**The TIDieR (Template for Intervention Description and Replication) Checklist\*:**

Information to include when describing an intervention and the location of the information

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| **Item number** | **Item TIDieR checklist for Development and modelling study of an evidence-based manualised intervention: PErsonalised Treatment packages for Adults with Learning disabilities who display aggressive challenging behaviour in community settings (PETAL)** | **Where located \*\*** | |
|  | Primary paper  (page or appendix  number) | Other † (details) |
|  | **BRIEF NAME** |  |  |
| **1.** | PETAL (PErsonalised Treatment packages for Adults with Learning disabilities who display aggressive challenging behaviour in community settings) | \_\_\_\_1\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **WHY** |  |  |
| **2.** | Aggressive challenging behaviour is prevalent in adults with an intellectual disability and is associated with over-medication, physical ill-health and psychiatric hospitalisation. Single-component interventions do not seem to be effective for everyone, thus a multi-component, tailored manualised psychological intervention was developed to address this public health concern. The PETAL therapy was designed following an extensive review of existing management provisions and was co-produced with carers with lived experience and self-advocates with an intellectual disability. It was informed by the Theoretical Domains Framework (TDF), focusing on principles of behavioural change, and its implementation was informed by the Normalisation Process Theory (NPT).  The PETAL therapy includes elements from behavioural theories and psychoeducational elements (e.g. understanding the antecedents and consequences of behaviour), cognitive-behavioural components (e.g. regulating emotions) and mindfulness. As recommended by NICE for addressing aggressive challenging behaviour, preventative strategies were also included (e.g. exploring anticipation of behaviours, calming practices and de-escalation). Additionally, communication, carer wellbeing and other potential influences that may impact behaviour such as lifestyle aspects were incorporated (e.g. exploring healthier habits). | \_\_1, 4-9\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **WHAT** |  |  |
| **3.** | The therapist manual includes session outlines and scripted session plans. Workbooks that map onto the manual are provided to carers and people with an intellectual disability. Workbooks include module content and home practice tasks to support the embedding of skills. Home practice tasks are set as SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) objectives. The materials are not available yet as they are being tested. | \_\_\_\_\_9\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **4.** | The PETAL therapy is a manualised, 7 module intervention to be delivered over a maximum of 14 weeks, including up to 2 review sessions. Each session can last up to 2 hours. During therapy sessions, therapists use talking and games with participants to find out more about the possible causes of the behaviour, and to practise new techniques and skills in better managing those episodes.  The therapy content, setting of delivery, frequency, and duration of sessions (maximum of two hours) can be adapted and personalised to suit the individual, including extending a module to 2 sessions if required. Participants are encouraged to set SMART objectives, record these in their workbooks, practice skills between sessions and incorporate realistic and manageable changes into their daily routines. | \_\_\_\_\_9 \_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **WHO PROVIDED** |  |  |
| **5.** | The therapy was delivered by trained therapists in Community Intellectual Disability Teams. Therapists were trained during a two-day online training programme, with an additional 6 hours of preparatory work, in essential clinical skills (e.g., risk management, communication, building a therapeutic alliance, managing conflict, etc.) and manual content. Training utilised an interactive approach, including content talks, case scenario discussions, role plays, recordings and input from family carer advisors. Videos were also filmed with both advisory groups (including with self-advocates with an intellectual disability) that were shown during the training. The completion of a case study assessment with three questions at the end of the second training day was required for therapists to receive permission to deliver the intervention. All trained therapists received individualised feedback and a certificate, and they all completed an evaluation form.  Therapists came from a range of healthcare professions, such as research assistants, assistant psychologists, community learning disability nurses, psychiatry trainees, behavioural advisor, clinical psychologist, mental health learning disability nurse, occupational therapist, senior practitioner, specialist registrar. Therapists had on average 8 years of experience working with people with intellectual disabilities. | \_\_\_10, 13\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **HOW** |  |  |
| **6.** | The therapy was delivered for dyads (person with the learning disability and a family/paid carer) or a triad (person with the learning disability, a family and a paid carer). Sessions were delivered mostly face-to-face, and in few cases virtually (via Teams/Zoom). The average session length was around 1 hour. | \_\_\_\_\_14\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **WHERE** |  |  |
| **7.** | Participants were recruited from Community Intellectual Disability Services from 6 NHS trusts in England. | \_\_\_\_\_10\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **WHEN and HOW MUCH** |  |  |
| **8.** | Seven dyads and one triad received the intervention between April 2023 and February 2024. On average, the therapy was delivered in 11.5 weeks (IQR: 1.24, range: 7-22 weeks). For 7/8 participants, the intervention was delivered within the set period of 14 weeks. One participant received the therapy over 22 weeks, and this was due to holidays and limited participant availability. The average session length was around 1 hour (range approximately 20-90 minutes). Five participants received the full intervention (all modules and at least one review session delivered). Two participants did not receive Module 4 ‘Emotions’ as the therapists deemed this as not relevant or appropriate in those specific cases. One participant did not receive the review session and therapy for another participant was terminated before modules 5-7 were delivered due to significant delays with delivery and the modelling stage having been completed. Participants received a mean of 10 sessions (SD:2.27, range: 6-13). | \_\_\_\_\_14\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **TAILORING** |  |  |
| **9.** | The therapy content, setting of delivery, frequency, and duration of sessions were adapted and personalised to suit individual needs. Therapists were encouraged to find out some information about participants before their first session. The first module (Getting to know the person) provided opportunity to gain further knowledge about individual skills and needs. Therapists were supported through supervision and encouraged to make adaptations as needed to maximise engagement with the therapy sessions. | \_\_\_\_\_9\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **MODIFICATIONS** |  |  |
| **10.ǂ** | The intervention was not modified; however, refinements were made based on the modelling study. | \_24, Table 7\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **HOW WELL** |  |  |
| **11.** | We developed two fidelity checklists adapted from those used for other psychological interventions [41-47] (Royston et al., 2024). The fidelity checklist for therapists comprises of an attendance log and sections for each module to outline whether aspects of the module were delivered (e.g. discussions of the session plan, introducing the session, personalisation and module specific items; response options: yes, partially completed, no) and sections to record adaptations, reasonable adjustments, challenges and further comments. A fidelity checklist for external coders based on observed recordings of therapy sessions was also developed. This checklist included general items to assess therapist competencies (e.g. communicating warmth, concern and caring, pacing the session appropriately, etc) and module specific items corresponding to the delivery of each module (response options: yes, partially, no). Out of the 80 sessions delivered, recordings were available for 44 sessions. The remaining recordings were missing due to technological problems (e.g. corrupt recordings, parts of recording missing or no recordings taken). Inter-rater reliability was calculated for 8 (18%) of audio recorded sessions on this checklist across five independent raters in the research team and reliability between coders was high (general items: α = 0.8385 and module-specific items: α = 0.8230). | \_\_\_11-12\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **12.ǂ** | All available audio recordings were coded for fidelity. Fidelity for the general item scores were high across every module (Mean: 19.5, SD: 2.5, range: 0-22, max score=22). There was more variability within the module specific items, with lower fidelity for Modules 3-5. | \_\_\_\_14\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |

