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# Vertical and horizontal equity in support for children with disabilities

A cross-sectional analysis of Australia's National Disability Insurance Scheme

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# **Research Summary**

# Why was the research done?

Children with disabilities face disadvantage in health, participation, and development. In Australia, the National Disability Insurance Scheme (NDIS) is the main funding mechanism for disability supports and explicitly aspires to deliver equity. However, it remains unclear whether this ambition is being realised for children with disabilities. This study provides the first systematic evidence on vertical and horizontal equity in NDIS support for children with disabilities, assessing whether resources are distributed according to need (vertical equity) and whether children with similar needs receive equivalent support regardless of social background (horizontal equity).

# What were the key findings?

Using data from 688 parents of children with disabilities aged 2-17 years, the study examined whether the child had a NDIS plan, the value of NDIS funding, and parents' satisfaction with NDIS supports. Children with greater functional limitations were much more likely to have a NDIS plan and received higher funding, indicating resources are directed to higher-need children consistent with vertical equity. However, parents of children with greater functional limitations reported lower satisfaction, suggesting that higher funding may not fully meet complex needs. After accounting for need, few systematic differences were found in access or funding by socioeconomic, cultural, or regional factors, suggesting generally equitable allocation. However, families with fewer financial resources or with an adult with disability reported lower satisfaction, and older children received lower funding and had lower participation than younger children.

# What does this mean for policy and practice?

The findings suggest that while the NDIS achieves partial vertical and horizontal equity, equity gaps remain in families' experiences and outcomes. Ensuring that higher funding translates into adequate, accessible, and high-quality support requires attention to administrative burden, service availability, and families' capacity to navigate the system. The lower satisfaction of families with fewer resources or adult disability highlights a need to strengthen outreach, support coordination, and advocacy for disadvantaged households. Age disparities underline the importance of seamless pathways between early intervention and ongoing support. As policy shifts toward the new Thriving Kids framework, these results underscore the need to design



systems that reduce inequities not only in access and funding but also in the ability of all families to convert resources into effective support for their children.

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We acknowledge the Traditional Custodians of the lands on which we work and live across Australia.

We pay our respects to Elders past and present and recognise their continued connections to land, sea and community.

# Vertical and horizontal equity in support for children with disabilities: A cross-sectional analysis of Australia's National Disability Insurance Scheme

#### Abstract

Background: Children with disabilities face persistent disadvantages in health, participation, and development. In Australia, the National Disability Insurance Scheme (NDIS) is a central funding mechanism for disability support. Equity is an explicit principle of the NDIS, yet concerns remain about whether access and experiences are equitable.

Objectives: This study examines equity in three outcomes of NDIS support for children with disabilities: (1) whether the child has a NDIS plan, (2) the level of plan funding, and (3) parental satisfaction with NDIS supports. We assess these outcomes through the lens of vertical and horizontal equity.

Methods: Data come from the 2024 Better Support for Kids with Disabilities survey (N=688 parents of children aged 2–17 years with disabilities). Logistic regression was used to model NDIS participation, ordinal logistic regression to model plan value, and linear regression to model satisfaction.

Results: Children with greater functional limitations were more likely to have a NDIS plan and to receive higher funding, indicating partial vertical equity. However, parents of children with greater functional limitations reported lower satisfaction. Horizontal equity was largely supported for the NDIS plan and funding outcomes, with few systematic disparities after accounting for functional limitations. Parents of older children, with fewer financial resources, and families including adults with disabilities reported lower satisfaction.

Conclusions: The NDIS appropriately directs greater resources toward children with higher needs, but inequities persist in satisfaction and experiences of support. Addressing disparities in navigation and service quality is essential to achieving equitable outcomes for all children with disabilities.

#### **Keywords**

Health equity; Children with disability; National Disability Insurance Scheme; Australia

## Introduction

Children with disabilities experience widespread disadvantage in health, learning, and participation <sup>1,2</sup>. In part, health disparities experienced by people with disabilities may reflect underlying health conditions. However, it is also true that, while people with disabilities experience worse health outcomes than people without disabilities, disability need not imply poor health <sup>3-5</sup>. Indeed, the social and biopsychosocial models of disability <sup>6,7</sup> have led to an increasing recognition that much of the health disadvantages experienced by people with disabilities are avoidable and stem from persistent ableism, social and economic exclusion, and health care systems that are often poorly equipped to support people with disabilities <sup>5,8-10</sup>. Addressing health inequities for people with disabilities therefore requires health care systems that are responsive to diversity and attentive to broader social disadvantage <sup>4,5</sup>.

