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BRIEF REPORT

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The Family Game to support parents with intellectual disability in managing challenging behaviours: A replication

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Abstract

Background: Although many parents with intellectual disability (ID) demonstrate good parenting practices, some parents experience difficulties in managing challenging behaviours. One potential solution to this issue involves using The Family Game, a program designed to teach parents with ID how to manage challenging behaviours in their child.

Aims: The purpose of our study was to conduct an independent replication of an investigation that had been performed by the developer of the program.

Materials & Methods: We used a multiple baseline design to examine the effects of The Family Game on the behaviour of two parents with ID who had a 3-year-old child.

Results: Similarly to the original study, our results indicate that The Family Game improved the use of effective parenting strategies during role play, but that these gains failed to generalise to real-life settings.

Conclusion: The study further supports the necessity of adding novel strategies to the game to better promote generalisation.

KEYWORDS
challenging behaviour, cooperation, intellectual disability, parenting

1 | INTRODUCTION

Contrarily to popular belief, many parents with intellectual disability (ID) demonstrate good parenting practices to care for their child (Coren et al., 2018; IASSID Special Interest Research Group on Parents and Parenting with Intellectual Disabilities, 2008; Llewellyn et al., 2010). Researchers have found, however, that some parents with ID implement ineffective strategies to manage challenging behaviours[1] (Feldman & Walton-Allen, 2002; Lindberg et al., 2017). The use of such ineffective parenting strategies may increase the frequency and intensity of challenging behaviours in children (Grusec et al., 2017; Sege et al., 2018). For example, researchers have reported that 18%–26% of children of parents with ID exhibit challenging behaviours (Aunos et al., 2008; Feldman & Walton-Allen, 2002; Meppelder et al., 2015).

To address this issue, Feldman (2004/2006) developed The Family Game, a program designed to support parents with ID in improving the quality of parent–child interactions. Specifically, The Family Game is a board game with a die and cards that prompt parents to role play a series of three skills designed to promote child cooperation (see Section 2). Tahir et al. (2015) evaluated The Family Game program with two mothers with ID. Their study observed improvements in parenting strategies that persisted 1 month after the program ended as

[1]By challenging behaviour, we are referring to any behaviour that may compromise the health, learning, or social integration of the child or of individuals who care for them.

well as increases in child cooperation, but it also raised concerns regarding generalisation outside of the game context. Given that the study involved the author of the program, independent replications are necessary to examine the generalisability of their results. Thus, the purpose of our study was to replicate the study conducted by Tahir et al. by evaluating the effects of the program with two parents with ID and their 3-year-old child.

2 | METHOD

2.1 | Participants

We recruited the participants from a program designed to support parents with intellectual disability in a publicly-funded agency in Montréal, Canada. The clinical team referred to the research team parents with a diagnosis of mild to moderate ID who were available and could benefit from improving their parenting practices. To extend Tahir et al. (2015) who only included children 10 and older, our study targeted parents of children younger than this age. The participants were a family of three: a 28-year-old mother with moderate ID, a 36-year-old father with mild ID, and their 3-year-old child with a language delay. The parents spoke French at home, were unemployed, and received governmental financial support. The project was approved by the research ethics boards of the researcher's university and of the agency. Both parents provided informed consent for their participation and their child using adapted procedures to ensure that they understood the project.

2.2 | The Family Game

Our study implemented the French version of The Family Game (Feldman, 2004/2006), a program designed to support the development of parenting strategies to promote cooperation. The Family Game included strategies divided into three categories: (1) giving clear instructions, (2) reinforcing child cooperation, and (3) correcting child non-cooperation. The materials were comprised of one board, one die, 120 cards, and one mover for each player. Each card involved a problem related to one of the three strategies. For example, a card to teach giving clear instructions said, 'Your children have finished breakfast and have left their cereal bowls on the table. You want them to take them to the sink. What do you say?' whereas a similar card to teach reinforcement said, 'Your children finish their breakfast and put their cereal bowls in the sink without asking. What do you say?' The game allowed for the creation of cards tailored to the needs of each parent. Hence, we created 8 new cards per strategy for the mother and 7 per strategy for the father. In total, the game included 40 cards per strategy: 30 cards were used for training and 10 cards to assess for generalisation.

