# CASE STUDY



Young adults with intellectual disabilities participating in employment-related activities using the pathways and resources for engagement and participation intervention: A case study

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# Abstract

**Background:** Participation-focused interventions are gaining momentum. The Pathways and Resources for Engagement and Participation (PREP) is one such intervention, and it was investigated in this study for its effectiveness in supporting participation in employment-related activities for young adults with intellectual disabilities in Australia.

**Methods:** The application of the PREP approach was adapted to accommodate COVID-19 restrictions. Data were gathered from multiple sources in a triangulating manner following a case study design. Measures of performance, satisfaction, and a third measure of involvement were collected using the Canadian Occupational Performance Measure (COPM) in a multiple baseline format. The work questionnaire from the Assessment of Life Habits (Life-H) was administered at three time points, and qualitative data were collected post-intervention via a separate semi-structured interview with four young adults with intellectual disabilities and the two occupational therapist facilitators.

**Findings:** Performance, satisfaction and involvement scores had increased for 75% or more of employment-related goals at follow-up, although these changes were not statistically significant. Visual analysis indicated improved Life-H accomplishment scores post-intervention, but satisfaction with employment scores did not change. PREP was positively perceived, but the young adults reported needing more support from their participation teams.

**Conclusions:** The PREP intervention shifts the focus from a skills-based approach to a participation approach to practice and empowers young adults with intellectual disabilities to have greater independence over employment goals and related activities. COVID-19 restrictions limited the application of the PREP approach, but the experience was still valued by the participants, although additional training and

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support for them and the PREP participation team working with them may have further enhanced their experience and participation outcomes.

### KEYWORDS

employment, environment modification, intellectual disability, occupational therapy, participation

# Accessible summary

- New way to help with jobs: People are trying a new way to help young adults with intellectual disabilities find jobs. It's called the Pathways and Resources for Engagement and Participation (PREP).
- How they checked if it worked: They collected information from different places to see if PREP was helping. They asked young adults with intellectual disabilities and the occupational therapists to join and share their thoughts on PREP. They also used some tools to see if PREP was helping.
- Findings: Most people felt better about their job goals after using PREP, even though the changes weren't proven statistically. People liked using PREP, but they said they needed more help from their support teams.
- Conclusion: PREP is a good way to help young adults with intellectual disabilities be more independent with their job goals. COVID-19 made it harder, but people still liked it. They think more training and support could make it even better.

Participation (attendance and involvement in life situations) is reported as an important outcome for health and well-being (Imms et al., 2016). The International Classification of Functioning, Disability and Health (ICF) (2002) describes the interaction between peoples' body functions and structures, the activities they participate in and the factors in the environment which affect their experience of participation as a framework for understanding the barriers and enablers to participate in chosen life situations (Australian Institute of Health and Welfare, 2003). Employment is an important adult life situation integral to community participation and has been shown to improve the quality of life for young people with intellectual disability (Dean et al., 2018). Despite this, fewer than 40% (668,100) of these young people were employed in Australia in 2012 compared to more than 80% of people without disabilities (Australian Bureau of Statistics, 2012). This statistic has remained largely unchanged since 2003 (Australian Bureau of Statistics, 2006), and work to identify effective interventions which improve employment outcomes for young adults with intellectual disabilities is an increasingly important imperative (Gooding et al., 2017).

Amid this sense of growing urgency, factors affecting the transition to employment for young adults with intellectual disabilities have been identified (Sheppard et al., 2017), and a small number of studies exploring the effectiveness of employment-focused interventions for young adults with intellectual disabilities have emerged (Rosner et al., 2020; Shahin et al., 2020). Shahin et al. (2020) emphasised the importance of interventions which modify the physical, social, attitudinal and institutional environment, and other

environment-focused interventions have led to improved participation outcomes in life situations more broadly than employment (Anaby et al., 2018; Kramer et al., 2018). While families have reported feeling pessimistic that young adults with intellectual disabilities might not gain employment (Beyer et al., 2016), it seems that environment-focused interventions may offer promise for improving participation in employment.

