**Evidence review: Strategies to increase employment and economic participation for people with a cognitive disability  
Economic Particpiation and Employment: Summary Report**

**Summary Report**

The University of Melbourne  
UNSW Canberra  
Brotherhood of St Laurence

The **Economic Participation and Employment project** is funded by the National Disability Insurance Agency. The program aims to better understand the best available evidence regarding the effectiveness of different disability employment interventions and also provide insight into the best current evidence and practice relating to these programs. The research is a collaborative project between researchers at the Disability and Health Unit within the Melbourne School of Population and Global Health at the University of Melbourne, the Brotherhood of St Laurence and the University of New South Wales Public Service Research Group.

**Disability and Health Unit (DHU), Melbourne School of Population and Global Health, The University of Melbourne**

DHU aims to improve the health of people with disabilities, their families and communities through rigorous research and knowledge exchange. DHU brings expertise in complex data analysis, mental health, employment, gender studies, and public health. They lead a range of large interdisciplinary projects on employment programs for people with disability with a focus on youth. Other projects focus on violence, abuse and neglect; experiences of NDIS participants and utilisation of NDIS plans; young people with disability and young carers; monitoring disability-related health inequalities; and simulations of policy interventions to improve health outcomes for people with disability. DHU works collaboratively with governments, advocacy groups, services and other stakeholders to generate evidence about how to enhance the health and wellbeing of people with disability. The Unit hosts the NHMRC Centre of Research Excellence in Disability and Health.

**Public Service Research Group (PSRG), The University of New South Wales**

PSRG was established to partner with organisational clients to produce new insights into effective public service implementation and evaluation. They perform timely, high-quality and reliable research into public policy implementation. PSRG takes an inter-disciplinary and inter-methodological approach that recognises the complexity of contexts and plurality of interests involved in any policy implementation. The research projects build local practice while advancing global knowledge. PSRG takes a systems-based approach, engage with partners to build mutually beneficial relationships, adopting an assets-based approach. The Group’s thought-leadership and quality research contributes to both local practice and global knowledge of public service delivery, implementation and evaluation.

**Brotherhood of St Laurence (BSL)**

BSL has a long history of research and evaluation in the thematic areas of inclusive employment, economic security and labour market disadvantage, including mature age workers, women, refugees and new migrants, young jobseekers, employer engagement, people with disability and the VET/TAFE sector and transitions from education to employment. The BSL’s deep understanding of the supports and conditions that enable people to transition to employment is drawn from our unique position at the nexus of research, policy and practice. The BSL have long experience in developing, delivering and evaluating innovative employment support models to those who, for both structural and individual reasons, struggle to adjust to significant social and economic change. It also convenes and enables the national Transitions to Work Community of Practice and the National Youth Employment Body.

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University of Melbourne, UNSW and Brotherhood of St Laurence

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# Executive Summary

## Background

People with autism, intellectual disability and/or psychosocial disability experience poorer employment outcomes than Australians without disability. The NDIA’s vision is for people with autism[[1]](#footnote-2), intellectual disability and/or psychosocial disability to have the same opportunities to work as other Australians, and to ensure they have the confidence, support, and skills to take advantage of opportunities available within the workplace.

## Purpose of project

This project aims to provide the NDIA with the best available evidence of the effectiveness of different disability employment interventions in Australia for people with autism, intellectual disability and/or psychosocial disability through:

Development of a typology to describe the range of interventions and approaches (the Theoretical Review);­

A Systematic Review of national and international randomised controlled trials (RCTs) and observational studies;

An Environmental Scan of current research and evaluation on employment (Part 1) and interviews with stakeholder experts to identify good practice (Part 2); and,

Mapping the evidence.

The Systematic Review and Environmental Scan: Part 1, were designed to identify the state of research and evaluation and the extent and quality of the empirical evidence base however they yield different types of evidence.

The Systematic Review assessed interventions implemented as randomised controlled trials (RCTs) with a range of different comparator populations. Because people are allocated to an intervention randomly the outcome does not depend on pre-existing differences between the intervention and comparison populations, which may occur if people simply ‘opt in’ to an intervention. The Systematic Review provides information about the extent of the evidence base from RCTs and its quality.

The Environmental Scan Part 1 provides information about the extent of research and evaluation in the field and the types and quality of the Australian evaluations using meta-evaluation tools. Typically, evaluations are considered a ‘weaker’ form of evidence because many do not have comparison populations and/or people self-select or opt into being part of a program or intervention. This means we cannot be sure whether differences in outcomes are due to the characteristics of people who take up a particular intervention or the intervention itself. However, when interventions are multi-faceted and individualised, they are challenging, and often unsuitable, to evaluate through an RCT.

Technical reports from the Systematic Review, Environmental Scan Parts 1 and 2 (Mallett, Brown and Finnis, 2021) provide a detailed account of the methods and findings. Report details are listed below.

Weld-Blundell I, Shields M, Davy L, Dickinson H, Kavanagh A, Marck C. (2021). *Interventions for employment participation in people with autism, intellectual disability and psychosocial disability.* University of Melbourne, UNSW Canberra. Melbourne.

Brown D and Mallet S. (2021). *Environmental Scan Part 1: Current research and interventions to promote economic participation of people with a disability.* Brotherhood of St Laurence, Melbourne.

Mallett S, Brown D and Finnis J. (2021). *Environmental Scan Part 1: Views of experts in the field on effective employment interventions for people with a disability*. Brotherhood of St Laurence, Melbourne.

## Findings

### Theoretical review

We developed a two-level typology informed by understandings of supply and demand-side labour market dynamics and adapted from work done by the International Labour Organisation (ILO) (International Labour Office, 2014). The typology distinguished three broad approaches to employment interventions/strategies to increase labour market participation:

1. *Supply-side* – interventions seek to build the capacity of jobseekers to be (more) ready and able to find and engage in work and/or build the capacity of employers to employ people with disability.
2. *Demand-side* – interventions create work opportunities for people with disability.
3. *Bridging interventions* – match people with disability to appropriate work opportunities and provide support to both employers and jobseekers to enable positive employment outcomes.

Some of the employment programs had elements of one or more of these approaches. The typology was used to group and analyse the interventions identified in the Systematic Review and the Environmental Scan.

### Systematic Review

Twenty-six RCTs were identified (23 for people with psychosocial disability, 3 for people with autism and none for people with intellectual disability).

All RCTs were judged to be of moderate or high risk of bias. With this in mind, there is some evidence to support positive impacts on attaining employment for:

* Individualised Placement Support (IPS) among people with psychosocial disability
* Job Coach programs that combine IPS and intensive employment assistance for people with psychosocial disability
* For young people with autism, Project SEARCH and Autistic Disorder Supports demonstrated some benefits.

No RCTs were identified for people with intellectual disability.

### Environmental Scan – desktop review

The Scan identified 135 relevant research projects/publications (24 current and 111 completed since 2015); 129 current interventions being delivered in Australia; and 71 international interventions. Over 60 per cent of interventions in both Australia and overseas were supply side approaches, with the majority being vocational programs.

For people with psychosocial disability, the research and interventions field is narrow, with the majority focused on recovery-led vocational models that integrate vocational program components (job coaching, skill development, work experience, training, placement and support) with mental health interventions.

Initiatives and research focused on people with autism were similarly specialised. Much of the research and many of the interventions were narrowly focused on skills and recruitment for the technology industry, or data management in large corporations, commonly in the banking industry or the public service. Compared to the other groups, interventions and research were very workplace focused – adapting workplace processes and conditions to be able to accommodate and leverage the skills of autistic employees and job candidates.

Initiatives and research focused on people with intellectual disability tended to be more varied than for the other two groups. Research and interventions were heavily concentrated on vocational programs that provided skill development, work experience and work placements, often with ongoing support in the workplace. Compared to the autism field, these programs and research were more concerned with the jobseeker – their skills and experiences (or lack thereof), rather than the workplace or employers.

Thirty evaluations were identified through the Environmental Scan; 15 were either formative, process, or output evaluations and 15 evaluated the outcomes or impact of the program. There was insufficient information to assess 4 of the outcome/impact evaluations; 4 were rated as poor or satisfactory quality; 5 as good quality and two as very good quality.

Evaluations assessed as good or very good were assessed in terms of whether they were associated with gaining employment. The supply-side intervention evaluations showed:

* Positive effects from 3 IPS trials
* Self-reported evidence of benefit of maintain work from a universal employment/engagement program (JobAccess)
* Some benefits in terms of finding a job and feeling positive about work in the future from a career mentoring service (headspace intervention) for people with psychosocial disability
* Progress against a work/study goal in a headspace Digital Work and Study Service where the intervention is delivered digitally for young people with psychosocial disability

The one bridging intervention implemented in the Victorian public service rated as good was for people with autism in the Victorian government. This showed positive experiences in the workplace; however, the sample was extremely small and did not capture sustainability of work.

While not all programs had been evaluated, the project did highlight that some interventions are better documented (if not evaluated) than others. These included structured, work integrated vocational programs; work integrated social enterprises (which combines elements of supply, demand and bridging interventions); and customised employment.

### Environmental Scan - expert interviews

Thirty-four academics, senior government and non-government executives who hold expertise in disability employment policy and programs participated in interviews and focus groups.

These interviews emphasized the need to move beyond supply-side focused interventions and combine elements of demand and bridging interventions.

Experts highlighted the importance of employment interventions that:

* Build the capabilities of people with disability to secure employment as well as employers’ abilities to match or create employment opportunities;
* Are guided by a set of principles including person-centered approaches that hold high expectations of people with disability and employers;
* Involve co-designing workplaces with employers to support their capability to employ people with a disability and co-design inclusive workplaces with people with disability;
* Promote ‘place and train’ rather than ‘train and place’ models for people with intellectual disability;
* Attend to workplace culture and communication with colleagues; and,
* Take into account the episodic nature of psychosocial disability by offering flexibility and control over their work.

Stakeholders also noted the lack of opportunity to share good practice in program design, implementation and evaluation.

Many of the insights that emerged from interviews are relevant to the broader disability employment ecosystem, of which the NDIA is a part, but are beyond the specific remit of the NDIA in its direct work with NDIS participants.

## Insights and considerations

Based on the limited the empirical evidence base, there are some programs worth considering:

* IPS for people with psychosocial disability;
* Jobcoach – a program for people with psychosocial disability that combines IPS with intensive employment assistance support;
* Combining cognitive behavioural therapy with traditional vocational programs for people with psychosocial disability;
* Mentoring programs for people with psychosocial disability.

Work-integrated training for people with autism is also worth considering. Other areas of emerging practice that are worth exploring further:

* Structured, work integrated vocational programsacross all cohorts;
* Work integrated social enterprises; and,
* Customised employment,particularly for people with intellectual disability.

Based on experiential evidence from experts a number of principles could be embedded across all the programs including: person-centredness; lifecourse approaches; working across the employment pathway; and, holding high expectations of jobseekers and employers.

Moving forward, there is a need to work across the disability employment ecosystem including with the Department of Social Services and the Department of Education, Skills and Employment, people with disability, employers and other stakeholders to generate high quality evidence and foster good practice across the system. This could include:

* Identifying ways to combine supply, demand and bridging interventions which the experts identified are likely to be more effective as they have the potential to build capability across the entire system;
* Develop mechanisms for sharing good practice in disability employment programs and evaluation;
* Investment in developing an evidence base through greater investment in:
  + Organisations conducting formative, process and output evaluations
  + Conduct of impact and outcome evaluations, particularly where formative, process and output evaluations have already been conducted and there is a good reason to believe an intervention might be successful
  + Explore the potential of pragmatic RCTs, quasi-experimental studies (e.g. before and after studies) and mixed method approaches to testing and evaluating interventions.
* Establishing agreement on employment outcomes that extend beyond the binary state of whether or not someone has a job and include job sustainability, the quality of work, and other indicators of success.

# 1. Introduction

## 1.1 Overview of project

People with autism, intellectual disability and/or psychosocial disability experience poorer employment outcomes than Australians without disability. The NDIA’s vision is for people with autism, intellectual disability and/or psychosocial disability to have the same opportunities to work as other Australians, and to ensure they have the confidence, support and skills to take advantage of opportunities available within the workplace.

