but not limited to, access to suitable parking and insufficient infrastructure. Previous surveys show that a very small minority (2 per cent) judge parking in a disabled parking space without a permit to be acceptable (NDA, 2017). However, our findings show that a small but significantly higher proportion of drivers report having done so in the past (4 per cent). When provided permanent anonymity, the figure is 4.8 per cent (20 per cent higher), although the difference is not statistically significant. Note that, in order to detect a statistically significant difference for behaviours with very low incidence and therefore a lower absolute bias-percentage, a sample in excess of 10,000 would have been required (Blair et al., 2020). Nonetheless, a true incidence rate of even 4 per cent implies that one-in-25 drivers have parked in disabled parking spaces without a permit. If these drivers are 'repeat offenders', this may lead to disproportionately high encounters of such behaviour among disabled people. This estimate does not

include others who may not park directly in disabled parking spaces but may impede access to them in other ways. We are careful to note also, however, that there may be legitimate use of disabled parking spaces included in this estimate (e.g. taking a relative to an appointment and forgetting the permit or requiring a permit but not meeting technical requirements).[23]

Turning to infrastructure, the majority (84 per cent) support the proposition that local councils should build more wheelchair accessible infrastructure, with support highest among older people. As with the cost-of-living supports, the proportion who support the policy is lower when survey questions highlight a potential cost or trade-off. For this policy, the potential trade-off was one of alternative prioritisation, where wheelchair accessible infrastructure came with the removal of driving infrastructure (parking spaces) or instead of active transport infrastructure (cycle lanes). Support is 7 per cent lower in the condition where parking infrastructure would be removed and even lower (20 per cent lower) in the condition where cycling infrastructure would be de-prioritised. Note however that removing parking infrastructure and not building cycling infrastructure are not necessary trade-offs to implementing wheelchair infrastructure (e.g. some may believe the infrastructure should be installed but without cost to parking or cycling infrastructure), but are merely illustrative of the change in support when trade-offs are specified.

5.3   OTHER SOCIAL ISSUES

Offering permanent anonymity when asked about social welfare increases altered responses in line with the hypothesis that some support for disability policy is due to social desirability bias. However, the list experiment about housing priority suggested the opposite. Respondents were *more* supportive of prioritising disabled people for social housing than when they were asked directly about their opinion. This finding may suggest that people view the socially acceptable response to be one where no one group is 'prioritised' during a period of housing shortages and affordability challenges. When provided more anonymity, they reveal preferences held towards some groups (e.g. disabled people). Alternatively, or in addition, the list technique may be detecting negative sentiment towards other groups that compete for limited social housing supply (e.g. refugees). It is not possible to identify what sentiment drives the reverse-list effect observed here, but this suggestion is in line with majority support for disability policies and other evidence for concealed negative attitudes towards immigration (McGinnity et al., 2020).

5.4   FAMILIARITY WITH DISABILITY

The results also reveal striking differences between those most familiar with disabled people and disability issues (i.e. people with disabilities themselves and their partners/children/parents) and those who report not knowing anyone with a

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[23]   We thank the advisory board for the study for making us aware of both of these limitations.

disability. When asked directly about their support, participants who themselves have a disability were 15 per cent more likely to support increasing welfare payments, more cost-of-living supports and greater housing list prioritisation than those who know no one with a disability. The opinions of participants who reported their partner, child or parent has a disability did not differ statistically from participants with a disability themselves.

The importance of knowing someone with a disability also emerged on the list experiment about increasing welfare payments. The list effect was driven entirely by those who know no one with a disability. They were 24 per cent less likely to endorse increasing welfare payments when provided permanent anonymity compared to when asked directly. Those with a partner, child or parent with a disability were 10 per cent *more* likely to endorse increased welfare payments when they could do so with full anonymity (although the difference was not large enough to be statistically significant, given the smaller group size for subgroup analyses). The variation in support by familiarity may partly explain the variation in support by educational attainment outlined above. Additional analyses show that those with a degree or above are less likely to have a disability themselves (14.4 per cent vs. 22.0 per cent of those without a degree), less likely to have a partner, child or parent with a disability (11.8 per cent vs. 15.6 per cent) and more likely not to know anyone with a disability (61.9 per cent vs. 54.0 per cent).