Growing evidence suggests that environment-focused interventions are more practical and improve participation outcomes on a greater scale than programmes aimed at body functions and structures (Kramer et al., 2018; Shahin et al., 2020). Environmentfocused interventions aim to remove environmental barriers to participation in chosen activities by providing coaching to identify and overcome these barriers (Anaby et al., 2017) and by using existing and new relationships to assist in navigating environmental challenges. Interventions improving participation in leisure, productivity, and employment for young people with disabilities share evidence-based coaching techniques and the involvement of caregivers, families and community members who can support the young adult in problem-solving solutions to environmental barriers (Anaby et al., 2018; Kramer et al., 2018; Law et al., 2016; Verhoef et al., 2014). One such intervention is the Pathways and Resources for Engagement and Participation (PREP) approach (Anaby et al., 2018), where occupational therapists work with young people with disabilities to identify participation goals and build capacity in the young adults and those around them to identify, reduce or remove barriers to their participation. Involving families, caregivers, friends and community

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members as part of a 'participation team' enhances the capacity of the young person and their team. The role of the participation team is to contribute expertise, enthusiasm, and assistance in adapting activities, equipment or the environment for the young person (Anaby et al., 2018). Studies using PREP for young people with physical disabilities have demonstrated increased participation in community activities (Anaby et al., 2016a, 2016b; Law et al., 2016), improved body structure and function through participation (Anaby et al., 2020, and activity attainment beyond the targeted goals (Anaby et al., 2019). Coaching approaches are supported by PREP and demonstrate evidence for improving occupational performance (Law et al., 2016). Coaching approaches include person-, family- and occupation-centred practice and encourage the individual to develop their own solutions to address challenges to participation (Graham, 2020; Nevala et al., 2019). Participation outcomes are of interest to occupational therapists who reported benefits in using a context-based approach such as PREP, which helped recognise and overcome broad environmental challenges (Anaby et al., 2015). In Australia, the client-centred participation focus of PREP aligns with the National Disability Insurance Scheme (NDIS) which aims to support people with disabilities to participate in education, social activities, and employment (Lloyd et al., 2021). The NDIS shifts the focus from a block-funded, agency-based welfare system to individualised funding, which aims to promote choice and control for individuals with disabilities and supports participation goals (Lloyd et al., 2021). With sustained poor employment outcomes for young people with disabilities and increased awareness of the importance of participation outcomes, there is a need for evidence about the effectiveness of participation-focused interventions such as PREP when applied to employment-related activities.

The aims of this study were to (i) explore the effectiveness of PREP in improving participation in employment-related activities and (ii) capture the experiences of participants with intellectual disabilities and the occupational therapy programme facilitators when undertaking a PREP approach to intervention.

# 1 | METHODS

# 1.1 | Participants and recruitment

Ethics approval was obtained from the Australian Catholic University's Human Research Ethics Committee (220-229EAP). Young adults with mild to moderate intellectual disabilities aged 18–25 years were recruited using convenience sampling across three sites of a learning and development centre in Victoria, Australia. Easy English project information adhering to inclusive design standards was provided (Centre for Inclusive Design, 2020), along with the opportunity to attend information sessions and ask questions. Young adults with intellectual disabilities were included in the study if they spoke English and could provide informed consent. An expert advisory group, including experienced researchers, occupational therapists and individuals living with disabilities, met regularly to discuss participation-based approaches to goal setting and to facilitate self-guided training in PREP and the Canadian Occupational Performance Measure (COPM). Coaching and its implementation were discussed, including reference to the Occupational Performance Coaching approach, which can support an individual's agency in goal development, planning, actioning and evaluating success (Graham, 2020). The COPM and PREP learning modules can be completed in approximately 3–5 h, respectively. The modules provide a description, administration process and implementation guide (https://www.thecopm.ca/; https://www.prepintervention.ca/).