This project provides the NDIA with the best available evidence of the effectiveness of different disability employment interventions in Australia for people with autism[[2]](#footnote-3), intellectual disability and/or psychosocial disability through:

1. A review of theoretical evidence of the types of interventions and approaches being used and how effectiveness is measured;
2. A Systematic Review of national and international randomised controlled trials and observational studies to identify the interventions that are effective, the quality of the evidence, and evidence gaps;
3. An Environmental Scan of current research on employment and economic participation for people with autism, intellectual disability and/or psychosocial disability, what is known about current models and the views of experts in the field; and,
4. Development of an evidence map that provides information about the quality of evidence across different types of interventions among specific populations and the intersections between research evidence and current practice.

Both the Systematic Review and Environmental Scan covered specific and targeted evidence and interventions for the three cohorts. The Environmental Scan also examined, universal employment platforms and approaches for the general population that are inclusive of people with a disability and particularly those with autism, intellectual disability and/or psychosocial disability and provided data for one or more of these three cohorts.

## 1.2 Project protocols

The protocols for the Systematic Review and Environmental Scan were developed in consultation with the National Disability Insurance Agency (NDIA), Research and Evaluation Branch. In the protocol development phase clear and systematic protocols were developed for a Systematic Review of contemporary and best available evidence as well as an Environmental Scan of current policies programs and practice in relation to the three identified cohorts. Research questions, inclusion and exclusion criteria, search terms, context and definition of the population groups were clarified and approaches to identifying the programs and practices for the Environmental Scan were agreed upon. The NDIA also assisted in the identification of experts for interviews in the Environmental Scan. Protocols were submitted to the Research and Evaluation Branch before commencing interviews with identified experts in the field.

## 1.3 Project approach

Figure 1 describes how the different components of the project worked together to generate a conceptual framework (typology of practice), research and quality of evidence from trials of vocational interventions (Systematic Review), scope of current Australian and international practice and non-RCT Australian research (Environmental Scan), and expert stakeholder views of effective practice.

#### 1.3.1 Theoretical review

The Theoretical Review was designed to identify the types of interventions used to increase work readiness and employment participation and how effectiveness was measured. To ensure that it was grounded in practice, we started by identifying the broad range and types of interventions based on the early findings of the Environmental Scan and Systematic Review. We used these findings and the theoretical literature to develop a typology of employment interventions.

#### 1.3.2 Systematic review

The Systematic Review specifically set out to assess the effectiveness of employment interventions for the target populations. As part of the Systematic Review, the approaches to measuring effectiveness were documented, and where relevant, validity was assessed. The findings from that assessment are presented as part of the Systematic Review.

#### 1.3.3 Environmental Scan

The Environmental Scan set out to map the current landscape of research and interventions aimed at promoting economic participation of people with disability (with a focus on the three target populations) and identify promising areas of practice or innovation. To this end, the scan explored the state of current and recent Australian research, the state of current Australian and international interventions, and the views of experts in the field. Current research and interventions were identified through a desktop review, and the views of experts were gained through focus groups and interviews with 34 stakeholders. The desktop review component of the Environmental Scan is primarily descriptive with some limited analysis of the quality of intervention (using meta-evaluation) and identification of gaps and indicators of innovation. Interviews with experts provides deep knowledge about the components of effective programs, beyond that collected in traditional research studies.

#### 1.3.4 Evidence map

The findings from the Systematic Review, Environmental Scan and Expert Interviews were synthesised to identify what we know in relation to the typology outlined in the Theoretical Review.

#### 1.3.5 Insights and considerations

Having synthesised findings from the different components of the project and explicitly mapped evidence gaps, we then provide recommendations for consideration by the NDIA and the sector on how they might incorporate what this project has revealed into improving practice and their own research and evaluation.

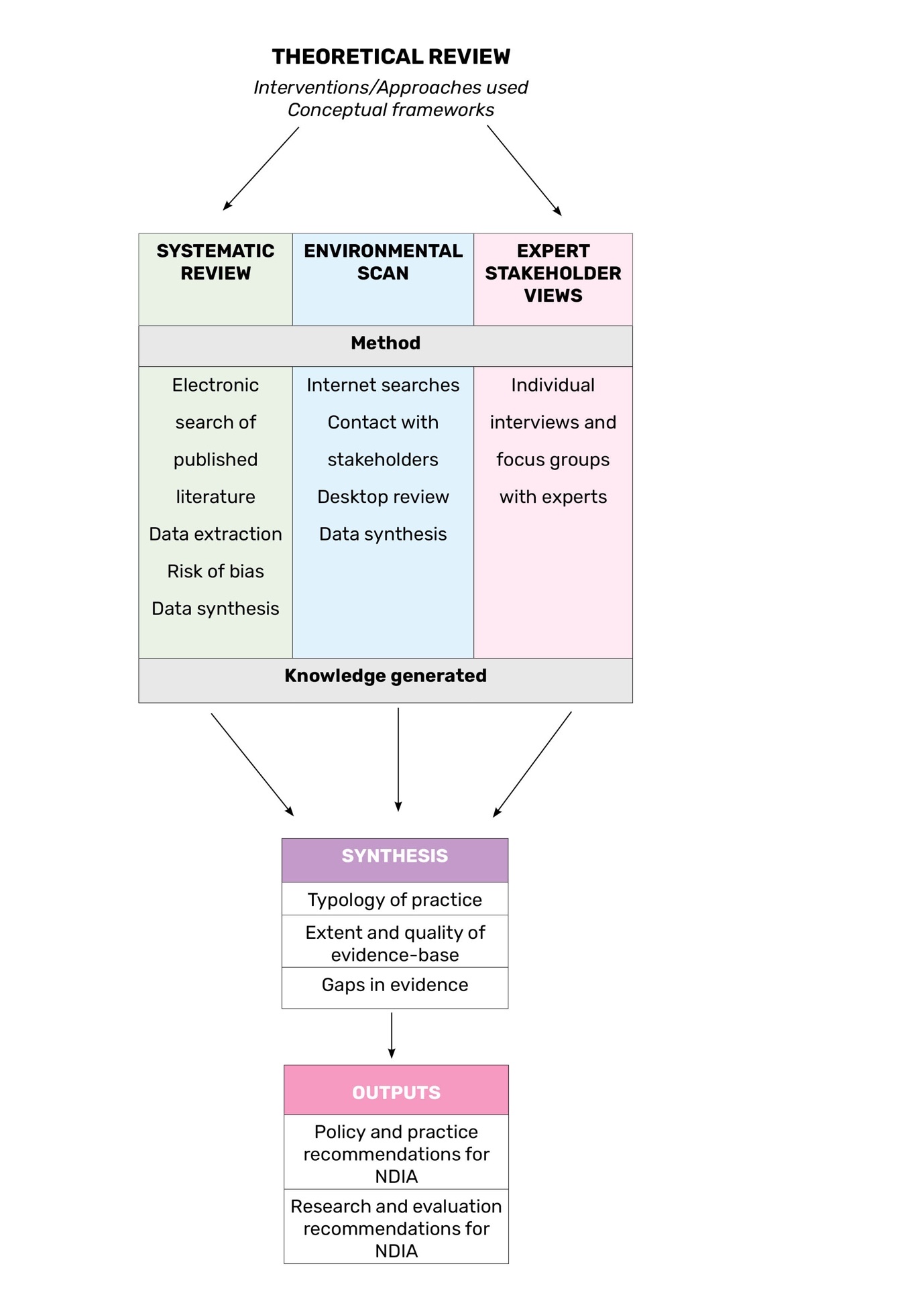


Figure 1: Description and contribution of project components

## 1.4 A note on evidence

The different components of the project yield different types of evidence. The Systematic Review assessed interventions implemented as randomised controlled trials (RCTs) with a range of different comparator populations. Therefore, the Systematic Review provides information about the extent of the evidence base from RCTs and its quality. RCTs aim to control for pre-existing differences between the intervention and control groups that might bias the results (referred to as confounders). However, many of the interventions are multi-faceted and/or individualised which makes them difficult to implement in a RCT.

The Environmental Scan provides information on the extent of research and evaluation in the field and the types and quality of the Australian evaluations using meta-evaluation tools, noting that evaluations usually did not include a comparator population and confounding is likely to be an issue even for outcome or impact evaluations. We refer to the evidence generated from the RCTs and other research and evaluation as ‘empirical evidence’.

The interviews with experts provide experiential knowledge about what works; we refer to their knowledge as ‘experiential evidence’.

## 1.5 Structure of this report

The report has eight sections:

1. Introduction (this section)
2. Theoretical Review
3. Systematic Review
4. Environmental Scan: Desktop Review
5. Environmental Scan: Views of Experts
6. Map of the evidence
7. Strengths and Limitations
8. Insights and Considerations

Technical reports from the Systematic Review (Weld-Blundell *et al.*, 2021), Environmental Scan (presented in two separate reports, Desktop Review (Brown and Mallet, 2021) and the Views of Experts (Mallet, Brown and Finnis, 2021)) are available as three separate reports.

# 2. Theoretical Review

## 2.1 Aim

The Theoretical Review sought to identify and categorise the types of interventions/approaches that have been or are being used to increase work readiness or employment participation for the three target populations; and to outline how effectiveness is being measured in employment interventions for the target populations (summarised in Section 6.3.1 of this report).

## 2.2 Development of typology

In order to find a way to make sense of the findings that we would generate through the project we first developed a typology of employment interventions. In doing this we drew on the existing evidence base where we found there is a common distinction made between supply and demand-side interventions. This supply-demand taxonomy is widely used by academics, a range of relevant international and national agencies (e.g., World Bank, OECD) and governments to categorise employment interventions. This distinction recognises the importance of labour market contexts and dynamics in shaping the employment outcomes of jobseekers. We developed a two-level typology informed by understandings of supply and demand-side labour market dynamics and adapted from work done by the International Labour Organisation (ILO) (International Labour Office, 2014). As described below, we developed an initial typology which was further refined as we went through the project and collected more data.

The typology serves several important functions for this project. It provides an organising frame to understand the locus of intervention or where effort is being targeted (e.g., jobseeker and/or employer) as well as the scope of intervention. It also enables approaches or interventions to be grouped across a wide field of interventions facilitating the identification of patterns and gaps. We use this typology to organise findings from the distinct outputs of the broader project.

The first level of the typology distinguished three broad approaches to employment interventions/ strategies to increase labour market participation: supply-side strategies, demand-side strategies, and bridging strategies.

1. *Supply-side* – interventions seek to build the capacity of individuals to be (more) ready and able to find and engage in work and/or build the capacity of employers to employ people with disability. Supply side interventions are typically focused on developing human capital and/or inclusive workplace cultures, structures, processes and practices.
2. *Demand-side* – interventions create work opportunities for people with disability. They typically facilitate access to new or existing roles that would not otherwise be open or accessible to people with disability. Demand side interventions can span a range of interventions ranging from wage subsidies and social procurement to (micro) social enterprises.
3. *Bridging interventions* – match people with disability to appropriate work opportunities and provide support to both employers and jobseekers to enable positive employment outcomes. Bridging interventions can be stand-alone or part of supply or demand side interventions. They can include work posted on specific platforms that match employment with jobseekers as well as target job matching work with key employers.

In practice, employment interventions are not entirely discrete. They may fall into one or more of these categories. Moreover, these three approaches are not the only types of disability employment intervention, but they do represent those most typically used. Interventions that do not neatly conform to this typology work directly or indirectly with the broader community, rather than focusing specifically on people with disability or employers. These include interventions focused on shifting community attitudes about the value and contribution of people with disability in the workplace.

The second level of the typology specifies intervention types of interventions that fall under one of these three categories or approaches (supply, demand, bridging). An initial list of intervention types was compiled from the research team’s familiarity with the employment intervention literature. This list was then expanded upon and refined through the literature review process of the Systematic Review, and particularly, the identification of research and interventions as part of the Environmental Scan. The main types of interventions are summarised in Table 1 with their descriptions.