5.5   LIMITATIONS

As acknowledged throughout the report, people with disabilities are a heterogeneous group who face different challenges, based on the type of disability, its severity and variation in other characteristics such as their socio-economic status, age or gender. Limitations in quantitative research, including this study, mean that people are typically asked to consider disabled people as a single group when responding to questions. This may lead to results that are based on individual respondents' widely differing understanding of who a disabled person is. For example, some research shows that most people think of physical disability when imagining a disabled person (NDA, 2017), and physical disability may be less stigmatised than intellectual disabilities or mental health conditions (e.g. Ostapczuk and Musch, 2011). The complementary study to this report used a vignette experiment to investigate differences in social judgements towards different types of disabilities to explore this issue further (Timmons et al., forthcoming).

Similarly, our study centred on attitudes towards policies to address the additional cost of having a disability and on accessibility issues. This is a necessarily limited subset of challenges faced by those with disability and does not include potential discriminatory behaviour, highlighted to disproportionately affect disabled people in other work (McGinnity et al., 2017). For example, although almost all respondents (97 per cent) in this study reported that people with disabilities should

be supported to work in jobs they are capable of, the Labour Force Survey shows they are underrepresented in employment (Kelly and Maître, 2021). This discrepancy may in part be driven by negative perceptions of disabled people by potential employers, although further research is required. International surveys of employers conflict with field experiment findings (e.g. Bredgaard Salado-Rasmussen, 2020), suggesting that further research using experimental methods with key groups such as employers in Ireland might yield interesting insights on attitudes to hiring disabled people.

A further limitation concerns our proxy variable for familiarity with disability. Self-identification as having a disability is known to be somewhat subjective, with some people who face difficulties carrying out day-to-day activities not classifying themselves as 'disabled' (e.g. older people). Between 15 per cent and 19 per cent of adults are estimated to have some form of disability or long-lasting condition, depending on the nature of the question (CSO, Census 2016 and this study; see Section 2.1). Given this level of prevalence, it is implausible that the majority (55 per cent) of the population do not know anyone with a disability (as found here, albeit other wording gives lower estimates; NDA, 2017). One possibility is that peoples' conceptualisation of disability drives their response to this question. For example, if they fail to consider without additional prompts that a colleague with a hidden disability, a brother with anxiety or a grandparent who requires a mobility aid is 'disabled', they may be less likely to appreciate the day-to-day challenges of disabled people when asked about disability in general in a survey. Another possibility is that disabled people may not disclose their disability to others in their social network.

Finally, it is assumed that differences in responses between list-elicited endorsement of policies and direct questioning reflect social desirability bias, because survey participants are offered permanent anonymity in the former. However, other differences between the experimental conditions may underlie the effect. For example, perhaps merely presenting a policy as part of a list leads to a different response than when the policy is presented as a direct question. In other words, if participants were requested to directly respond to each policy in the list there would have been no difference to the fully-anonymised item-count response. While this explanation is plausible and we could locate no tests of non-anonymised list endorsement, we think it is unlikely. Participants in the 2017 NDA survey were asked for their support of welfare increases for disabled people as part of a list of disability policies and the proportion who endorsed the item was the same as the proportion who endorsed it when asked about the policy as a standalone issue in this study (77 per cent). A difference is observed on the housing priority policy compared to the same question in 2017 study, but the drop in support on this item aligns with expectations given worsening housing availability and affordability over the time period. Moreover, use of the list experiment technique has been shown to yield more accurate responses than direct questions

about sensitive topics when compared to true prevalence rates of opinion (referendum votes among those who voted; Rosenfeld et al., 2016).