# 1.2 | Study design

Given the contemporary "real-world" context of adapting the PREP approach for adults with intellectual disabilities undertaking employment preparation activities, a case study approach to reporting the findings was considered most appropriate. Data were collected using mixed methods to allow for a robust understanding of the intervention effect (Ivankova et al., 2016). Quantitative data were gathered and analysed first, followed by qualitative data collection via interview. Data were gathered from multiple sources: (i) participant self-ratings using the COPM performance, satisfaction and the newly developed involvement scales, repeated over time to form multiple baseline single case datasets as previously used by Anaby et al. (2016b); (ii) participant self-report on the Assessment of Life Habits (Life-H) work questionnaire at three time points; and (iii) semistructured interviews with the young adults and occupational therapists to enable data analysis at three levels: individual, group and exchanges between individuals (Cvr. 2017). In this current study. a 2.5-week baseline was followed by a 4-week intervention for goal one, a 6.5-week baseline followed by a 4-week intervention for goal 2, and a 10.5-week baseline followed by a 4-week intervention for goal 3. Involvement and COPM Performance scales were completed biweekly from baseline to follow-up (18.5 weeks). COPM Satisfaction scales were completed at baseline, between phases and at follow-up (six time points). Separate semi-structured interviews with the young adults and therapists were recorded via videoconferencing for 60 min and moderated by the first author post-intervention. Multiple sources of data collection converging in a triangulating manner are wellsuited to real-world evaluations (Jones & Lyons, 2004; Yin, 2018).

# 1.3 | Intervention

The PREP manual guides therapists and individuals through the five steps of PREP: (a) make goals; (b) map out a plan; (c) make it happen; (d) measure the process and outcomes; and (e) move forward (Law et al., 2016). Supported by occupational therapists as the PREP facilitators, the young adults with intellectual disabilities and their families developed three employment-related goals. Three 4-week interventions involving coaching and environment modification were tailored to each individual and goal. The therapists modified

intervention procedures to online coaching sessions to account for COVID-19 restrictions, occasionally interrupting typically utilised context-based therapy.

# 1.4 | Measures and procedures

# 1.4.1 | The COPM

The COPM is a semi-structured interview supporting the development of goals and can track performance and satisfaction (Law et al., 2019b). Performance is defined as the skills and abilities a person uses in daily occupations and their satisfaction with that performance (Law et al., 2019b). The individual self-rates performance and satisfaction between 1 and 10 (1 = not able to do it/not satisfied; 10 = able to do it extremely well/extremely satisfied; Law et al., 2019a). The instrument can detect clinically significant change with an increase of 2 points (Law et al., 2019a). The COPM is a valid measure of participation when applicable to the population and when goals are participation-based rather than skill-based (Imms, 2020). It has been used with people with intellectual disability for employment (Hoffman et al., 2018; Temizkan et al., 2022), cerebral palsy (Sakzewski et al., 2007), stroke (Yang et al., 2017) and acquired brain injury (Jenkinson et al., 2007). It is recommended by the PREP manual (Law et al., 2016), supports client-centred practice and is a suggested goal-setting tool that aligns with NDIS processes (Mathews et al., 2020).

### 1.4.2 | Involvement scale

A newly developed involvement scale modelled on the COPM with a similar scale range of 1–10 (1 = *not involved*; 10 = *completely involved*) aimed to provide a measure of participation (C. Imms, personal communication, 8 October 2021). *Involvement* incorporates "the experience of participation while attending that may include elements of engagement, motivation, persistence, social connection and affect" (Imms et al., 2017, p. 20). Repeated measures of participation-related goals can provide evidence of change by introducing the intervention at different time points and staggering the baselines (Anaby et al., 2018).

# 1.4.3 | The Life-H

The Life-H collects information in 12 activity or social role domains (Fougeyrollas & Noreau, 2015). The domains are scored in areas of accomplishment ranging from 0 (*not accomplished*) to 9 (*accomplished* without difficulty) and satisfaction ranging from 1 (*very dissatisfied*) to 5 (*very satisfied*; Roy-Bouthot et al., 2014). The work questionnaire was self-reported by the young adults with intellectual disabilities at three time points and included eight questions relating to choosing and seeking employment, employment status, regular occupations,

and the use of workplace services. The measure has been used previously with a range of populations, including intellectual disability (Kaljača et al., 2014), down syndrome (Foley et al., 2014) and cerebral palsy (Sakzewski et al., 2007).