In Australia, health and social care and support for children with disabilities is delivered through both mainstream health systems and specialist disability services, including the National Disability Insurance Scheme (NDIS). The NDIS was designed to provide 'choice and control' to people with disabilities by introducing a system of individualised budgets that people with disabilities use to purchase supports through quasi-markets <sup>11, 12</sup>. While the mainstream health system retains responsibility for providing health care to people with disabilities, the NDIS currently provides the main funding source for early intervention and therapy delivered by allied health professionals, modifications to the home, and aids and assistive technology <sup>13</sup>. As such the NDIS represents a crucial adjunct to the mainstream health care system for children with disabilities. Recent evidence shows that access to NDIS funding is linked to lower unmet needs for therapy or medical care among children with disabilities, and reduced likelihood of parents indicating cost as a reason for unmet needs <sup>14</sup>. This indicates that the NDIS, while not replacing mainstream health systems, fills an

important role in addressing unmet health needs and ameliorating costs for people with disabilities.

Equity is an explicit principle of the NDIS <sup>15</sup>, but concerns have emerged about whether the NDIS is delivering on this ambition <sup>11, 16, 17</sup>. Research indicates that families navigating the scheme face substantial administrative burdens, including understanding complex eligibility rules, compiling evidence of support needs, negotiating appropriate funding and supports, and managing multiple funded services <sup>14, 18-20</sup>. The complexity of the NDIS, and emphasis on individual advocacy, may lead to inequitable access to support as families without the capability to manage administrative burdens are excluded from the scheme or receive poorer support <sup>14, 17, 18</sup>. Supporting these concerns, an emerging body of evidence has documented disparities in access to and use of NDIS funding <sup>21-23</sup>. For instance, Disney and colleagues <sup>21</sup> identified lower approval rates for NDIS applications among women, people aged 55 or older, or those living in disadvantaged communities. The NDIS depends also on mature service markets, and regional gaps in the development of markets, particularly in areas with geographically dispersed populations or for populations with niche support needs, may limit participants' ability to effectively spend allocated funding <sup>12, 24</sup>.

Despite these concerns, it is unclear whether equity challenges documented in the adult population extend to children with disabilities. This represents an important gap, as the mix of disability types among children differs substantially from the adult population and access pathways are different for children<sup>13, 14</sup>. Under the age of nine years, children with disabilities access NDIS support through the 'early childhood approach', which emphasises early intervention and requires a correspondingly lower standard of evidence and diagnosis <sup>13</sup>. Given the central role of the NDIS in supporting children with disabilities, studies investigating equitable access to support through the NDIS are therefore of considerable

importance. To our knowledge, no previous study has addressed equity in the NDIS for children with disabilities.

In this study we use data from a new survey of parents of children with disabilities to investigate equity in three outcomes which capture key aspects of children with disabilities' engagement with the NDIS: 1) whether the child has a NDIS plan, 2) the level of funding allocated, and 3) parents' satisfaction with the NDIS. We examine these outcomes drawing on concepts of vertical and horizontal equity <sup>25-27</sup>. Vertical equity is the principle that children with greater needs, which we proxy by functional limitations, should receive proportionately greater support. Horizontal equity indicates that, holding need constant, children should receive equal support irrespective of their characteristics, family background, or community. Consistent with our conceptualisation of equity, vertical equity will be supported if children with more functional limitations have higher rates of NDIS participation and receive greater NDIS funding. A challenge with assessing vertical equity is the absence of a clear normative standard for *appropriately* higher support. We offer a partial solution to this problem through our third outcome, parental satisfaction with the NDIS. Specifically, we argue that if access to support is appropriately scaled to children's needs, there should be no relationship between child functional limitations and parents' reported NDIS satisfaction.

Horizontal equity will be supported if, accounting for need, there is no relationship between disability support outcomes and child, family, and community characteristics including child age, family financial resources, parent education, cultural background, parent relationship status, adult disability, remoteness, and area advantage. We acknowledge that an equity interpretation of potential age-related differences in support may be contested because 1) the NDIS uses a different model of access for children under the age of nine <sup>13, 14</sup>, 2) higher levels of support for younger children may be ethically defensible based on benefits of early intervention (e.g. <sup>28, 29</sup>), and 3) cumulative support over childhood may still be equitable if all

children have equal access at different ages. With these caveats, we nonetheless argue that, in keeping with the principle of horizontal equity, systematic differences in participation, funding, or satisfaction, whether by policy design or not, would raise important questions about whether the NDIS is delivering support in a way that is fair across the population.