5.6   IMPLICATIONS

Most people support government assistance for disabled people in all issues included in this study; meeting the extra cost of living associated with disability, access to housing and day-to-day accessibility issues. Support was below 50 per cent in only one instance, where cost-of-living supports were to be funded through a tax increase. Lack of support for a tax increase is unsurprising, even for social issues that the public feel positive towards (e.g. tackling climate change). It is further worth considering that greater detail could alter support; for example a progressive tax may be more accepted than one of unspecified nature.

That said, we estimate that 14 per cent of people (one-in-seven) who may appear supportive of increased social welfare or other cost-of-living supports for disabled people in standard surveys do so either only to align with perceived social expectations or until funding mechanisms are also specified. This variation does not imply that this proportion hold negative attitudes towards people with disabilities, but rather that support among this group may be weaker than portrayed in surveys. One straightforward implication is for surveys to include details on funding mechanisms being considered. More broadly, this finding highlights one of the challenges associated with relying on such surveys or polls of opinion in order to gauge support for the rights of minorities. Multiple recent examples of binary-choice political decisions have demonstrated that few outcomes are protected from swings as high as 11 percentage points. Thus, standard surveys may erroneously suggest that support for minority rights, including those with disabilities, is more robust than in reality.

This is not to say surveys about sensitive issues should be abandoned. They are relatively easy to implement and useful for gauging general sentiment. Rather, surveys should be considered as just one tool; regular use of other quantitative methods is advised to gain more accurate estimations of where misperceptions or biases lie. List experiments, such as this one, are relatively easy to implement in standard surveys, although they require large sample sizes and mechanisms to assign respondents to treatment and control groups at random. Other approaches, such as vignette experiments, allow for greater nuance than survey questions and shed light on opinions towards specific issues or situations faced by minority groups (e.g. Timmons et al., forthcoming). These are just two experimental techniques of many that help to identify the psychological mechanisms that underlie opinions and judgements. For example, the Randomised Response Technique described above yields estimates that are less biased than direct questions for sensitive issues, but more efficient than the list experiment method

meaning sample sizes can be smaller (Rosenfeld et al., 2016).[24] Hence it may be a more suitable for certain smaller target populations that are influential in the lives of disabled people, such as particular health professionals, employers or policymakers.

Qualitative approaches offer another way of exploring attitudes among these key stakeholders (see for example Tri Handoyo et al., 2021). While interviews, focus groups and other qualitative data collection methods are also open to social desirability bias, there are ways to minimise it (Bergen and Labonté, 2020). Qualitative research also allows for much richer and more nuanced engagement with people's attitudes, conceptions and beliefs than closed-ended surveys, and could be used to unpack the relationship between familiarity and more positive attitudes or to explore individual attitudes to different types of impairment or disability in contexts like education, healthcare and employment.

Part of the reason it is important to measure public perceptions accurately is to identify where misperceptions or biases lie, so they can be challenged. For example, our findings show that familiarity with disability issues, as measured by reported relationships with someone who has a disability (or having one oneself), is associated with support for policy. This is consistent with multiple previous studies which show that contact with people with various disabilities is associated with more positive attitudes compared to respondents without contact (Burke et al., 2013; Ju et al., 2013; Pullen et al., 2022). The mechanism that underlies this association, however, is unclear. It may be that knowledge of the day-to-day issues faced by disabled people leads to greater policy support, in which case policy documents such as the *Cost of Disability in Ireland* report are essential to enhance public understanding of the cost of disability. It could also be the case that merely knowing an individual who would be directly affected by the policy leads to greater support, in which case further research on how people understand and recognise disability in their social networks would be helpful. Further research to identify interventions that successfully inform the general public of the challenges faced by disability would likely be an important next step for strengthening support.

