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ORIGINAL ARTICLE

# Behaviour support for people with acquired brain injury within the National Disability Insurance Scheme: an Australian survey of the provider market

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## Abstract

**Background and objectives:** People with acquired brain injury (ABI) may experience behaviours of concern that require therapy services, including behaviour support. In Australia, the implementation of a National Disability Insurance Scheme (NDIS) and development of the NDIS Quality and Safeguards Commission, has led to significant changes to behaviour support workforce processes, and the way behaviour support is funded, regulated and delivered to people with ABI who are Scheme participants. The aim of this study was to explore the current and future provider market of professionals providing behaviour supports to Scheme participants who experience ABI.

**Method:** An anonymous survey was designed and distributed via social media channels, an email listserv and professional association newsletters to professionals working within the NDIS in Australia. Data were analysed using descriptive statistics and content analysis.

**Results:** One hundred and two surveys responses were analysed. A majority of professionals had an average understanding of the NDIS Quality and Safeguard Commission rules and policies on behaviour support. Responses to current and future registration as an NDIS Practitioner indicated the workforce gap could increase by between 17 and 26%. Respondents also raised concerns about the lack of training and experience of allied health professional students and graduates in addressing behaviours of concern. Responses to the open-ended question highlighted additional issues in the provision of behaviour support within the NDIS.

**Conclusions:** This research highlighted the need for an NDIS behaviour support workforce strategy and supply-side market intervention to ensure a viable and sustainable workforce for people with ABI who need behaviour support.

**Keywords:** Acquired Brain Injury; behaviours of concern; allied health; workforce; National Disability Insurance Scheme

## Introduction

Acquired Brain Injury (ABI) commonly results in significant and permanent neurobehavioural disability, impacting a person's ability to regulate and control the way they behave and respond in everyday situations (Alderman, Knight & Brooks, 2013). Behaviours of concern (also referred to as 'challenging behaviours') are those behaviours that cause harm to self and/or others, social isolation or loss of access to valued activities (Sloan, 2017). Behaviours of concern most commonly include aggression and socially inappropriate behaviour, lack of initiative, sexually inappropriate behaviour and wandering/absconding (Hicks et al., 2017; Kelly, Brown, Todd & Kremer, 2008;

Kelly, Simpson, Brown, Kremer & Gillett, 2019). Complexity of behaviour change following ABI is often compounded by the high prevalence of comorbid mental health issues (Simpson, Sabaz, Daher, Gordon & Strettles, 2014). These behaviour changes can interfere with a person's ability to live independently in the community, to work or study, or have relationships with other people (Gould et al., 2021; Hicks et al., 2017).

There are no evidence-based guidelines for managing behaviours of concern after ABI; however, various approaches to the management of behaviours of concern have been described in the literature (Alderman et al., 2013; Gould et al., 2021; Rahman, Alderman & Oliver, 2013). Positive behavioural support (PBS) is an intervention model that emerged in the mid 1980's as a broad approach to managing behaviours of concern in people with developmental and intellectual disabilities with a focus on quality of life outcomes (Brown, Michaels, Oliva & Woolf, 2008; Hayward, Poed, McKay-Brown & McVilly, 2021). Drawing on key principles of applied behaviour analysis, inclusion and person-centred values, PBS utilises educational methods and systems change to modify the individual's living environment and shape behaviours to enhance quality of life and minimise behaviours of concern (Carr et al., 2002; Brown et al., 2008; Singer & Wang, 2009). PBS has since expanded its application to other clinical groups, including ABI (Gould et al., 2021; Kincaid et al., 2016; Sloan, 2017). The PBS focus is on building skills and positive behaviours that facilitate participation and goal attainment in life roles (Gould et al., 2021). Importantly, PBS has a life-span perspective which acknowledges the chronicity of severe brain injury and the fact that meaningful behaviour change can take years.

In Australia, implementation of the National Disability Insurance Scheme (NDIS) has included the development of a new independent national regulatory body, the NDIS Quality and Safeguards Commission (the Commission). The Commission was established to monitor the quality and safety of NDIS services, including behaviour support (NDIS Quality and Safeguards Commission, 2018; NDIS Quality and Safeguards Commission, 2021a). It has focused on the development of a Positive Behaviour Support Capability Framework to guide practice, and produced a self-assessment resource guide for practitioner to self-rate their experience and capability (NDIS Quality and Safeguards Commission, 2019b; NDIS Quality and Safeguards Commission, 2021b). The Commission aims to both regulate and support the minimisation of the use of restrictive practices for Scheme participants. Restrictive practices are "any practice or intervention that has the effect of restricting the rights or freedom of movement of a person with disability" (NDIS Quality and Safeguards Commission, 2021a, p1). Under the National Disability Insurance Scheme (Restrictive Practices and Behaviour Support) Rules (Australian Government, 2018) certain restrictive practices are subject to regulation and oversight by the NDIS Quality and Safeguards Commission. These include seclusion, chemical restraint, mechanical restraint, physical restraint and environmental restraint.

According to most recent public reporting, whilst people with ABI make up only a small proportion (3%) of the total 449,998 Scheme participants, they are one of the highest cost participant groups (NDIS, 2021). Although prevalence rates of challenging behaviours for this group have been shown to be high, ranging from 54% (Sabaz et al., 2014) to 70.5% (Hicks et al., 2017), data also highlights that, to date, NDIS plans often include insufficient capacity building supports (e.g. therapy supports, support coordination, behaviour support), to cover the costs of receiving PBS planning and intervention.

