The *Positive Behaviour Support Plan Quality Assessment* (PBSP-QA) – A Brief Introduction to its Development and Psychometric Properties

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ASID Conference 2025 Sydney

The PBSP-QA

A new positive behaviour support plan quality assessment tool

- The **PBSP-QA** (*Vassos & Nankervis, 2025*) is a **pen/paper assessment tool** that assesses the quality of a positive behaviour support plan (*plan* from here in) that has been informed by a functional behavioural assessment (i.e., is a complete and comprehensive plan, not an interim plan). The items cover various aspects of plan quality including:
  - The plan's technical compliance with behavioural principles,
  - Evidence of functional behavioural assessment,
  - The level of inclusion and/or consultation of the person who is the focus of the plan and other relevant stakeholders, to support plan development,
  - Readability and accessibility of plan content, and
  - The inclusion of strategies to enhance plan implementation.

The PBSP-QA

A new positive behaviour support plan quality assessment tool

- **Why did we develop the PBSP-QA?**
  - Born out of the **Promoting Positive Behaviour Support Practice** project, a joint University of Queensland-University of Melbourne-Flinders University project funded by the NDIS Quality and Safeguard Commission.
  - The outcome of the project was the development of a suite of online learning resources to support behaviour support practitioners to develop quality plans, including:
    - An **AI-based, online summary plan form** that reads and analyses the content of a summary plan and provides **feedback** on the content based on a set of criteria. *Note.* This is not a quality assessment tool.
    - We (UQ) led the development of the online form and the assessment criteria embedded into the AI algorithm.
    - The PBSP-QA builds on the assessment criteria we developed for the AI algorithm.

The PBSP-QA

A new positive behaviour support plan quality assessment tool

- **Why did we develop the PBSP-QA?**
  - Available measures [e.g., the Behaviour Intervention Plan Quality Evaluation (BIPQEII; Browning-Wright et al., 2013)] tend to focus on a plan's **technical compliance with behavioural principles**.
    - A systematic review of plan quality research (Vassos, Carberry, Breedt & Nankervis, in preparation) revealed several quality markers **above and beyond** technical compliance, e.g., markers related to the assessment and data gathering process, plan implementation processes and plan accessibility.
    - The PBSP-QA takes these additional markers into account.
  - The PBSP-QA assesses **one plan quality marker at a time**.
    - The rationale for doing this was to (hopefully) enhance reliability across scorers.

The PBSP-QA

The ins and outs of the tool

- The 43-items assess the quality of a plan quality across the following 11 domains:

About the person who is the focus of the plan (1 item)	**Assessment and data gathering** (4 items)	**Behaviour description** (5 items)	**Antecedent-behaviour-consequence (ABC) chain** (4 items)
Function and formulation (3 items)	**Goals** (3 items)	**Positive behaviour support strategies** (5 items)	**De-escalation strategies** (6 items)
Social validity (2 items)	**Implementation** (5 items)	**Outcome and review monitoring** (5 items)	

The PBSP-QA

The ins and outs of the tool

- The PBSP-QA should only be used by scorers with **extensive knowledge** of behaviour support practice and a **considerable degree of training, practice and experience**.
  - This instruction is based on previous findings (Vassos et al., 2023)
- Best to read the plan in full before attempting any scoring.
  - The average time to score the PBSP-QA after reading the plan in full is 40 minutes.

The PBSP-QA

The ins and outs of the tool

- Each domain contains a set of **Quality Marker** items (green section), scored using a 0 – zero (NO) and 1 (YES) scale.
  - Scoring directions and plan content examples are provided to assist the scoring process.
  - The score for each domain is the **sum** of all 1 (YES) responses.
  - Total score out of 43. No scoring categories have been developed yet for the total score - The higher the better!
- Within each PBSP-QA domain is a set of optional **Additional Feedback** items (yellow section).
  - These items are rated on a **YES and NO** scale – akin to items that one might see on measures of plan social validity.
  - Aim to provide subjective feedback from the perspective of the scorer regarding other relevant plan quality markers related to the domain being assessed.

The PBSP-QA

Example domain and items – *Domain 4 (Antecedent-Behaviour-Consequence (ABC) Chain)*

Quality Markers		**1 = YES 0 = NO**
Q4a.	For each target behaviour, the plan describes what happens immediately before the target behaviour occurs (i.e., triggers/antecedents). --- ***Definition to Assist Scoring:*** • Triggers/antecedents are the events that happen immediately before the target behaviour is exhibited. ***Scoring Direction:*** • If a list of triggers/antecedents is provided in the plan with no clear links as to which triggers/antecedents link to which target behaviour, score 0 (NO) for this item.	

Additional Feedback (Optional)	**Yes**	**No**
The identified triggers/antecedents and maintaining factors/consequences were correctly classified as such.	☐	☐

Development of the PBSP-QA

Research activities that informed the development of the PBSP-QA

- **Item development and refinement was informed by:**
  - The findings of a systematic literature review focused on plan quality.
  - A textual analysis of 200 de-identified plans of varying quality as assessed by BIPQEII.
  - Individual consultations with people with a lived experience of positive behaviour support to ascertain what makes a good plan from their perspective.
  - A series of focus groups with disability support workers to ascertain what makes a good plan from their perspective.
  - Consultation over a two-year period with a reference group who provided advice on plan quality and feedback on draft versions of the PBSP-QA.
  - The findings from two psychometric evaluations of the PBSP-QA (to be discussed later).