5.7   CONCLUSION

Overall, people in Ireland strongly support policies that aim to enable people with disabilities to participate fully in society, in line with the UNCRPD. Support is strongest among those closest to someone with a disability. Although the reasons why are not identified in this study, based on previous research we can theorise that greater support is likely to be linked to greater recognition and knowledge of

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[24]   Other experimental techniques, in which participants make multiple choices that vary systematically by features of interest can give reliable insights into the psychological underpinnings of decisions from relatively small samples. Recent research in Ireland has employed such techniques to understand what features of social settings affect perceptions of risk from COVID-19 exposure (Timmons et al., 2022). A similar approach could be utilised to, for example, determine the weight assigned to disability status in hypothetical medical decisions among healthcare workers or hiring decisions among employers.

disability, and the greater empathy people have for specific disabled people close to them. Further research on the public's understanding and conceptualisation of disability is recommended. Despite high levels of support, there is some risk of support weakening when attention is drawn to the necessary costs of policy implementation. Improved understanding of the challenges faced by disabled people, based on the lived experience of those with a disability, may help protect against support declining when funding mechanisms for policies which support disabled people are proposed.

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Appendix

TABLE A.1 JOINT DISTRIBUTIONS AND DESIGN EFFECT TEST FOR WELFARE PAYMENT LIST

	Coef.	Robust SE	Z	p		λ	p
Pr(R=0,S=1)	0.01	0.01	1.31	.90	Pr(R, S=0)	0.00	1.00
Pr(R=0,S=0)	0.02	0.00	5.15	1.00	Pr(R, S=1)	0.00	1.00
Pr(R=1,S=1)	0.30	0.02	13.61	1.00			
Pr(R=1,S=0)	0.19	0.01	14.49	1.00			
Pr(R=2,S=1)	0.26	0.02	14.52	1.00			
Pr(R=2,S=0)	0.11	0.02	4.79	1.00			
Pr(R=3,S=1)	0.10	0.01	11.47	1.00			
Pr(R=3,S=0)	0.02	0.01	1.15	.88			

Source: Authors' analysis.

TABLE A.2 JOINT DISTRIBUTIONS AND DESIGN EFFECT TEST FOR SOCIAL HOUSING LIST

	Coef.	Robust SE	Z	p		λ	p
Pr(R=0,S=1)	0.07	0.01	5.70	1.00	Pr(R, S=0)	0.00	1.00
Pr(R=0,S=0)	0.04	0.01	7.29	1.00	Pr(R, S=1)	0.00	1.00
Pr(R=1,S=1)	0.23	0.02	10.71	1.00			
Pr(R=1,S=0)	0.12	0.02	6.95	1.00			
Pr(R=2,S=1)	0.27	0.02	13.90	1.00			
Pr(R=2,S=0)	0.12	0.02	5.22	1.00			
Pr(R=3,S=1)	0.13	0.01	13.93	1.00			
Pr(R=3,S=0)	0.02	0.02	1.04	.85			

Source: Authors' analysis.

### TABLE A.3 JOINT DISTRIBUTIONS AND DESIGN EFFECT TEST FOR CAR PARKING LIST

	Coef.	Robust SE	Z	p		λ	p
Pr(R=0,S=1)	0.07	0.01	5.70	1.00	Pr(R, S=0)	0.00	1.00
Pr(R=0,S=0)	0.04	0.01	7.29	1.00	Pr(R, S=1)	0.00	1.00
Pr(R=1,S=1)	0.23	0.02	10.71	1.00			
Pr(R=1,S=0)	0.12	0.02	6.95	1.00			
Pr(R=2,S=1)	0.27	0.02	13.90	1.00			
Pr(R=2,S=0)	0.12	0.02	5.22	1.00			
Pr(R=3,S=1)	0.13	0.01	13.93	1.00			
Pr(R=3,S=0)	0.02	0.02	1.04	.85			

Source: Authors' analysis.

Figure A.1 shows the distribution of responses to each of the lists. A small minority of participants in the welfare and housing lists (2.1 per cent and 4.1 per cent, respectively) revealed a socially undesirable belief (i.e. a response of '0'). The undesirable response ('4') for the parking list was 2.1 per cent. Hence the

anonymity for socially undesirable responding was sufficiently low to avoid raising design concerns.

