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The TAFE SA Centre of Excellence in Early Childhood Education and Care (CoE ECEC) is a national skills leader in early childhood development, education and care. A joint initiative between the Australian and South Australian governments, the Centre aims to lead initiatives with a generational impact, shaping better, brighter futures for children and communities across the country.

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Acknowledgement of Country

TAFE SA acknowledges the traditional owners of the land on which our campuses are located. We pay our respects to their Elders past and present and extend that respect to other Aboriginal and Torres Strait Islander Peoples. It is a privilege to be sharing these lands on which we live, work, and learn.

We recognise that these lands have always been places of teaching, learning and knowledge sharing. We acknowledge the deep and enduring spiritual connection the First Nation's people have to these lands and their ongoing contributions to education.

We recognise that Aboriginal and Torres Strait Islanders have maintained their cultures, heritage, beliefs, languages, and lores and these are of ongoing importance. We commit ourselves to learning from the wisdom and knowledge of the Traditional Owners and to fostering a spirit of respect, inclusivity, and reconciliation within our TAFE SA community.

A note on terminology

The United Nation's (UN) guidelines on disability-inclusive language recommend a people-first approach to disability but note that some specific communities prefer an identity-first approach (UN, 2019). The available research indicates that the autistic community typically prefers an identity-first approach as autism is an essential component of their identity (Autism CRC, n.d.; Neurodiverse Connection, 2024). Similarly, the neurodivergent community has also stated a preference for neuro-affirming language (Neurodiverse Connection, 2024). To respect the stated preferences of these communities, this report adopts identity-first language when referring to autistic or neurodivergent people. We recognise, however, that not all individuals within these communities prefer this terminology but hope that any such individual can appreciate the intention of respect that underlies this decision.

Additionally, this report uses a social model of disability, rather than a medical or deficit-

based approach. As such, the term autism is used instead of Autistic Spectrum Disorder (ASD); while the latter is the accepted medical terminology it is offensive to many Autistic people given the reference to a ‘disorder’ (Victorian Public Sector Commission, 2025). Similarly, the term intervention is used rather than treatment (as the latter implies a ‘cure’ is desirable). We also note that the terminology associated with ‘challenging behaviours’ typically treats the behaviour as something to be cured (which is a deficit approach to disability), rather than acknowledge the environmental and social factors that contribute the expression of such behaviour (i.e. adopting a social model of disability). We have therefore tried to limit the use ‘challenging behaviours’ and instead refer to children experiencing ‘Big Emotions” (or similar phrasing), consistent with language recommendations from Neurodiverse Connections (2024).

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Executive Summary

TAFE SA is leading work to better equip early childhood educators with the skills, knowledge, and understanding needed to effectively support autistic children and their families. This is likely to include the development of additional learning for:

- educators currently studying the Certificate III in Early Childhood Education and Care (henceforth the Cert. III)
- experienced educators who have already completed this qualification
- the VET lecturers (and equivalent staff in registered training organisations) who will deliver learning to the above audiences.

The initial focus will be the creation of a 'Unit of Competency' for the Cert. III to develop the skills, knowledge and understanding of educators studying this qualification (note that, from here on, the intended 'Unit of Competency' will simply be referred to as the 'unit'). To inform the content and design of this unit, this report seeks to establish preferred practices for:

> The provision of support for autistic children from birth to five years

> The professional development of educational professionals responsible for providing this support.

To achieve this, this report synthesises information from:

- key representatives of the early childhood education and care (ECEC) sector
- a desk-top review of existing professional development (PD) courses about autism, offered to education professionals
- a review of recent research published in the English language that evaluates practices relevant to supporting autistic children in educational settings, or the development of the professionals who provide this support
- guidance around supporting autistic children, published, in the English language and within the last 10 years, by high-profile organisations with a nation-wide remit (irrespective of their country).

The analysis clearly demonstrates a need for more effective PD of educational professionals who support autistic children, across a range of roles. The literature indicates that some educators have a low level of understanding or knowledge about autism or effective practices that support autistic children. Furthermore, even highly qualified educational professionals often have misconceptions around what interventions are recognised as evidence-based practices (EBPs) and what interventions are of limited value for supporting these children. Despite the importance of using EBPs to improve outcomes for autistic children, very little existing PD references them, at least in the online course descriptions.

Much of existing PD intended to improve the knowledge of educational professionals about autism is quite short in duration, with many courses less than a day in length. This constrains the amount of information that can be shared, as well as limiting opportunities for the application of new skills or knowledge and associated feedback. Descriptions of the content

covered in existing PD were sometimes limited, however, analysis of the information available showed some common themes. Unsurprisingly, many courses start with an overview of autism, development issues and common behaviours typically associated with this, before moving onto strategies that would enable educators to support young autistic children with these issues and behaviours. Development of children's skills in communication and social interactions were often emphasised in existing materials. Play- based learning represents an important approach for developing such skills and should therefore be included within the unit despite limited references to this within existing PD. Similarly, it is strongly recommended that the unit introduce educators to the concept of EBPs, including key types, and examples of implementation.

Twenty-seven types of EBPs have been recognised in the literature as consistently producing positive outcomes for autistic children younger than 5 years. Some types of evidence-based practice, such as Alternative and Augmentative Communication (AAC) include multiple methods. There is also some overlap of methods between types of EBP; for example, video modelling can be regarded both as an example of modelling as well as a form of visual support. Given time constraints on the unit, it will not be feasible to discuss all 27 types of EBPs; instead, a few key types should be included. An initial suggestion is that AAC, visual supports and modelling be considered for this, however, feedback from the Advisory Group should be sought on this. Professional development for vocational education and training (VET) educators will likely be required to update their own knowledge, understanding and practice of these methods prior to teaching such modules. Consideration should therefore be given to how best this can be achieved and what supports may be required.

Input from the Advisory Group was initially used to ascertain the breadth of content required for the unit. This has subsequently been expanded to incorporate recommendations from the literature and existing guidance documents, a recommended outline (Figure 1) has been produced for the unit which expands on content included within existing PD. Recommended additions include a broader introduction to neurodiversity, evidence-based practices and play-based learning. Although the suggested content has been ordered into modules, the structure represents a hypothetical illustration of how the course could be shaped rather than being evidence informed.

Given EBPs have been repeatedly demonstrated to support the development of autistic children, it is recommended that all approaches and methods referred to within the unit are evidence-based. Having said that, if there are common practices used within the sector that are not EBPs, it may be appropriate to discuss the lack of evidence for these and to provide examples of alternative EBPs that achieve the same outcomes. Feedback from the Advisory Group should be sought on this suggestion.

Figure 1. Content recommended for the unit.

The literature review also considered what learning activities or approaches are most effective for promoting learning and engagement of students. Consequently, it is recommended that the learning activities associated with the unit include:

- multi-media materials
- the voices of adults with lived experience of autism
- discussion-based activities that will stimulate critical thinking.

From a learning perspective, having students undertake a practical placement working with autistic children would be advantageous, however, this poses logistical and financial issues, especially for students in regional and remote areas. Further consideration of alternative activities that would provide participants with opportunities to observe autistic children and to practice implementing EBPs is therefore recommended; ideally, this will include consultation with the sector.

Summary of recommendations

In addition to the outline of suggested content, a set of key over-arching Recommendations have been made. These are briefly summarised below:

- Educators who support the development of autistic children (or those who display similar behaviours and characteristics), need improved knowledge of autism, how to recognise potential characteristics of autism in young children, and how to best support the development of these children.
- Many autistic children will require additional support with communication, social interaction, emotional and sensory regulation and play-based learning. As such, educators not only need to be aware of EBPs related to these but also need to be able to critically evaluate what practices are EBPs.
- The unit should provide educators with opportunities to observe and either practice or rehearse, the implementation of EBPs in different settings. As noted above, further consideration and consultation as to the role of placements in achieving this is likely to be required.

Introduction

South Australia is actively promoting greater inclusion of autistic people across all facets of life. The South Australian Government is actively working towards improving outcomes for autistic people "through the development of policies and initiatives that support access, inclusion, awareness, opportunity, connection and belonging" (Office for Autism; 2023). Following the recent creation of a national "Centre of Excellence in Early Childhood Education and Care" (hereafter the CoE) based at its Adelaide campus, TAFE SA is leading work to promote greater inclusion of, and support for, autistic children in Early Childhood Education and Care (ECEC) settings.

Recent reports indicate that many professionals within the ECEC sector lack knowledge and skills in how to effectively respond and care for children who display traits and behaviours typically associated with autism (regardless of whether these children have been formally diagnosed). For example, social interaction and communication are difficult for autistic people, with developmental delays in verbal and non-verbal communication commonly reported in children (Gibson et al., 2021). To address this knowledge gap, and enable educators to better support autistic children, the CoE will develop a unit and then advocate for the inclusion of this unit within the Cert. III. Further work is likely to be required to assess the content requirements of professional development needed for:

- The VET lecturers who teach students enrolled in the Cert. III
- Experienced, and already qualified, educators working in the early childhood sector.

To inform the creation of these potential products, this report explores what knowledge and skills educators require to effectively support autistic children in early childhood education and care settings. To provide a holistic overview of the required knowledge, this report synthesises the perspectives of key stakeholders, research findings, published guidance and existing professional development materials.