The Australian Government's NDIS National Workforce Plan: 2021–2025 has highlighted workforce supply gaps, referred to as 'thin markets' (Department of Social Services (DSS), (2021)). Specific to behaviour support services within the NDIS, most recent public data highlights there are 1669 registered provider groups nationally offering behaviour support (NDIS, 2021). The NDIS behaviour support workforce is failing to keep pace with the needs of many Scheme participants, and there is a shortage of registered practitioners (referred to as behaviour support practitioners) available to develop behaviour support plans (BSPs), particularly those containing regulated restrictive practices (DSS, 2021; National Disability Services, 2020). As a result, the Agency that administers the NDIS – the National Disability Insurance Agency (NDIA) – has begun pilot work in key geographical sites to undertake "a combination of market facilitation and direct commissioning to improve the behaviour support market" in some states or regions (NDIS, 2021, p.82). Greater market stewardship

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(including monitoring, evaluation, oversight and, where necessary, intervention) has been identified as necessary to address the complex support needs that exist for some Scheme participants, as limited or 'thin' market supply remains a significant challenge to the quality and safeguarding endeavour of the NDIS (Carey, Malbon, Marjolin & Reeders, 2018; Meltzer, Dickinson, Malbon & Carey, 2019; NDS, 2020; Productivity Commission, 2017).

Traditionally, registered allied health professionals (primarily psychologists) have provided behaviour support services in the field of ABI in Australia (Wong, McKay & Stolwyk, 2014). However, the NDIS allows both a range of allied health professionals (including psychologists, occupational therapists and social workers) as well as other workers (including those without behaviour support qualifications or formal training) to become a registered behaviour support practitioner (NDIS Quality and Safeguards Commission, 2019a; NDIS Quality and Safeguards Commission, 2021b). As part of regulatory oversight, however, the Agency has specified that behaviour support funding allocated within an NDIS plan will always be managed by the NDIA, rather than self-managed by a Scheme participant or a plan nominee. For this reason, all NDIS-funded behaviour support practitioners are required to register with the Commission as either sole practitioners under registration group 0110 (specialist behaviour support), or work for a 0110 registered service provider (NDIS Quality and Safeguards Commission, 2019b).

Some allied health professionals were registered as NDIS providers on Scheme launch from 2013, and thus were grandfathered in as registered providers of a range of supports, including behaviour support (Australian Government, 2013). Grandfathering changed to re-registration after establishment of the Commission in 2018 (NDIS Quality and Safeguards Commission, 2018). Consequently, registered providers must undergo annual certification via an external auditor, to provide and receive payment for behaviour support services to Scheme participants under the capacity building support category 'Improved Relationships'. This necessitates significant preparation of practice documentation and provider payment for independent audit costs each year, on top of any individual professional registration processes required (NDIS Quality and Safeguards Commission, 2019a). Costs for this auditing have been estimated between $3000 to $15,000 depending upon the business structure (e.g. sole trader versus company) (Disability Services Consulting, 2018).

In addition to provider registration and renewal processes, the Commission also oversees reporting obligations specific to the assessment and provision of behaviour support. Each individual practitioner needs to be deemed suitable by the Commission, to undertake functional behaviour assessments and develop BSPs. Provider suitability is considered against the PBS Capability Framework, via a self-assessment process with sign off by a nominated supervisor (NDIS Quality and Safeguards Commission, 2019b). The Commission uses a four-tiered approach (core, proficient, advanced and specialist) which they explain is to encourage the acquisition of capabilities at incremental levels.

In the field of ABI in Australia, Wong et al. (2014) have identified a lack of training and experience of neuropsychologists in treating behaviours of concern for people with neurological conditions. Other barriers identified by Australian therapists include limited understanding of PBS, a lack of time to learn new behaviour interventions, and clinicians' confidence (Carmichael, Gould, Hicks, Feeney & Ponsford, 2020; Carmichael et al., 2021). With the Commission seeking to build a skilled and capable workforce, a number of other issues have been highlighted as part of a parliamentary inquiry into NDIS behaviour support processes and regulations (NDIS Quality and Safeguards Commission, 2018). These include administrative burden and costs involved in being a registered provider under the Scheme; inadequate funding in Scheme participant plans for behaviour support assessments, and to devise, implement and monitor a BSP; lack of access to experienced behaviour support practitioners; and problems with providers adapting to the reporting requirements under the PBS Capability Framework (NDIS Quality and Safeguards Commission, 2019b). Considering these issues, the Australian Government is now exploring the future alignment of regulation across the care and support sectors for both NDIS and other disability services, and aged and veteran's care (Australian Government Department of Health, 2021).

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Given the significant changes to the behaviour support workforce processes, and the way behaviour support is regulated, reported and delivered to people with ABI in Australia, this research had four objectives: (1) Investigate the characteristics of professionals delivering therapy and behaviour supports to Scheme participants with ABI within the NDIS; (2) Explore the level of experience and knowledge of the NDIS and the rules and policies on behaviour support; (3) Gain insight into current and future registration for behaviour support within the NDIS and (4) Explore perspectives on issues to be addressed to influence behaviour support outcomes for people with ABI in the NDIS.

## Method

Ethics approval was gained from Monash University Human Research Ethics Committee prior to the research commencing.

### *Design*

The data reported in this paper are drawn from an anonymous online survey. Survey responses were collected between October and December 2019 from 102 professionals providing capacity building supports (e.g. therapy supports, support coordination, behaviour support) to Scheme participants who experience ABI. This represents 6.25% of the current registered NDIS behaviour support provider market nationally (NDIS, 2021).