Table 1: Interventions to increase work readiness or employment participation and definitions

| **Intervention** | | | **Description** |
| --- | --- | --- | --- |
| *Skills development* | | | Skills development interventions provide work ready skill training for people with disability before or during employment. This can include training in personal development (including literacy, numeracy, social and/or cognitive skills), and/or vocational training. The aim of these types if interventions is to improve the employability of job seekers. |
| *Vocational rehabilitation (VR)* | | | Vocational rehabilitation is designed to return a person to the workforce typically after an accident, injury or medical issue that can include psychosocial disability. This is a managed process that aims to provide assistance according to assessed needs to achieve a meaningful and sustainable employment outcome. A range of services can be provided to individuals depending on their specific requirements and aims. |
| *Active Labour Market Programs (ALMPs)* | | | ALMPs are government commissioned and funded employment services which seek to increase the likelihood of job seekers securing and retaining employment through a combination of ‘pro-market' measures often relating to people’s behaviour, including strict job search and/or work requirements. ALMPs describe a broad range of policies, programs and interventions that can be broadly categorised as either work-first or human-capital development approaches:   * *Work first* approaches aim to produce a quick return to the labour market, irrespective of the quality or suitability of the job. Work-first measures may be more compliance-focused, including job search, training and/or work requirements. Work is generally characterised as being limited, mandatory and unpaid. * *Human capital development* approaches aim to improve jobseekers’ employability and achieve sustained employment transitions. These approaches often target those who are ‘harder to help’ and attempt to reduce labour market barriers. The interventions include more intensive, personalised and longer-term training and supports that focus on upskilling for long-term labour market prospects. |
| *Career guidance/ counselling* | | | Career guidance/counselling assists jobseekers to understand the range of employment and career paths that may be available in the labour market, and to identify which ones might be matched to their skills and interests. It may be accessed at any stage of life and is designed to assist jobseekers through work, learning and other career changes. Counsellors may also help jobseekers navigate available services and supports, look for work, and match them with available vacancies. |
| *Work experience/ internships* | | | Work experience/internships are short-term and typically unpaid opportunities, designed to provide experience of professional working environments particularly for young people. Placements provide opportunities to develop participant networks, job-ready skills and may involve on-the-job training. |
| *Work placements* | | Work placements schemes provide paid employment opportunities for jobseekers in either the private sector or public sector through a brokerage service where placements with employers are negotiated with or on behalf of jobseekers by a service provider (including education institutions). |
| *Apprenticeships/ traineeships* | | An apprenticeship or traineeship involves full-time or part-time work with an employer who provides an opportunity to learn all aspects of a vocation. They are structured, with a combination of on the job and off the job training at a training institution. The difference between a traineeship and an apprenticeship is that a traineeship is usually for around 12 months (apprenticeships usually last for three to four years) and is generally in a non-trade related area. |
| *Employer engagement/ education* | Employer engagement/education interventions aim to change employer perceptions of the costs and risk of employing people with disability, build their capacity to provide an inclusive workplace, and improve employment pathways for people with disability | |
| *Wage subsidies* | Wage subsidies seek to contribute to, or offset employment costs, providing a financial incentive for private businesses to hire eligible participants and greater flexibility in hiring options. | |
| *Employer targets/quotas* | Targets/quotas commit and/or require employers to hire a set quantity of people with particular demographic characteristics (in this case disability). | |
| *Work integrated social enterprise (WISE)* | Work integrated social enterprises use a social enterprise organizational model to provide employment opportunities for people with disability. A social enterprise is an organization that operates as a commercial entity but has specific social objectives. These organisations aim to maximize profits while maximizing benefits to society. Any profits are typically used to support social programs | |
| *Social procurement* | Social procurement approaches typically use the purchasing power of organisations (including government) to create social value for the community. They do this through direct job creation and/or purchasing goods and services from suppliers that employ people who may otherwise struggle to find paid employment | |
| *User-led organisations* | User-led organisations include cooperatives and mutuals; they are businesses primarily run, owned and/or controlled by people with disability. | |
| *Micro-enterprise / entrepreneurship* | Micro-enterprises are a form of creating self-employment and are sometimes called small business enterprises (SBE) or micro-businesses. They typically have minimal capital or start-up costs. | |

## 

## 2.3 Refinement of typology

The two-level typology was refined as the project progressed based on findings of the Environmental Scan and, to a lesser extent, the Systematic Review. As the scan progressed, two important findings were evident from the analysis of interventions. These shaped the final version of the typology.

First, it was evident that single component interventions can and are delivered on their own (e.g., career guidance). There are also multi-component interventions. Of these, two primary intervention groups were evident, each with sub-models: vocational programs and recruitment/brokerage/capacity building programs**.**

* *Vocational programs* are supply-led (i.e., focus on the jobseeker and their skills and experience or lack thereof). They typically combine two or more of a common set of interventions including: career guidance, skills development, work experience and/or work placements. They may be publicly funded/operated (such as ALMPs). There is a high degree of variability in these programs in relation to the elements they combine, the structured nature of the program, and whether or not they use a validated model or a looser collection of program elements. While most vocational programs were un-defined, the scan identified three notable iterations of vocational programs which follow a more structured or defined model:
  + Customised employment.
  + Individualised placement and support (IPS).
  + Work integrated training programs.
* *Recruitment/brokerage/capacity building programs*combine employer capacity building alongside jobseeker work placements and/or training programs. The scan identified one notable iteration of this approach:
  + Industry specific versions that typically partner with (or are embedded within) large corporations and train jobseekers in a highly specific set of skills.

Second it was evident from the analysis that in addition to the three high-level employment intervention types – supply, demand and bridging – there are a range of interventions that combine one or more of these approaches: supply and demand, supply and bridging, or supply, demand *and* bridging strategies. These findings are reflected in the finalised typology in Tables 2, 3 and 4. The typology also specifies whether there are examples of each of these types of interventions for the target populations – people with autism, intellectual disability or psychosocial disability.

This typology was used to group and analyse the interventions identified through the Systematic Review and the Environmental Scan. It provides a useful mechanism for understanding the disability employment intervention landscape, and identifying where the majority of effort by policymakers, service providers and researchers has been targeted.

Table 2: Typology of employment interventions for people with disability: Supply side

| **Common intervention types and combinations** | **Blank cell** | **Target populations** | **Typical examples** |
| --- | --- | --- | --- |
| **Vocational programs** | General | Common to all three groups and to universal programs  Often targeted at young people | Ticket to Work (AUS)  Owl Employment (CANADA) |
| Vocational programs | Individual placement and support (IPS) | Psychosocial disability | headspace IPS trial (AUS)  Orygen IPS trials (AUS) |
| Vocational programs | Customised employment | Often non-specified but notionally more common with intellectual disability | Centre for Disability Employment Research and Practice (CDERP) programs (AUS)  methode-IHW (Inclusive Redesign Method) (NETHERLANDS) |
| Vocational programs | Work integrated training programs | Marginally more common to intellectual disability | Integrated Practical Placement Program (AUS)  Project SEARCH (UK) |
| Vocational programs | Active labour market programs | Universal | DES (AUS)  Assisted Work (Arbeid med bistand) (Norway) |
| Vocational programs | Active labour market programs | Common to all three groups and to universal programs | Diversity Field Office program (AUS)  Project EARN (Employee Assistance and Research Network on Disability Inclusion) (USA) |
| ***Career guidance/ transition planning*** | General | Common to all three groups, most often targeted at young people | myWAY Employability (AUS)  Autism Work Skill Questionnaire (USA) |
| ***Work experience programs*** | General | Common to all three groups and to universal programs | National Work Experience Program (AUS)  Job in Sight (JIS) (SWEDEN) |
| ***Mentoring programs*** | General | Universal | AND Positive Action towards Career Engagement (PACE) Mentoring (AUS) |
| ***Assistive technology*** | General | Universal | QLD Skills Disability Support (AUS)  VICAID (UK) |
| ***Inter-agency networks*** | General | Often targeted at young people in the school to work transition | National Disability Coordination Officer Program (AUS) |
| ***Skill development*** | General | Universal | Specialisterne STEM labs (AUS) |
| ***Peer support*** | General | Common to all three groups | Purple Space (UK) |

Table 3: Typology of employment interventions for people with disability: Demand and bridging interventions

| **Supply/demand/bridging** | **Common intervention types and combinations** | **Target populations** | **Typical examples** |
| --- | --- | --- | --- |
| ***Demand*** | *Micro-enterprise initiatives* | Commonly universal and people with intellectual disability | Start Up/Regional Entrepreneurship Challenge (AUS)  Western Economic Diversification Canada Entrepreneurs with Disabilities Program (CANADA) |
| ***Demand*** | *Subsidies* | Universal | DES Wage Subsidy Scheme (AUS)  Inclusive Working Life Agreement (IA-avtalen) (NORWAY) |
| ***Demand*** | *Targets/quotas* | Universal | Japanese levy-grant scheme (JAPAN) |
| ***Demand*** | *Social procurement* | Universal | Buyability (AUS) |
| ***Bridging*** | *Recruitment/work placement programs (for job-ready candidates)* | Commonly universal and people with autism | Recruitability Scheme (AUS)  Microsoft Autism Hiring Program (USA) |
| ***Bridging*** | *Recruitment/ brokerage/ capacity building programs and General* | Commonly universal and people with autism | Specialisterne (AUS and INTERNATIONAL)  Marriott Foundation’s Bridges from School to Work Program (USA) |
| ***Supply and bridging elements*** | Industry specific recruitment/ brokerage/ capacity building programs | Commonly universal and people with autism, most often linked to the IT industry | DXC Dandelion (AUS)  Certificat Data Asperger (FRANCE) |

Table 4: Typology of employment interventions for people with disability: supply and demand elements

| **Supply/ demand/ bridging** | **Common intervention types and combinations** | **Target populations** | **Typical examples** |
| --- | --- | --- | --- |
| **Supply, demand and bridging elements** | *Work integrated social enterprises with an explicit transition function* | Too limited to say | Jigsaw (AUS)  Vanguard Laundry Services (AUS) |
| **Supply and demand elements** | *Apprenticeships* | Universal | Shaping Futures Pilot Program (AUS) |
| **Supply and demand elements** | *Work integrated social enterprise (including supported employment)* | Common to all three groups | Australian Autism Academy (AASQA) (AUS)  Einer für Alle (One for All) (AUSTRIA) |

# 3. Systematic Review

## 3.1 Aim

The Systematic Review assessed the empirical evidence for *vocational interventions[[3]](#footnote-4)* aimed at improving employment participation of people with autism, intellectual disabilities and/or psychosocial disabilities. Therefore, it sought to directly inform the NDIA on what programs can best support NDIS participants in the target populations.

## 3.2 Methods

Studies were included if they reported on the primary outcome of interest for this systematic review: open or supported employment[[4]](#footnote-5) at the follow-up closest to the end of the intervention, but no longer than 12 months post-intervention. Secondary outcomes of interest from eligible studies were also included: sustained employment; job satisfaction (measured using validated tool); and work readiness (measured using validated tool).

The protocol for this Systematic Review was a-priori registered with PROSPERO (International prospective register of Systematic Reviews, CRD42020219192).  The full technical report is available and provides more detail (Weld-Blundell *et al.*, 2021).

Interventions were eligible if they took place in a high-income country, and included a vocational component aimed at increasing participation in open or supported employment. We excluded interventions that included medical or pharmacological components as part of the intervention condition only or control condition only or if 25% or more of participants were not of working age (under the age of 16 or over the age of 64).

We searched eight databases (MEDLINE, Embase, PsycINFO, Web of Science, SCOPUS, CINAHL, ERIC, ERC) for published articles of randomised controlled trials (RCTs). We decided a-priori that if there were few (or no RCTs) for one or more of the target populations, we would conduct an additional search for non-randomised interventions for those populations, based on the previous search strategy.

Search results were screened independently by two researchers using Systematic Review software COVIDENCE. The risk of bias of the RCTs was assessed using the Cochrane Risk of Bias tool (ROB-II).

## 3.3 Findings

We identified 26 RCTs of 2679 participants (range 14-219) (23 for people with psychosocial disability and three for people with autism). The duration of interventions ranged from 5-10 business days to 5 years. Additional searches were conducted to identify non-randomised interventions for autism and intellectual disability, however only two studies were identified (one for autism and one for intellectual disability) so these were not included in our synthesis below.

### 3.3.1 Study populations

The study populations were varied across the studies and were either restricted to people in the target population who were unemployed or not in work (for varying lengths of time) at baseline or employed or unemployed people at baseline.

#### Control group

The non-intervention (control) group varied across the RCTs. Most studies focussed on supply-side vocational interventions and tested one component of those interventions (e.g., virtual reality interviewing) with a wait list control group. Some studies compared the intervention group with usual practice (e.g., Project SEARCH compared to usual high school special education supports (Whittenburg *et al.*, 2020). Other studies compared a particular vocational intervention with that intervention plus an additional element (e.g., IPS with motivational interviewing vs IPS only (Craig *et al.*, 2014).