Methods

A multi-faceted approach was adopted to establish the content requirements for the professional development product, comprising:

- Sector input via the Advisory Group
- A desk-top review of professional development (PD) courses for professionals working in Early Childhood Education and Care (and allied fields), offered nationally or internationally
- A brief literature review of best practices for Early Childhood Education and Care professionals working with neurodiverse children or young autistic children
- A review of guidelines around working with autistic children published by high-profile organisations with a national remit and who are based either in Australia or a comparably developed country.

To elaborate on the approach above, sector input was gathered during the initial meeting, with a focus on both recommendations for content and specific examples of effective and relevant PD. The desktop review consisted of Google searches using varying combinations of the following groupings:

- Group 1: professional development, professional learning, CPD, training
- Group 2: neurodivergence, neurodiversity, autism, autistic spectrum disorder and ASD[1]
- Group 3: early childhood, infants, toddlers, young children, children, pre-school, pre-primary.

These searches were performed both with or without the additional terms of educators, teachers, carers, health care and social work. Websites that offered learning resources or short courses were included within the review. Given the anticipated scope of the unit, courses that required a time commitment greater than 3 months of full-time study were not included within the review.

The literature review was primarily undertaken using Google Scholar and the Education Resources Information Centre (ERIC). The former is a search engine that focuses on academic literature and/or patents, whereas the latter is an online database of education research and information, sponsored by the Institute of Education Sciences (IES) of the U.S. Department of Education. Both Google Scholar and ERIC provide links to pdf versions of articles, where these are freely available, and typically link to the publisher's website as well. Search terms included those listed above, but with the addition of autistic spectrum disorder and its abbreviation (ASD) to Group 2. Additional searches were also undertaken where the following two groupings of search terms sequentially replaced Group 1:

- best practice, effective practice, evidence-based practice (EBP)[2], evidence-informed practice, research-based pedagogies, evidence-based teaching, evidence-based interventions, and effective behaviour management strategies
- teacher training, pre-service teacher training, pre-service education, teacher education, and educator training.

For all searches, a minimum of 100 results were screened based on their abstracts with relevant articles read in full. Additionally, Google Scholar provides lists of related articles, and articles which have cited a given reference. Most publisher sites also provide similar information (e.g. Elsevier). As such, when highly relevant articles were located, these lists were screened for any additional, relevant articles. Research Gate was also used to screen for further articles by the authors of highly relevant articles. Finally, the AI-based Research

[1] While this report preferentially uses the term autism, autistic spectrum disorder and ASD were included so as not to exclude potentially useful information due to differences in terminology.

[2] Evidence-Based Practices (EBP) are approaches or interventions that research demonstrates consistently produce beneficial outcomes (Hume et al., 2021). The supporting research may consist of large group studies, such as randomized controlled trials (which are typically recognised as the gold standard) or multiple studies where the practice(s) in question have been used with an individual (single case studies).

Rabbit was used to locate additional references. This approach involved uploading several highly relevant papers and then using the AI mapping tool to locate similar references based on either the authors or key words. Only English-language articles published in peer- reviewed journals within the last ten years were considered. While this is a shorter period than would commonly be considered for literature reviews, it kept the task manageable given the time available for this research. The articles identified using the above approaches were read and any highly relevant references cited within them were also included if they were published within the last 20 years (and could be located). A few articles could not be located, where the original URLs cited were no longer working or the articles were not freely available on the web.

Finally, the review of national guidelines from high-profile organisations was also based on a Google search, using the terms:

- national guidelines, national guidance, international guidelines, international guidance
- autism, autistic, ASD
- children, young children, infants, toddlers, under 12, under 18.

The top 100 results were screened, however, many of these were articles about the same guidance documents. For example, a national guideline recently published by the Autism CRC was mentioned on numerous webpages from other organisations. The intention was to restrict any guidance located to documents published in English, however, this wasn't necessary as the search results only located documents from Australia and the United Kingdom (UK).

Results

Advisory Group input

The Advisory Group confirmed there was a clear need for relevant PD pertaining to neurodiversity and autism for both commencing and established educators. Feedback from the Advisory Group outlined key gaps in the current level of knowledge and skills for those working and educating in the sector. Consequently, suggested topics for the unit included:

- What is inclusion and inclusive education (for new starters)?
- What is neurodiversity?
- What are the common signs of neurodivergence?
- What are the current language conventions (for example, when should the term neurodivergence be used rather than autism)?
- What traits or behaviours are typically exhibited by young autistic children?
- What are the typical developmental stages (or benchmarks) expected for neuro-typical children and how do these differ for neurodivergent or autistic children?
- What should educators know about sensory development[3]?
- What strategies enable better communication with neurodivergent children and their parents?

and,

- Where can educators get further advice and support (potentially including how to keep their knowledge updated and current)?

Another request from the Advisory Group was that the unit should develop the capacity for critical thinking so that educators are both observing and reflecting on children's behaviour in order to develop appropriate learning experiences and environments. The Advisory Group also emphasised that, ideally, the unit should familiarise educators with a suite of resources that they can use when working with children who they suspect may be neurodivergent or autistic. Existing PD courses recommended by the Advisory Group included:

- the TAFE offering "Image of the child"
- "Traffic Jam in my Brain"
- "Navigating Autism: the early years" training developed by Autism Awareness Australia
- "Marte Meo".

Where possible, these recommended courses were included within the desktop review.

Finally, members of the group noted several experiences that they had found useful, namely:

- speaking with a psychologist to understand how the brain of a neurodivergent child worked differently (at a level that enables the educator to explain that to a child)
- hearing from adults with ASD about their experiences as a child.

Desktop review

Twenty websites were identified that offered autism related learning resources or courses intended for parents or educators (Appendix 1); a few websites offered several closely related courses. For example, the Autism Teaching Institute offered courses for School Leaders as well as regional school staff. Three websites offered learning resources for dental and medical staff, as well as for educators and families of autistic children while several websites offered general autism information courses that were open to anyone. In total, 24 relevant autism courses were identified, ranging from 40 minutes to 20 hours (Appendix 1). Two courses were stated as 7 and 9 weeks long, respectively, but only required ~2 hours a week. Approximately two thirds of the courses required 7 hours or less of study time.

One of the limitations of this desk-top review is that it relies on publicly available information. Some providers, including Marte Meo and Sensory Tools (who provide access to Traffic Jam

[3] Information provided around sensory development should be extended to include information around sensory processing and sensory overload as these are often challenging for autistic children.

in my Brain), didn't provide sufficient information on the content of their courses for these to be included within following analysis. Furthermore, descriptions of course content vary significantly between providers.

Analysis of existing learning indicates five key topics are commonly covered (Figure 2), albeit with different titles or names. Nearly all courses started with an introduction to autism, including traits and behaviours often seen in autistic children. A few courses also mention the strengths and interests of autistic children. Very few courses included information on neurodiversity or inclusive education more generally, thus this could potentially represent a knowledge gap.

Figure 2. Topics commonly included within PD courses for educators working with autistic children.

The introduction to autism was often followed by a focus on areas of development delay, such as communication, social interaction and emotional regulation. Communication, often in combination with social skills, was frequently mentioned in the course descriptions. Communication variously focused on communicating with autistic children, their parents, educational staff and professionals within health and social care. Multiple courses focused on communication in terms of child development, often with a concurrent focus on social interactions. In many courses, communication led into modules on how to work effectively with autistic children, including how to manage 'challenging behaviours', 'meltdowns' and 'big emotions' (note this terminology reflects that used in the course descriptions).

Additionally, several courses included topics such as sensory processing, or how the brain influenced behaviour as these are key concepts related to autism, including why autistic children may exhibit 'challenging behaviours'. Several courses included behaviour management as a topic by itself. A focus on creating inclusive learning environments was also seen in multiple courses. A few courses included positive behaviour supports within the inclusive teaching strategies while a few courses discussed strength-based approaches. Differentiation was mentioned within several courses but was not consistently included despite this being a fundamental component of inclusive education. Similarly, only a few courses referenced play-based learning despite this being an important approach to working with young children.

Finally, while several courses referred to practical or effective strategies, only one provider (Aspect) specifically mentioned EBPs within the course description. While it is possible that

other providers also focus on EBP, this is not explicitly stated and thus it cannot be assumed that all of the methods taught are evidence-based. This is a potential weakness with much of the PD available for educators (and teachers) of autistic children.

Literature review: PD for Early Childhood Educators

Why do early childhood educators need PD about autistic children?

Limited research has been undertaken into the knowledge and beliefs of early childhood educators about autistic children, however, that available indicates that many educators have limited knowledge of autism and the needs of autistic children (see Mejia-Cardenas et al., 2024 and references therein). The lack of knowledge of pre-school staff presents a major barrier to the early identification (and thus better inclusion) of autistic children (Taresh et al. 2020). This limits the inclusion of autistic children in pre-school settings (Güleç-Aslan, 2020; Mejia-Cardenas et al., 2024), even though educators and management of early childhood education and care settings have positive attitudes towards their inclusion (Mejia-Cardenas et al., 2024).

Similarly, the literature on educational professionals across multiple levels of schooling also indicates often limited knowledge of autism, associated traits and behaviours, and strategies to support autistic children (e.g. Al-Sharbati et al., 2015; D'Agostino & Douglas, 2021; Wittwer et al., 2024). For example, a recent review of published studies examining teachers' knowledge of autism found that only 20% of studies reported that teachers had high levels of knowledge while over half of the studies reported low levels of knowledge (Gómez-Marí, et al., 2021). Common misconceptions related to autism-related interventions have been reported for educators, teaching assistants and teachers, (e.g. D'Agostino & Douglas, 2021, Hugh et al. 2020). Correspondingly, multiple studies have reported that many teachers want additional training around autism, including how to recognise it, and how to manage some of the frequently associated behaviours (e.g. Gomez-Mari et al., 2021; All Party Parliamentary Group on Autism, 2017).