### *Participants*

The survey was distributed via public domain contact details of NDIS therapy providers; health networks across each state of Australia; psychology and occupational therapy professional associations and peak bodies; NDIS community of practice networks for which email listserv or Facebook groups existed, and other social media channels available to the research group. Inclusion criteria were that respondents were professionals working in Australia with people who experienced ABI, and with a caseload that includes Scheme participants.

### *Measures*

An anonymous survey was designed across two online meetings (using zoom videoconferencing software) in July and August 2019 with seven clinical neuropsychologists and two occupational therapists registered as NDIS behaviour support practitioners that worked across two states of Australia with people with ABI. Clinicians from other professions and states either declined or did not respond to the email invitation. The final survey questions were based on this consultation and a comprehensive literature search on behaviour support and NDIS policy guidance, issues raised in response to an ongoing parliamentary inquiry into issues around the implementation and performance NDIS (Parliament of Australia, 2019). The final survey (see Appendix A) consisted of 18 closed-ended items across four sections which covered demographic information (i.e. age, gender, location), professional background, experience and understanding of the NDIS and practitioner capability in relation to behaviour support. At the end of the survey there was one open-ended question for respondents to provide any comments about their perspectives on provision of capacity building supports, including behaviour support, within the NDIS.

## Procedure

### *Data collection*

The survey was advertised to NDIS professionals who are eligible to provide therapy and behavioural capacity building supports to Scheme participants who experience ABI. This included allied

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health professionals (neuro/psychologists, occupational therapists, speech pathologists, social workers and physiotherapists), as well as disability support providers and managers who play a central role in the delivery of PBS. The professionals were made aware in the explanatory statement that participation was voluntary, and there was no renumeration offered for survey completion. By proceeding to complete the online survey after review of the explanatory statement, respondents provided implied consent to participate in the study. At the end of the survey, respondents were offered the option to be contacted about future research in the area of behaviour support for people with ABI; and 33 respondents were willing and provided their name and contact details.

## Analyses

The online survey data was exported into SPSS 26 statistical software. A total of 104 survey responses were received, however data from two respondents were excluded from analysis as they had no Scheme participants, and as such, no experience of working in the NDIS. There was between 100 and 102 survey responses for the closed-ended questions, and these were analysed descriptively for the whole sample. Each participant was given a unique numerical code (Respondent 1–102), and the 65 responses for the one open-ended question were exported into Microsoft Excel. These responses were then analysed using inductive content analysis, with open coding undertaken and combined with other codes to form categories or sub-themes (Elo et al., 2014; Thomas, 2006). These sub-themes were subsequently combined and organised into overall themes. To ensure trustworthiness, two members of the research team performed the content analysis separately. The initial coding and themes applied were then checked through consensus work undertaken by the two researchers, with any discrepancies in the application of codes explored via in-depth discussion and a final set of codes and themes agreed upon (Creswell, 2012; Elo et al, 2014).

## Results

### *Description of participants*

Table 1 summarises the respondent characteristics of the workforce providing capacity building supports to Scheme participants who experience ABI. Over half of respondents were in the field of occupational therapy ($n = 53$, 52%), and one third in neuro/psychology ($n = 35$, 34%), followed by speech pathology ($n = 9$, 9%), physiotherapy ($n = 4$, 4%), disability support provider or manager ($n = 5$, 5%), and social work ($n = 1$, 1%).

### *Workforce and the NDIS*

Of the 102 respondents, just over half reported some experience with the NDIS ($n = 53$, 52%), one third reported a lot of experience ($n = 36$, 35%), with only a small number reported having little experience ($n = 13$, 13%). As shown in Table 2, one in five of the respondents were registered as an NDIS behaviour support practitioner at the time of survey completion ($n = 21$, 20%), with a further 26 (25%) subcontracted or employed by an organisation that was a registered NDIS provider of behaviour support. The majority of those registered were neuro/psychologists or occupational therapists, and aged 30–59 years ($n = 36$, 77%).

### *Knowledge of the NDIS Quality and Safeguard Commission rules and policies*

Registration status had no impact on respondent's knowledge of the NDIS Quality and Safeguard Commission rules and policies on behaviour support. Over half of respondents registered ($n = 27$, 57%) and not registered ($n = 30$, 55%) self-rated their understanding as 'Average' (meaning they self-rated as having some understanding).

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**Table 1.** Characteristics of the Capacity Building ABI Workforce within the NDIS

| | Frequency ($n = 102$) | % |
|---|---|---|
| Gender | | |
| Woman | 92 | 90 |
| Man | 9 | 9 |
| Undisclosed | 1 | 1 |
| Age | | |
| Mean (SD) | 42 years (SD = 10) | |
| Range | 24–64 | |
| State | | |
| Victoria | 60 | 59 |
| New South Wales | 28 | 27 |
| Queensland | 6 | 6 |
| Western Australia | 5 | 5 |
| South Australia | 2 | 2 |
| Northern Territory | 1 | 1 |
| Tasmania | 0 | 0 |
| Years practicing in the field of ABI | | |
| Mean (SD) | 13 years (SD = 9) | |
| Range | 1–40 | |
| Years of experience providing behaviour support to people with ABI | | |
| Mean (SD) | 9 years (SD = 9) | |
| Range | 0–35 | |
| Professional background[a] | | |
| Sole practitioner in own practice | 35 | 34 |
| Employee of a group practice | 22 | 22 |
| Owner/principle of a group practice | 19 | 19 |
| Employee of a non-government/non-profit organisation | 13 | 13 |
| Employee of a private health network | 9 | 9 |
| Employee of public health network | 7 | 7 |
| Subcontractor to one or more organisations | 7 | 7 |

[a]Respondents could select more than one response.