#### Methods

Analysis used data from the Better Support for Kids with Disabilities (BSKD) survey. Recruitment occurred via Facebook advertisements and email lists of supporting disability organisations between July and October 2024. Eligible respondents were parents or primary caregivers (henceforth 'parents') of one or more children with disabilities aged 2–17 years who lived in Australia. For families with multiple children with disabilities, parents were instructed to respond in relation to their oldest child within the 2–17 age range. A total of 688 parents completed the survey and were included in our analysis.

The Better Support for Kids with Disabilities survey was granted ethics approval by the XXX (blinded for peer review) Human Research Ethics Committee (Approval number XXX) in accordance with the National Health and Medical Research Council (NHMRC) National Statement on Ethical Conduct in Human Research. Implied consent to participate within this project was provided through the completion of the survey.

#### Disability support

The analysis drew on three measures of support for children with disability, which are summarised in table 1. The first was a binary indicator capturing whether the child held a current NDIS plan. Because NDIS funding is a central mechanism for disability support in Australia, access to the NDIS represents a crucial outcome. Second, parents who indicated that their child had a NDIS plan were asked to report the annual value of the plan in AUD at the time of approval. Responses were grouped into four ordinal categories, "\$1-19,999",

"\$20,000-29,999", "\$30,000-49,999", and "\$50,000 or more". The third measure (asked only for parents of children with a NDIS plan) captured parents' satisfaction with NDIS services. This construct was developed by combining survey items that asked respondents to rate their satisfaction across different aspects of NDIS engagement. Satisfaction with NDIS supports is important because it signals the perceived adequacy of supports delivered by diverse stakeholders, including for instance, agency staff, allied health professionals, and other service providers, as well as any difficulties parents face in navigating the system.

The satisfaction scale comprised eleven items, each rated from 0 ("Not at all satisfied") to 10 ("Very satisfied"), with a "Don't know/NA" response available. Items spanned the application and planning phase, management and outcomes of NDIS-funded supports, information quality, and interactions with the National Disability Insurance Agency. The internal reliability of the scale was high (Cronbach's  $\alpha = 0.90$ ). For each respondent, the overall satisfaction score was calculated as the mean of all non-missing items (requiring at least six valid responses) and then standardised (z-scores) for use in analysis.

#### Child functional limitations

Children's functional limitations were assessed using the Washington Group/UNICEF Child Functioning Module <sup>30, 31</sup>, which has separate item sets for children aged 2–4 years and those aged 5–17. Both versions include questions on vision, hearing, walking, communication, learning, and behaviour. For the younger age group (2–4 years), additional domains addressed fine motor ability and play, while for older children (5–17 years) the module also covered self-care, memory, concentration, adjustment to change, peer interactions, and anxiety and depression. Following recommended guidelines <sup>30</sup>, responses for each domain were classified into "no limitation" or "limitation." Typically, children were considered not to have a limitation in a particular domain if parents reported "no difficulty" or "some difficulty," while "a lot of difficulty" or "cannot do at all" indicated a limitation. To support

cross-age comparisons and address the small number of cases in some domains, items were further collapsed into seven broader categories: sensory (seeing, hearing), physical (walking for both groups; fine motor for 2–4 years), communication, cognitive, social/behavioural, mental health (anxiety and depression, 5–17 years only), and self-care (5–17 years only). As an overall indicator of functional limitations, we also calculated the number of distinct domains in which the child experienced a limitation.

#### Family background

A range of parent and family background measures were incorporated into analysis. Parental characteristics included education (degree; no degree), relationship status (partnered; single), Indigenous status (Aboriginal or Torres Strait Islander; non-Indigenous), language at home (English only; language other than English), age (in years), and sex. Adult disability was assessed by asking whether any adult member of the household had a long-term health condition, impairment, or disability lasting six months or more that restricted daily activities and could not be corrected by treatment or medical aids. Economic resources were captured using a composite index. This drew on three indicators: (1) log-transformed equivalised (using the OECD scale) annual household income before tax, (2) satisfaction with overall financial situation (measured on an 11-point scale ranging from "totally dissatisfied" to "totally satisfied"), and (3) perceived family financial position relative to needs and responsibilities (assessed on a six-point scale from "prosperous" to "poor"). We employed this multidimensional approach because household income, while fundamental, fails to capture savings, assets, or costs that are particularly salient for families affected by disability <sup>32</sup>. Subjective evaluations of financial wellbeing were therefore combined with income to better reflect families' overall financial capacity. Principal components analysis was used to create a composite score, which was standardised for analysis. To align with developmental

stages and the age threshold for the 'early childhood approach', children's ages were grouped into categories of 2–4, 5–8, 9–12, and 13–17 years.