Concerningly, the limited comparative research available suggests that Australian special education teachers use EBPs less than their North American counterparts, and conversely, implement more low-value practices (Paynter et al., 2019a). This is not surprising given Australian training courses for early childhood and primary school teachers and teaching assistants offer little learning specific to autism (Coates et al., 2017). Similarly, teacher training in the UK does not consistently cover autism or neurodivergence, with only 25% of pre-service teachers receiving any information on autism as part of their course (Bennet, 2013). Furthermore, when autism-related information is provided, it is rarely evidence or research-based (Bennet, 2013).

The appropriateness of teacher training programs related to autism and the capability of staff working within these has been repeatedly questioned in the literature. For example, many mentor teachers in a teacher training program in an American university did not know what practices were (or weren't) evidence based (D'Agostino & Douglas, 2021). Additionally,

mentor teachers were likely to implement unsupported practices but used just 7 of 20 EBP examined within the study (D'Agostino & Douglas, 2021). Consequently, these mentor teachers would be passing on these misconceptions and poor practices to student teachers. Other studies have also reported that university tutors lack knowledge of autism specific teaching strategies or EBP (e.g. Ravet, 2018). As such, limited knowledge of how to identify and work effectively with autistic children appears to be a challenge for educational professionals world-wide, irrespective of their level of qualification. Consequently, there is a clear need for effective PD and training for both new and existing educational professionals.

What do educators of autistic children need to know?

Over the last two decades, various guidance has been produced regarding the key competencies that educational professionals require or the content that should be included in autism training courses (Table 1). Commonalities between these include a focus on an overview of autism, knowledge of common characteristics of autistic children, as well as awareness of EBPs and strategies to support the development of these children. Reinforcing these recommendations, a recent evaluation of PD intended to improve teachers' knowledge of autism concluded that effective courses included 4 key components, namely:

- a comprehensive introduction to autism (e.g. definition, causes, common myths)
- practical strategies to promote the inclusion of autistic children
- interventions to enhance educational outcomes for autistic children
- information on how to identify (and refer onwards) children who exhibit autistic traits or behaviours (Gómez-Marí, et al., 2021).

These recommendations are similar to those made for Australian educators and Education Support Workers/Officers. One point of difference, however, is that instead of knowledge of referral, an ability to collaborate effectively with teachers was stipulated (Coates et al., 2017). This is probably because, in Australia, Educational Leaders or Directors would lead this process within most Early Childhood Education and Care Settings. In Family Day Care, this role is likely to be undertaken by Family Day Care Coordinators.

A more extensive review of articles published on this topic within the last 20 years found that, in addition to generally increased knowledge and confidence related to working with autistic children, teachers also wanted more specialised learning on the following topics:

- Collaborating with parents and other professionals
- Communication and social skills of autistic children
- Managing behaviours
- Personalising teaching and learning for autistic children (Listiakova & Preece, 2020).

A common thread throughout all these recommendations is the need for practical tools, strategies and interventions that can be used to promote the inclusion of autistic children.

Table 1. Brief overview of content recommended for inclusion in PD for educators and teachers working with autistic children

Authors	Scheurman et al., 2003*	Centre for Exceptional Children*	Shyman, 2012	Coates et al., 2017	Petersson-Bloom & Bolte (2022)
Staff level	Teachers	Teachers	Teachers	Teachers and teaching assistants	Teachers and educators
Recommended Content	• Knowledge of the disorder. • Parent involvement. • Theoretical underpinnings of instructional approaches. • Teaching language & communication, social competencies, adaptive behaviours and transitions. • Classroom structure. • Behaviour management. • Special issues (as topical).	• Foundational knowledge. • Development and characteristics of learners. • Individual learning differences (effects of the condition). • Instructional strategies (EBPs, specialised curriculum design, etc.). • Learning environments/ social interactions. • Language (retention of cultural values of individual, language /communication). • Instructional planning. • Assessment. • Professional and ethical practice /collaboration.	• Characteristics of Individuals with ASD. • Current Research and evidence base of methodological approaches in ASD. • Multidisciplinary/ comprehensive approaches to Methodologies in ASD. Behaviourally based approaches. • Relationship/emotional-based approaches. • Language/ communication-based approaches. • Technology based approaches. • Sensory-based approaches. • Medically-based approaches.	• Current, available research surrounding foundational information related to ASD. • The use of differentiated strategies, and using technology with autistic students (e.g. specific apps, video modelling, etc.) • Hands-on practical experiences with multiple autistic students. • Effective collaboration with classroom teachers to promote successful outcomes for autistic students. • Assessing the use of EBPs. Content could be taught and then experienced first- hand during practicum placements.	• Introduction to autism (online). • Understanding autism and neurodiversity. • Collaborating with parents. • Cognition and sensory processing. • Educational strategies. • Understanding challenging situations. • Inclusion and accessibility in educational contexts.

* As cited in Shyman (2012).

Interventions for autistic children in early childhood settings

The literature clearly indicates that early childhood educators need a better knowledge and understanding of EBPs. As such, the following section provides further information about EBPs to inform potential content for the unit. As noted above, EBPs are approaches or interventions that the research has demonstrated produce consistent, positive outcomes for autistic children.

During the last two decades there has been an increased focus on evaluating the use of interventions within education. For example, between 2012 and 2017, over 550 journals articles showed positive outcomes from focused interventions undertaken with autistic children (Figure 3; Hume et al., 2021). **Where the research and evidence demonstrate consistently positive outcomes from an intervention, the intervention can be regarded as being an evidence-based practice (EBP).**

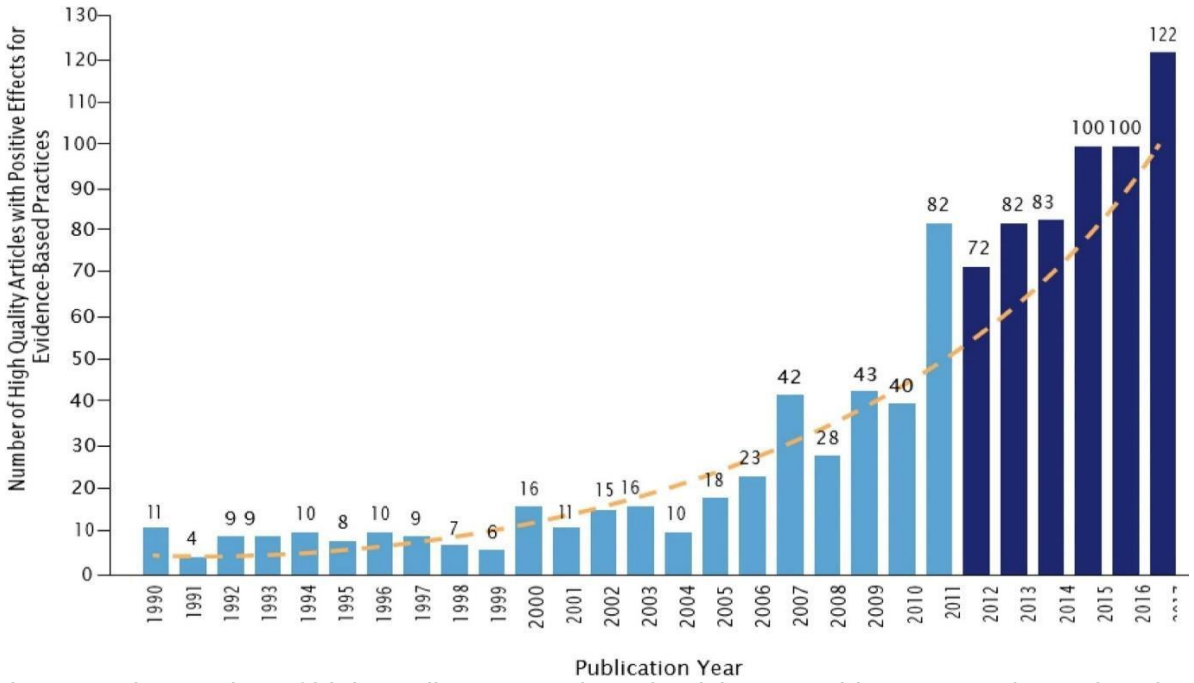


Figure 3. The number of high-quality peer-reviewed articles on Evidence-Based Practices in Early Childhood Education. Source: Hume et al. (2021).

What focused interventions for autistic children are recognised as EBPs.

Twenty-eight different types of focused interventions have sufficient evidence demonstrating they are beneficial for autistic children to be recognised as EBPs (Appendix 2; Hume et al., 2021; Steinbrenner et al., 2020). Twenty-seven of these produce positive outcomes for children under 6 (Table 2; Steinbrenner et al., 2020), predominantly in relation to communication, social interactions and challenging behaviours. There are limited EBPs for children under 5 years which result in associated with improvements related to mental health and, to a lesser extent, cognition (Table 2; Steinbrenner et al., 2020).