### *Future plans to register for behaviour support within the NDIS*

Table 2 also provides a summary of the future plans of respondents in relation to NDIS behaviour support status, overall, and by each profession. Of the 47 professionals, registered or subcontracted/employed by an organisation that was a registered NDIS provider of behaviour support only 20 had plans 'in the future' (noting an indicative time of 'the future' was not specified in the survey) to continue to subcontract to, or be employed by an organisation registered for behaviour support, with a further nine responding 'maybe'. The is a potential decrease of between −17%

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**Table 2.** Current and Future Plans with Regards to Registration for Behaviour Support within the NDIS: Overall ($n = 102$) and by Profession

| | Current workforce status | | | | | | Plans in the future to continue to subcontract to or be employed by an organisation registered for behaviour support | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Registered as an NDIS behaviour support practitioner | | Subcontracted/ employed by an organisation that is a registered NDIS provider of behaviour support | | Total registered or subcontracted/ employed as a registered NDIS Practitioner | | Yes | | Maybe | | % change in workforce capacity (future to current) |
| Profession | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | |
| Total | 21 | 20 | 26 | 25 | 47 | 45 | 20 | 19 | 9 | 9 | −17 to −26 |
| Neuro/psychology | 11 | 10 | 9 | 9 | 20 | 19 | 7 | 7 | 2 | 2 | −10 to −12 |
| Occupational therapy | 7 | 7 | 12 | 12 | 19 | 18 | 8 | 8 | 6 | 6 | −5 to −11 |
| Speech pathology | 3 | 3 | 2 | 2 | 5 | 5 | 3 | 3 | 1 | 1 | −1 to −2 |
| Social work | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | No change |
| Physiotherapy | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Disability support provider or manager | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | −1 |

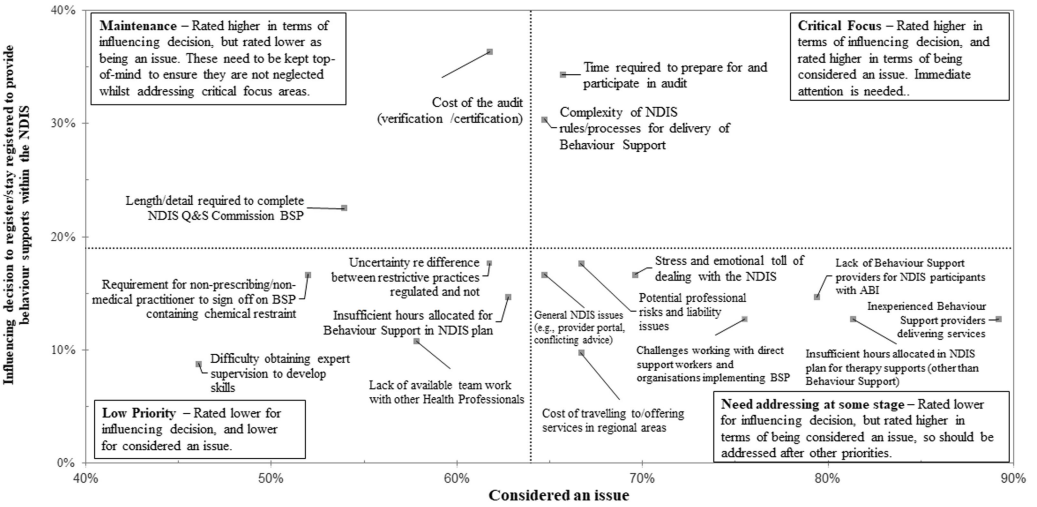


**Figure 1.** Considerations and issues influencing respondents decisions to provide behaviour support within the NDIS.

(Yes / Maybe Responses) to −26% (only Yes Responses) of workforce capacity in the future, with the largest decrease for professionals aged 40–59 (between −6% to 8%).

For the 55 respondents who were not an NDIS behaviour support practitioner or subcontracted/employed by an organisation that was registered, 54 (96%) provide interventions to Scheme participants via other support categories (e.g. therapy, assistive technology, counselling), and 44 (79%) of these respondents were registered NDIS providers. When asked about the future, only five of these 55 professionals responded that they had plans to begin to subcontract to, or be employed by, an organisation registered for behaviour support.

The PBS Capability Framework uses a self-assessment process signed off by a supervisor to determine the level of provider capability. The four-tiered approach encourages practitioners to incrementally build their capabilities (NDIS Quality and Safeguards Commission, 2019b). Of the 100 professionals who answered the question about practitioner capability, 11 (11%) anticipated being approved as a core practitioner, nine (9%) as a proficient practitioner, six (6%) as an advanced practitioner and 17 (17%) as a specialist practitioner, with 57 (56%) responding 'Not Applicable' as they did not anticipate registering to become an NDIS behaviour support practitioner.

### *Considerations and issues influencing decisions to provide NDIS supports*

Respondents were provided with a list of 17 considerations that had been raised in response to government inquiries into market supply and other general issues within the NDIS that were relevant to behaviour support (Ernst & Young Australia, 2019; Parliament of Australia, 2019). Figure 1 shows the percentage of the 102 respondents who considered each item an issue and the percentage who responded that an item was influencing their decision to register/stay registered to provide NDIS supports. The mean percentage scores across the issue and influencer items were used to create the four quadrants to identify the necessary actions to support the NDIS workforce providing PBS. There are two items needing critical focus, the time it will take to prepare for, and participate in, the audit, and the complexity of the rules and processes for delivery of behaviour support within the NDIS.