Analysis

To model access to disability support, we used logistic regression to model whether the child has a current NDIS plan, ordinal logistic regression to model the value of the child's plan, and linear regression to model parents' satisfaction with the NDIS. Multiple imputation by chained estimates with m = 50 imputed datasets was used to account for missing data. A single model was fitted for each outcome, including all covariates. Separate bivariate analysis (not shown, available on request) exploring unadjusted relationships between specific predictors and disability support outcomes produced very similar substantive conclusions.

#### Results

Sample summary statistics are presented in Table 2. A majority (74%) of children had a NDIS plan, with most (65.8%) having plan budgets less than \$30,000 AUD/year. Mean satisfaction with aspects of the NDIS varied from a low of 3.9 (on a scale from 0-10) for 'quality of information about the NDIS' to a high of 6.9 for 'quality of NDIS-funded services'. Parents also reported relatively high satisfaction on average with their child's outcomes from NDIS services (6.8) and the process of managing NDIS-funded services (6.2), whereas satisfaction was lower for interactions with the NDIA (4.2) or local area coordinators (4.1), the application and planning process (4.2), and how the NDIS works with other services (4.2). Most (87.5%) children were school aged, with slightly more than half (58%) aged nine years or older. Slightly less than two-thirds (63.5%) of children were male. On average, children had 2.3 (range 0-5) functional limitations. The sample appeared to overrepresent more educated parents, with nearly seventy percent having a degree. Most parents were female (95.1%), non-Indigenous (97.4%), spoke English at home (88.9%), and were in couple

relationships (78.6%). Slightly more than half of households (56.4%) included an adult with a disability. Approximately three-quarters (75.3%) of families lived in major cities.

Modelling results are presented in Table 3. Odds ratios are reported for NDIS plan (logistic regression) and NDIS plan value (ordinal logistic regression). Linear regression coefficients are reported for NDIS satisfaction. Children with more functional limitations were more likely to have a current NDIS plan (OR = 1.63; 95% CI: 1.40, 1.91; p < 0.001) and receive greater NDIS funding (OR = 1.71; 95% CI: 1.48, 1.97; p < 0.001). To ease interpretation, marginal predicted probabilities are presented in figure 1 (probability of child having a NDIS plan) and figure 2 (probability of different funding levels). The predicted probability of having a NDIS plan varied substantially by number of functional limitations, ranging from approximately fifty percent for children with no functional limitations up to about ninety percent for children with five or more functional limitations. The level of NDIS funding awarded to those who had a plan also depended strongly on functional limitations. The predicted probability of a child having NDIS funding less than \$20,000 was approximately seventy percent for those with no functional limitations, but declined to approximately fifteen percent among those with five or more functional limitations. Conversely, the likelihood of children being awarded higher value plans increased substantially with greater functional limitations. Less than five percent of children with no functional limitations were predicted to have a NDIS plan of \$50,000 or more, whereas this increased to approximately forty percent among those with five or more functional limitations. The probability of having a plan of \$30,000-49,999 also increased markedly with functional limitations, from less than ten percent among those with no functional limitations to roughly a quarter of those with five or more functional limitations. These results appear consistent with vertical equity in the NDIS application and planning processes as children with higher needs received higher levels of support. However, contrary to vertical equity,

parents of children with more functional limitations reported significantly lower NDIS satisfaction than parents of children with less functional limitations ( $\beta$  = -0.17; 95% CI: -0.23, -0.11; p < 0.001).

Child age was associated with large disparities in the likelihood of having a NDIS plan and the value of funding awarded. Compared to pre-school aged (2-4 years) children, the odds of having an NDIS plan were lower by roughly half for children aged 5-8 years (OR = 0.48; 95% CI: 0.24, 0.98; p < 0.05), two thirds for children aged 9-12 years (OR = 0.34; 95%) CI: 0.17, 0.67; p < 0.01), and three quarters for children aged 13-17 years (OR = 0.23; 95%) CI: 0.11, 0.46; p < 0.001). When they did have a NDIS plan, children in the 5-8 years (OR = 0.34; 95% CI: 0.20, 0.60; p < 0.001) or 9-12 years (OR = 0.37; 95% CI: 0.21, 0.64; p < 0.001) also received less generous funding than pre-school aged children. Children aged 13-17 years did not receive significant different levels of funding compared to those aged 2-4 years (OR = 0.61; 95% CI 0.33, 1.13; n.s.). Parents of older children also reported lower satisfaction with the NDIS. In comparison to parents of children aged 2-4 years, NDIS satisfaction was approximately half a standard deviation lower for parents of children aged 9-12 years ( $\beta = -0.47$ ; 95% CI: -0.74, -0.20; p < 0.001) or 13-17 years ( $\beta = -0.54$ ; 95% CI: -0.83, -0.24; p < 0.001). Acknowledging that the NDIS uses different systems for older children and these differences may be justifiable as supporting early intervention, these results nonetheless suggest that older children and their families are disadvantaged with respect to NDIS support.