Evidence-Based Practice (EBP)	Outcome Category										
	Pre-Academic	Adaptive/Self-help	Challenging Behaviour	Cognitive	Communication	Joint attention	Mental Health	Motor	Play	School readiness	Social
Antecedent Based Interventions (ABI)	■	■	■		■				■	■	■
Augmentative and Alternative Communication (AAC)	■		■		■	■			■		■
Behavioural Momentum Intervention (BMI)		■	■		■				■	■	■
Differential Reinforcement of Behaviour (DR)	■	■	■		■			■	■	■	■
Direct Instruction (DI)	■				■						
Discrete Trial Training (DTT)	■	■		■	■	■			■	■	■
Exercise and Movement (EXM)	■		■	■	■			■	■	■	■
Extinction (EXT)		■	■		■					■	■
Functional Behavioural Assessment (FBA)	■		■							■	
Functional Communication Training (FCT)		■	■		■				■	■	■
Modeling (MD)	■	■	■		■	■		■	■	■	■
Music-Mediated Intervention (MMI)		■	■		■			■	■	■	■
Naturalistic Intervention (NI)	■	■	■	■	■	■	■	■	■	■	■
Parent-Implemented Intervention (PII)	■	■	■	■	■	■	■	■	■	■	■
Peer-Based Instruction and Intervention (PBII)					■	■			■	■	■
Prompting (PP)	■	■	■		■	■		■	■	■	■
Reinforcement (R)	■	■	■		■	■		■	■	■	■
Response Interruption/Redirection (RIR)	■	■	■		■				■	■	■
Self-Management (SM)	■		■							■	■
Sensory Integration® (SI)	■	■	■	■	■			■			■
Social Narratives (SN)	■	■	■		■	■			■		■
Social Skills Training (SST)			■	■	■				■		■
Task Analysis (TA)		■			■	■					
Technology-Aided Instruction and Intervention (TAII)	■	■	■	■	■	■	■	■	■	■	■
Time Delay (TD)	■	■	■	■	■	■		■	■	■	■
Video Modelling (VM)	■	■	■		■	■		■	■	■	■
Visual Supports (VS)	■	■	■	■	■	■		■	■	■	■

■ Evidence of positive outcomes ☐ No positive outcomes reported

Table 2: Evidence-Based Practices applicable for autistic children (0-5 years old). Adapted from Steinbrenner et al. 2020.

Somewhat confusingly, the 28 EBP are not mutually exclusive, and a specific intervention may fall into several categories of EBP. Conversely, EBP encompass a variety of interventions; for example, Augmentative and Alternative Communication (AAC) includes sign language, gestures, prompting, and the 'Picture Exchange Communication System (PECS), to name a few (Steinbrenner et al. 2020). Given the importance of communication skills for autistic children, several interventions under the AAC category should be included within the unit. Research also demonstrates the importance of

visual supports for autistic children (Table 2;; Steinbrenner et al., 2020).

Despite the research undertaken into EBP, a myriad of unsupported (or poorly supported) interventions are still being promoted. In 2018, the UK's national autism register listed over 1000 interventions, most of which lacked any evaluation or supporting evidence (The Westminster Commission on Autism, 2018; Paynter 2020a). A recent review of interventions offered to autistic people in the United Kingdom (UK) found they incorporated many harmful practices, spanning psychological, chemical, dietary and social interventions, even including potentially lethal options such as consuming bleach or turpentine (The Westminster Commission on Autism, 2018). To avoid the risk of harm, it is crucial that only EBP are used with autistic children. Furthermore, the selection of specific EBP for use with an individual child should be informed by both the professional judgment of the educator as well as the preferences and interests of the child, their parents and other professionals involved in their care (Spencer et al., 2012).

The perceived strength of evidence influences the likelihood of an educator planning to use it (Laskin-Saxby et al., 2023; Paynter et al. 2020b). However, while educators can identify some evidence-based practice, they are also likely to incorrectly identify some low-value practices (that is practices that do not consistently produce positive outcomes) as being evidence-based (e.g. Laskin-Saxby et al., 2023; Paynter, 2020). As such, educators continue to use some low-value practices because of a mistaken belief that they are evidence-based; this is also an issue for Early Childhood Teachers (e.g. Dynia et al., 2020; Hugh et al., 2024). Consequently, there is a clear need for all early childhood professionals to be upskilled in critical thinking, and how to assess the robustness of evidence, consistent with the Advisory Group's recommendation.

Consideration should also be given to correcting (de-bunking) educator perceptions of specific practices which are frequently viewed as EBP despite producing little benefit for autistic children. As noted above, education professionals in Australian have previously been reported to use more low-value practices, and fewer EBPs, than their American counterparts (Paynter et al., 2019a). Examples of low-value practices commonly used in Australia include Facilitated Communication, Perceptual Motor Training and Auditory Integration Training (Paynter et al., 2019a, b). De-bunking of low-value practices may therefore be an important component of PD for Australian educators. When de-bunking low-value practices, research suggests it is important to not just state that it is ineffective but to explain:

1. why a practice was expected to work
2. that research has shown it doesn't work
3. what EBPs could be implemented instead (Paynter et al., 2019b).

Implementing EBP

Several key steps need to be followed when selecting an EBP for use with a given individual, including selecting an intervention that targets the desired outcomes and assessing the evidence base for that intervention. Another key step is to ensure that the interventions are implemented according to their original design. Accurate implementation of interventions can pose challenges to educators (Berquist & Charlop, 2014), especially as the literature on focused interventions for young children with autism often fails to provide sufficient details for educators implement these

appropriately (Odom et al., 2010).

Helpfully, the US National Professional Development Center (NPDC) on Autism offers the Autism Focused-Intervention Resources and Modules (AFIRM); a series of free short online modules (approximately 2 hours each) on the 28 types of EBP[4] focused interventions (NPDC, n.d.). These learning materials introduce EBPs, explain how educators should select which EBPs to use (NPDC, n.d.) and, crucially, include detailed guidance and checklists for implementation (Odom et al., 2010). As such, these modules are highly recommended for educators interested in using EBP to improve outcomes for autistic children.

Given the proposed unit will be around 30 hours, that precludes similarly detailed learning around all 28 types of EBP. However, the developed material should ensure that educators:

- have a basic understanding of some of the more relevant EBP
- are aware that different EBPs target different developmental areas
- are able to access and assess further information about EBP, including how to implement them effectively.

Finally, while the unit is intended to improve educators knowledge of EBPs, it is also important that educators realise that this is not a static field. As such, educators will need to periodically update their knowledge of EBPs. The unit should therefore help educators develop the critical thinking capabilities needed for this.

What approaches should be used in PD for educators of autistic children?

Practical experience

Given the focus on practical strategies noted above, it would seem logical that PD courses should provide opportunities for attendees to practice implementing such strategies (e.g. Shyman, 2012). Increased hands-on practice and exposure to real-world situations within training courses have been recommended by both pre-service teachers and recent graduates (Devi et al., 2024). Both coursework and practical placements should focus on EBP to develop the ability of these staff to better manage the inclusion of autistic children and associated behaviours (e.g. D'Agostino & Douglas, 2021; Gómez-Marí, et al., 2021; Stites et al, 2020). This should include evidence-based language and communication supports as these are often key requirements of inclusion plans for autistic children (D'Agostino & Douglas, 2021).

Conversely, however, practical placements may be of limited value for PD when in-service teachers lack sufficient knowledge or skills of working with autistic children to appropriately advise or develop the skills or others (Ravet, 2018; Wermer et al., 2018). One potential solution to this would be to first train staff who will be supervising students in the relevant material (including EBP) before students attend placements. This approach could work well for courses with onsite access on ECEC services (such as creches) but may be more difficult for smaller or online providers to implement. An alternative option would be to partner with organisations that routinely demonstrate best practice to

[4] Of relevance for this initiative, a subset of the AFIRM program focuses on the application of EBP with autistic toddlers (please note that each 'toddler' module is typically 3 hours long).

ensure that trainees are exposed to appropriate EBP. Regardless of the approach, careful consideration would need to be given to the extent and focus of the placements in order to embed learning from across the unit but without overlying reducing the time available for acquiring knowledge about characteristics of autistics children, or EBPs.

Other 'experiential' learning methods

Previous surveys of pre-service teachers and their tutors have recommended the inclusion of videos and case-studies within autism training, both to stimulate learning and bring the content to life (Ravet, 2018). The use of multimedia resources echoes the Advisory Group's suggestion that recollected childhood experiences of autistic adults be included within the unit. Case-studies may be useful for regional areas where there are limited opportunities for field visits or placements (Busby et al., 2012). Additionally, case studies can provide examples of successful implementation of EBP that may not otherwise be available within a specific region. Previous research suggests that such examples of successful implementation are essential for embedding knowledge and student learning (Busby et al., 2012).

Other strategies recommended for developing the knowledge of education service workers/officers and early childhood educators include role play, modelling and feedback on performance (Wermer et al., 2018). Role play, videos, simulations and real-world experiences (including field excursions to special education centres) are also recommended for building educators understanding of autism and evidence-based practices (Busby et al., 2012; Devi et al., 2024; Listiakova & Preece, 2020). Simulations and role plays may be a more flexible alternative to placements for enabling students to develop experience implementing EBPs. This is particularly important for students in rural areas who may not have suitably knowledgeable mentors to provide feedback on their workplace performance. A PD program which included videos, case studies, role plays and discussions and was delivered online was shown to improve Yemeni pre-school teachers knowledge of autism, including their ability to correctly identify the cause of challenging behaviours exhibited by autistic children (Taresh et al. 2020). This indicates the feasibility of using such methods for remote delivery to regional areas.