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### *Results from open-ended survey responses*

The quantitative data summarised in Fig. 1 highlighted the key issues of professionals in the provision of behaviour support within the NDIS. The qualitative data provided additional insights across four key themes: (1) challenges and cost of behaviour support registration; (2) a lack of skilled ABI behaviour support practitioners; (3) professional risks faced by behaviour support practitioners within the NDIS and (4) NDIS planning processes and funding of behaviour support. Each theme will now be briefly discussed, with verbatim data provided linked to each respondents' unique numerical code.

### *Challenges and cost of behaviour support registration*

Behaviour support registration was noted to be complex, confusing and time consuming, as well as costly by the vast majority who responded to this question. These were barriers to new providers seeking to obtain registration, as Respondent 29 wrote, "I started to register but found the requirements way too arduous". Similarly, Respondent 69 wrote, "The financial and logistical requirements are currently too large a barrier to register for behaviour support". These were also a barrier for experienced practitioners, particularly those in sole practice, to continue their registration. Respondent 28 wrote, "As a part time, sole practitioner with nearly 20 years' experience in ABI behaviour support I do not wish to register for NDIS behaviour support due to all the risks and costs of auditing". These were also reasons why some practitioners let their registration lapse. For example, Respondent 65 wrote, "It was too expensive to re-register and so I have let my registration lapse". Some, such as Respondent 17, noted these as reasons people are not pursuing registration, "Due to the enormous amount of paperwork, cost and rules associated with this area, it is actually turning people away from working in this much needed area".

### *A lack of skilled ABI behaviour support practitioners*

Respondents identified market failure in the area of ABI behaviour support and this was linked to issues with NDIS Quality and Safeguards registration and audit processes driving experienced practitioners away from registration. Some, such as Respondent 10, were concerned that the gap was being filled in part by large organisations employing new graduates, "Organisations registering for behaviour support does (sic) not necessarily lead to a practitioner with skills and knowledge. Many of the large companies have largely new graduate workforce". Others, such as Respondent 64 were concerned that less experienced clinicians were providing specialist behaviour support, "I am concerned only big multi-site organisations will be able to afford to provide behaviour management support and they tend to employ people who are not specialists in community-based behaviour intervention with people with ABI".

Respondents reported that the emerging workforce issues are also resulting in long wait lists for specialist services. For example, Respondent 24 wrote, "With people re-referring into our service we have had to close our wait list – there are not enough registered and experienced behaviour support practitioners". Respondent 42 explained that people with ABI are therefore experiencing difficulty finding registered behaviour support providers, "I can only say there is a massive lack of people who would be willing to register [to provide behaviour support] and an overwhelming number of people requiring behaviour support practitioner interventions". These difficulties were considered even greater for people living in rural and remote areas. As examples of this, Respondent 55 stated, "Due to a lack of providers in remote settings, I am concerned that FIFO [Fly-in fly-out] style supports will be engaged that do not have a good understanding of local contexts, networks of support, culture etc". Following, Respondent 83 wrote, "In regional areas, it is difficult to obtain service providers that are experienced with behavioural support".

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### Professional risks faced by behaviour support practitioners

Survey respondents registered as behaviour support practitioners identified a number of professional risks associated with providing this type of NDIS-funded support. For example, Respondent 38 wrote, "The accountability being expected for behaviour practitioners is well outside their expertise and could possibly have legal ramifications e.g. being legally responsible for a plan involving chemical restraint when you are not the prescribing doctor". Some respondents highlighted that there is confusion regarding whether particular clinical practices constitute restrictive practice or not, and the interface with implementing providers and responsibilities for monitoring restrictive practice raise liability issues: "As an OT [Occupational Therapist], even standard [direct support] practices are being questioned as restrictive practices and we do not have the capacity to address the copious needs of a positive behaviour support plan, so are leaning towards avoiding these referrals" [Respondent 1].

Training in understanding the NDIS Quality and Safeguards Commission framework had been helpful but, as Respondent 8 explained, there are "Significant delays (i.e., months) with getting response from Q&S commission on questions relating to regulated restrictive practices". Ongoing, telephone support for specific clinical issues was also identified:

> There needs to be more support from the NDIS to assist providers ... you should be able to pick up a phone and speak to someone in the NDIS [Quality and Safeguards Commission] who knows what they are talking about [Respondent 48].

### NDIS planning processes and funding of behaviour support

Respondents identified that issues in the area of specialist ABI behaviour support were magnified by considerable challenges in the NDIS planning processes to obtain Improved Relationship funding (the NDIS price guide category under which specialist behaviour support is funded). For example, Respondent 18 wrote, "Participants have raised concerns about not being able to utilise Improved Relationships funding due to the lack of registered behaviour support providers and current organisations already at capacity". This funding was often absent in a Scheme participant's NDIS plan, despite restrictive practices being applied, and thus required an urgent plan review. However, plan reviews were identified as then taking an inordinate time to be scheduled by the NDIA, as illustrated by Respondent 54:

> Behaviour support is an ongoing project for many clients – NDIS planners sometimes view this as a one-off cost – once accessed, it can't be accessed again. Other clients that need to have behaviour support just haven't had this line item included on their [NDIS] plan so they can't access this service when they need it and need to wait for approval and funding to be added.

Where Improved Liveability category of funding was included within the Scheme participant's NDIS plan, it was often insufficient to enable the BSP to be successfully implemented. This was seen as being due to a range of reasons including lack of NDIS plan funding for an adequate level of training of core support staff and/or other key supporters (e.g. family), capacity to use a coordinated teamwork approach given limited hours of therapy funding in a plan, and limited or no supply of skilled complex support coordination. In addition, some people, such as Respondent 61, identified gaps in service provision due to plan funding running out:

> Sufficient funding for ongoing staff training on the BSP is often not provided. This is an essential part of being able to successfully implement the plan. The implication for participants is that they are not having their needs met and participation outcomes are reduced.