Regarding family characteristics, we found no evidence that financial resources, parental education, cultural background, or adult disability were associated with the probability of a child having a NDIS plan or the amount of funding awarded. Parents with greater financial resources did, however, report significantly higher satisfaction with the NDIS ( $\beta = 0.15$ ; 95% CI: 0.04, 0.26; p < 0.01). Adult disability was also linked to lower

NDIS satisfaction ( $\beta$  = -0.32; 95% CI: -0.51, -0.13; p < 0.01). For community characteristics, children living in regional or remote areas were more likely to have a NDIS plan (OR = 1.94; 95% CI: 1.15, 3.28; p < 0.05) than children living in major cities. Regional or remote residence did not, however, predict either the level of funding or parents' satisfaction with the NDIS. Area socioeconomic advantage was not associated with any aspect of children's support.

#### **Discussion**

This study aimed to provide the first systematic evidence of (in)equity in access for children with disabilities to NDIS support. Because the NDIS provides critical access to allied health services, assistive devices, and other supports, unequal access to the NDIS may contribute to inequalities in health, education, and participation for children with disabilities <sup>14</sup>. Our findings indicate partial evidence of vertical equity: children with greater functional limitations were more likely to have a NDIS plan and to receive greater levels of funding. This aligns with the aims of the scheme which are to provide support to those with high levels of functional limitations. However, at the same time, parents of children with greater functional limitations reported lower satisfaction with the scheme. This suggests that higher levels of funding may not be fully proportionate to the children's needs, that there may be gaps in the quality or availability of services, or that families of children with greater functional limitations may face additional administrative burdens navigating the NDIS. Taken together, these findings suggest that the NDIS achieves partial vertical equity in allocating greater resources to children with higher needs, but this principle is not fully realised in practice.

Mixed results were found regarding horizontal equity. Notably, there was little evidence of disparities in whether the child had a NDIS plan or the level of funding, in

relation to family or neighbourhood socioeconomic resources, cultural background, family structure, or the presence of adults with disabilities. Children living in regional or remote areas were found to be *more* likely to have a NDIS plan, contrary to our expectation that urban communities would be advantaged. These findings suggest that horizontal equity is largely supported at the application and planning stage, although there is a need for future studies with larger samples (or using administrative data) to investigate gaps for smaller population groups – in particular Indigenous or culturally diverse children with disabilities. As previous studies have found that the magnitude of social inequalities in access to the NDIS varies by disability type <sup>21</sup>, it would also be valuable to investigate this issue for children with larger datasets. For NDIS satisfaction, we found evidence of inequitable outcomes by family financial resources and adult disability. This may indicate that disadvantaged families, or families where a parent is either disabled themselves or provides care to an adult with a disability, face additional barriers or burdens to accessing and utilising NDIS support for their children.

Older children were less likely to have a NDIS plan and received lower funding than pre-school aged children, and their parents reported lower satisfaction with the NDIS. Age disparities likely reflect structural features of the scheme. The early childhood approach provides a more accessible pathway for younger children, whereas families of older children face more stringent eligibility criteria and potentially greater administrative burdens to access support <sup>13</sup>. While these design features may be justifiable as a means to support effective early intervention <sup>28,29</sup>, they risk entrenching disadvantage for children with disabilities who are identified at older ages or did not have the opportunity to access early intervention. Identification may be delayed for culturally diverse or disadvantaged families who lack the resources to facilitate timely diagnosis <sup>33,34</sup>, and age-related restrictions on access to services may therefore exacerbate inequalities. Universal access to early years screening and

assessment is crucial in ensuring that all children can benefit from appropriate timely support. Further research and policy work is also required to build effective 'step-down' pathways for children who have received support through the early childhood approach but may not be eligible for the full scheme after age nine.