FIGURE A.1   DISTRIBUTION OF LIST EXPERIMENT RESPONSES
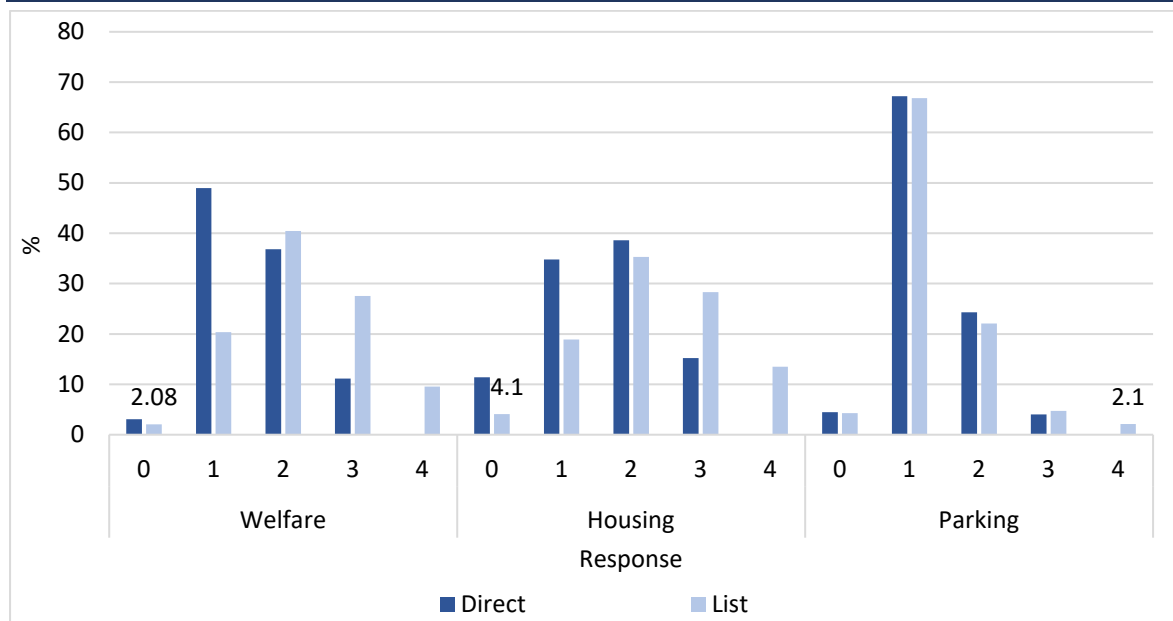
Source: Authors' analysis.
Note: A response of '4' is not possible for the direct condition.

Cost of Living by Education Interaction

Table A.4 shows that support for the policy declined for both funding mechanisms relative to the control among those with no degree, but the decline in support was even larger among those with a degree, particularly for the budget reallocation policy. Tests of coefficients showed that support in the budget condition was weaker among those with degrees than without, $\chi^2 = 4.43$, p = .035, but there was no difference in the tax condition, $\chi^2 = 1.49$, p = .222.

TABLE A.4   LOGISTIC REGRESSION OF COST-OF-LIVING SUPPORT: EDUCATION INTERACTION

	Control (v1)
Male (Ref: Female)	0.35 (0.40)
Age (Ref: 18-39 years)	
40-59 years	0.23 (0.44)
60+ years	0.95 (0.59)
Education x Statement Interaction (Ref: No Degree- Control (v1))	
No Degree – Budget (v2)	-0.65* (0.90)
No Degree – Tax (v3)	-2.52*** (0.28)
Degree – Control (v1)	0.97* (0.44)
Degree – Budget (v2)	-1.07* (0.51)
Degree – Tax (v3)	-0.60 (0.49)
Social Grade (Ref: DE)	
C1C2	-0.36 (0.55)
AB	-0.64 (0.65)
Urban (Ref: Rural)	-0.29 (0.41)
Intercept	2.05*** (0.63)
N Yes Responses	301
Total N	329

Source: Authors' analysis.
Note: *p < .10, ** p < .05, *** p < .01. Standard errors are in parentheses.

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