### 3.3.3 Definition of primary and secondary outcomes

In terms of the *primary outcome* of this systematic review, the majority of included studies defined open employment as work that paid at least minimum wage, that was located in mainstream settings and open to applicants from the general public. Three studies operationalised competitive employment as accepted job offers while other studies defined open employment as accepted job offers and actively working at that job. Definitions of employment included working duration varying from 1 hour through to continuously worked in a job for at least 2 months for at least 20h/week. In some studies, it was not clear how the employment outcome was defined.

Only six studies measured *secondary outcomes* of interest with some reporting more than one secondary outcome. Secondary outcomes included: sustained employment (n=1), job satisfaction (n=1) work readiness (self-esteem and empowerment, n=4) assessed using validated instruments, and economic evaluation (n=4). No studies formally measured barriers or facilitators to implementation.

### 3.3.4 Summary of study findings

Eight (out of eight) studies favoured IPS compared to traditional vocational rehabilitation (TVR) on open employment. Two (out of three) studies favoured IPS compared to control conditions other than TVR. Three studies assessed the effect of IPS plus another intervention, with mixed outcomes. One study that examined three interventions favoured IPS and IPS plus over TVR at the first time point, and IPS plus over IPS at both time points. The remaining eight studies showed positive effects for the Job Coach intervention, and for supported employment plus skills development interventions. There was no strong evidence for the vocational coaches intervention, vocational empowerment photovoice intervention, or virtual reality job interview training. Two (out of three) studies with people with psychosocial disability found that more participants in the control than IPS or Job Coach conditions were in sheltered employment.

The findings of all three studies with people with autism were in favour of Project Search and ASD Supports for open employment at the end of intervention, although one study was small and did not perform statistical analysis.

In the table below (Table 5) we summarise the results for the studies where the control groups were either wait list controls or usual practice (N=19), as these are most relevant. The remaining seven studies not included in the table compared IPS plus another intervention to IPS only (n=3), IPS to another control condition (n=1) or Vocational Coaches vs Standard Coaches (n=1) or Vocational cognitive behaviour therapy plus supported employment program vs. supported employment (n=1), and Thinking Skills for Work Program and Enhanced supported employment vs Enhanced supported employment (n=1). Full results are available in the technical report.

Table 5: Summary of Systematic Review findings (Note: all are supply side vocational interventions)

| **Intervention types** | **Author** | | **Target Population** | | **Primary outcome definition, n included in intervention and control group (I/C)** | **Primary outcome in % employed in intervention (I) vs control (C) group and p-value** | **Risk of Bias** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Individual placement and support (IPS)** | (Bejerholm *et al.*, 2015) | | Psychosocial | | At least 1 week in open employment up to 18 months, n=60/60 | 46.3% (I) vs 10.9% (C); p<.001 | Moderate | |
| **Individual placement and support (IPS)** | (Davis *et al.*, 2012) | | Psychosocial | | At least 1 day in last 12 months in open employment, n=43/42 | 76.2% (I) vs 27.9% (C), P<.001 | High | |
| **Individual placement and support (IPS)** | (Erickson *et al.*, 2020) | | Psychosocial | | At least 1 day of work: 0-6months, 6-12 months, n=53/56 | 60% (I) vs 57.7% (C) and 72.3% (I) vs 50.0% (C); both timepoints not significant | Moderate | |
| **Individual placement and support (IPS)** | (Howard *et al.*, 2010; Heslin *et al.*, 2011) | | Psychosocial | | Continuous employment for 30 days full-time (part-time employment pro-rata, n=110/109 | 22.1% (I) vs. 11.6% (C); p=.053 | Moderate | |
| **Individual placement and support (IPS)** | (Killackey *et al.*, 2019) | | Psychosocial | | Open employment at least 1 day/week in 6-month period, n=73/73 | 71.2% (I) vs 48.0% (C), p=0.025 | Moderate | |
| **Individual placement and support (IPS)** | (Michon *et al.*, 2014) | | Psychosocial | | At least 1 day of work (0-30 months), n=80/71 | 43.7% (I) vs 25.3% (C), p<.05 | Moderate | |
| **Individual placement and support (IPS)** | | (Oshima *et al.*, 2014) | Psychosocial | At least 1 day a week in open employment in 30 day period up until 6 months post-intervention, n=19/18 | | 44.4% (I) vs 10.5% (C); p = 0.022 | Moderate | |
| **Individual placement and support (IPS)** | | (Poremski, Rabouin and Latimer, 2017) | Psychosocial | At least 1 day a week in open employment in a 30 day period (20-27 into intervention), n= 45/45 | | 34% (I) vs 22%(C), p=0.16 but adjusted analysis p=0.02 | Moderate | |
| **Individual placement and support (IPS)** | | (Tsang *et al.*, 2010) | Psychosocial | At least 20 h per week in the job for >=2 months, 65/66 | | 44.6% (I) vs 6.1% (C), p<0.001 | Moderate | |
| **Individual placement and support (IPS)** | | (Twamley *et al.*, 2012) | Psychosocial | At least part of a day at 6 months, 12 months and 0-12 months, n=28/30 | | 56.7% (I) vs 28.6% (C); p = 0.031 | High | |
| **Individual placement and support (IPS)** | | (Waghorn *et al.*, 2014) | Psychosocial | At least 1 day a week in open employment between 0-12 months, n=102/106 | | 42.5% (I) vs 23.5% (C), p<0.01 | High | |
| **Work integrated training programs** | | (project SEARCH) | (Wehman et al 2014, 2017) | Autism open employment 9, 12, 21 months n=20/24 | | 74.2%(I)vs5.6%(c) P0.001 moderate | | |
| **Work integrated training programs** | | (Wehman et al 2020) | Autism | Open employment up until 9 months n=75/81 | | 31.6%(I)vs 5.6%(c), p=0.014 moderate | | |
| **Work integrated training programs** | | (Whittenburg *et al.*, 2020) | Autism | Accepted job offer in open employment (0-12 months, n=8/6 | | 83.3% (I) vs 12.5% (C), no statistical analyses  Moderate | | |
| **Cognitive remediation & vocational program** | | (Yamaguchi *et* *al*., 2017) | Psychosocial | At least 1 day in open employment in last 12 months, n=54/57 | | 62.2% (I) vs 19.1% (C), p<.001  Moderate | |
| **Virtual job reality interview training** | | (Smith, Fleming, Wright, Jordan, *et al.*, 2015) | Psychosocial | Accepted job offers within 6 months, n=22/48 | | 38.5% (I) vs 25.0% (C), no statistical analyses  High | |
| **Virtual job reality interview training** | | (Smith, Fleming, Wright, Roberts, *et al.*, 2015)(21,22) | Psychosocial | Accepted job offers within 6 months, n=8/17 | | 39.1% (I) vs 14.3% (C), no statistical analyses  High | |
| **Vocational empowerment photovoice** | | (Russinova *et al.*, 2018) | Psychosocial | At least 1 day in open employment post-intervention and 3 months, n=27/24 | | 14% (I) vs 4% (C), not significant  High | |
| **Job coach** | | (Hoffmann *et al.*, 2012) | Psychosocial | In open employment for at least 2 weeks over the 5-year study, n=54/46 | | 65.2% (I) vs 33.3% (C), p=.002  Moderate | |

\*Unclear definition and authors did not respond to request for further detail

#### Psychosocial disability

The majority of RCTs (15 of 23) were of Individual Placement Support (IPS). Other studies were other vocational interventions (e.g., Job Coach project), additional elements incorporated in an established program (e.g., traditional vocational program plus cognitive behavioural therapy), work-related skill development and career guidance.

Evidence for a beneficial effect of IPS on open employment outcomes was found for almost all of the IPS RCTs. Some evidence of benefit for cognitive behavioural therapy combined with traditional vocational programs was also found. There was also evidence that the Job Coach project which extended IPS models and include employment specialist support to identify suitable jobs, on the job training and, in the event of job loss, support and assistance to gain employment.

Other interventions, such as virtual job reality interview training and vocational empowerment photovoice, did not demonstrate any benefits. All studies were assessed as being at moderate or high risk of bias. Due to the large variability in the operationalisation and measurement of the outcome for both open and supported employment, we could not conduct a meta-analysis or GRADE assessment.

#### Autism

RCTs with participants with autism examined the effects of Project SEARCH with Autism Spectrum Disorder Supports. This program is a collaborator, employment-based employer training and placement program. The three studies showed a positive impact of these programs on open employment, although it was not clear how outcomes were defined. All studies were assessed as having a moderate or high risk of bias. All the RCTs identified were of young people aged 18-21 years.

#### Intellectual disability

No RCTs were identified that fit our criteria.

## 3.4 Summary

### 3.4.1 Main findings

For people with psychosocial disability, we found evidence for a beneficial effect of IPS compared to traditional vocational rehabilitation or other control condition on open employment outcomes. There was some evidence for other interventions also, but from single studies only. For young people, Project SEARCH and Autistic Disorder Supports demonstrated benefits. Few studies measured the secondary outcomes of interest, and there was no strong evidence that interventions improved sustained employment, cost-effectiveness, job satisfaction or work readiness. However, the results should be viewed with caution due to the poor quality of many of the studies and the lack of transparency and consistency in the ways in which outcomes were defined and measured.

### 3.4.2 Outcome measurement

Future efforts should be focused on establishing consistent standards of outcome measurement for employment interventions in this area, and a-priori publishing study protocols including outcome definition, measurement and statistical analysis plans. Furthermore, interventions assessing the effectiveness of vocational interventions on open and supported employment for adults with autism and for people with intellectual disability are completely lacking and urgently needed.

### 3.4.3 Recommendations for future trials of employment interventions

Conducting RCTs in this field is challenging. While RCTs might theoretically be ideal, they are limited in their capacity to test complex interventions in ‘real world’ settings. RCTs also require a considerable commitment of time and resources and raise ethical issues particularly if control groups do not receive any intervention. It is possible that pragmatic RCTs, quasi-experimental studies and mixed methods studies would be better suited to studying the impacts of multi-faceted, multi-level employment interventions for people with disability.

# 4. Environmental Scan: desktop review

The Environmental Scan set out to map the current landscape of research and interventions aimed at promoting economic participation of people with a disability (with a focus on the three target populations) and identify promising areas of practice or innovation. To this end, the scan explored the state of current and recent Australian research, the state of current Australian and international interventions, and the views of experts in the field. Thus, the Environmental Scan provides both empirical evidence as well as experiential evidence from experts in the field. In this section we report on the first two components (current and recent Australian research and current Australian and international interventions). The full technical report provides more detail (Brown and Mallet, 2021).

## 4.1 Aims

1. Identify current and recent (defined as 2015 onwards) Australian research aimed at improving employment participation of people with disability (with a focus on those with autism, intellectual disability and/or psychosocial disability).
2. Identify current Australian and international models, practices and innovations to promote economic participation of people with disability (with a focus on those with autism, intellectual disability and/or psychosocial disability).

Aim 1 was extended to include a meta-evaluation exploring the evaluations of Australian employment interventions to assess their quality.

## 4.2 Methods

Here we present a summary of the methodological approach taken for the Environmental Scan. Further details, including the full list of websites accessed and organisations contacted, are provided in the full technical report.

The Environmental Scan covered current and recently completed Australian non-RCT academic literature and grey literature. International research was out of scope and not explored. Literature was limited to work commenced or published in English between 2015-2021.

The Australian and international intervention scan covered initiatives currently being delivered and targeted at one or more of the three priority groups; universal initiatives (i.e., inclusive of all people with disability); and limited non-disability specific initiatives with demonstrated caseloads of people with disability. The international search was largely limited to OECD countries to enable comparison with the Australian context.

Literature and interventions were identified through the University of Melbourne Discovery search function, a platform connecting data bases, including Academic Search Complete, Business Source Complete, SocINDEX, EBSCO, and ProQuest; an online search of 81 Australian organisation websites and research repositories from the academic, consultancy, government and non-profit sector; a desktop search of a further 44 organisations from the public, community/provider, and philanthropic sectors; online searches of intergovernmental organisations (e.g. the OECD, ILO) and multi-national disability specific networks (e.g. European Association of Service Providers for Persons with Disabilities); and through expert consultations detailed in section 5. Lists of grant recipients for relevant Information Linkages and Capacity Building (ILC) Grant and Jobs Victoria Innovation Fund rounds; reports of and submissions to major government inquiries; and State and Territory Disability Employment Plans were reviewed. A further 22 organisations were contacted via email for further details on interventions. To identify current research projects not listed online, 103 research centres, institutes and schools and academic departments were also contacted via email.