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## Discussion

This is first study to explore the NDIS workforce delivering therapy and behaviour supports to Scheme participants with ABI in Australia. The NDIS is seeing ongoing growth in the number of people receiving support via the Scheme, with over 50% receiving disability funding for the first time in their lives (NDIS, 2021). As a result, the number of people with ABI in the NDIS will continue to increase, and so too will the demand for individualised support, including behavioural support (NDIS Quality and Safeguards Commission, 2021a).

The majority of survey respondents were from the fields of occupational therapy and neuro/psychology. Although respondents indicated they had experience with the NDIS, they generally rated themselves as having an average understanding of the NDIS Quality and Safeguard Commission rules and policies on behaviour support. Additionally, only a minority considered they would be approved by the Commission as a proficient or advanced behaviour support practitioner. This adds to recent findings of research with the broader ABI workforce in Australia, which highlighted clinicians' limited understanding of, and lower confidence in, provision of PBS (Carmichael et al., 2020; Carmichael et al., 2021).

Furthermore, the current research indicates that – in the field of ABI – this behaviour support workforce gap could increase further (by between 17% and 26%). These findings support past concerns raised about the risk of NDIS market failure to meet the anticipated growth in demand for services for vulnerable populations, including those who experience behaviours of concern (Carey et al., 2018; Ernst & Young Australia, 2019; National Disability Services, 2020). Importantly, market failure has been noted to take many forms, including an insufficient numbers of skilled providers available; providers experiencing systemic issues which mean they can no longer deliver services; and services being unsafe or of poor quality (Meltzer et al., 2019). If the NDIS behaviour support market does not function effectively, then good outcomes for Scheme participants will not be achieved (Carey et al., 2018; NDIS, 2021).

This points to the need to increase the scale and geographical reach of the current pilots of supply-side market facilitation and direct commissioning being used by the NDIA to try and enhance the behaviour support market (NDIS, 2021). As a matter of priority, there is a need for greater market intervention to ensure a viable NDIS workforce for Scheme participants who need behaviour support nationally. Flexibility and adaptability of this supply-side approach will however also be required, in order to respond to emerging and changing market needs (Carey et al., 2018). In addition, clear and accessible information on NDIS Quality and Safeguard Commission requirements for registration and renewal of approval for provision of NDIS-funded behaviour support services will also be required.

Building on this, the time demand, cost and complexity of behaviour support registration and reporting to the Commission requires close attention. This regulatory complexity must be balanced with the necessary quality and safeguarding of services provided to Scheme participants with behaviour support needs (NDIS Quality and Safeguards Commission, 2018). The current and future workforce of both NDIS behaviour support practitioners – and NDIS-funded providers who use regulated restrictive practices – will need to be willing and able to meet the significant registration and/or reporting requirements and costs of the NDIS Quality and Safeguards Commission (2021a). When thin provider markets already exist, the risk is that market failure will be accelerated by regulatory complexity. This issue has previously been identified, primarily with the Commission processes being viewed as both duplicative and an onerous addition to existing allied health professional registration requirements (Parliament of Australia, 2019). However, the current research has offered further insights in this area particular to ABI practice, and may inform new work underway to explore alignment of the cross-sector care and support regulatory environment in Australia (Australian Government Department of Health, 2021).

Specifically, there were two key findings that were represented in both qualitative and quantitative data as areas requiring critical focus. Firstly, the costs and time to prepare for, and

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participate in, the Commission audits were viewed as a barrier for new providers seeking to obtain registration, and for experienced practitioners to re-register. Secondly, the complexity of rules and processes for delivery of behaviour support, in particular issues with NDIS Quality and Safeguards registration and audit processes, was identified to be driving experienced practitioners away from registration. This finding adds to the evidence indicating the importance of further streamlining NDIS Quality and Safeguard Commission registration, reporting and annual certification processes – or more broadly, aligning regulation across the care and support sectors – for the benefit of behaviour support market growth, and behaviour support access for people with ABI and their families (Australian Government Department of Health, 2021).

In addition to enhancing workforce growth and improving the Commission processes, the current study highlighted other focus areas that need to be addressed to support the NDIS workforce and influence behaviour support outcomes for people with ABI. Specifically, a need for a behaviour support workforce that has both the necessary training and also experience in assessing, managing and reviewing change in behaviours of concern was identified. Behaviour support training opportunities for graduate health professionals are therefore required. Similar to Wong et al. (2014), respondents in the current study raised concerns about the lack of training and experience of the NDIS behaviour support workforce, which may or may not include the use of allied health professionals, in treating behaviours of concern. The need for evidence-based clinical guidelines to inform practice in the area of behaviour support for people with ABI was also further highlighted (Gould et al., 2021; Sloan, 2017). Some respondents in the current study also considered that the professional risks associated with providing behaviour support interventions were significant.

Given the reported difficulties in recruiting and retaining allied health practitioners with disability expertise, including behaviour support expertise, review and growth of allied health university curriculum and contemporary student work integrated learning programmes are also required (Ernst & Young Australia, 2019; NDS, 2020). With regard to allied health student education, this should consider opportunities for clinical fieldwork placements in the disability sector. This expanded fieldwork will in turn develop engagement and workforce capacity of health professional new graduates. However, such fieldwork will require behaviour support practitioners to provide training and supervision opportunities, and allocation of resources and/or funding to accommodate the supervision of students. Consideration could also be given to creating a network of senior disability practitioners (discipline-specific) to support and mentor those who need support to grow relevant experience and expertise. This would likely need to be led by professional peak bodies (e.g. occupational therapy or psychology associations) and, again, resources and funding would be required to meet the costs associated with supervision and mentoring of a high-quality behaviour support workforce.