Other characteristics of effective professional learning for educational professionals

Most of the research on effective professional learning for educational professionals has focused on teachers, however, the types of activities that promote learning are likely to be relatively consistent. The research shows that extended professional learning activities that provide educators with time to apply their knowledge, then reflect on this, results in greater learning than shorter, one-off experiences (Darling-Hammond et al., 2017; Vongkulluksn et al., 2018). Similarly, opportunities to rehearse or practice strategies increases transference on learning into practice (Tondeur et al., 2017; Vongkulluksn et al., 2018). These findings emphasise the value of placements and other methods outlined above which provide experiential learning for participants.

Activities that are collaborative and which provide learners with feedback on their performance, preferably on multiple occasions, are also likely to promote learning, as well as learner engagement (Darling-Hammond et al., 2017). Discussion-based activities (peer learning, coaching and mentoring) which occur over several weeks address several of these factors as they are collaborative, and provide repeated opportunities for critical reflection.

Combining discussion-based activities with practical placements would provide opportunities to implement new strategies and then reflect on both the implementation and outcomes in a

collaborative manner, thereby capitalising on the benefits of each type of activity to maximise learning.

Consequently, it is recommended that a combination of methods are used to develop educator knowledge of autistic children and EBPs that will support the latter's development, including assisting educators to better manage the learning environment and, thus, reduce challenging behaviours. This should include practically orientated activities (such as placements, role-plays or simulations) as well as case studies and more theory-based activities.

Guidelines

Australian guidance

Two relevant documents were published in Australia during the last 10 years. Firstly, the Autism CRC recently released a *Framework for assessing children's functional strengths and support needs* (Fitzpatrick et al., 2024). Consideration of needs and strengths, supports and challenges, aspirations and the voices of the children and their families are paramount considerations within this. The framework emphasises implementing evidence-based methods yet remaining aware of language and bias (including within the underlying research). For example, many medical texts adopt a deficit approach and associated language that can be exclusionary or offensive. As such, educators need to be self-aware and reflective, to avoid perpetuating racist or ableist language and attitudes.

Another key focus of the framework is on adapting responses to suit the individual child and their context, a process referred to as differentiation; similar to, but broader than, the way a teacher might adapt (differentiate) learning materials for individual children (Fitzpatrick et al., 2024). Combining information about a child's aspirations with their needs and strengths enables professionals (including educators) to better support them to achieve their goals and succeed in life. Seeing the individual child, not just a diagnosis or disability, is essential for understanding their needs, developing positive relationships and enabling that child to develop to their full potential. This is also reflected in the first four recommendations of the second document identified, namely the '*National Guideline for supporting the learning, participation, and wellbeing of autistic children and their families in Australia'.*

This national guideline (Trembath et al., 2022) sets out 84 different recommendations to ensure that appropriate supports are provided for autistic children and their families. Multiple recommendations relate to the objectives or purpose of support, namely that the support provided should:

- Support the child to communicate with people in the way that they choose
- Meet the child's sensory needs
- Help develop cognitive, socio-emotional and motor skills of the individual child.

Another subset of recommendations focus on the professionals who provide support, including that they should:

- be appropriately qualified and experienced to provide the support offered
- be aware of the research but seek multiple sources of evidence;
- act within their remit and scope; and,

- refer the child to a relevant practitioner should the required support fall outside of their own capabilities (Trembath et al., 2022).

Finally, other recommendations focus on the need to monitor the child's progress and the effectiveness of any support provided, using a variety of sources, and to consider how to reduce risk (including of adverse effects) throughout the process. The National Guideline is applicable to clinical and community settings, rather than educational settings (Trembath et al., 2022), but the underlying principles of support, consultation and differentiation are still applicable for early childhood educators.

International Guidance

The search for relevant guidelines identified the UK's National Institute for Health and Care Excellence (NICE) clinical guidelines on *Autism spectrum disorder in under 19s: support and management,* which were updated in 2021. Despite being intended for the health and social care sector, these guidelines nevertheless contain relevant information for this report. For example, a key recommendation in the report is to assess the physical environment as this can have a significant impact on autistic children. Differences in sensory perceptions (relative to neurotypical people) is a key indicator of autism. For example, an autistic individual may perceive light and colour significantly differently to a neurotypical person (Figure 4; National Development Team for Inclusion (NDTI), 2020).

Figure 4. Different sensory processing of a hallway by (a) a neurotypical and (b) an autistic person. Note different individuals with autism will process and respond to sensory inputs in various ways, thus this image is an example of a single autistic person's perception rather than being typical of how all autistic people would perceive this environment.

Given the negative impact that sensory over-stimulation can have on cognitive processing, it is essential that educators have a good understanding of this topic and how to modify environments to better support autistic children in their care. The NDTI published a comprehensive set of recommendations on creating more accessible environments for autistic youth (developed in

conjunction with ‘Experts with Experience’), which includes practical steps such as putting felt under chair legs to reduce noise (NDTI, 2020). This publication could help all staff working within Early Childhood settings to create more accessible environments for autistic children.

Of further relevance for early childhood educators, the NICE guidelines recommend psychosocial interventions, with a major emphasis placed on play-based learning.
Specifically, professionals were instructed to “Consider a specific social-communication intervention for the core features of autism in children and young people that includes play- based strategies with parents, carers and teachers to increase joint attention, engagement and reciprocal communication in the child or young person” (NICE, 2021).

The NICE guidelines also outline the knowledge that health and social care professionals require to work effectively with children and young people who have been diagnosed with autism. The scope exceeds that required of early childhood educators, thus only the most relevant points for these staff are summarised below:

- the nature and course of autism
- the nature and course of behaviour that challenges in autistic children and young people
- the importance of key transition points, such as changing schools or health or social care services
- the child or young person's experience of autism and its impact on them
- the impact of the social and physical environment on the child or young person
- how to provide individualised care and support and ensure a consistent approach is used across all settings
- skills for communicating with an autistic child or young person” (NICE, 2021).

There are obvious commonalities between this information and some of the professional development courses available. In addition, this aligns with several of the six specific priority areas identified by the US National Research Council for interventions with autistic children, namely:

- “functional spontaneous communication;
- social skills;
- play skills;
- cognitive development;
- proactive approaches to behavior [sic] problems; and,
- functional academic skills” (Stansberry-Brusnahan & Collet-Klingenberg, 2010, p48).

The emphasis on communication, social skills and play-based learning agrees with much of the literature on EBPs (e.g. Barnett et al., 2018; Carrero et al., 2014; Gibson et al., 2021).

Other key recommendations from the NRC relevant for educators are that interventions should:

- be introduced as soon as there is any indication that a child might be autistic
- actively engage children for a minimum of five hours a day, five days a week
- include both individual and small group activities to promote interactions with neuro- typical children
- be monitored to assess the effectiveness and the impacts on the child's development (Stansberry-Brusnahan & Collet-Klingenberg, 2010).

There is clear overlap between these recommendations and the more recent guidance issued by the Autism CRC. While neither are legally binding on educators, it is recommended that the unit emphasises the above recommendations, so educators better understand the importance of EBP for supporting the development of autistic children.

Discussion

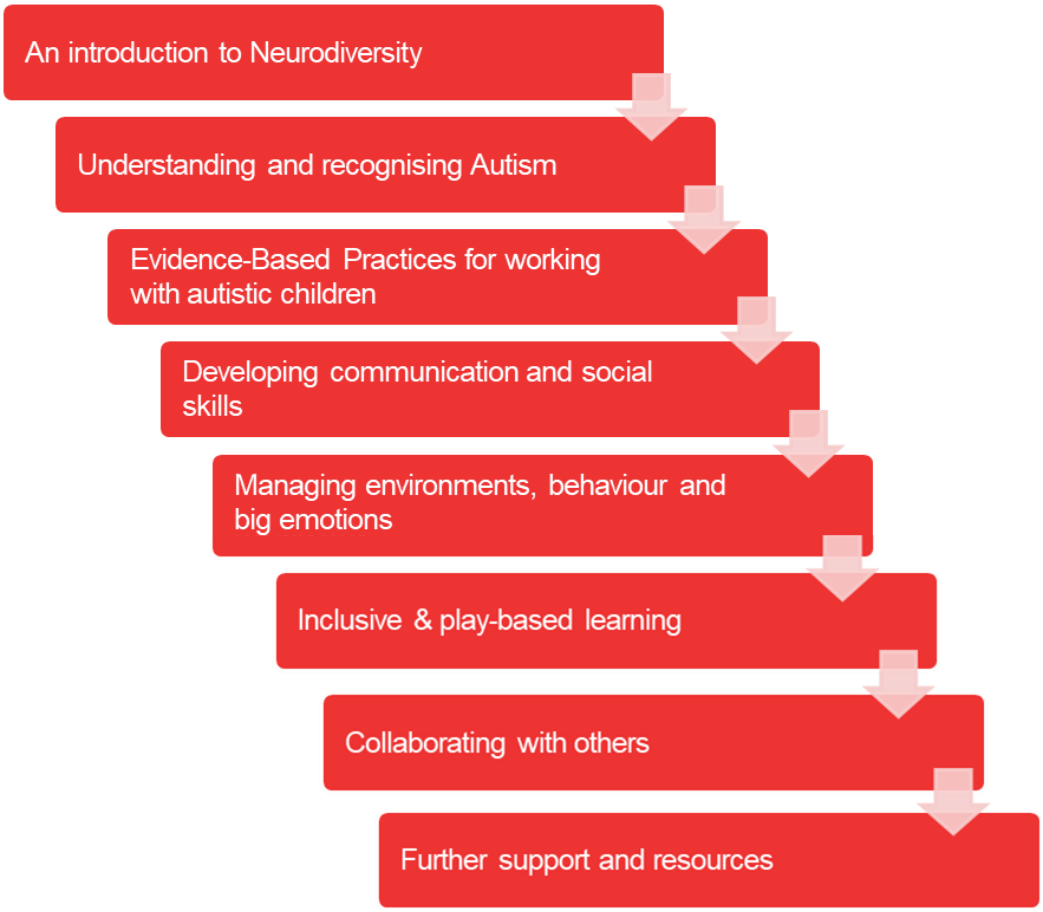
There is a clear need to improve the knowledge of early childhood educators and other educational professionals regarding autism. Educators need to understand the concept of EBPs and have a basic awareness of key types. This is important given the NRC's recommendation that autistic children receive appropriate interventions to promote their development for 25 hours a week. The proposed unit should therefore cover this content and familiarise educators with a few, highly relevant methods. An aligned recommendation is that all interventions and strategies (including approaches for supporting behaviour) mentioned within the unit are restricted to EBPs, other than when de-bunking commonly used low-value practices. Consequently, further discussions should be held with experienced educators, sector representatives and researchers to assess the relevance and effectiveness of specific focused interventions currently used in early childhood education and care settings within Australia. This should capture both what EBPs are commonly used as well as what low-value practices educators are likely to encounter so the latter can be pro-actively de-bunked. Unfortunately, de-bunking incorrect beliefs is harder than creating new beliefs (Paynter et al., 2019a, b) thus this review recommends that the unit should proactively discredit low-value practices found to be commonly used in Australian ECEC settings, prior to educators encountering them in workplaces.