Identified research and interventions were reviewed and compiled into a spreadsheet that inventoried key characteristics, including the target population, research/intervention design, evaluation/findings, location/organisation and funding source.

Interventions were categorised according to the typology outlined in Section 2 Theoretical Review above.

A meta-evaluation was also conducted on the evaluations of Australian programs in order to determine the approaches adopted and the quality of evidence produced. Evaluations were classified into five types.

1. *Formative evaluation*: Assesses whether program feasible, appropriate and acceptable
2. *Process evaluation*: Determines whether program activities have been implemented as intended
3. *Output evaluation*: Assesses progress in short-term outputs
4. *Outcome/performance evaluation*: Evaluation which assesses program effects in the target population
5. *Impact evaluation*: An evaluation that considers ‘positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.’

Outcome and impact evaluations were further assessed using the TAXUD quality assessment tool (European Commission, 2014) to assess quality of design, reliability of data, quality of analysis, credibility of findings and validity of conclusions. These were assessed as: 0=poor, 1=fair, 2=satisfactory, 3=good, 4=very good, 5=excellent which were summed and divided by 5 to calculate the mean and assign a rating from poor to excellent. We decided a-priori that we would report the findings of outcome and impact evaluations that were rated as good, very good or excellent.

## 4.3 Findings

The scan identified 135 relevant research projects/publications (24 current and 111 completed since 2015); 129 current interventions being delivered in Australia; and 71 international interventions. Interventions were categorised using the supply, demand, bridging typology and described in the Theoretical Review. The identified international interventions came from 18 countries, primarily in North America (48%) and Western Europe (27%). A small number of interventions were identified in Nordic countries, as well as East Asia, Western Asia, Africa, the Balkans and Australasia. Three interventions available across multiple countries were also identified.

### 4.3.1 Interventions and research by typology

The interventions identified in Australia and overseas fall along a continuum of supply, demand and bridging approaches, often combining elements from more than one category. Interventions in both Australia and overseas were heavily weighted towards supply side approaches (60% and 63% respectively). Demand side interventions were limited in Australia (12%) and internationally (17%). A further 17 per cent of the identified interventions combined elements of supply, demand and/or bridging approaches.

Vocational programs were the most common supply side interventions in Australia (35%) and internationally (31%). Twenty-two per cent of the Australian research also focused on vocational programs, primarily through program evaluations and literature reviews of factors that enable employment outcomes for people with a disability.

Employer engagement, education and capacity building interventions were the second most common type of intervention in both Australia (13%) and internationally (18%), becoming even more so if combined with interventions that deliver employer capacity building alongside jobseeker recruitment and/or training (rising to 23% in Australia and 31% internationally). These types of interventions also made up 17 per cent of the research.

Demand side interventions in Australia primarily consisted of micro-enterprise initiatives (12 of 15 initiatives), while internationally we predominantly found subsidies or workplace quota schemes. In both Australia and internationally, bridging interventions were all disability-focused recruitment and placement initiatives that matched ‘job-ready’ candidates, including tertiary graduates, with employment opportunities. The Australian research on these demand and bridging interventions was very limited (6%).

### 4.3.2 Interventions and research by target population

Half the identified Australian interventions targeted one of the priority groups for this project (with the remainder focused on all people with a disability), compared with 31 per cent of the identified international interventions. Seventy-five percent of the Australian research projects/publications focused on one or more of the priority groups.

Early intervention initiatives (i.e., targeting young people while still at school or in the transition from school to work) featured prominently in both the research and interventions, with 26 per cent of Australian interventions, 18 per cent of international interventions and 25 per cent of Australian research focusing on young people.

In Australia, interventions and research were both fairly evenly spread between the groups, with 19 per cent of interventions and 23 per cent of research focused on people with intellectual disability, 16 per cent of interventions and 23 per cent of research focused on people with ASD and 13 per cent of interventions and 20 per cent of research focused on people with psychosocial disability. Another 2 per cent of interventions and research were targeted at all three groups. Internationally, 17 per cent of interventions focused on people with intellectual disability, 14 per cent on people with ASD and 1 per cent on people with psychosocial disability; however, the limited number of psychosocial interventions is a result of the research team focusing on interventions for people with ASD and intellectual disability as the Systematic Review was heavily skewed towards this population.

### 4.3.3 Psychosocial disability

For people with psychosocial disability, the non-RCT research and evaluation is narrow, with half of the identified projects and articles focused on IPS. The most recent research consisted of evaluations of current headspace initiatives in Australia (see Section 4.3.6, Meta-evaluation, for further information); research from 2016-18 explored the evidence for IPS overseas. In Australia, 71 per cent of interventions for people with psychosocial disability or mental illness were characterised by recovery-led vocational models that integrate vocational program components (job coaching, skill development, work experience, training, placement and support) with mental health interventions. These interventions varied in how structured/clinical they were – for example IPS programs which were delivered via mental health providers, through to DES providers which had a specialist add on component of their service which employed ‘mental health specialists’ and delivered ‘healthy mind’ type activities.

Other interventions included three initiatives aimed at developing and promoting the use of a peer-work or lived experience workforce; an employer engagement initiative; and a work integrated social enterprise.

### 4.3.4 Autism spectrum disorder

Initiatives and research focused on people with autism commonly focused on employer capacity building, usually alongside jobseeker recruitment and/or training. Interventions and research tended to be workplace focused – adapting workplace processes and conditions to be able to accommodate and leverage the skills of autistic employees and job candidates. Seven of eight broad research reviews of factors enabling employment of people with autism focused on workplace factors, the perspective of employers, or the perspectives of employees with autism. In identifying actions and interventions to promote the employment of people with autism, these reviews focused heavily on changes to key settings and processes (including recruitment, professional development, physical environment and supervision/management) that were deemed essential to achieve successful employment outcomes.

Research and interventions were also more industry specific and associated with large corporations, with many of the interventions narrowly focused on skills for the ICT industry (commonly software testing), and in the case of Australia, on data management in the banking industry or the public service. These programs more closely resemble traditional graduate programs and recruitment agencies, than vocational programs such as DES.

Research driven tools or interventions – that is, research for the primary purpose of testing and developing a tool or intervention for use with people with autism – also featured in the research and intervention field, including an online career guidance platform for young people with autism; two different employer capacity building approaches; and an autism-specific training package for DES workers.

### 4.3.5 Intellectual disability

Initiatives and research focused on people with intellectual disability tended to be more varied than for the other two groups. Research and interventions were heavily concentrated on vocational programs that provided skill development, work experience and work placements, often with ongoing support in the workplace. Where research on employment of people with autism was very focused on the workplace, the research on people with intellectual disability was more focused on building the skills and work experience of the jobseeker. Compared to autism interventions, programs for people with intellectual disability were much less likely to focus on employer engagement and/or recruitment (17% compared to 50% for autism interventions).

Compared to the other target groups, several research projects had reviewed and synthesised the evidence base for a wide range of interventions and approaches for people with intellectual disability and identified common elements and practices including: early intervention while still at school (including building expectations with families); customised employment approaches; work integrated learning; and local collaboration between different sectors.

Two notable approaches were identified within the vocational programs area (both in Australia and internationally): customised employment and work integrated learning programs. These models tended to be more structured and intentional in their approach, with more codified practices than other vocational programs.

### 4.3.6 Meta-evaluation

Of the identified Australian interventions, 44 out of 129 had current or completed research associated with them (a total of 72 projects/publications since 2015). Of these, 19 interventions had one or more evaluations reports published; 11 had evaluations currently underway; and 13 had been the subject of non-evaluation research (e.g., case studies, scoping reviews). One intervention noted completed evaluations which were not able to be accessed by the research team.

For the 19 interventions which had been evaluated, 30 publications were identified and assessed for the quality of the evaluation. Tables 6, 7, 8 and 9 summarise the results.

Of the 30 evaluation reports, 15 were either formative, process, or output evaluations and 15 evaluated the outcomes or impact of the program. There was insufficient information to assess 4 of the outcome/impact evaluations; 5 were rated as poor or satisfactory quality; 5 as good quality and 2 as very good quality. The quality and outcomes of these evaluation are summarised in Tables 4.1, 4.2, 4.3 and 4.4

Findings from these evaluations include:

* Positive effects of employment from 2 IPS trials (headspace) with evidence of positive work and study outcomes and value for money although the sustainability of employment is of concern (KPMG, 2019, 2020) and one smaller evaluation of IPS (WorkWell) demonstrated weak evidence of benefits in achieving open employment (Scanlan *et al.*, 2019);
* A universal employment/engagement program (JobAccess) reported some self-reported evidence about its benefit in maintaining work (Colmar Brunton, 2019);
* Career mentoring service (headspace intervention) showed some benefits in terms of finding a job and feeling positive about work in the future (Miyazaki *et al.*, 2020);
* Progress against a work/study goal in a headspace Digital Work and Study Service where the intervention is delivered digitally for young people with psychosocial disability (The headspace Research & Evaluation Team, 2018)

The one bridging intervention rated as good was for people with autism in the Victorian government. This was evaluated using qualitative interviews and indicated positive experiences in the workplace however the sample was extremely small and did not capture sustainability of work. (Flower *et al.*, 2019)

Table 6: Summary of meta-evaluation of Australian interventions (Supply side vocational programs)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply/ demand/ bridging** | **Intervention types and combinations** | **Name of intervention** | **Target population** | **Type of evaluation** | **Quality of evaluations** | **Findings for outcome/impact evaluations very good or excellent** |
| **Supply** | *Vocational programs* | Ticket to Work | Universal | 1 process, 2 outcome, 1 impact | 2 poor, 1 satisfactory | Not applicable |
| **Supply** | *Vocational programs* | Studio G | Young people with autism | 2 output | Not assessed | Not applicable |
| **Supply** | *Vocational programs* | Career Launchpad (YouthWorX NT) | Universal | 1 output | Not assessed | Not applicable |
| **Supply** | *Vocational programs* | headspace Digital Work and Study Service | Young people with psychosocial disability | 1 impact | 1 good | N=127. Digital work/study support sessions. Average of 8.4 (range 1-91 sessions). 55% of participants made progress against work/study goal (e.g., gained a job, volunteering, job taster, enrolled in course) (The headspace Research & Evaluation Team, 2018) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply/ demand/ bridging** | **Intervention types and combinations** | **Name of intervention** | **Target population** | **Type of evaluation** | **Quality of evaluations** | **Findings for outcome/impact evaluations very good or excellent** |
| **Supply** | *Individual Placement Support (IPS)* | headspace trial | Young people with psychosocial disability | 1 impact, 1 outcome (cost-benefit analysis) | 2 very good | N=1558  43% achieved an education/employment outcome  Of the 1148, who had employment goal, 45% achieved employment however only 30% who of these were still in employment at 26 weeks (KPMG, 2019)  Cost benefit analysis showed that IPS has greater benefits in terms of employment than jobactive or DES and cost-benefit ration showed IPS similar to DES and more value for money than jobactive (KPMG, 2020) |
|  |  |  |  |  |  |  |
| **Supply** | *Individual Placement Support (IPS)* | WorkWell (IPS) | Psychosocial | 1 outcome | 1 good | N=97 participants  49.5% achieved competitive employment  63.9% achieved work-relevant outcome (e.g., competitive employment, volunteering) (Scanlan *et al.*, 2019) |
|  | *Customised employment* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Supply** | *Work integrated training programs* | Integrated Practical Placement Program | Intellectual | 1 output | Not assessed | Not applicable |
|  | *Active labour market programs* | No evaluations identified |  |  |  |  |
| **Supply** | *Employer engagement, education, capacity building* | Diversity Field Officer program | Universal | 1 formative | Not assessed | Not applicable |
| **Supply** |  | Integrated Employment Success Tool (IEST) | Autism | 1 process, 1 output | Not assessed | Not applicable |
| **Supply** |  | JobAccess | Universal | 1 outcome | 1 good | N=90 in-depth interviews, 748 surveys  JobAccess users, employers and employment service providers  Self-reported data suggests most helpful for people with disability maintaining work and less effective in finding a job or employers creating vacancies (Colmar Brunton, 2019) |
| **Supply** | *Career guidance/ transition planning* | myWAY Employability | Young people with autism | 1 formative, 3 process | Not assessed | Not applicable |