# 1.4.4 | Semi-structured interviews

Young adults and occupational therapists who participated in the PREP intervention were invited to semi-structured interviews. Before the discussions, the therapists received a question guide, and questions were piloted with young adults. Questions were targeted at identifying barriers, successes, areas for improvement and acceptability of PREP and the COPM. For example, young adults' and occupational therapists' experiences using PREP and the COPM were discussed. The young adults were supported in the interview by an experienced learning and development staff member. Field notes were completed during and after each discussion.

# 1.5 | Data analysis

Visual analysis of repeated measures data is commonly used to evaluate intervention effects (Lobo et al., 2017). In this study, visual analysis was used first to detect a change in COPM and involvement scales across phases. In addition, when comparing phases where floor and ceiling effect data were present in the baseline, the "percentage of phase B data points exceeding the median of the baseline phase" (PEM) was also calculated as a means of reflecting the effect size (Ma. 2006: Parker et al., 2011, p. 311). The baseline stability criterion was satisfied if 80% of the data fell within 15% of the median (Lobo et al., 2017). Extended celeration lines (ECL) were used to detect change between phases when baseline data were stable (Byiers, 2019). When more than 50% of data points in the intervention and follow-up phases were outside the ECL, the result was deemed to indicate an intervention effect (Anaby et al., 2014). A two-standard deviation band method calculated clinical significance when more than 5% of the intervention and follow-up data were outside the second standard deviation (Lobo et al., 2017).

Life-H reports were generated from the young adult participants' score sheets using an online calculator affiliated with the instrument. Raw Life-H accomplishment scale averages and satisfaction percentages were reviewed to detect any change in employment social roles and satisfaction within and between phases.

Reflexive thematic analysis was used to analyse semi-structured interview data and generate broad meaning and thematic patterns (Braun & Clarke, 2019). This provided insight into the PREP experience for young adults with intellectual disabilities and added context to the quantitative data. Braun and Clarke's approach to thematic analysis allowed for flexibility in the composition and size of datasets and was most applicable in this instance to guide the analysis and integration of the two datasets (the young adults' interview data and the therapists' interview data). The research team

-WILEY-(two experienced in vocational research) employed inductive thematic analysis to individually generate patterns and ideas. Subsequently, they convened as a team to discuss these ideas before independently generating themes. The researchers then revisited the process, meeting regularly to discuss the themes and review analytical outputs. The researchers bolstered the reliability of thematic analysis by maintaining an audit trail to document coding and thematic development, promoting the coder's consistency through regular discussions among multiple coders to align interpretations, and engaging in peer debriefing sessions to critically review and refine analytical decisions, collectively contributing to a robust and trustworthy analysis; a process supported by Braun and

#### 2 RESULTS

Clarke (2019).

Five young adults with intellectual disabilities and two occupational therapists were recruited for the intervention and semistructured interviews. Of the five young adults, four (two males and two females) aged 21-23 years (M = 22.08 years, SD = 1.08 years) completed the intervention, and three participated in the interview (two males and one female). One participant withdrew from the study before goal development, and one could not attend the interview due to scheduling issues. All the young adult participants completed secondary education at specialist schools and attended the learning and development centre as their primary occupation. The young adults and their families selected a range of employment-related goals, including skills for job readiness, seeking, and accessing employment. COVID-19 restrictions interrupted 27 days of the 12-week intervention and the entire 4-week follow-up phase. The occupational therapists and an allied health assistant working with the young adults with intellectual disabilities provided an average of 2.0 sessions (SD = 0.75) and 1.9 h (SD = 0.44) of therapy per goal. Both therapists completed the semi-structured interview. One had 18 months of experience working with people with physical and intellectual disabilities, and the senior therapist had over 10 years of experience in community and acute healthcare.

