

“The big wide world of school”: Supporting children on the autism spectrum to successfully transition to primary school: Perspectives from parents and early intervention professionals

Nigel Chen^{1,2,3}, Scott Miller^{2,4,5}, Ben Milbourn^{1,2,3}, Melissa H. Black^{1,2,3*}, Kathryn Fordyce⁶, Gerdamari Van Der Watt^{4,5}, Tasha Alach^{2,4,5}, Anne Masi^{2,7}, Grace Frost⁸, Madonna Tucker⁹, Valsamma Eapen^{2,7,10}, Sonya Girdler^{1,2,3}

¹School of Occupational Therapy Social Work and Speech Pathology, Curtin University, Perth, Western Australia, Australia; ²Cooperative Research Centre for Living with Autism (Autism CRC), Long Pocket, Brisbane, Australia; ³Curtin Autism Research Group, Curtin University, Perth, Western Australia, Australia; ⁴Autism Association of Western Australia, Perth, Western Australia, Australia; ⁵Autism Specific Early Learning and Care Centre, Perth, Western Australia, Australia; ⁶St Giles Society North West Tasmania Autism Specific Early Learning and Care Centre, Burnie, Tasmania, Australia; ⁷School of Psychiatry, University of New South Wales, Sydney, New South Wales, Australia; ⁸Anglicare SA Daphne St Autism Specific Early Learning and Care Centre, Prospect South Australia, Australia; ⁹AEIOU Foundation, Queensland Autism Specific Early Learning and Care Centre, Nathan, Queensland, Australia; ¹⁰Academic Unit of Child Psychiatry, South West Sydney (AUCS), ICAMHS, Mental Health Centre, Liverpool, New South Wales, Australia

*Corresponding author: melissa.black@curtin.edu.au

Abstract

Background: The transition to primary school is often a complex and uncertain time for autistic children and their families. Understanding how best to develop school readiness and support transition to primary school for autistic children is essential. School readiness and transition planning are influenced by a range of personal and contextual factors, and it is important to understand the perspectives of the various stakeholders involved in the transition process.

Methods: A qualitative exploration employing focus groups and interviews was undertaken with early intervention (EI) staff (n = 45) and parents (n = 18) across Australia to understand their perspectives on school readiness and the transition to primary school.

Results: Thematic analysis identified four emerging themes facilitating transition including: 1) building the child; 2) building the parents; 3) building the receiving school; and, 4) connecting the system.

Conclusion: Findings highlight the need to consider school readiness and transition planning from a holistic perspective, ensuring clear, collaborative and ongoing communication between parents, teachers and EI staff, using a strength-based approach, and individualizing transition planning.

Keywords: School transition; school readiness; school preparation; inclusion

Introduction

Commencing primary school is the first major educational transition in a child's young life (1), and a critical period where appropriate supports can have a meaningful impact on short and long term academic, social and mental health outcomes (2-5). Whilst typically seen as a positive experience, educational transitions can present significant challenges for children, as well as their families and teachers (6). Transition to school is invariably accompanied by the loss of existing supports,

coupled with the need to establish new supports and relationships with school teachers and peers (7-9). The experience of transitioning is often associated with increased anxiety, and uncertainty for both the child and their family (10).

While adapting to new environments and coping with uncertainty are difficult for all children, this time can be particularly challenging for families who have a child with a disability, such as Autism Spectrum Disorder (ASD) (1, 11). The complex nature of ASD can contribute to significant difficulties during the

transition process, with autistic¹. children facing increased risk of emotional and behavioural problems (12), bullying (13), school exclusion (14), and peer rejection (15) Targeted transition planning attempts to mitigate as many of these identified risks as possible.

Transition to school is defined as the transition of a child and their family to new service delivery models through a series of coordinated steps (16). The transition may be deemed successful, when children feel secure and comfortable, are eager to attend school, develop academic and social skills, attain higher levels of independence, participate actively with peers and teachers, and experience a sense of wellbeing, belonging and inclusion (7). Influencing the successful transition to school is school readiness, a broad concept encompassing the skills and abilities a child needs to be successful at school, as well as the schools readiness for the child and the family's readiness for their child to make the transition to school (17, 18). One well-established contemporary definition describes school readiness as going beyond academic skills or child-related factors, taking a systems-focused perspective highlighting the mediating influence of external factors in preparing a child for school, contextualizing a child within the environment and emphasizing the importance of an active, rather than a passive role for the receiving teacher and school (19). This model also draws attention to the influence of more overarching factors, not directly related to an individual child, such as educational policies at the local and national level (19).

This multidimensional, or "interactionist" model is further developed by Britto (17) who argues that school readiness consists of two characteristics (transition and gaining competencies), on three dimensions (children's readiness for school, schools' readiness for children, and families' and communities' readiness for school). The interplay of these three dimensions work towards preparing for the upcoming challenges associated with the transition.