The rules of the game were simple and similar to many board games. The players rolled a die on each turn and advanced their movers. The board included squares such as 'skip your turn', 'draw card', 'go back one space', and 'lose a turn'. Some squares also encouraged the parents to tell stories about their family (e.g., 'tell me a nice story about your child'). When landing on a square, the player engaged in the corresponding action. When the parent or the trainer landed on a 'draw card' square, the parent or the trainer drew a card, the trainer read it, and the parent had to role play the solution to the problem.

2.3 | Measures and interobserver agreement

Our main dependent variable involved measuring the percentage of correct responses provided on training and generalisation cards for each of the three strategies. We also conducted in-situ probes to examine whether the strategies generalised to real-life settings. During these probes, the first author measured each behaviour defined in Table 1 using 30-s partial interval recording. As each session was also recorded on video, a second observer measured each behaviour on 30% of sessions to measure interobserver agreement (IOA) using the interval-by-interval method. Mean IOA was 87% (range: 82%–93%) for the mother and 82% (range: 79%–88%) for the father. Finally, each parent completed an adapted version of the Treatment Acceptability Rating Form Revised questionnaire (TARF-R; Reimers et al., 1991) at the end of the study.

2.4 | Procedures

To remain consistent with Tahir et al. (2015), we used a multiple baseline design across behaviours to examine the effects of The Family Game. The multiple baseline across behaviour is a type of single-case experimental design that involves repeatedly measuring a behaviour before and during the implementation of an intervention while staggering the introduction of this intervention across each targeted behaviour. Staggering the introduction of the intervention provides control over confounding variables, mainly history and maturation. The multiple baseline design is commonly used to assess the effects parenting skills training (e.g., Lees & Ronan, 2008; Merrill et al., 2023; Tahir et al., 2015). Each parent completed their training sessions separately (i.e., when the other parent was not present). The trainer (i.e., the first author) conducted approximately one session per week that lasted 60–90 min. The game ended when there were no more cards to draw.

2.4.1 | Baseline

When a strategy was in baseline, the game included 10 randomly selected cards from the training deck for this strategy (in addition to the cards from the other strategies). The trainer provided no feedback or error correction for the parent's responding on the strategies in baseline. However, she reinforced their participation in playing the game.

TABLE 1 Operational definition for each behaviour.

Behaviour	Definition
Clear instructions	For this step, the parent must have a full or partial view of the child. They use a firm tone of voice that is loud enough for the child to hear. A clear instruction is stated as a declarative and must clearly describe the action to perform (e.g., 'Pick up your toys from the floor and put them in the toy box') instead of a vague interrogation (e.g., 'Can you clean up?'). After the instruction, the parent must allow 5 s for the child to initiate compliance. The instruction can be repeated once, if the child has not complied the first time.
Reinforcement	The parent recognises and acknowledges the compliance of the child in a positive way within 5 s of the initiation or the completion of the correct response by the child. The approval can be done in several ways, such as verbal praise (e.g., 'Great job picking up all your toys!'), physical affection (e.g., a hug) or tangible rewards (e.g., toys, treats, and tokens). If the child complied, but also exhibited inappropriate behaviour (e.g., whining, swearing), the parent does not approve the cooperation.
Correction	When the child does not comply to the clear instruction within 5 s of repeating the instruction, the parent must (1) give a warning to the child that a specific consequence will be applied if they do not comply, and (2) apply the consequence if the child continues to be noncompliant after the warning. The consequences should be non-corporal disciplinary strategies (e.g., privilege will be removed).
Cooperation of the child	The child initiating the behaviour stated in a parental instruction within 5 s without repeating the instruction and without engaging in problem behaviour (e.g., gently placing toys in the toy box rather than throwing them inside).
Non-cooperation of the child	The child does not initiate the correct response within 5 s of the first delivery of the parent's instruction.

Note: Adapted from Tahir et al. (2015).