Table 7: Summary of meta-evaluations (Supply side non-vocational programs)

| **Supply/ demand/ bridging** | **Intervention types and combinations** | **Name of intervention** | **Target population** | **Type of evaluation** | **Quality of evaluations** | **Findings for outcome/impact evaluations very good or excellent** |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply** | *Mentoring programs* | headspace Career Mentoring service | Young people with psychosocial | 1 outcome | 1 good | N=78  60% gained a job while engaged with service  90% of 57 participants interviewed felt more positive about their work future (Miyazaki *et al.*, 2020) |
| **Supply** | *Assistive technology* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Supply** | *Inter-agency networks* | National Disability Coordination Officer Program | Universal | 1 outcome | 1 satisfactory | Not applicable |
| **Supply** | *Skills development* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Supply** | *Peer support* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |

Table 8: Summary of meta-evaluations (Demand and bridging)

| **Supply/ demand/ bridging** | **Intervention types and combinations** | **Name of intervention** | **Target population** | **Type of evaluation** | **Quality of evaluations** | **Findings for outcome/impact evaluations very good or excellent** |
| --- | --- | --- | --- | --- | --- | --- |
| **Demand** | *Micro-enterprise initiatives* | Start Up/Regional Entrepreneurship Challenge | Young people with intellectual disability | 1 output | Not assessed | Not applicable |
| **Demand** | *Work integrated social enterprise (including supported employment)* | Australian Autism Academy (AASQA) | Autism | 1 process | Not assessed | Not applicable |
|  | *Subsidies* | No evaluations identified |  |  |  |  |
| **Demand** | *Targets/quotas* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Demand** | *Recruitment/work placement programs (for job-ready candidates)* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Demand** |  | Recruitability | Universal | 1 formative | Not assessed | Not applicable |
| **Bridging** |  | Rise@DHHS | Autism | 1 impact | 1 good | 5 interviews with autistic employees. 10 co-workers who participated in 3 focus groups, 36 on line surveys. Autistic employees reported feeling included, accepted and integrated into the DHHS workforce and reported their employment having a positive impact on their health and wellbeing (Flaw et al 2019) |

Table 9: Summary of meta-evaluations (Programs combining different elements)

| **Supply/demand bridging** | ***Intervention types and combinations*** | **Name of intervention** | **Target population** | **Type of evaluation** | **Quality of evaluations** | **Findings for outcome/impact evaluations very good or excellent** |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply and bridging elements** | *Recruitment/ brokerage/ capacity building programs*  *General* | AND High Growth Jobs, Talented Candidates (HGJTC) | Universal | 2 outcomes | 2 insufficient information | Not applicable |
| **Supply and bridging elements** | *Industry specific recruitment/ brokerage/ capacity building programs* | No evaluations identified | Blank cell | Blank cell | Blank cell | Blank cell |
| **Supply, demand and bridging elements** | *Work integrated social enterprises with an explicit transition function* | Vanguard Laundry  Services (AUS) | Psychosocial | 1 outcome, 1 impact | 2 insufficient information | Blank cell |

Many of the evaluations served a primary purpose of service improvement for the provider (who had commissioned the evaluation), and so were often focused on process outcomes, key performance indicators or intermediate outcomes and measures rather than outcomes or impact. There was a pattern of providers commissioning relatively small-scale (given most interventions were small scale with limited resourcing) evaluations from universities, and it is unclear how well disseminated or institutionalised the knowledge base is within the sector.

The meta-evaluation was limited due to the scope and timing of the overall project. Detailed information on the methods used for many of the evaluations was not available, as many of the evaluation reports were tailored to specific audiences (e.g., service providers, funding bodies) who were more interested in outcomes, impacts and key learnings to inform practice than the methods. As the assessment process for the meta-evaluation relied on information about the methods used, the quality of data etc., this limited the meta-evaluation process.

Given this, the meta-evaluation is only an indicative assessment of one aspect of the evidence base for disability employment interventions in Australia. The assessment of the quality of the evaluations does not capture the complete contribution that much of this work has made in revealing key elements and practices for effective delivery of employment interventions.

## 4.4 Summary

A large number of national and international interventions were identified, heavily weighted towards supply side approaches. We find that intervention for people with psychosocial disability tend to focus on recovery-led vocational models that integrate vocational programs alongside mental health interventions and in Australia are typically delivered by mental health providers. Initiatives and research targeting people with ASD commonly focused on employer capacity building, usually alongside jobseeker recruitment and/or training and are typically very workplace focused. Initiatives and research focused on people with intellectual disability tended to be more generalised than for the other two groups. Research and interventions were heavily concentrated on vocational programs that provided skill development, work experience and work placements, often with ongoing support in the workplace.

Only a limited number of the interventions had current or completed research associated with them and for may there was insufficient information to assess these studies. In some cases, this was entirely appropriate because the interventions are not sufficiently developed to engage with outcome or impact evaluations. Those evaluations rated of good or very good quality showed some evidence of positive effects for supply-side programs (IPS, JobAccess and career mentoring) and a very small evaluation of a bridging program for people with autism in the Victorian public service found positive workplace experiences.

# 5. Environmental Scan: Views of experts

## 5.1 Aim

As part of the Environmental Scan, the views of experts in the field of disability employment were sought to deepen our understanding of policy, programs, and practice as they currently exist in the field. Their views provide experiential evidence of what works. A full technical report for this part of the Environmental Scan is available separately (Mallet, Brown and Finnis, 2021).

## 5.2 Methods

Mixed qualitative methods were employed combining semi-structured focus groups and interviews. A purposive sample was derived using both convenience and snowball sampling techniques. Fifty prospective participants were identified by the research team through existing knowledge of the disability employment sector; a desktop search of Australian university websites for academic experts, including relevant published literature; identification of high performing and innovative service providers through publicly available outcomes data and good practice awards; and recommendations from the NDIA, DSS, disability employment providers, academics working in the field and disability peak bodies and people with disability. Thirty-four academics, senior government and non-government executives who hold expertise in disability employment policy and programs participated. Just over half (56%) held specific expertise in one of the three priority groups; the remainder held more general expertise in disability employment. The final sample included participants from the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria. There was no representation from Western Australia and the Northern Territory.

Focus groups and interviews focused on the following questions:

* What is working?
* What is not working?
* What is missing?

Categorical and iterative thematic analysis was used to interpret findings, drawing out key details and examples to illustrate good practice in each category.

## 5.3 Findings

Participants identified a range of barriers and enablers of effective disability employment interventions at the program and practice level, and at the systems-level. They highlighted the importance of program and practice level interventions that build the capabilities of people with disability to secure employment, as well as the practices that build the capabilities of employers to match or create employment opportunities for these populations. Structural and systemic barriers and enablers for effective employment interventions focused on funding/commissioning, boundaries between service systems and workforce issues.

While many specified program design and practice elements of employment interventions for the disability groups of interest in this study – people with autism, intellectual disability or psychosocial disability – most focused on the specific characteristics of successful disability employment interventions with diverse groups of people with disability. This reflected their shared view that many elements of disability employment interventions are applicable to all disability populations. Most described approaches that fit within the supply, demand and bridging employment program typology, however they did not routinely employ this typology in their discussions.

### 5.3.1 Program and practice level barriers and enablers to effective disability employment interventions

Collectively interviewees pointed to five principles and associated practices for effective employment service interventions to build individual capability of jobseekers. Interviewees also noted that the development of individual capabilities of jobseekers is not sufficient to create employment (at scale) for people with disability. People need access to work experience and real jobs. This is contingent on employer demand, employment opportunities that match employer need with job-seeker capability, and conducive workplace environments. Six principles and associated practices to build employer capability to employ people with a disability were also identified.

Principles and practices for building the capability of jobseekers include:

1. **Build capability by implementing person-centered approaches.** Practices that underpin person-centred approaches include: aligning employment related opportunities with people’s goals, interests and choices; focusing on individual needs and capabilities; tailoring support to where the jobseeker is at in their journey to work; and engaging other (non-employment) support as required to facilitate successful employment outcomes.
2. **Design disability employment interventions to inspire and achieve high expectations of jobseekers and employers.** Interviewees stressed that a mindset shift about the capability of jobseekers with disability is a critical first step to effective practice and sustainable employment outcomes. By holding high expectations of and for jobseekers with a disability, employers, families and providers communicate that the jobseeker has the capability to make a valued contribution to the workplace.
3. **Apply a life course perspective.** The adoption of a life course perspective enables disability employment organisations, families and employers to plan and tailor age and stage-appropriate education, training and employment opportunities to people, particularly for young people in the transition from school to work.
4. **Intervene as early as possible.** Early intervention activities equip individuals and families with the necessary information to navigate transition into employment. To implement this approach at scale, the connections between schools, specialist disability employment services (e.g. SLES, DES, ADEs), universal employment services (e.g. jobactive, Transition to Work) and the VET sector need to be more flexible, intentional and collaborative.
5. **Create a line of sight to a job at all points on jobseekers’ employment pathway.** Skill and talent development should be geared towards an identified industry, workplace or actual job opportunity. In practice, interventions should set people up to succeed by creating authentic real-world opportunities for them to incrementally gain confidence, skills and readiness for employment.

Principles and practices for building employer capability to employ people with a disability include:

1. **Advance the social and economic inclusion of people with disability by working to shift employer attitudes and expectations.** Interviewees underlined the important role employers play in creating a disability employment system that values the contribution of people with disability in the workforce and facilitates and rewards success. Employers need to hold high expectations about the types of jobs people with disability can perform, and the forms of support that businesses provide for employees with disability.
2. **Resource employers with knowledge and information about disability employment to develop their capability to provide real employment opportunities for people with disability.** Knowledge around disability and available disability employment supports and functional adjustments is critical to inspire and motivate prospective employers to employ a person or people with disability. This information must be practical, addressing the identified concerns of employers including the impact on the business bottom line, as well as the capabilities, needs and available support and benefits of employing people with disability within their workplaces.
3. **Build trusting, supportive and constructive relationships with employers to create real employment opportunities in workplaces.** Strong, trusting and mutually beneficial relationships with employers underpin successful interventions with good outcomes. Practices which underpin these relationships include: understanding where providers can best help the employer; identifying shared responsibility for good employment outcomes; providing flexible and purposeful pre-and post-placement support; and tracking and celebrating successful outcomes.
4. **Co-produce mutually beneficial employment opportunities for people with disability in the workplace.** Interviewees stressed the need to leverage these trusting relationships to match and shape roles in workplaces to meet employer and jobseeker needs and capabilities. They highlighted that successful work experience and employment placements are demand-led, based on the business case for disability employment, and developed in collaboration.
5. **Co-design inclusive workplaces with employers.** Some workplaces require an upfront investment in time and effort to become inclusive environments. Examples of the kind of support required from providers include: reducing barriers to uptake/retention in both recruitment and human resources processes; instituting inclusive platforms for cross-team communication; and accessing equipment and/or other enablers necessary for successful employment outcomes.
6. **Work with employers to design and provide commercially viable employment for people with disability.** Almost all interviewees stressed that disability employer organisations, including social enterprises, need to secure ‘real’ commercially viable jobs for people with disability rather than paternalistic or patronising, ‘pseudo’ employment opportunities that are constructed by employers/organisation to fulfil corporate social responsibility goals.

### 5.3.2 Cohort-specific approaches

While the proposed principles and practices for effective employment interventions apply to all people with a disability, experts proposed some tailored approaches to address the needs and capabilities of people with autism, intellectual disability and/or psychosocial disability.

Experts stressed that the ‘place and train’ rather than ‘train and place’ model is considered best practice for people with intellectual disability. In their experience, this strategy has been demonstrated to work effectively and lead to better job retention. Additionally, while support workers and job coaches are a crucial support, they suggested jobseekers should be as closely embedded in a work or work-like environment as possible. They also highlighted that in their experience, people with intellectual disability benefit from job customisation and structured learning components (to engage colleagues and meet soft skill requirements), including direct instruction and database decision-making. Structured working environments were deemed essential to helping people with intellectual disability master their new roles, build capability and confidence.

People with autism spectrum disorder require support to gain jobs, which often necessitate strong, trusting partnerships with employers. The experts highlighted that for people with autism, workplace culture and communication with colleagues plays a central role. So too, providers need time to understand the interests and talents of the individual. Interviewees suggested more job tailoring is required, but when people are placed in the right job, people with autism experience good employment outcomes.