Systematic Literature Review

Review findings

Behavioural Assessment	Adherence to Behavioural Principles	Plan Implementation
• **Collaboration** with the focus person and other relevant stakeholders • **Direct observations** of the focus person's challenging behaviour in relevant environments • **In-direct data collection processes** utilised (e.g., interviews). • **Other sources** of information consulted (e.g., support plans, etc.).	• **Observable descriptions** of challenging behaviour(s) • **Setting event, antecedents(triggers) and consequences** identified • **Function** of behaviour(s), **equivalent replacement behaviour(s)** identified • Measurable/achievable intervention **goal(s)** - behaviour change and QoL • **Environmental changes** to reduce challenging behaviour/enhance QoL • **Skill development** to **teach/reinforce** replacement behaviours. • **Non-behavioural strategies** that may impact behaviour (e.g., exercise). • Positive **reactive strategies** to deal with challenging behaviours • **Rationale** for any **restrictive practices** to be used provided and a plan to **fade out** use	• **Social validity** – The acceptance of the PBSP by relevant stakeholders outlined • **Training** approach in how to implement the PBSP discussed • **Bi-directional communication** strategies to support plan implementation outlined • **Outcome measurement** processes to ascertain PBSP effectiveness provided • Process to measure **implementation fidelity** outlined • Process to **review** the effectiveness of the plan provided • **Readability** – short, easy to read and understand (e.g., secondary school reading level)

Textual Analysis of Plans

How was this done and example findings

- 200 plans (provided by the NDIS Quality and Safeguards Commission) were thematically analysed to understand what **content** was **commonly being featured** in plans.
- Some of the relevant findings that informed the AI algorithm, and in turn the PBSP-QA items:
  - **A lack of goals** being included in the plan, and when included, were not related to the strategies proposed for implementation in the plan (e.g., goals related to service funding as opposed to behaviour support)
  - Many plans included a **formulation** section to summarise the functional behavioural assessment (in line with the 4P/5P approach used in psychology)
  - Very little detail in relation to **social validity** and **plan implementation** provided in the plans analysed, e.g., who are the plan implementers? Do they agree with the proposed strategies in the plan? How will they be trained to implement the plan, and by whom?

Focus Groups with Disability Support Workers

How were these done and findings

- Focus groups were conducted with 45 support workers within a conference workshop.
- Support workers chose the five quality markers of most relevance to them from a list that reflected the quality markers extracted from the systematic literature review. The most ranked markers were:

1. The plan uses plain, easy to read and understand language (33 votes).
2. The plan clearly describes the person with disability's challenging behaviours (18 votes).
3. The plan outlines the triggers/setting events that occur before the person with disability engages in challenging behaviour (17 votes).
4. The plan outlines a communication strategy that will allow plan implementers and the behaviour support practitioner to regularly discuss plan implementation (13 votes).
5. The plan outlines measurable and achievable goals for both behaviour change and quality of life (13 votes).

Consultation - People with Lived Experience

How were these consultations done and some relevant findings

- Individual interviews conducted with three people with intellectual disability who have a current plan being implemented by their families and/or their support staff. These plans contained restrictive practices.
- One interview was conducted per person via Zoom or over the telephone (due to distance) – the research team experienced difficulties organising follow-up interviews with each person.
- The main issue discussed by the three people interviewed was their **lack of inclusion** in the development phase of the plan, for example:
  - Not being asked about their preferences in relation to behaviour support.
  - Their lack of agreement with some of the behaviour support strategies developed.

Consultation – Expert Reference Group

How were these consultations done

- As part of the **Promoting Positive Behaviour Support Practice**, an expert reference group consisting of **eight members** met on a quarterly basis with the research team (over Zoom).
- The group consisted of **behaviour support practitioners**, **behaviour support service managers**, and state government **policy makers** in the area of behaviour support and restrictive practices.
- Group meetings consisted of:
  - Project updates and presentations of findings from the various research activities undertaken.
  - Feedback discussions related to draft versions of the online interface for the AI tool and the assessment criteria to be embedded into the AI algorithm.
- Each member was also afforded the opportunity to have a one-on-one meeting with the research team to discuss their feedback on the final (draft) version of the AI tool online interface and assessment criteria.

Consultation – Expert Reference Group

Feedback received

- Provided feedback on the wording used within the AI tool and the assessment criteria to ensure its accessibility with the target audience (behaviour support practitioners).
- Provided feedback on the structure of the AI tool online interface to ensure ease of use.
- Provide feedback on how the assessment criteria should be applied in the AI tool, for example:
  - **Not forcing** the need for a **functionally equivalent replacement behaviour** and **associated skill development strategies** to be included in a plan.
  - Ensuring that specific criteria were included around the practitioner having to indicate **how the focus person of the PBSP was included** in the development of the plan.