The critical thinking capabilities of educators (including the ability to evaluate the evidence base underlying an intervention) needs to be developed for these staff to more effectively support autistic children. While there is some overlap in content between the key topics recommended in the research literature, and the material suggested by the Advisory Group, the literature places more emphasis on information related to management strategies and adjustments for autistic children. This is consistent with the need to improve knowledge of EBP discussed above.

The key topics identified within the existing PD courses (Figure 2) provide a reasonable foundation for the unit, however, several additional components should be included. Firstly, as noted by the Advisory Group, there is limited information on neurodiversity currently available to educators. As such, a preliminary module that introduces neurodiversity including key terms and concepts could be added to the start of the unit (Figure 5). This would precede the module on Understanding and recognising autism. These two modules could both explore bias and discrimination by including the voices of those with lived experience (including parents of autistic children). Consistent with recent

recommendations from the Autism CRC, this should encompass autistic people from Aboriginal and Torres Strait Islander communities to ensure that non-Western perspectives are included within educator development.

Figure 5. Content recommended for the unit



We note that the Advisory Group recommended the unit contain some information on Inclusion and Inclusive Education specifically for relatively new sector staff who are currently studying the Cert. III. However, according to the National Training Register, the currently endorsed Cert. III in Early Childhood Education and Care (CHC30121) already includes a compulsory 63-hour unit called "Support Inclusion and Diversity" (Commonwealth of Australia, n.d.). The unit has been offered since 2021 (Commonwealth of Australia, n.d.). To avoid duplicating content, incorporating introductory information on inclusion within the proposed Introduction to neurodivergence and autism is not recommended for students studying the Cert. III. However, the preceding version of this qualification did not have a compulsory unit related to supporting Inclusion (although it contained a unit on developing cultural competence). As such, educators who completed that may benefit from an overview of Inclusion, covering topics such as inclusive education, disability, and intersectionality. Secondly, an additional module should be included to introduce the concept of EBPs, including an overview of the main types, and some relevant examples, as discussed above. Logically, this should precede the modules which refer to specific strategies or approaches, and thus would form the third module in the unit (Figure 5). The remaining four modules from Figure 2 could then be offered,

however, the two modules on (1) developing communication and social skills, and (2) managing environments, behaviours and 'Big Emotions' should focus on EBP to be consistent with the research findings. As noted above, the exception to this would be if commonly used low-value practices need to be de-bunked. Additionally, it is recommended that content on inclusive learning and learning environments be expanded to include a focus on play-based learning.

Although play-based learning wasn't mentioned by the Advisory Group and, similarly, isn't featured within most of the existing PD courses found, play-based learning is emphasised in several guidance documents and the research literature (e.g. Barnett et al., 2018; Carrero et al., 2014; Gibson et al., 2021). Play-based learning represents an effective strategy for both social interaction and promoting communication within children of this age-group. Multiple EBPs can be used to promote play and play-based learning in autistic children (e.g. Barnett et al., 2018; Carrero et al., 2014) thus its inclusion does not contradict the previous recommendation to only incorporate EBPs within the unit. Given autistic children often experience play quite differently to neurotypical children, it is important that inclusive learning for neurodiverse and autistic children includes this approach. Sensory play should be one component of play-based learning. TAFE SA introduces play-based learning within other units in the Cert. III, however, other training organisations may not. The extent of play-based learning already incorporated within the Cert. III therefore needs further exploration.

Collaborating with others should primarily focus on internal collaboration (with teachers, room leaders and centre managers) but also reference external collaboration with health or social care professionals and communication with parents and care givers of autistic or potentially autistic children. Finally, educators should be provided with additional resources, sources of information and help (akin to the final module of *Navigating Autism: the Early Years)*. Ideally, this will consist of a variety of different resources, ranging from tip sheets, suggested activities (for different levels and areas of development), visuals to help educators recognise specific characteristics and information about EBPS (including the AFIRM modules mentioned above). Similarly, a practical activity within the unit could ask educators to start compiling their own toolkit of useful resources they could use later in their work.

For simplicity, the course content outlined above have been described as modules, however, this may not necessarily represent the best structure. Insufficient research (especially outcome data on existing PD) was found to enable recommendations to be made around the course structure. Consequently, the analysis within this report has focused on the content requirements, rather than the structure. As such, course designers should not feel constrained to adopt the modular approach suggested herein.

Where possible, the content should be brought to life through the use of multi-media, including videos of autistic children (or actors playing these roles) as well as the voices of adults with lived experience of autism. For example, hearing several adults talking about how they experience sensory overload both now, and as a child, could help educators better understand issues around sensory processing and the importance of appropriately managing the learning environment'.

The inclusion of practical experience is strongly recommended within the literature; this is reported as being requested by students, including students from Queensland who opted to study autism modules as an elective (Coates et al., 2017). Ideally, students would therefore be able to apply their

learning, under supervision, with autistic children in a workplace environment, including the use of EBPs. As a minimum, students need to be able to observe these being implemented or rehearse implementation (for example, in role-plays or simulations). We note, however, that anecdotal information suggests that many providers have difficulties releasing staff for placements while completing placements can pose an additional barrier for regional and remote students. To avoid placement poverty, any required placements should be paid (Jobs and Skill Australia, 2024). The feasibility of including practical experience within the unit, whether that be working with autistic children, or observing other educators implementing EBPs when working with autistic children) should therefore be explored. Where this is not feasible, alternative options (such as videos, roleplaying and simulations) should be considered to provide educators with experience identifying characteristic behaviours and implementing EBPs. For example, educators could be asked to design a sensory environment that is inclusive of autistic children, ideally enabling them to control the levels of light and sound which they are exposed to.

Consistent with the literature on professional development, collaborative and discussion- based activities which promote critical reflection and feedback should also be included within the unit. Finally, activities that will promote critical thinking and analysis (especially around EBPs) should be embedded throughout. This will not only promote educator development while they are undertaking the unit but also develop the skills they will need to continue to develop their own knowledge and understanding of EBPs throughout their careers in the early childhood education and care.

Recommendations

1. A unit should be developed to improve the knowledge and understanding of educators who support neurodiverse and autistic children, as well as children who display similar characteristics or behaviours (irrespective of a formal diagnosis).
2. In addition to providing information about neurodiversity and autism, the unit should focus on evidence-based practices, including developing the capabilities of educators to assess what practices are evidence-based.
3. Any strategies mentioned within the unit for use with autistic children should be EBPs; the sole exception to this would be if any low-value practices need to be de- bunked. Consultation should be undertaken with key representatives of the sector to establish what, if any, low-value practices should be addressed in this way.
4. The unit should provide educators with EBPs that will enable them to support the development of autistic children, including in the areas of communication, social interaction, emotional regulation and play.
5. Similarly, the unit should enable educators to implement EBPs; adapt the learning environment to reduce sensory overload and better respond when autistic children experience big emotions.
6. The unit should provide educators with opportunities to observe and either practice or rehearse, the implementation of EBPs in different settings. Serious consideration needs to be given to the inclusion of practical placements or hands-on learning within the unit. While this is strongly recommended by the research literature, it potentially poses issues for

regional and remote students, thus alternative options (such as role play, video modelling or simulations) may need to be considered.

7. Professional development should be provided to update the skills and knowledge of VET lecturers, especially with regards to EBPs, prior to them delivering the unit.