Employment interventions with people with psychosocial disability require approaches designed to respond to the episodic nature of these conditions. Experts stressed that people with psychosocial disability require flexibility and control over their work and variable supports. Employers who offer flexibility and control, allowing employees with psychosocial disability to care for their mental health are more likely to enable and sustain successful employment outcomes with this cohort.

It was also noted that all three groups face an additional challenge in that they face exclusion, stigma and other disadvantages at school. This can mean that they start comparatively behind in a system that already has high barriers.

### 5.3.3 Systems-level barriers and enablers to effective employment interventions

Interviewees emphasised four key interconnected system-level areas that impact on the capacity of the disability employment ecosystem to achieve employment outcomes at scale for people with disability:

* Siloes which result in hard boundaries within and across service systems.
* Approaches to commissioning and funding of services which do not enable and incentivise good practice.
* De-skilling and poor conditions in the disability employment services workforce.
* Issues with program design, the paucity of evidence and codified best practice.

In the context of these barriers, a range of high-level and specific solutions were posited to address the barriers identified in these four areas. In the course of this discussion four key principles for system and structural level reform were evident:

1. **Enable person-centred rather than system-centred practices in the employment intervention ecosystem.** Do this by: commissioning disability employment interventions with the capacity to tailor support to people’s needs; enabling disability employment interventions to integrate across systems to avoid hard boundaries; and ensuring funding and performance frameworks enable and incentivise good practice.
2. **Design and implement evidence informed disability employment interventions.** Interviewees identified the need across all programs for greater collaboration, flexibility and mechanisms for co-producing ‘codified’, evidence informed practices, processes, tools and resources. Some stressed the need for investment in the development of the data and evidence about ‘what works’.
3. **Value and invest in the disability employment workforce to maximise effectiveness and employment outcomes.** Effective employment services are dependent on the quality, skills and conditions of the workforce. Interviewees identified two key issues within the workforce: de-skilling that has occurred over several decades; and high staff turnover and churn due to poor conditions. Interviewees suggested investing in quality standards and training, and addressing the combination of low pay, high caseloads, and high compliance and administrative burdens have eroded job quality and job satisfaction for many in this workforce.
4. **Clarify, implement and communicate system level roles and accountabilities.** Interviewees indicated that there are interface issues between the systems that support people with a disability to gain and retain employment. Program and system level boundaries create and compound significant information, service and resourcing gaps for people with disability. They also result in duplication of services across systems.

## 5.4 Conclusions: the role of the NDIA in the disability employment ecosystem

Participating experts were also asked to comment on the role of the NDIS and more specifically the role of the NDIA in enabling employment for people with disability, including the target groups. All noted that the NDIS, including the NDIA, can and must play a strong role in enabling employment pathways for people with disability. The scheme has an enduring relationship with people over their life course, with the potential to have positive impact on employment pathways as people transition from childhood through to retirement age.

However, the particular role of the NDIA in the disability employment ecosystem currently remains unclear, particularly where its’ work intersects with other programs, organisations or actors in the system. Interviewees identified a range of ways to address this and specified some practices and actions that will assist the NDIA to positively support and facilitate people’s employment pathways (outlined below). These suggestions centered on the planning and community capacity building aspects of the scheme. Some stressed the importance of developing interventions in the context of a job, rather than as an abstract plan.

Several interviewees also suggested a role for the NDIA in funding or supporting the generation of evidence about ‘what works’. This could occur alongside a national strategy designed to develop, share and evolve evidence informed practices that promote effective employment pathways for people with disability.

# 6. Mapping the evidence

## 6.1 Aim

This section synthesises the empirical evidence across the Systematic Review and the Australian research and evaluation reported as part of the Environmental Scan in order to create a map of the evidence regarding the current state of knowledge and practice in relation to employment programs for people with disability in the three cohorts.

## 6.2 Method

A summary of how effectiveness is measured is provided. The quality of the evidence from RCTs and Australian evaluations is summarised according to the typology.

## 6.3 Findings

### 6.3.1 How effectiveness of employment programs has been measured

There has been no consistency in how effectiveness in employment programs were measured in the Systematic Review or in the evaluations identified in the Environment Scan. The majority of studies in the Systematic Review looked at open employment, however the hours of work and duration of time in work varied. Three studies simply measured job offers and others did not state how they had measured employment outcomes at all.

The outcome and impact evaluations tended to combine multiple outcomes as a single measure of success such as achieving any of a number of outcomes such as getting a job, volunteering, and/or progress on a specified work goal.

### 6.3.2 Summary empirical evidence from Systematic Reviews and Australian Evaluations

Table 10 shows the International and Australian RCT evidence and Australian evaluation evidence on attaining a job according to the typology outlined in the Theoretical Framework. Shaded boxes reflect where:

* There are one or more RCTs but no outcome or impact evaluation/s, or
* There are one or more outcome or impact evaluation/s but no RCT/s.

Where there were *neither* a RCT or outcome or impact evaluation for programs they are not represented in the table.

Combining the RCT and evaluation evidence, we found evidence of benefit for the following vocational programs:

* IPS for people with psychosocial disability (RCTs and Australian evaluations), although the quality of the studies was moderate to poor.
* Work integrated training for young people with autism showed some evidence of benefit although risk of bias from RCTs was moderate or high

Other interventions where we found evidence of benefit were:

* Cognitive remediation and vocational program for people with psychosocial disability tested in an RCT that combined cognitive behavioural therapy with a traditional vocational program, however there was moderate to high risk of bias
* Jobcoach, a program for people with psychosocial disability where IPS approaches were combined with intensive support from employment assistants to find and maintain suitable employment, noting that the RCT had moderate to high risk of bias
* Mentoring programs for people for people with psychosocial disability based on weak evidence from an evaluation

Table 10: Empirical evidence regarding effect of intervention on gaining employment according to typology

| **Supply/ demand/ bridging** | **Intervention types and combinations** | **Target group** | **International and Australian RCTs** | **Australian outcome or impact evaluations** | **Evidence of effect on employment RCT\*** | **Evidence of effect evaluation\*** |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply** | *Vocational programs*  IPS | Psychosocial | N=15  Moderate to high risk of bias | N=2  Good or very good | +ve | +ve |
| **Supply** | Work integrated training programs | Autism | N=3  Moderate to high risk of bias |  | +ve |  |
| **Supply** | *Cognitive remediation and vocational program* | Psychosocial | N=1  Moderate risk of bias | Shaded box | +ve | Shaded box |
| **Supply** | *Employer engagement, education, capacity building* | Universal | Shaded box | 1 Good | Shaded box | 0 |
| **Supply** | *Mentoring programs* | Psychosocial | Shaded box | 1 Good |  | +ve |
| **Supply** | *Virtual job reality interviewing* | Psychosocial | N=2  High risk of bias | Shaded box | +ve | Shaded box |
| **Supply** | *Vocational empowerment and photovoice* | Psychosocial | N=1  High risk of bias | Shaded box | 0 | Shaded box |
| **Supply** | *Job coach* | Psychosocial | N=1  Moderate risk of bias | Shaded box | +ve | Shaded box |

\* +ve positive effect; 0 No effect, -ve negative effect

Shaded boxes reflect where there are one or more RCTs but no outcome or impact evaluation/s, or there are one or more outcome or impact evaluation/s but no RCT/s.

### 6.3.3 Emerging practice in employment programs for people with disability

The project did highlight that some approaches and interventions are better documented (if not evaluated or tested in RCTs) than others, with emerging practice bases and investment from stakeholders in both the academic and service delivery sectors in establishing program models, codifying quality and practice, and testing different ways of working. These are described below.

* *Structured, work integrated vocational programs*that provide hands-on skill development and familiarisation with work environments through structured and sometimes accredited training based mainly on employers' premises and ongoing support to both the young person and the employer through a job coaches or employment consultants.
* *Innovative work integrated social enterprises*delivering models that avoided the pitfalls of Australian Disability Enterprises by providing structured training programs, award wage employment in the enterprise, and an explicit transition function to open employment after a period of time through work experience or work placement.
* *Customised employment***,** which originated in the US and has an emerging field of practice in Australia (particularly for people with intellectual disability).

Investment needs to be made in establishing an evidence base around the benefits of these programs.

### 6.4 Summary of findings

The results of this synthesis shows that the evidence-base for employment interventions among people with disability is nascent and primarily relates to supply-side vocational programs. This in part relates to the fact that the Systematic Review focused on supply-side vocational interventions.

The meta-evaluation focused on Australian evaluations. There were no outcome or impact evaluations of demand side interventions or interventions that combined elements of supply, demand or bridging despite the theoretical rationale for these. Although the DHHS Victoria bridging intervention for people with autism showed positive workplace experiences in a small sample, it did not measure employment outcomes.

The outcomes described here related to gaining employment. These employment outcomes are not measured consistently (e.g., this can be demonstrated through job offers, 1 day of work, or even continuous employment for 2 months). Such a lack of consensus over whether someone is employed or not is concerning from the perspective that within the limited evidence base we cannot be sure that we are comparing like with like. Further, it was unclear if studies defined their definition of “employment success” a-priori, as published protocols were lacking or unclear.

Very few RCTs or evaluations measured the secondary outcomes such as job readiness, job satisfaction, cost-effectiveness. A growing literature base that clearly evidences the impact that employment has on wellbeing of people with disability and the deleterious effects of under-employment and unemployment (Milner *et al.*, 2014, 2017, 2019).This literature also shows that the quality of a job (e.g. job security, job control) impacts on health and wellbeing and, ultimately, the sustainability of the job (Milner, Aitken, *et al.*, 2015; Milner, Krnjacki, *et al.*, 2015; LaMontagne *et al.*, 2016). The absence of research and evaluation in relation to the effects of employment programs on these qualitative dimensions of work is concerning.

One of the major challenges in developing an evidence base relates to the sheer number of stakeholders, the small scale of many of the interventions and the size of the agencies involved in the implementation who do not have the resources for larger evaluations.

# 7. Strengths and limitations of the project and the evidence base

As with any research project there are a range of strengths and limitations to this project and also the evidence base being investigated.

## Project strengths include:

* Multi-method project that gathered and synthesised a wide range of information from a broad range of different sources
* The Systematic Review and the Environmental Scans are underpinned by comprehensive search processes incorporating national and international sources across the peer review, grey and practice literatures. In this report we have sought to comprehensively document both the state and the quality of this empirical evidence base in terms of interventions and approaches to evaluation.
* The empirical evidence base has been complemented by focus groups and interviews with experts that provide significant experiential evidence into the ways that the Australian employment system operates in practice and where there are points of tension and opportunities to intervene.

There are also a number of limitations to the approach adopted and therefore the conclusions that might be generated from this. Potential limitations include:

* Data on interventions generated through the Systematic Review and Environmental Scan are predominantly supply-side vocational interventions amongst the target populations. While this suggests a gap in the evidence base, the supply-side vocational interventions may be of most interest to the NDIA.
* Lack of clarity in terms of the generalisability of the empirical evidence to NDIS participants as studies often lacked definitional clarity in terms of the population groups. The eligibility requirements for the NDIS are that an individual has a severe and ongoing impairment, and these may not apply to the groups in the study to the same degree.
* Lack of agreement in terms of how to measure employment outcomes. We do not know whether we are comparing similar primary outcomes. Further, simply measuring whether an individual is in employment or not does tell us anything about the quality of these jobs or their impact on wellbeing.
* The project did not include the views and experiences of people with disability from the three cohort groups. Their experiential evidence is critical to knowing how and which programs are effective.

As a final observation in relation to the project approach, the limited amount of data generated regarding these interventions in the Systematic Review might be a product of the fact that many of these do not readily lend themselves to RCTs. Such approaches typically assess a small element of an employment intervention (for example doing a virtual reality interview). That said, there was also limited evidence arising from evaluations in Australia, identified through the Environmental Scan.

# 8. **Insights and considerations**

In this section we highlight potential approaches that are considered to improve employment outcomes for NDIS participants in the target populations, drawing on the empirical and experiential evidence base (see 8.1). The focus of this review was to understand what interventions best support an individual to gain and maintain employment and we have this front of mind in setting out the suggestions below which are supply-side and predominantly vocational interventions. We then offer some suggestions about how a culture of research and evaluation can be supported and how the NDIA can work within the broader ecosystem of disability employment (8.2) and summarise our considerations (8.3).