### 2.1 Performance and satisfaction in employmentrelated goals

Twelve goals were analysed (three goals × four young adults with intellectual disabilities). More than 35 of 37 data points for performance and involvement scales were collected for participants P1, P2 and P4, and 28 of 37 data points were collected for P3. Ten performance goals showed instability in baseline; thus, the PEM approach was used to calculate effects in the intervention and follow-up phases. Performance scores indicated a range of 60%-100% PEM for 4 of 10 goals in the intervention phase and 63%-100% PEM for 8 of 10 goals in follow-up (see Figure 1).

Strong evidence of performance change in the follow-up phase was reported for P1 and P2. ECL was used for the two goals, displaying baseline stability. Goal 3 for P2 indicated an intervention effect (p = 0.004) and clinical significance. Goal 3 for P4 indicated that more than 5% of data points were above the second standard deviation in the intervention phase; however, no statistically significant effect was detected (p = 0.27). Across all young adults with intellectual disabilities, the COPM satisfaction scores increased by at least two points for 6 of the 12 goals in the intervention phase and for 9 of 12 goals in the follow-up.

#### 2.2 Involvement in employment-related goals

Participants increased their involvement in 10 of 12 employmentrelated goals following the intervention, as measured by the involvement scale. Young adults with intellectual disabilities with no activity attendance (i.e., no involvement) in the previous week recorded did not take part in the activity and scored 0 at that time point; however, these data were not displayed in the visual analysis. Attendance in the baseline phase was low for 6 of the 12 goals, reducing the number of goals that PEM could be calculated for from 12 to 5 goals, with the sixth goal meeting the criteria for ECL analysis. Four of five goals from three young adults with intellectual disabilities had a PEM of 67%-100% for the intervention phase and 88%-100% PEM at follow-up. ECL for P2 (goal 1) indicated clinical and statistical significance in the intervention (p = 0.008) and follow-up phases (p = 0.001).

#### 2.3 Changes to employment-related social roles

The Life-H indicated that no participants were employed, and three of the four participants were searching for employment before the commencement of the intervention. P3 gained employment in the follow-up phase but rated the Life-H accomplishment score lower at follow-up (7.71) than at post-intervention (8.07). Across the group, Life-H accomplishment scores increased from baseline (M = 3.66, SD = 1.02) to intervention (M = 5.57, SD = 1.50) and follow-up (M = 5.36, SD = 1.46; see Figure 2). Satisfaction levels of employment-related social roles using the Life-H did not change from pre-intervention to follow-up for young adults with intellectual disabilities.

#### The PREP experience 2.4

Themes were synthesised across datasets to generate a story of how PREP was perceived with the barriers and facilitators of success identified (see Figure 3). Young adults provided brief responses during the semi-structured interviews, limiting the number of quotations available.



FIGURE 1 COPM performance scores: Changes within and between phases. Black vertical line = baseline end; red/square framed weeks = COVID-19 restrictions; and P1-4 = participant 1-4. COPM, Canadian Occupational Performance Measure.

#### PREP was positively perceived 2.4.1 |

PREP was positively perceived by participants, seemingly related to the intervention's educational and empowering nature. Therapists alluded to the importance associated with ongoing professional development and knowledge translation: "It was a big learning curve to take that coaching point of view. It was really beneficial and something I would want to do more of in the future"; however, "it was difficult for me to take a step back and

be a coach rather than being hands-on and helping them in that practical sense" (OT2). The young adults with intellectual disabilities also enjoyed learning PREP: "I enjoyed learning about my goals. I want to learn more and do [PREP] again" (P4). The young adults with intellectual disabilities spoke to feelings of increased independence, confidence and autonomy in employment-related activities, which was supported by the coaching approach: "just coaching her through the ideas. ... and letting her make those decisions and take control. ... [P3] was so

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proud of [herself]. ... she felt motivated to continue after achieving that first goal" (OT1). The young adults with intellectual disabilities and therapists reported a recognised achievement in the activities and the young adults with intellectual disabilities were motivated to continue working towards their employmentrelated goals post-intervention.