2.4.2 | Intervention

During intervention, the deck included 40 cards in total: 20 randomly-selected cards from the training deck for the strategy being taught and 10 cards for each of the other two strategies, which were either still in baseline or had already been taught. When a parent responded correctly on a card of the strategy being taught, the trainer provided specific praise. If the parent responded incorrectly to a card of the strategy in teaching, she provided corrective feedback, modelled the expected behaviour, and asked the parent to practice. Only one strategy was actively taught during any given session.

2.4.3 | Follow-up

One month after the end of the intervention phase, the trainer conducted a follow-up session with each parent. The follow-up session was identical to baseline, except that the deck only contained 5 cards per strategy from the training deck. The parents also responded to the social validity questionnaire at this time.

2.4.4 | Generalisation cards

Across each phase, the trainer integrated two randomly-selected cards from the generalisation deck in the game. Regardless of the phase, the trainer never reinforced, nor provided corrective feedback for responding on these generalisation cards.

2.5 | In-situ probes

We conducted 30-min in-situ probes with the parents: one during baseline, four during intervention, and one at follow-up. The purpose of the in-situ probes was to examine whether the behaviour changes observed during the role-play situations generalised to real-life settings with the child. During these probes, the trainer asked the parents to make requests to the child to examine cooperation. Both parents were present during the probes, except for the fourth intervention probe wherein the father was alone. Nonetheless, we scored cooperation separately for each parent. That is, if the mother made the request, we scored the cooperation for the mother and vice versa for the father. To remain consistent with Tahir et al. (2015), the trainer did not provide prompting, feedback, or reinforcement during the in-situ probes.

2.6 | Analysis

We visually examined changes in trend, overlap, and level across phases for each graph. In addition to visual inspection, we also applied the conservative dual-criteria method of analysis to each tier (see Fisher et al., 2003). Both analyses led to similar conclusions, which we discuss in our results below.

3 | RESULTS AND DISCUSSION

Figure 1 shows the results for the mother. Correct responding on the training cards systematically increased as the trainer introduced the strategies across each tier of the multiple baseline and persisted at follow-up. Responding on the generalisation cards improved for the reinforcement and correction strategies and remained adequate at follow-up only for one strategy (i.e., reinforcement). Furthermore, the mother showed similar levels of correct responding in in-situ probes across all phases. Child cooperation to mother requests during these