Finally, this research has further demonstrated the specialised skills required in both service planning and provision in the area of behaviour support, and the need to ensure equity of access to the NDIS supports including behaviour support services (Carey et al., 2018; Carmichael et al., 2021; Gould et al., 2021). Meaningful behaviour change can take years after an ABI, and as such a life-span perspective is required for funding of behaviour supports within plans beyond just a one-off or single year of funding allocation. For people with ABI to get access to effective funding allocation for behaviour supports, there is therefore a need to address the current issues with NDIS planning processes. Skilled planning by people who understand the impact of ABI will aid adequate capacity building goal setting and funding put into plans to assist to meet an individual's need for positive behaviour support and was seen as lacking at this early stage of Scheme implementation (Gould et al., 2021; Parliament of Australia, 2019).

## Limitations

There were a number of limitations in this study. Despite attempts to recruit nationally, there is a relatively small sample size (respondents equated to 6.25% of the current registered NDIS behaviour support provider market nationally); however, it should also be noted people with ABI make

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up only 3% of all NDIS participants and this survey attempted to draw on the ABI behaviour support workforce (NDIS, 2021). Furthermore, there was a higher response rate from professionals in Victoria and New South Wales, and results did not include some professions that can be involved in the delivery of behaviour supports, such as nurses, school teachers and aboriginal health workers. Thus, the risk of reduced external validity should be noted, as the results are not representative of the broader population of the NDIS workforce. Response bias should also be considered, in that those survey respondents who were more motivated to participate may have stronger perspectives in either the positive or negative in relation to providing behaviour supports. Finally, it should also be noted that this study is a one-time snapshot of the ABI workforce within the NDIS, so there is a need for this type of research to be extended and updated regularly. This will enable a continual monitoring and evaluation of the workforce, and the provision of behaviour supports to Scheme participants. Preferably, it will also need to incorporate additional sources of data such as allied health student training and employment in the sector.

## Conclusion

An online anonymous survey was used to gain an understanding of the current and future behaviour support workforce for people with ABI within Australia's NDIS. The findings provide recommendations to avoid NDIS market failure, and increase both the supply and quality of behaviour support practitioners readily available to Scheme participants. Market stewardship, including supply-side investment in workforce capacity, and streamlining of the complex regulatory environment, is required. Without this, there is a very real risk that people with ABI will be limited in their access to timely positive behaviour support to assist them to achieve personally valued goals. This will in turn result in negative impacts in the area of both Scheme participant experience, and Scheme costs and outcomes achieved.

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## References

**Alderman N., Knight C., & Brooks J.** (2013). Rehabilitation approaches to the management of aggressive behaviour disorders after acquired brain injury. *Brain Impairment*, *14*(1), 5–20.

**Australian Government** (2013). National Disability Insurance Scheme Act. Retrieved from https://www.legislation.gov.au/Details/C2016C00934

**Australian Government** (2018). National Disability Insurance Scheme (Restrictive Practices and Behaviour Support) Rules 2018. Canberra: Author. Retrieved from https://www.legislation.gov.au/Details/F2020C01087

**Australian Government Department of Health** (2021). *Aligning regulation across the care and support sectors*. Retrieved from https://www.health.gov.au/initiatives-and-programs/aligning-regulation-across-the-care-and-support-sectors

**Brown F., Michaels C. A., Oliva C. M., & Woolf S. B.** (2008). Personal paradigm shifts among ABA and PBS experts: Comparisons in treatment acceptability. *Journal of Positive Behavior Interventions*, *10*(4), 212–227.

**Carr E. G., Dunlap G., Horner R. H., Koegel R. L., Turnbull A. P., Sailor W.**, & et al. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions*, *4*(1), 4–16.

**Carey G., Malbon E., Marjolin A., & Reeders D.** (2018). *National Disability Markets. Market stewardship actions for the NDIS*. Sydney, NSW: Centre for Social Impact.

**Carmichael J., Gould K., Hicks A., Feeney T., & Ponsford J.** (2020). Understanding Australian community ABI therapists' preferences for training in and implementing behaviour interventions: A focus on positive behaviour support. *Brain Impairment*, *21*(2), 191–207.

**Carmichael J., Hicks A., Gould K., Feeney T., Analytis P., & Ponsford J.** (2021). We struggle and muddle. A qualitative study exploring community ABI therapists' experiences of using, training in and implementing behaviour interventions. *Brain Impairment*, *22*(1), 34–49.

**Creswell J. W.** (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson Education, Limited.

**Department of Social Services (DSS)** (2021). NDIS National Workforce Plan: 2021-2025. Retrieved from https://www.dss.gov.au/sites/default/files/documents/06_2021/ndis-national-workforce-plan-2021-2025.pdf

**Disability Services Consulting** (2018). *The Cost of Registering in the NDIS World*. Retrieved from https://teamdsc.com.au/resources/cost-registering-ndis-world

**Elo S., Kääriäinen M., Kanste O., Pölkki T., Utriainen K., & Kyngäs H.** (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE Open*, *4*(1), 1–10.

**Ernst & Young Australia** (2019). NDIS Thin Markets Project Discussion paper to inform consultation. Retrieved from https://engage.dss.gov.au/wp-content/uploads/2019/04/Thin-Markets-Project-Discussion-Paper-2019-04-05.pdf

**Gould K. A., Ponsford J. L., Hicks A. J., Hopwood M., Renison B., & Feeney T. J.** (2021). Positive behaviour support for challenging behaviour after acquired brain injury: An introduction to PBS + PLUS and three case studies. *Neuropsychological Rehabilitation*, *31*(1), 57–91.