Therapists discussed how the approach and its resources helped young adults with intellectual disabilities to understand and manage employment-related intervention plans. For example, the young adults appeared to be focused on their goal-related activities, had developed plans and put effort into gaining support from their participation teams. Furthermore, the young adults liked the COPM rating scales and felt confident to complete or learn the scales over time. Therapists tended to support the outcome measures; however, they found self-rating scales required extensive coaching due to varying levels of comprehension and therefore questioned the reliability of the instrument with young adults with intellectual disabilities.



**FIGURE 2** Life-H: Change in work scores. T1 = baseline, T2 = post-intervention, and T3 = follow-up.

# 2.4.2 | Barriers to success

Therapists discussed needing more training to support their understanding of participation, coaching, environment modification, and facilitating participation teams: "I was a bit overwhelmed, to be honest. ... there was a lot to read and a lot to get my head around" (OT2). Therapists reflected on facilitating participation teams and noted challenges communicating with families and learning and development centre staff in three areas: (a) describing the PREP programme and aims, (b) developing common goals, and (c) discussing roles and responsibilities. "We didn't identify it early on, but it ended up being a barrier that the [learning and development centre] staff didn't know what was going on" and "to be honest, I didn't follow up. I didn't have any phone calls with [the family]. Maybe that is something I should do next time, making sure they did get that email and they were on board" (OT2). This may relate to young adults with intellectual disabilities recounting inadequate support to enact participation plans from therapists and participation teams: "I try my best to ask them, but all the staff members can't help" (P4).

Consensus between participants and therapists suggested restrictions related to COVID-19 limited the amount of therapy and context-based sessions, and all agreed that more sessions and longer intervention timeframes would have better-supported goal attainment. However, therapists were ambivalent as to whether limited goal progress was due to the limitations imposed by COVID-19 or the young adults with intellectual disabilities requiring increased support due to cognitive difficulties: "It was a bit tricky getting [the young adults with intellectual disabilities] to understand what [their] plan was" (OT2).

Therapists discussed motivation as another barrier to participation. While the PREP approach was reported to enhance motivation, lower motivation was noted for activity goals set by one young adult's family and not set collaboratively with the young adult. One therapist said, "Sometimes a lot of decisions are made for them"



**FIGURE 3** Semi-structured interview themes. Rectangular frames are synthesised themes across datasets unless stated as specific to one interview group; Bold text denotes the central theme; Oval frames connect sub-themes.

(OT1), describing ongoing issues with empowering young adults with intellectual disabilities. Opportunities for increased independence in the community were reported to be limited by busy family schedules and families being reluctant to allow young adults with intellectual disabilities to take risks in the community.

# 2.4.3 | Facilitators of participation

Two separate themes appeared to facilitate participation: PREP shifting the focus of therapy from skill-building to building participation and the role of participation teams in the PREP approach. Occupational therapists described the change at personal and systems levels: "I don't know whether it's just me because I come from a very medical and acute background; it was just a different space in my head to be at when using that type of model" (OT1). The therapists discussed two sub-themes: supporting and shifting practice. Firstly, the model supported therapists in identifying environmental barriers: "It's a really nice learning and a bit of a reflective piece for us, working with participants who don't have physical disabilities to consider the environment to enable participation instead of skills to enable participation" (OT1). Secondly, therapists described how communicating with participation teams supported the goals of the young adults with intellectual disabilities: "It helped when I started doing those emails out to everyone involved, and then everyone was on the same page" (OT2). The therapists reflected on methods of communication and the importance of facilitating teams, considering the experience to be "a good learning point for next time" (OT2). Cohesion between therapists, participation teams and young adults appeared to improve over time, and the young adults expressed how therapists and participation teams believed in their abilities to achieve their employment-related goals. The young adults reported that speaking with their families about their goals helped them to plan and action employment-related activities.

# 3 | DISCUSSION

This study sought to evaluate the effectiveness of the PREP approach in enhancing participation in employment-related activities for young adults with intellectual disabilities. The results suggest that PREP supported young adults to have greater ownership and independence in setting meaningful employment-related goals. The young adults reported needing more support from their participation teams and the occupational therapists identified needing further training in PREP to successfully support the young adults with intellectual disabilities to achieve their employment-related goals.