## 8.1 Potential interventions for NDIS participants in target population groups

In outlining these potential interventions, we recognise that the NDIA’s role is primarily to work with individual participants to achieve positive employment outcomes.

### 8.1.1 Insights from the Systematic Review and Environmental Scan

Although the current empirical evidence base is limited, and the studies are of relatively low quality, there is some empirical evidence on outcomes and impact for programs particularly for people with psychosocial disability that NDIA might be interested in pursuing. These programs include:

* IPS for people with psychosocial disability;
* Jobcoach, a program for people with psychosocial disability that combines IPS with intensive employment assistance support;
* Combining cognitive behavioural therapy with traditional vocational programs for people with psychosocial disability; and,
* Mentoring programs for people with psychosocial disability.

There is some evidence from two RCTs to support a work-integrated training for people with autism (Project SEARCH).

We found no empirical evidence to of effect of impact for employment interventions for people with intellectual disability.

### 8.1.2 Practice based evidence

The Environmental Scan of research, interventions and the views of experts found there has been considerable investment in establishing program models across all of the target populations that are also worthy of consideration although there is not yet an empirical evidence base in Australia to support them.

These include:

* Structured, work integrated vocational programs;
* Work integrated social enterprises; and,
* Customised employmentparticularly for people with intellectual disability

### 8.1.3 Good practice principles

The experts who participated in interviews identified a number of principles that should be incorporated into employment programs.

These principles include:

* Hold high expectations (of the jobseeker and the employer).
* Build capability by implementing person-centered approaches.
* Apply a life course perspective.
* Intervene as early as possible.
* Create a line of sight to a job at all points on jobseekers’ employment pathway.
* Tailor interventions to particular cohorts and functional capabilities.

Experts noted that effective employment service interventions also work intentionally with employers to build their capability to employ people with a disability. The six key principles to guide effective work with employers include:

* Invest in developing employers’ high expectations of jobseekers with disability.
* Listen to and resource employers needs for knowledge and information.
* Build trusting, supportive and constructive relationships with employers.
* Co-produce mutually beneficial employment opportunities for people with disability in the workplace.
* Co-design inclusive workplaces with employers.
* Prioritise commercially viable business opportunities and employment over short-term placements.

## 8.2 Considerations for the future

### 8.2.1 Combining supply, demand and bridging interventions

Although we lack high quality RCT data regarding these interventions, the experts we spoke to suggest that interventions are more likely to be effective where they combine supply, demand and bridging elements as opposed to just one of these. The rationale for this approach is that they are more likely to be comprehensive, and able to build the capacity of jobseekers, meet the needs of employers, and also shape and customise new or existing employment opportunities that are accessible to jobseekers with disability. This approach would require collaboration between government agencies, service providers and employers to enable the facilitation of all components of these interventions.

### 8.2.2 Sharing good practice

There are currently few mechanisms for developing, codifying, sharing, implementing and evolving good practice across the sector (including ILC projects) or in place(s). While the Environmental Scan identified some areas where there is investment in testing and documenting emerging practice in Australia, these are often driven by passionate individuals and resource constrained. More systematic mechanisms are needed to identify, share and develop evidence for good practice; initial focus areas may include planning, career guidance and assessment; job bridging and customisation; optimal practice for mutually beneficial work with employers and key industries; and identifying referral pathways between different services and systems. The development of a mechanism to do this could help to share good practice in both employment interventions and evaluation practice.

### 8.2.3 Investment in developing a sound evidence base

There is a need for investment in research and evaluation of these types of programs. The Systematic Review found only 26 RCTs the majority of IPS among people with psychosocial disability. The Environmental Scan demonstrated that only 23 per cent of current Australian interventions were evaluated, and that the quality of these evaluations was typically limited. There are clear gaps in the evidence base for all cohorts particularly people with autism and intellectual disability.

Half of the Australian evaluations were formative, process or output evaluations (describing how interventions were conducted and implemented, participant experiences, barriers and enablers) and half were outcome and impact evaluations (describing the effect on employment outcomes). Evaluations that explore processes are key to understanding how interventions operate but they do not provide sufficient information about what works. If we want to generate high quality evidence around interventions to guide investment decisions, it is crucial that appropriate evaluation approaches are understood and adopted. It is considered best practice to select the type of evaluation according to the point in development an intervention is at (Dickinson and O’Flynn, 2016). For example, formative and process evaluations are important in the design and testing phases of employment interventions (note this can take several years), to establish the theory of change underpinning an intervention, test and adapt key features and practice, and identify the contextual factors and mechanisms that enable or constrain good outcomes. In this case it would also be appropriate that these are shaped by the organisation implementing the evaluations.

Impact and outcome evaluations can be expensive and are only appropriate to conduct when the intervention has been robustly developed and where there is good reason to believe that the intervention seems to be effective. Many providers in the disability employment landscape do not have the resources, capability or time to follow this robust process of service development and evaluation. Where we are seeking generalisable data regarding the effectiveness of interventions, then we need to see significant investment made in evaluation these effectively through outcome and impact evaluations that should be as independent as possible. Scale up of interventions should be based on this kind of evaluation.

The Systematic Review provided some evidence that IPS programs for people with psychosocial disability were effective although we do not know the degree to which they might be transferable to other cohorts. The Environmental Scan and interviews with experts highlighted many examples of program models and practices across the disability employment ecosystem, that are may be effective but do not exist at scale and are not typically supported by robust data, conceptual frameworks and empirical evidence about ‘what works’.

Greater consideration should be given to the use of a range of different approaches to evaluating programs. These could include quasi-experimental designs (e.g., pre- and post-interventions) complemented with qualitative research. Trials of different interventions could be nested within the delivery of programs. This study design is sometimes referred to as a pragmatic RCTs. Such evaluations should be complemented by cost-effectiveness studies where possible. This may be done in partnership with high performing providers who have invested in practice, as well as investing in creating and sharing new evidence.

### 8.2.4 Establishing agreement on employment outcomes

The Systematic Review and Environmental Scan revealed the lack of consensus regarding what employment outcomes should be measured and how. There is a need for the NDIA and other stakeholders, including people with disability, to establish a consistent definition and approach to measuring employment outcomes. We suggest outcomes extend beyond the binary state of whether or not someone has a job and extend to job sustainability, the quality of work, and other indicators of success.

## 8.3 Summary of considerations

### 8.3.1 Actions to support positive outcomes among NDIS participants

* Promote the use of interventions for which there is some empirical evidence for among the participant groups recognising the limitations of the evidence base;
* Consider the promotion of interventions for which there is emerging practice-based evidence. In the first instance it might be helpful to understand and document who funds and delivers these activities (e.g. IPS);
* Promote the application of good practice principles in all programs; and,
* Encourage innovation in practice but with clear evaluation protocols in place

### 8.3.2 System-wide initiatives

These actions relate to the how the NDIA could work with Department of Social Services and Department Education, Skills and Employment, people with disability and other stakeholders to generate high quality evidence and foster good practice across the system. This includes exploring the potential of combining supply, demand and bridging elements to meet the needs of diverse stakeholders.

We recommend there should be joint efforts to build the evidence base by:

* Identifying and sharing good practice in employment interventions and evaluation practice;
* Achieving consensus about what a positive employment outcome is so that it can be consistently measured and compared across interventions;
* Exploring greater use of pragmatic RCTs, quasi-experimental and mixed methods studies, including among NDIS participants;
* Investing in the development of an evidence base in relation to people with autism and people with intellectual disability;
* Investing in outcome and impact evaluations where formative, process and output evaluations have already been conducted; and,
* Conduct outcome and impact evaluations aiming to develop a high-quality evidence base that clearly establishes the impacts, outcomes, and costs of interventions.

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# Appendices

## Appendix 1 Definitions of target populations

## Firstly, while a wide group of individuals are encompassed within individuals with autism, intellectual disability and/or psychosocial disability, we sought to apply common definitions for key terms were established to ensure coherence across the three parts of the project.

Table 11: Definitions of target groups for research

| Key Term | Definition |
| --- | --- |
| Intellectual disability | Intellectual disability is characterised by significant limitations in mental functioning and adaptive behaviour, including issues relating to self-care, learning, communication and socialisation. Most occur during the developmental period (age 0–18 years) ([NDS n.d.](https://www.nds.org.au/disability-types-and-descriptions)) |
| Autism | Autism is a developmental disorder which affects how a person communicates and relates to others. It is a lifelong condition characterised by difficulties with cognition, interpersonal communication, interaction, and restricted or repetitive behaviours and interests ([ABS 2019](https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release#autism-in-australia)) |
| Psychosocial Disability | “People with psychosocial disability have one or more psychosocial impairments which cause limitations or restrictions in their everyday activities” ([ABS 2018](https://www.abs.gov.au/articles/psychosocial-disability#key-statistics)). Psychosocial disability may arise from mental health conditions, mental illness or a combination of both. Not all people with health conditions or mental illness will experience psychosocial disability.  Note, that for the Systematic Review this was too broad a definition on which to base a search strategy and not commonly used in the academic literature. Therefore, we searched for people with a medical diagnosis of a mental illness that hindered participation in employment. |

## Appendix 2: NDIA definitions and eligibility criteria for target populations

*A2.1 Autism*

The latest version of the Diagnostic and Statistical Manual (DSM-5) categorises Autism Spectrum Disorder into 3 levels:

* Level 1 – Requires Support
* Level 2 – Requires Substantial Support
* Level 3 – Requires Very Substantial Support

NDIS eligibility is based on reduced **Functional Capacity** in one or more of the following areas; **Communication, Mobility, Social Interaction, Learning, Self-Care and Self-Management** and the NDIA have Lists A-E to assist them to determine eligibility.

[List A](https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/list-conditions-which-are-likely-meet-disability-requirements-section-24-ndis-act)**– conditions that are likely to automatically meet disability requirements (outlined in Section 24 of the NDIS Act) with no further assessments required:**

Autism diagnosed by a specialist multi-disciplinary team, pediatrician, psychiatrist or clinical psychologist experienced in the assessment of Pervasive Developmental Disorders, and assessed using the current Diagnostic and Statistical Manual of Mental Disorders (DSM-5) diagnostic criteria as having severity of Level 2 (Requiring substantial support) or Level 3 (Requiring very substantial support)

[List B](https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/list-b-permanent-conditions-which-functional-capacity-are-variable-and-further-assessment-functional-capacity-generally-required)**– permanent conditions for which functional capacity is variable and further assessment of functional capacity is generally required:**

* Pervasive developmental disorders not meeting severity criteria in List A or List C
* Asperger syndrome
* Atypical autism
* Childhood autism

[List C](https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/list-c-defined-programs)**– refers to defined programs**

[List D](https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/list-d-permanent-impairmentearly-intervention-under-7-years-no-further-assessment-required)**– Permanent Impairment/Early Intervention, under 7 years – no further assessment required**

[List E](https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/list-e-qualifying-programs)**– Qualifying programs**

* Better start for Children with Disability
* Helping Children with Autism

*A2.2 Intellectual disability*

Conditions that are likely to meet disability requirements in section 24 of the NDIS Act include intellectual disability diagnosed and assessed as moderate, severe or profound in accordance with current DSM criteria (e.g. IQ 55 points or less and severe deficits in adaptive functioning).

*A2.3 Psychosocial disability*

Not all people with mental health issues will have access to the NDIS however people with a significant disability that is likely to be permanent may qualify for NDIS support.  In relation to the NDIS, mental health recovery does not necessarily mean there is a permanent absence of the symptoms, impairments and/or disabilities that people can experience. Rather it is understood that psychosocial disabilities can be “…episodic or persistent, debilitating and long lasting”. The NDIA states, “[r]ecovery is about achieving an optimal state of personal, social and emotional wellbeing, as defined by each individual, whilst living with or recovering from mental health issues”.

1. We note many people with autism use the term autistic person because autism is a critical part of their identity. We have used person first language to be consistent with how we refer to the other target populations in this review however we acknowledge the contested nature of person first and identity language. [↑](#footnote-ref-2)
2. *We note many advocates in the autistic person because autism is a critical part of their identity. We have used person first language to be consistent with how we refer to the other target populations in this review however we acknowledge the contested nature of ‘person first’ and ‘identity’ language.*  [↑](#footnote-ref-3)
3. Vocational interventions focus on the supply side of the typology outlined in Table 2. [↑](#footnote-ref-4)
4. [↑](#footnote-ref-5)