Conclusion

Published literature demonstrates suggestions that educators required additional knowledge and skills to adequately support autistic children in early childhood education and care settings. The research base indicates that educational professionals, spanning roles from educators to university lecturers, have misconceptions about autism and limited understanding of EBPs. Consequently, the inclusion of an autism specific unit within the Cert. III is warranted, especially give then increasing prevalence of this within young children, and the importance of early interventions. Additional PD is likely to be required for staff delivering the unit to ensure that they have sufficient knowledge, especially with regards to EBPs.

The review of existing PD offerings intended to improve the knowledge of educators working with autistic children found a wide variety of courses available, ranging from short workshops on specific components, to longer courses up to 20 hours in duration. Key learning outcomes in these courses included general information about autism and potential indicators or characteristics of autistic children; developmental issues such as sensory processing, communication, socialisation and, occasionally, emotional regulation; plus management of behaviours[5] and learning environments. Collaboration with parents and other professionals was also seen in much of the PD available. These topics are all appropriate for inclusion within the unit; there does not appear to be extraneous material that could be omitted. Conversely, however, several gaps were noted in multiple courses, including an over-arching introduction to neurodiversity, EBPs, differentiation and play-based learning. Based on the literature, these topics should be included within the unit.

The unit should both introduce educators to some highly relevant EBPs and de-bunk any commonly used low-value practices. Consultation with the sector (either via the Advisory Group or more broadly) should be undertaken to identify any such low-value practices. Additionally, the unit will promote educator awareness of the importance of maintaining fidelity of implementation, to improve the likelihood of the desired outcomes of a given intervention being achieved. Finally, the unit will develop the critical thinking capabilities required so educators can maintain and update their knowledge of EPBs regularly throughout their careers.

Critical thinking and critical reflection are important skills for educators; learning activities included within the unit should be designed to foster the development of these skills. The research also strongly emphasises the importance of practical experience in developing educator skills and confidence, however, this needs to be carefully weighed against the potential barriers that practical placements can pose to students and employers alike. Alternative learning activities incorporating role-plays, observations and simulations could potentially offer a solution to this dilemma.

[5] While TAFE SA prefers to refer to use the term “supporting behaviours”, the term “management” is used to be consistent with the majority of course descriptions reviewed.

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Appendices

Appendix 1. Summary of existing PD courses about autism A1
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Appendix 1. Summary of existing PD courses about autism

Provider ***Course Name***	**Target Audience**	**Duration**	**Delivery Mode**	**Core Contents (Topics)**	**Link**
Autism Awareness Australia *Navigating Autism: The Early Years*	Educators	3 hours	Online	Understanding and recognising autism in young children Communication Inclusive education Understanding the [autistic] child Inclusive environment Teaching through play Getting outside support Resources	Navigating Autism: The Early Years | Navigating Autism: The Early
Sue Larkey elearning *Developing Early Childhood Approaches For Children with Additional Needs*	Educators	5 hours	Online	Identifying and addressing the learning needs of all children, including neurodiverse ones. Adapting activities and using sensory tools to enhance engagement. Understanding communication styles and behaviour management. Implementing play-based learning and setting individualised goals. Creating sensory programs and managing meltdowns.	https://elearning.suelarkey.com.au/wp-content/uploads/2019/06/Sue-Larkey-Early-Childhood-online-Course-flyer-2023.pdf
Monash University *Supporting Individuals on the Autism Spectrum in Early Childhood Education*	Educators	6 hours	Online	Understanding The Autism Spectrum. The Autistic Child In The Preschool Setting Understanding And Addressing Behavioural Challenges.	Supporting Children on the Autism Spectrum in Early Childhood Education
Reframing Autism *Other paid courses*	Anyone	2 - 6 hours	Online	Examples: Reframing Autistic Behaviour (6 hours); Reframing Autistic Communication & Socialisation (6 hours); Using Neurodiversity to Support Autistic Children and Their Families (2 hours).	https://reframing-autism-s-school.teachable.com/courses/

Provider *Course Name*	Target Audience	Duration	Delivery Mode	Core Contents (Topics)	Link
Reframing Autism *Autism Essentials*	Anyone	Self-paced	Online	Language: Person-first vs identity-first language, pathologising language. What Is Autism?: Neurodiversity, autistic perspectives. Brain Differences: Autistic brain structure and functioning. Communication and Socialising: Double empathy, autistic communication, and socialising styles. Thinking and Processing: Cognitive, executive functioning, and sensory differences.	Autism Essentials | Reframing Autism
Positive Partners *Professional Learning Workshop*	Educators	2 days	F2F and Online	Pre-course online module: An Introduction to Autism Setting the scene Strengths and interests Connections to culture and community Executive Functioning Social Skills and Communication Sensory Processing Selfcare and Independence Mental Health, Wellbeing and Behaviour Working in partnership with families and students	Positive Partnerships | Professional Learning
Positive Partners *Schools & Families Together Workshop*	Educators	2 days	F2F and Online	Pre-course online module: An Introduction to Autism Beliefs and Perspectives: Autism: History and Diversity Exploring Team Strengths: The Diversity of Autism:. Working Together: completing a planning tool.	Positive Partnerships | Professional Learning
Autism Spectrum Teacher *Autism for Teachers*	Teachers	13 hours	Online	Autism and Neurodiversity; Inclusive Teaching Strategies; Help My Communication; Help My Social Relationships; Help My Emotional Regulation; Help My Sensory Processing; Help My Transitions; Leading a Team of Teaching Assistants	Autism for Teachers - Professional development programme

Provider *Course Name*	Target Audience	Duration	Delivery Mode	Core Contents (Topics)	Link
Parental Stress Centre *Autism-Specific Parent Training for Aussie Families*	Parents and Carers	9 weeks	Online	Understanding autism and child's behaviour. Mental health and coregulation strategies. Building skills for emotional regulation, communication, and connection. Managing meltdowns, anxiety, school avoidance, and family dynamics.	https://www.parentalstresscentre.com
The Autism Hub *Professional Learning Courses*	Educators, support workers and professionals	Full day or evening series	F2F or Online	Autism Hub has lots of general courses for teacher PD such as managing anxiety (of autistic children), supporting autistic children, supporting behaviour etc.. There is one course for early years (offered either daytime or evening) which covers Cognitive difference; Communication supports; Sensory processing; Routines and Transitions	Professional Learning Courses – The Autism Hub
Study.com *Autism Strategies for Teachers*	Teachers	20 hours	Online	Autism Teaching Strategies; Academic Skills & Autism; Listening & Attention for students with Autism; Autism Awareness & Inclusion Ideas for Teachers; Sensory Issues in Autism for Teachers; Life Skills & Autism; Behaviour, Self-improvement & Autism; Social Skills &Autism	Autism Strategies for Teachers Course - Online Video Lessons | Study.com
Sensory Tools *Traffic Jam in My Brain*	Educators	7 hours	Online	Understanding the brain's role in behaviour. Tools for managing situations and preventing meltdowns. Enhancing care by adapting responses effectively.	https://sensorytools.net/collections/workshops-on-demand/products/thetrafficjaminmybrain
The Spectrum *My Child and Autism Online Modules*	Parents and Carers	Self-paced	Online	Social communication and interaction. Restricted and repetitive behaviours. Sensory processing differences. Learning styles and key strategies.	My Child and Autism Online Modules | The Spectrum

Provider *Course Name*	Target Audience	Duration	Delivery Mode	Core Contents (Topics)	Link
Autism Navigator *Autism Navigator for Classroom Success in PreK to 2nd Grade*	Educators	15-20 hours	Online	Autism in the classroom and its impact on learning. Increasing prevalence and causes of autism. Active engagement and family - school partnerships. Supports for engagement and student success. Understanding and addressing challenging behaviours.	Autism_Navigator_for_Classroom_Success_in_PreK_to_2nd_Grade.pdf
Autism WA *The More Than Words® Program and TalkAbility™*	Parents and carers	19 hours	F2F and Online	Some regular 2hour workshop available upon register More Than Words® Program: Tools and strategies for children aged 6 and under. TalkAbility™ Program: Fostering language and social skills for verbal children aged 3–7.	Hanen® Programs for Parents and Carers - Autism Association of Western Australia
Autism WA *Autism - What are the Early Indications?*	Parents & Carers; Educators	2 hours		This information session will help participants: Identify the early signs of Autism Understand diagnostic and intervention pathways Support families of children showing signs of Autism	Autism: What are the Early Indicators? - Autism Association of Western Australia
Autism SA *Customised Workshops*	Educators	1.5-6.5 hours	F2F or Online	General tools and strategies for specific settings (educational, workplace, etc.). Combination of theoretical knowledge, practical strategies, and workshop activities. Customised to meet organisational needs, including lived experience sessions.	Autism SA Training - Referral and Quote
Aspect *Autism PD workshops*	Educators, support workers allied health		F2F or Online	Evidence-based practices for effective strategies. Practical application guidance from allied health specialists. Focus on implementing best practices in autism support.	Professional Development… – Autism Spectrum Australia (Aspect)
Autism Queensland *Positive Behaviour Guidance Workshops*	Teachers	Full day	F2F or Online	What is Positive Behaviour Guidance Positive Relationships Regulation Setting Up for Success Strengthening Supports	Professional Development & Parent Education - Autism Queensland