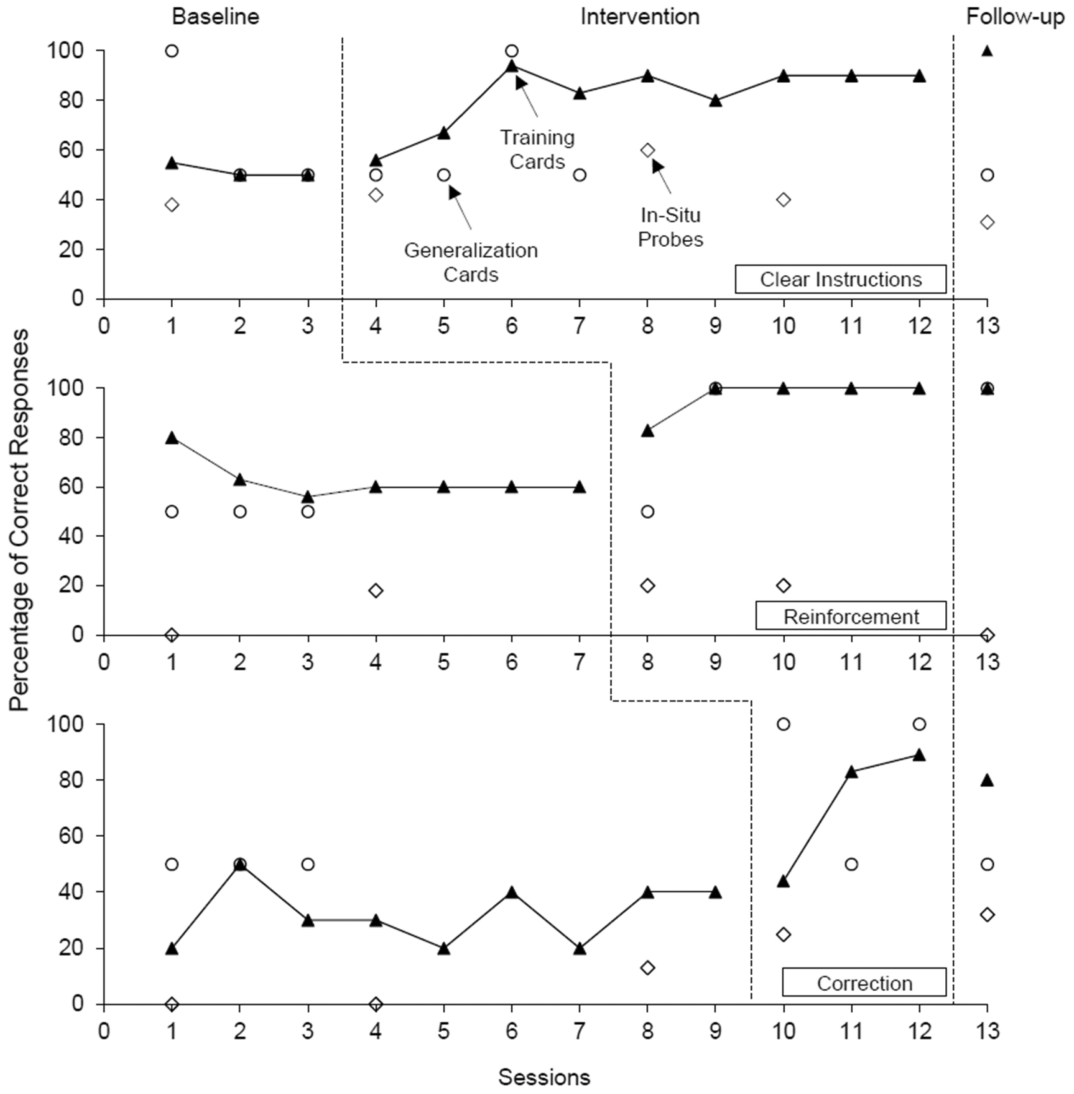

FIGURE 1 Percentage of correct responses for the mother across baseline, intervention, and follow-up sessions.

probes (not depicted on graph) was 100% at baseline, 55% during intervention, and 80% at follow-up. Figure 2 shows that correct responding systematically improved for the father as the strategies were introduced in the intervention phase, but the clear instructions and correction strategies showed lower scores at follow-up. In contrast with the mother, the father showed high correct responding on generalisation cards at follow-up, but these did not translate to correct implementation in the in-situ probes. Child cooperation to father requests (not depicted on graph) was 0% during baseline, 38% during intervention, and 100% at follow-up. The scores on the TARF-R items were high, with a mean of 4.7 on 5.0 for both parents. The mother reported that The Family Game helped her better respond to challenging behaviours whereas the father indicated that the program increased his self-esteem to deal with these behaviours.

Overall, The Family Game improved parenting behaviours during training (both parents) and generalisation (father only) role-play situations. That said, neither parent showed generalisation of these strategies to real-life settings. These results are nearly identical to those reported by Tahir et al. (2015) wherein parents displayed the strategies during the game, but failed to show generalisation during in-situ probes. This observation suggests that The Family Game should not be recommended as a standalone intervention. Some potential solutions to improve the game include adding a video feedback component and conducting in-situ training sessions (e.g., Egemo-Helm et al., 2007; Hodes et al., 2018). As shown by other researchers using in-situ probes (e.g., Gunby & Rapp, 2014; Miltenberger et al., 1999), providing feedback, reinforcement, and modelling to the parent during the in-situ probes may have resulted in better generalisation.

Our replication has some limitations that should be noted. Due to time constraints related to the COVID-19 pandemic, we conducted the in-situ probes with both parents simultaneously. Similarly, the parents could have shared or discussed the strategies outside the game setting, improving the effectiveness of the program. Another limitation is that we conducted a single in-situ probe during baseline. As such, responding during probes may not have been representative of typical parenting behaviours, especially since they were being