\*\* **Authors** - use N/A if an item is not applicable for the intervention being described. **Reviewers** – use ‘?’ if information about the element is not reported/not sufficiently reported.

† If the information is not provided in the primary paper, give details of where this information is available. This may include locations such as a published protocol or other published papers (provide citation details) or a website (provide the URL).

ǂ If completing the TIDieR checklist for a protocol, these items are not relevant to the protocol and cannot be described until the study is complete.

\* We strongly recommend using this checklist in conjunction with the TIDieR guide (see *BMJ* 2014;348:g1687) which contains an explanation and elaboration for each item.

\* The focus of TIDieR is on reporting details of the intervention elements (and where relevant, comparison elements) of a study. Other elements and methodological features of studies are covered by other reporting statements and checklists and have not been duplicated as part of the TIDieR checklist. When a **randomised trial** is being reported, the TIDieR checklist should be used in conjunction with the CONSORT statement (see [www.consort-statement.org](http://www.consort-statement.org)) as an extension of **Item 5 of the CONSORT 2010 Statement.** When a **clinical trial** **protocol** is being reported, the TIDieR checklist should be used in conjunction with the SPIRIT statement as an extension of **Item 11 of the SPIRIT 2013 Statement** (see [www.spirit-statement.org](http://www.spirit-statement.org)). For alternate study designs, TIDieR can be used in conjunction with the appropriate checklist for that study design (see [www.equator-network.org](http://www.equator-network.org)).