ECA Learning Hub *An insight into Autism Spectrum Disorder in the early years*	Educators	2.5 hours	Online	Exploring behaviours and understanding their causes. Developmental differences in children with Autism Spectrum Disorder. Proactive strategies for supporting positive behaviour and advocating for children with special rights.	**https://learninghub.earlychildhoodaustralia.org.au/elearning/understanding-behaviour-supporting-children-autism-spectrum-disorder/**
ECA Learning Hub *Making connections with neurodivergent children through play*	Educators	40 min	Online	Understanding neurodiversity and its impact on learning. Brain functions and neurodiverse children's engagement in play. Building trusting relationships through play-based learning. Promoting individual learning and development.	Making connections with neurodivergent children through play (2-part series) | Early Childhood Australia Shop
Swinburne University of Technology *Autism*	Parents and Carers, Educators	7 weeks	Online	Introduction to Autism; Communication; Special Interests Labels; Transitions; Resilience; Skills for working with autistic children	Swinburne Commons | Swinburne University of Technology
Amaze *What is Autism and What is Autism: Online workshops*	Anyone	1-hour self-paced learning; 2-hour workshops	Online	Understanding autism and the diversity of the Autistic experience. Exploring the social model of disability and the importance of strengths-based language. Appreciating the Autistic perspective and recognising the uniqueness of the community. Practical ways to foster autism-friendly interactions and behaviours.	Training - Amaze can empower you to become more autism-inclusive.
AEIOU Foundation for *children with Autism Community and Bespoke Workshops*	Parents, carers, educators, allied health	custom	Online	Customised workshops for workplace's needs. Regular community workshops including information on behaviour, communication and independence	Workshops | AEIOU Foundation

Appendix 2. Evidence Based Practices (Steinbrenner et al., 2020)

Evidence-Based Practice	Definition
Antecedent-Based Interventions (ABI)	Arrangement of events or circumstances that precede an activity or demand in order to increase the occurrence of a behavior or lead to the reduction of the challenging/interfering behaviors.
Augmentative and Alternative Communication (AAC)	Interventions using and/or teaching the use of a system of communication that is not verbal/vocal which can be aided (e.g., device, communication book) or unaided (e.g., sign language)
Behavioral Momentum Intervention (BMI)	The organization of behavior expectations in a sequence in which low probability, or more difficult, responses are embedded in a series of high probability, or less effortful, responses to increase persistence and the occurrence of the low probability responses.
Cognitive Behavioral/ Instructional Strategies (CBIS)	Instruction on management or control of cognitive processes that lead to changes in behavioral, social, or academic behavior.
Differential Reinforcement of Alternative, Incompatible, or Other Behavior (DR)	A systematic process that increases desirable behavior or the absence of an undesirable behavior by providing positive consequences for demonstration/non-demonstration of such behavior. These consequences may be provided when the learner is: a) engaging in a specific desired behavior other than the undesirable behavior (DRA), b) engaging in a behavior that is physically impossible to do while exhibiting the undesirable behavior (DRI), or c) not engaging in the undesirable behavior (DRO).
Direct Instruction (DI)	A systematic approach to teaching using a sequenced instructional package with scripted protocols or lessons. It emphasizes teacher and student dialogue through choral and independent student responses and employs systematic and explicit error corrections to promote mastery and generalization.
Discrete Trial Training (DTT)	Instructional approach with massed or repeated trials with each trial consisting of the teacher's instruction/presentation, the child's response, a carefully planned consequence, and a pause prior to presenting the next instruction.
Exercise and Movement (EXM)	Interventions that use physical exertion, specific motor skills/ techniques, or mindful movement to target a variety of skills and behaviors.
Extinction (EXT)	The removal of reinforcing consequences of a challenging behavior in order to reduce the future occurrence of that behavior.
Functional Behavioral Assessment (FBA)	A systematic way of determining the underlying function or purpose of a behavior so that an effective intervention plan can be developed.
Functional Communication Training (FCT)	A set of practices that replace a challenging behavior that has a communication function with more appropriate and effective communication behaviors or skills.
Modeling (MD)	Demonstration of a desired target behavior that results in use of the behavior by the learner and that leads to the acquisition of the target behavior.
Music-Mediated Intervention (MMI)	Intervention that incorporates songs, melodic intonation, and/or rhythm to support learning or performance of skills/behaviors. It includes music therapy, as well as other interventions that incorporate music to address target skills.

Evidence-Based Practice	Definition
Naturalistic Intervention (NI)	A collection of techniques and strategies that are embedded in typical activities and/or routines in which the learner participates to naturally promote, support, and encourage target skills/behaviors.
Parent-Implemented Intervention (PII)	Parent delivery of an intervention to their child that promotes their social communication or other skills or decreases their challenging behavior.
Peer-Based Instruction and Intervention (PBII)	Intervention in which peers directly promote autistic children's social interactions and/or other individual learning goals, or the teacher/ other adult organizes the social context (e.g. play groups, social network groups, recess) and when necessary provides support (e.g., prompts, reinforcement) to the autistic children and their peer to engage in social interactions.
Prompting (PP)	Verbal, gestural, or physical assistance given to learners to support them in acquiring or engaging in a targeted behavior or skill.
Reinforcement (R)	The application of a consequence following a learner's use of a response or skills that increases the likelihood that the learner will use the response/skills in the future.
Response Interruption/ Redirection (RIR)	The introduction of a prompt, comment, or other distractors when an interfering behavior is occurring that is designed to divert the learner's attention away from the interfering behavior and results in its reduction.
Self-Management (SM)	Instruction focusing on learners discriminating between appropriate and inappropriate behaviors, accurately monitoring and recording their own behaviors, and rewarding themselves for behaving appropriately.
Sensory Integration® (SI)	Interventions that target a person's ability to integrate sensory information (visual, auditory, tactile, proprioceptive, and vestibular) from their body and environment in order to respond using organized and adaptive behavior.
Social Narratives (SN)	Interventions that describe social situations in order to highlight relevant features of a target behavior or skill and offer examples of appropriate responding.
Social Skills Training (SST)	Group or individual instruction designed to teach learners ways to appropriately and successfully participate in their interactions with others.
Task Analysis (TA)	A process in which an activity or behavior is divided into small, manageable steps in order to assess and teach the skill.
Technology-Aided Instruction and Intervention (TAII)	Instruction or intervention in which technology is the central feature and the technology is specifically designed or employed to support the learning or performance of a behavior or skill for the learner.
Time Delay (TD)	A practice used to systematically fade the use of prompts during instructional activities by using a brief delay between the initial instruction and any additional instructions or prompts.
Video Modeling (VM)	A video-recorded demonstration of the targeted behavior or skill shown to the learner to assist learning in or engaging in a desired behavior or skill.
Visual Supports (VS)	A visual display that supports the learner engaging in a desired behavior or skills independent of additional prompts.

Appendix 3. Autism spectrum disorder in under 19s: support and management. National Institute for Health and Care Excellence (NICE; 2021).

The following information is an extract quoted directly from the above guidelines (NICE, 2021).

Features suggesting possible autism.

The following features suggesting possible autism are a combination of delay in expected features of development and the presence of unusual features, and are intended to alert professionals to the possibility of autism in a child or young person about whom concerns have been raised. They are not intended to be used alone, but to help professionals recognise a pattern of impairments in reciprocal social and communication skills, together with unusual restricted and repetitive behaviours.

Social interaction and reciprocal communication behaviours

Spoken language

- Language delay (in babble or words, for example less than ten words by the age of 2 years).
- Regression in or loss of use of speech.
- Spoken language (if present) may include unusual:
    - non-speech like vocalisations
    - odd or flat intonation
    - frequent repetition of set words and phrases ('echolalia')
    - reference to self by name or 'you' or 'she/he' beyond 3 years.
- Reduced and/or infrequent use of language for communication, for example use of single words although able to speak in sentences.

Responding to others

- Absent or delayed response to name being called, despite normal hearing.
- Reduced or absent responsive social smiling.
- Reduced or absent responsiveness to other people's facial expressions or feelings.
- Unusually negative response to the requests of others (demand avoidant behaviour).
- Rejection of cuddles initiated by parent or carer, although may initiate cuddles themselves.

Interacting with others

- Reduced or absent awareness of personal space, or unusually intolerant of people entering their personal space.

- Reduced or absent social interest in others, including children of his/her own age – may reject others; if interested in others, may approach others inappropriately, seeming to be aggressive or disruptive.
- Reduced or absent imitation of others' actions.
- Reduced or absent initiation of social play with others, plays alone.
- Reduced or absent enjoyment of situations that most children like, for example, birthday parties.
- Reduced or absent sharing of enjoyment.

Eye contact, pointing and other gestures

- Reduced or absent use of gestures and facial expressions to communicate (although may place adult's hand on objects).
- Reduced and poorly integrated gestures, facial expressions, body orientation, eye contact (looking at people's eyes when speaking) and speech used in social communication.
- Reduced or absent social use of eye contact, assuming adequate vision.
- Reduced or absent joint attention shown by lack of:
    - gaze switching
    - following a point (looking where the other person points to – may look at hand)
    - using pointing at or showing objects to share interest.

Ideas and imagination

- Reduced or absent imagination and variety of pretend play.

Unusual or restricted interests and/or rigid and repetitive behaviours

- Repetitive 'stereotypical' movements such as hand flapping, body rocking while standing, spinning, finger flicking.
- Repetitive or stereotyped play, for example opening and closing doors.
- Over-focused or unusual interests.
- Excessive insistence on following own agenda.
- Extremes of emotional reactivity to change or new situations, insistence on things being 'the same'.
- Over or under reaction to sensory stimuli, for example textures, sounds, smells.
- Excessive reaction to taste, smell, texture or appearance of food or extreme food fads.