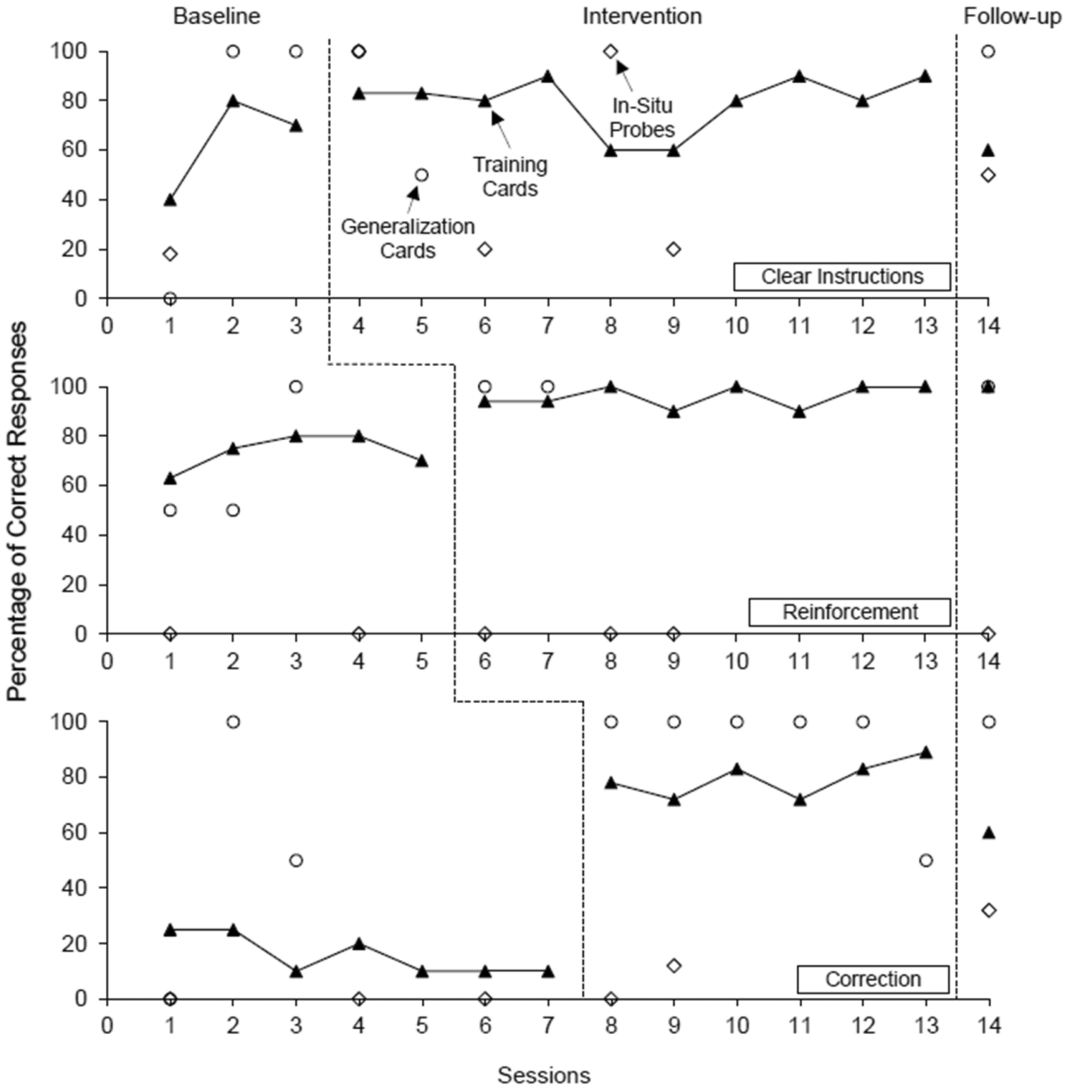

FIGURE 2 Percentage of correct responses for the father across baseline, intervention, and follow-up sessions.

observed by the trainer. A final limitation is that our experimental design only targeted two participants. Although the cornerstone of single-case methodology is replication and our results remained consistent with those reported by Tahir et al. (2015), researchers should strive to further examine the generalisability of our results. Considering these limitations, future research should modify the program by adding components designed to promote better generalisation to real-life settings while including a larger number of participants and more in-situ probes.

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CONFLICT OF INTEREST STATEMENT

None of the authors have a conflict of interest to disclose.

DATA AVAILABILITY STATEMENT

The data are available from the third author upon request.

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