Our results highlight that, while the NDIS has gone some way to achieving equity at the application and planning stage, inequalities persist in how families experience and utilise support. The finding that disadvantaged families and those including adults with disabilities report lower satisfaction suggests that the complexity of managing NDIS supports may generate inequity, disproportionately affecting families with limited resources and administrative capabilities. This aligns with scholarship on administrative burdens, which demonstrates that the costs of navigating complex bureaucracies are unequally distributed and often reinforce existing disadvantage <sup>20, 35, 36</sup>. Systematic gaps in satisfaction, despite apparently equitable allocation of support, also point to issues beyond eligibility and initial access – for instance the quality and availability of services, participants' ability to effectively spend funding, and the demands of coordinating supports across multiple systems. These patterns emphasise the importance of considering not only whether resources are distributed fairly in initial access and funding decisions, but also whether families are equally able to convert available resources into effective support for their children. The government recently announced the new *Thriving Kids* scheme which aims to move many supports from the NDIS into mainstream services <sup>37</sup>. The results of this current study are important in this new policy context for indicating those areas where particular populations may need additional support to navigate changed ways of accessing disability supports and to ensure that supports meet individual needs.

This study provides the first systematic analysis of equity in NDIS support for children with disabilities, offering important evidence of vertical and horizontal (in)equity.

However, it is important to acknowledge some limitations. The sample is not nationally representative, with more highly educated parents overrepresented, and findings should therefore be interpreted with caution in relation to population patterns. Future research should aim to employ true probabilistic sampling where possible, or benchmark samples against population reference data to improve representativeness. Our outcome measures also do not capture utilisation of funded supports <sup>21-23</sup> or children's longer term health, developmental, or educational outcomes, and do not include an independent assessment of the quality of services provided through the NDIS. Longitudinal studies and more detailed assessments of the quality of funded services may address these limitations and represent a priority for future work.

## **Conclusion**

Overall, our findings indicate that the NDIS performs relatively well in directing resources towards children with higher needs and ensuring broadly equitable access across most social groups. However, disparities in satisfaction and outcomes for older children show that important equity gaps remain, and these gaps may reinforce social inequalities in health and development. Equity gaps may not manifest in whether children are approved to access the NDIS or level of funding, but in alignment of supports with need, the ease of navigation, and quality and accessibility of relevant services. Addressing these issues will be essential to ensure that the NDIS and adjacent programs and systems deliver support that is fair and proportionate to need, and that children with disabilities are supported to have equitable opportunities to be healthy, learn, and participate in their communities.

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#### **Table 1: NDIS outcome measures**

## **NDIS** plan

Does your child have a current National Disability Insurance Scheme plan?

Response options: 0 "No", 1 "Yes"

### NDIS funding level

What is the annual value of your child's current NDIS plan?

Please indicate the <u>total value of the plan at the time of approval</u>, not your remaining budget

Coded to 1 "\$1-,19,999", 2 "\$20,000-29,999", 3 "\$30,000-49,999", 4 "\$50,000+"

## NDIS satisfaction (asked only if child has a current NDIS plan)

These questions are about your experiences with the National Disability Insurance Scheme for your child. Please select a number between 0 and 10 that indicates your level of satisfaction with each. The more satisfied you are, the higher the number you should pick. The less satisfied you are, the lower the number.

Response options: 0 "Not at all satisfied" to 10 "Very satisfied"; "Don't know/NA"

- (1) 'The application and planning process?'
- (2) 'The quality of NDIS-funded services my child receives?'
- (3) 'The adequacy of your child's NDIS budget?'
- (4) 'My interactions with the National Disability Insurance Agency?'
- (5) 'My experiences with the local area coordinators?'
- (6) 'The process of managing your child's NDIS funded services?'
- (7) 'The quality of information about the NDIS?'
- (8) 'Your child's outcomes from engaging with NDIS funded services?'
- (9) 'The coordination of NDIS services?'
- (10) 'How NDIS funded services work with other services (e.g. schools or hospitals) to meet my child's needs?'
- (11) 'Your experiences with the NDIS overall?'