# 3.1 | Environmental influences

Similar to previous research highlighting the importance of environmental modification to promote participation (Shahin et al., 2020; Sheppard et al., 2017; Verdonschot et al., 2009; Wallen & Imms, 2014), this study identified two key environmental influences

affecting participation in employment-related goals: (a) collaborative relationships, including those in the participation teams and (b) the perception of risk and risk management. According to Francis et al. (2018), barriers to collaborative relationships often result from communication breakdowns. Similarly, in this study, families and learning and development centre staff were initially unsure of what PREP offered, unaware of intervention aims and did not know their role in the programme. In addition, mitigating perceived safety risks associated with the independence required for some employmentrelated activities may have limited opportunities for the development of that independence, even where that was a goal for the young adult. For instance, during the semi-structured interviews, the occupational therapists highlighted situations where families expressed discomfort with a young adult accessing the community to deliver a resume to a potential employer. Additionally, there was hesitation about allowing one young adult to conduct a practice interview at a different LDC location to enhance interview skills. Protective behaviours to mitigate perceived risks have been previously reported as a barrier to employment for people with intellectual disabilities (Lloyd et al., 2021) and speak to the importance of developing strong collaborative relationships and trust among those supporting the young person. In this study, it was noted as therapists became more comfortable facilitating participation teams using the PREP approach, trust increased, and expectations of the participation team members became more closely aligned. A balance between independence and protection requires consensus about aims, appropriately scaffolded goals, and close collaboration within participation teams (Taylor et al., 2019). This study indicates that young adults with intellectual disabilities need a supportive participation team to achieve employment-related goals and that PREP can facilitate collaborative relationships between key stakeholders to support the young adults' goals.

# 3.2 | COVID-19 restrictions

Achieving a just-right fit between the young adults' capacities and goals was challenging for therapists during COVID-19 restrictions. This study aligns with the findings of Anaby et al. (2021b) on the importance of re-thinking therapy during a pandemic to facilitate capacity building. Previous studies using PREP with young people with physical disabilities reported an average of four sessions per goal (Anaby et al., 2016b, 2018), yet in this study, two therapy sessions per goal provided either in person or remotely were completed with the young adults with intellectual disabilities. The availability of therapy and participation team support was limited by COVID-19 restrictions, which affected the scaffolding of goals and likely the employment-related participation outcomes. PREP intervention length and intensity can vary depending on existing participation barriers, activity complexity, resources, and participation teams (Law et al., 2016). Further PREP training may have supported intervention programmes to be better tailored to each young adults' individual needs and focused goal setting more on participation outcomes.

# 3.3 | Goal setting

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Involving the young adults in setting motivational goals was critical for them to engage in employment-related activities and work towards the achievement of those goals. Acting on preferences which enable meaningful goal pursuit is a key component of selfdetermination (Curryer et al., 2015) and higher levels of selfdetermination have been linked with better employment outcomes for young adults with disabilities (Burke et al., 2020). Goals which were decided by the young adults themselves had increased COPM Satisfaction and Performance scores post-intervention. Employmentrelated activity attendance, as measured by the involvement scale, also increased during intervention and follow-up phases for these self-identified goals. The young adults reported participation teams believing in their ability to achieve their goals supported goal progress, aligning with findings previously reported that expectation influences employment-related outcomes (Sheppard et al., 2017). An occupational therapist reported that one young adult had less motivation for achieving goals that were set by the young adult's family, as opposed to when the young adult's family supported them in choosing their own motivational goals during the COPM process. Previous studies have found that young adults with intellectual disabilities identified barriers to choice and control, such as overprotective behaviours from those around them, including parents and social support (Haigh et al., 2013; Shogren & Broussard, 2011).

Research suggests that participation should be the entry point for change at activity and body function and structure levels (Imms et al., 2017) and thus should be the focus of intervention-related goals. There was a tendency in this study for the young adults, their families, and the occupational therapists to develop skill-based goals rather than participation-focused goals, and this may have limited the young adults' opportunity to participate in employment-related activities and affected the validity of the COPM to demonstrate participation outcomes. Despite this and the social barriers experienced due to COVID-19 restrictions, the young adults with intellectual disabilities in this study participated more often in employment-related activities of their choice and felt confident and supported to continue working on their goals post-intervention. Additional benefits such as these were also reported by Anaby et al. (2019), where changes in daily occupations persisted beyond goal achievement following the use of PREP to support adolescents with disabilities (n = 13) in community-based goals.