Psychometric Findings

Is the PBSP-QA reliable and valid?

- **First psychometric evaluation (concurrent validity):**
  - Involved one independent scorer scoring 104 plans with the PBSP-QA and the BIPQEII. The first draft of the PBSP-QA was used for this evaluation.
    - PBSP-QA and BIPQEII total scores were **positively correlated** (r = .49) and **statistically significant** (p < .001).
    - Significant, positive correlations above r > .3 are considered evidence of concurrent validity (Andresen, 2000; Gregory, 2014).

Psychometric Findings

Is the PBSP-QA reliable and valid?

- **Second psychometric evaluation (internal consistency, interrater reliability, test-retest reliability, and face and content validity):**
  - Involved 13 scorers : 9 scorers who scored 19-20 plans with the PBSP-QA and 4 scorers who scored the same 5 plans on two occasions, two-weeks apart. The second draft of the PBSP-QA was used for this evaluation.
    - **Inter-rater reliability**:
      - Assessed via the Gwet AC1 statistic (akin to Kappa) – Moderate agreement acceptable or higher (AC1 > .40).
      - **63.6%** of the PBSP-QA quality marker items had 6 or more of the 12 scoring pairs demonstrating moderate agreement or higher (AC1 > .40).
      - **All** quality marker items had scoring pairs that achieved substantial (AC1 > .60) to near perfect agreement (AC1 > .80), therefore a lack of agreement was related to **how scorers interpreted** each item.

Psychometric Findings

Is the PBSP-QA reliable and valid?

- **Second psychometric evaluation (internal consistency, interrater reliability, test-retest reliability, and the face and content validity):**
  - For the items where **interrater agreement was lacking**, the AC1 data was inspected in combination with qualitative feedback from the scorers to look for scoring patterns to explain the lack of agreement.
    - **Q2a within Domain 2 – Assessment and Data Gathering:** A lack of agreement on this item stemmed from how the scorers interpreted the meaning of *inclusion* and *consultation*.
    - **Domain 9 – Social Validity:** A lack of agreement for the three domain items stemmed from some scorers interpreting a process to gain consent to use a restrictive practice as an example of assessing the acceptability of the strategies contained within a plan, while others did not.

Psychometric Findings

Is the PBSP-QA reliable and valid?

- **Second psychometric evaluation (internal consistency, interrater reliability, test-retest reliability, and the face and content validity):**
  - **Test-retest reliability**: Assessed via the Gwet AC1 statistic also.
    - 38 of the 43 PBSP-QA quality marker items had **all four scorers** achieve moderate agreement or higher (AC1 > .40) across the two time points.
    - Regarding the remaining five quality markers items, **only one of the four scorers** had less than moderate agreement for each item.
    - These five items also had less-than-ideal interrater reliability and as a result, were modified based on the AC1 interrater reliability findings and qualitative feedback from the scorers.
    - Given this, no other modifications made based on the test-retest reliability findings.

Psychometric Findings

Is the PBSP-QA reliable and valid?

- **Second psychometric evaluation (internal consistency, interrater reliability, test-retest reliability, and the face and content validity):**
  - **Internal consistency reliability:** Cronbach α = .89, which is above the .80 acceptable threshold for α (Andresen, 2000; Gregory, 2014; Tavakol & Dennick, 2011).
  - **Face and content validity:**
    - Feedback highlighted that the items of the PBSP-QA **appear to measure** aspects of plan quality on face value.
    - Feedback provided by the scorers primarily centred on **potential modifications** that could be made to some of the PBSP-QA items to improve their clarity to, and useability by scorers, as opposed to recommendations for additional items to be included.

When and Where Can I Access the PBSP-QA?

The UQ Plan Quality Website

Available for download:

https://education.uq.edu.au/positive-behaviour-support-plan-quality

Acknowledgements

Many thanks to the following people and organisations

- **Colleagues who contributed to the development and evaluation of the PBSP-QA:**
  - *Research Assistants:* Trent Carberry, Michelle King, and Radostina Breedt.
  - *Reference Group:* Simon Wardale, Tracey Harkness, Craig McIver, Samantha Vesey, Tegan Ferguson, Tiffany Carroll, CJ, Nick Collyer Shelley Birrell, Dariane McLean, and Olivia Gibson.
  - *Other Contributors:* Debra Corfield, Fiona Davis, Sarah Hutchison, and Frank Lambrick.
  - *The Promoting Positive Behaviour Support Practice team:* Keith McVilly, Alinka Fisher, Michael Kirley, Eduardo Araujo Oliveira and Kymberly Louise.

Acknowledgements

Many thanks to the following people and organisations

- **The organisations, their behaviour support practitioners and other behaviour support professionals for supporting the evaluation of the PBSP-QA:**
  - Multicap
  - Australian Capital Territory (ACT) Office of the Senior Practitioner
  - NDIS Quality and Safeguards Commission
  - ABC Behaviour Support
  - Allora Options
  - Brightt

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