**Table 2: Sample summary statistics** 

| Table 2: Sample summary statistics         | (1)             |               | (2)              |
|--|-----------------|---------------|------------------|
|  | (1)<br>Mean / % | (SD)          | (2)<br>Missing % |
| Child NDIS plan                            | Wican / /o      | (SD)          | Wilssing 70      |
| No   | 26.0%           |               | 0.0%             |
| Yes  | 74.0%           |               | 0.070            |
| Child NDIS funding amount $(n = 509)$      | 7 1.0 7 0       |               |                  |
| \$1-19,999                                 | 39.7%           |               | 6.5%             |
| \$20,000-29,999                            | 26.1%           |               | 0.370            |
| \$30,000-49,999                            | 17.6%           |               |                  |
| \$50,000+                                  | 16.6%           |               |                  |
| NDIS satisfaction $(n = 509)$              | 10.070          |               |                  |
| NDIS satisfaction (in 30%)                 | 0.0             | (1.0)         | 5.9%             |
| Application and planning process           | 4.2             | (2.7)         | 9.2%             |
| Quality of NDIS-funded services            | 6.9             | (2.7) $(2.4)$ | 9.2%             |
| Adequacy of child's NDIS budget            | 5.2             | (3.0)         | 10.4%            |
| Interactions with the NDIA                 | 4.2             | ' /           | 11.8%            |
|  | 4.2             | (2.7)         | 13.2%            |
| Experiences with local area coordinators   | 6.2             | (3.0)         | 12.6%            |
| Process of managing NDIS-funded services   |                 | (2.6)         |                  |
| Quality of information about the NDIS      | 3.9<br>6.8      | (2.5)         | 13.0%            |
| Child's outcomes from NDIS services        |                 | (2.4)         | 11.6%            |
| Coordination of NDIS services              | 4.4             | (2.6)         | 28.9%            |
| How NDIS works with other services         | 4.2             | (2.9)         | 16.9%            |
| Experiences with the NDIS overall          | 5.0             | (2.5)         | 9.8%             |
| Child age                                  | 10.50/          |               | 0.00/            |
| 2-4 years                                  | 12.5%           |               | 0.0%             |
| 5-8 years                                  | 29.5%           |               |                  |
| 9-12 years                                 | 34.3%           |               |                  |
| 13-17 years                                | 23.7%           |               |                  |
| Child sex                                  | ·               |               |                  |
| Male                                       | 63.5%           |               | 0.4%             |
| Female                                     | 35.9%           |               |                  |
| Other                                      | 0.6%            |               |                  |
| Child number of functional difficulties    | 2.3             | (1.4)         | 0.0%             |
| Financial resources                        | 0.0             | (1.0)         | 18.9%            |
| Parent education                           |                 |               |                  |
| Less than degree                           | 30.8%           |               | 10.9%            |
| Degree                                     | 69.2%           |               |                  |
| Parent indigenous status                   |                 |               |                  |
| Non-Indigenous                             | 97.4%           |               | 11.0%            |
| Indigenous                                 | 2.6%            |               |                  |
| Parent language other than English at home |                 |               |                  |
| Yes  | 88.9%           |               | 10.9%            |
| No   | 11.1%           |               |                  |
| Adult disability in household              |                 |               |                  |
| No   | 56.4%           |               | 10.8%            |
| Yes  | 43.6%           |               |                  |
| Parent partnership status                  |                 |               |                  |
| Partnered                                  | 21.4%           |               | 11.0%            |
|  |                 |               |                  |

| Non-partnered               | 78.6% |       |       |
|-----------------------------|-------|-------|-------|
| Region                      |       |       |       |
| Major cities                | 75.3% |       | 11.0% |
| Regional or remote          | 24.7% |       |       |
| Area advantage/disadvantage | 0.0   | (1.0) | 11.0% |
| Parent sex                  |       |       |       |
| Male                        | 4.3%  |       | 11.6% |
| Female                      | 95.1% |       |       |
| Other                       | 0.7%  |       |       |
| Parent age (years)          | 42.4  | (6.5) | 19.3% |
| N = 688                     |       | ·     |       |