### 3.4 | Influences on therapy

The PREP approach in this current study shifted therapy from a focus on skill acquisition to a focus on participation. It also adopted a coaching approach to support young adults in choosing meaningful goals and modifying the environment to work towards employmentrelated goals. These approaches align well with the NDIS social model of disability, which recognises the multiple factors impacting participation and the need to provide individuals with choice and control to improve participation and health outcomes (Lloyd et al., 2021). The coaching approach used in PREP may have contributed to the trend in increased scores in the Life-H employment-related social roles. Although the increases were not to the significance level, the trend is promising and aligns with the findings of Kramer et al. (2018) for improving employment for young adults with developmental disabilities using a coaching approach. The change from hands-on therapy to coaching and environment modification appeared to advance the young adults' self-efficacy and reinforced the need for therapists to undertake practical training in developing participation goals, using coaching techniques, implementing environment modifications, and mobilising participation teams. The increased focus on the environment supported therapists to become aware of and make changes at individual and community levels.

# 3.5 | Outcome measures

The self-report scales used in this study appeared to empower the young adults by providing a forum to discuss, plan and evaluate service provision. Hagelskjær et al. (2019) found supporting individual preferences led to an increase in active participation in therapy when using the COPM with people with cognitive impairment. The young adults in this study enjoyed the challenge of learning the COPM rating scale and involvement scale and participating in the semi-structured interview. However, unstable COPM and involvement baseline data for some participants suggest that interval measurement scales may not be appropriate for all levels of intellectual disabilities, and suitability may depend on the time available for participant training and practice or research timeframes. Similar to findings from a systematic review on the applicability of COPM (Parker & Sykes, 2006), this study found that therapists and researchers completing the COPM with young adults with intellectual disabilities need to be skilled, well-trained and provide sufficient time for the young adults to learn the scale for reliable and valid use of the measure. The Life-H questionnaire holds promise as a self-report survey to be used with young adults with intellectual disabilities, although on this occasion, change scores did not reach significance.

### 3.6 | Limitations

Convenience sampling and small sample size were limitations for generalising the findings of this study. Baseline instability due to shortened timeframes was also a limitation. The PREP approach suggests a 4-week baseline is necessary to establish stability (Law et al., 2016), but only two and a half weeks were available for baseline in this study due to time constraints. It is unclear how much this may have impacted the stability; however, the internal validity of a study can be compromised if the baseline phase is extended when variance may be associated with chance fluctuations (Byiers, 2019). These limitations were countered by a rigorous approach to analysing

single-subject quantitative data over time supported by qualitative data from two separate sources, which provided an account of the PREP experience from both a participant's and a therapist's perspective. This method of using multiple sources of data to form a triangulated evaluation is consistent with a case study approach where the 'case' is bound by clear parameters and focused on a specific real-life context (Yin, 2018).

# 3.7 | Conclusions

PREP supports occupational therapists in translating knowledge into practice by employing coaching, collaboration and advocacy skills (Anaby et al., 2021a). The approach draws the therapist's attention to the multifaceted factors impacting participation in real-life environments (Anaby et al., 2016b). PREP is suited to NDIS funding models as it supports preferences, is goal-directed, and aims to increase employment and community participation. A focus on shifting choice and control into the hands of young adults with intellectual disabilities supports the use of PREP to enhance meaningful employment-related participation. Researching intervention effectiveness with a larger and more diverse sample of young adults with intellectual disabilities in employment-related goals across different locations would support a better understanding of the validity, reliability, and clinical utility of PREP with this population. Such information may further support the use of the approach in practice and when funded through the NDIS.

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### CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

### DATA AVAILABILITY STATEMENT

Data that support the findings of this study are openly available in CloudStor and are available upon request.

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