**Hayward B., Poed S., McKay-Brown L., & McVilly K.** (2021). Introducing Positive behaviour support (PBS) into disability services for successful adoption: A synthesised systematic review. *British Journal Learning Disabilities*, *49*(2), 145–161.

**Hicks A. J., Gould K. R., Hopwood M., Kenardy J., Krivonos I., & Ponsford J. L.** (2017). Behaviours of concern following moderate to severe traumatic brain injury in individuals living in the community. *Brain Injury*, *31*(10), 1312–1319.

**Kelly G., Brown S., Todd J., & Kremer P.** (2008). Challenging behaviour profiles of people with acquired brain injury living in community settings. *Brain Injury*, *22*(6), 457–470.

**Kelly G., Simpson G., Brown S., Kremer P., & Gillett L.** (2019). The Overt Behaviour Scale-Self-Report (OBS-SR) for acquired brain injury: Exploratory analysis of reliability and validity. *Neuropsychological Rehabilitation*, *29*(5), 704–722.

**Kincaid D., Dunlap G., Kern L., Lane K. L., Bambara L. M., Brown F.**, & et al. (2016). Positive behavior support: A proposal for updating and refining the definition. *Journal of Positive Behavior Interventions*, *18*(2), 69–73.

**Meltzer A., Dickinson H., Malbon E., & Carey G.** (2019). Why is lived experience important for market stewardship? A proposed framework for why and how lived experience should be included in stewarding disability markets. *Evidence & Policy: A Journal of Research, Debate and Practice*, *17*(2), 335–347.

**National Disability Insurance Scheme** (2021). *Q3 2020-2021 NDIS Quarterly Report to disability ministers*. Retrieved from https://www.ndis.gov.au/about-us/publications/quarterly-reports

**National Disability Services** (2020). *Submission to the Joint Standing Committee Inquiry into NDIS Workforce (submission no. 25WF)*. Parkville, Australia: National Disability Services.

**NDIS Quality and Safeguards Commission** (2018). *Understanding providers' Obligations. Information for NDIS Providers*. Retrieved from https://www.ndiscommission.gov.au/sites/default/files/documents/2018-07/Understanding%20providers%27%20obligations.pdf

**NDIS Quality and Safeguards Commission** (2019a). *Compendium of Resources for Positive Behaviour Support*. Penrith, Australia: NDIS Quality and Safeguards Commission. Retrieved from https://www.ndiscommission.gov.au/sites/default/files/documents/2019-06/compendium-resources-positive-behaviour-support.pdf

**NDIS Quality and Safeguards Commission** (2019b). Positive behaviour support capability framework: For NDIS providers and behaviour support practitioners. Penrith, Australia: NDIS Quality and Safeguards Commission. Penrith, Australia: NDIS Quality and Safeguards Commission. Retrieved from https://www.ndiscommission.gov.au/pbscapabilityframework

**NDIS Quality and Safeguards Commission** (2021a). Behaviour Support. Retrieved from https://www.ndiscommission.gov.au/providers/behaviour-support

**NDIS Quality and Safeguards Commission** (2021b). Self-Assessment Resource Guide. Retrieved from https://www.ndiscommission.gov.au/document/2151

**National Disability Services** (2020). *State of the Disability Sector Report 2020*. Retrieved from https://www.nds.org.au/images/State_of_the_Disability_Sector_Reports/SoTDS_2020.pdf

**Parliament of Australia**. (2019). Joint Standing Committee on the National Disability Insurance Scheme inquiry into general issues around the implementation and performance of the NDIS: Progress Report 2019. Canberra, Australia: Author. Retrieved from https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/National_Disability_Insurance_Scheme/General_NDIS/Report

**Productivity Commission** (2017). National Disability Insurance Scheme (NDIS) Costs. Retrieved from https://www.pc.gov.au/inquiries/completed/ndis-costs/report

**Rahman B., Alderman N., & Oliver C.** (2013). Use of the structured descriptive assessment to identify possible functions of challenging behaviour exhibited by adults with brain injury. *Neuropsychological Rehabilitation*, *23*(4), 501–527.

https://doi.org/10.1017/BrImp.2022.10 Published online by Cambridge University Press

**Sabaz M., Simpson G. K., Walker A. J., Rogers J. M., Gillis I., & Strettles B.** (2014). Prevalence, comorbidities, and correlates of challenging behavior among community-dwelling adults with severe traumatic brain injury: A multicenter study. *The Journal of Head Trauma Rehabilitation*, *29*(2), E19–E30.

**Singer G. H., & Wang M.** (2009). The intellectual roots of positive behavior support and their implications for its development. In *Handbook of positive behavior support* (pp. 17–46). Boston, MA: Springer.

**Simpson G., Sabaz M., Daher M., Gordon R., & Strettles B.** (2014). Challenging behaviours, co-morbidities, service utilisation and service access among community-dwelling adults with severe traumatic brain injury: A multicentre study. *Brain Impairment*, *15*(1), 28–42.

**Sloan S.** (2017). *Understanding Acquired Brain Injury and behaviour change*. Randwick, NSW.: ASSBI Resources.

**Thomas D.** (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237–246.

**Wong D., McKay A., & Stolwyk R.** (2014). Delivery of psychological interventions by clinical neuropsychologists: Current practice in Australia and implications for training. *Australian Psychologist*, *49*(4), 209–222.

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