**Table 3: Regression models** 

| Table 3: Regression models    | NDIS plan <sup>1</sup> | NDIS Plan value <sup>1</sup> | NDIS satisfaction <sup>2</sup> |
|-------------------------------|------------------------|------------------------------|--------------------------------|
| Child functional difficulties | 1.63***                | 1.71***                      | -0.17***                       |
|                               | [1.40,1.91]            | [1.48,1.97]                  | [-0.23,-0.11]                  |
| Child age group (ref 2-4)     |                        |                              |                                |
| 5-8                           | $0.48^{*}$             | 0.34***                      | -0.15                          |
|                               | [0.24, 0.98]           | [0.20, 0.60]                 | [-0.42,0.12]                   |
| 9-12                          | 0.34**                 | 0.37***                      | -0.47***                       |
|                               | [0.17,0.67]            | [0.21, 0.64]                 | [-0.73,-0.20]                  |
| 13-17                         | 0.23***                | 0.61                         | -0.54***                       |
|                               | [0.11,0.46]            | [0.33,1.13]                  | [-0.83,-0.24]                  |
| Financial resources           | 1.05                   | 1.04                         | 0.15**                         |
|                               | [0.83,1.33]            | [0.84,1.29]                  | [0.04, 0.26]                   |
| Degree                        | 1.00                   | 1.24                         | -0.01                          |
| Ref: no degree                | [0.63,1.58]            | [0.81,1.89]                  | [-0.21,0.20]                   |
| Indigenous                    | 0.50                   | 2.55                         | -0.07                          |
| Ref: non-Indigenous           | [0.15,1.60]            | [0.86,7.56]                  | [-0.60,0.45]                   |
| Language other than English   | 1.37                   | 0.98                         | 0.11                           |
| Ref: English only             | [0.70,2.66]            | [0.56,1.71]                  | [-0.16,0.37]                   |
| Partnered                     | 0.86                   | 0.71                         | 0.02                           |
| Ref: unpartnered              | [0.52,1.43]            | [0.45,1.13]                  | [-0.20,0.24]                   |
| Adult disability              | 1.25                   | 1.15                         | -0.32**                        |
| Ref: no adult disability      | [0.83,1.87]            | [0.79,1.69]                  | [-0.51,-0.13]                  |
| Regional/remote               | $1.94^*$               | 1.29                         | -0.10                          |
| Ref: major cities             | [1.15,3.28]            | [0.83,1.99]                  | [-0.31,0.11]                   |
| Area advantage/disadvantage   | 1.06                   | 0.99                         | 0.03                           |
|                               | [0.84,1.33]            | [0.80,1.22]                  | [-0.07,0.13]                   |
| Constant                      | 2.30                   |                              | $0.90^{***}$                   |
|                               | [0.97,5.42]            |                              | [0.54,1.25]                    |
| <b>Cut-points</b>             |                        |                              |                                |
| Cut-point 1                   |                        | 1.10                         |                                |
|                               |                        | [0.52,2.32]                  |                                |
| Cut-point 2                   |                        | 3.60***                      |                                |
| -                             |                        | [1.70,7.64]                  |                                |
| Cut-point 3                   |                        | 10.64***                     |                                |
| -                             |                        | [4.87,23.25]                 |                                |
| N                             | 688                    | 509                          | 509                            |

<sup>1</sup> Odds ratios. 2 Linear regression coefficients. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001. Estimates based on 50 multiply imputed samples.

Figure 1: Probability of NDIS plan by child functional limitations and age

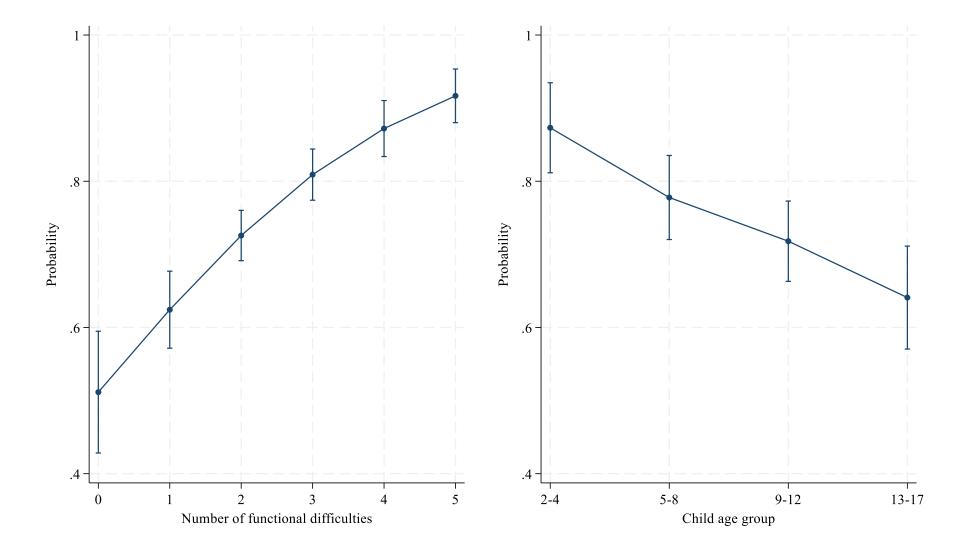


Figure 2: NDIS plan value by child functional limitations and age