While research has begun to explore the issue of school readiness for autistic children, including the identification of barriers and protective factors (1, 2, 6, 10, 18, 20), this research is limited (10). The benefits of intervention in the early years preceding school entry is well established with findings supporting the role of early intervention (EI) in promoting school readiness, and later academic and social success (21). A growing number of autistic children also participate in EI programs leading up to

school with the goal of preparing them for school life. While EI programs differ in regard to their theoretical underpinnings and operational frameworks many achieve positive outcomes for children (22, 23). Evidence supports the importance of tailored supports, both for the child and family, in facilitating positive transition outcomes (1, 2, 24).

Consistent with multi-dimensional or interactive models of school readiness and transition planning, is consideration of the influence of a range of personal and contextual factors on successful transition to school. Perceptions as to what constitutes a successful transition for an individual child likely differ between stakeholders. While parents and teachers share many of the same beliefs in regard to as what supports facilitate the transition process, there is evidence that they define success differently (25). For example, in a survey study, Dockett and Perry (25) found parents emphasized academic preparedness more than teachers, whilst teachers placed more emphasis on adjustment to the school environment. However, the authors noted that while differences were apparent in trends in responses between groups, context and individual circumstances made it difficult to define a single set of universal predictors for a successful transition to school for autistic children. This highlights the importance of consulting the various stakeholders actively involved in the transition process. For this reason, this study sought to understand the perspectives of parents and EI staff on school readiness and transitioning planning for autistic children.

Methods

Design

An inductive qualitative (26) research design was employed, seeking the rich meanings, understandings and perspectives of parents and EI staff across Australia. Focus group methodology and interviews were utilized (27) aiming to obtain a broad understanding of the attitudes and perceptions of participants.

Context

This study was undertaken across Australia, including Western Australia, New South Wales, South Australia, Queensland, and Tasmania. Schooling in Australia varies across states, however, consists of 13 years of education, including primary school, secondary school and senior secondary school. Compulsory schooling (primary to secondary) begins at approximately five to six years of age (28). Prior to

¹ "Autistic" is used throughout this manuscript in accordance with preferences of the autistic community. Kenny L, Hattersley C, Molins B, Buckley C, Povey C, Pellicano E.

Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism* 2016;20(4):442-462. doi:10.1177/1362361315588200

engaging in school, children can attend kindergarten or preparatory school, or day-care.

Autism Specific Early Learning and Care Centres (ASELCCs) are accredited long day-care centres, providing early intervention and parental support for autistic children up to six years of age. The therapeutic services provided by ASELCCs draw primarily from behaviour-based interventions, such as *Applied Behaviour Analysis* (ABA) and *Early Start Denver Model* (ESDM), and are implemented through a combination of play and joint activities to support a broad range of social, cognitive, motor, and language outcomes. On average, children and their families are typically engaged with an ASELCC for one to two years, although this can range from six months to three years for some families. ASELCCs aim to provide autism-specific supports and learning to assist autistic children to transition to additional school or other systems (29).

Participants

A total of 45 EI professionals and 18 parents of autistic children participated in this study. Both EI and parent participant groups were recruited via ASELCCs across Western Australia, New South Wales, South Australia, Queensland, and Tasmania.

Parents of children were provided with information regarding the present study, and were invited to participate if their child was transitioning out of an ASELCC in Term 4, 2017, to commence school at the start of 2018. Parent participants were primarily female ($n = 15$). The parent group collectively included 24 autistic children who were predominantly male ($n = 16$).

EI staff were offered the opportunity to volunteer for this project if they held professional experience with transitioning autistic children to school from an EI setting. EI staff were informed that participation was not a requirement of their employment. EI staff were primarily female ($n = 42$). There was some overlap in roles for EI staff (i.e. staff members holding multiple roles). EI staff included trained teachers or educators ($n = 14$), early learning providers ($n = 7$), health professionals such as occupational therapists ($n = 9$), speech pathologists ($n = 5$), physiotherapist ($n = 1$), social workers ($n = 1$), behaviour analysts ($n = 1$), program managers, team leaders and coordinators ($n = 8$), and administrative staff ($n = 2$). EI staff experience working with autistic children ranged from 0.25 to 39 years, with the median experience being four years.

A total of five focus groups and four interviews were conducted with EI staff while two focus groups and nine interviews were conducted with parents. Focus groups for EI staff and parents were, on average, 59.2 and 82.5 minutes long, respectively. Interviews were on average 32.3 minutes for EI staff

and 32.8 minutes for parents. Parents and EI staff who were unable to attend focus groups were offered the opportunity to participate in an interview.

Data analysis

Qualitative focus group and interview responses were transcribed and exported into NVIVO (30) to be organized using inductive thematic analysis (31). In accordance with the process outlined by Braun and Clarke's six phase process (31), the research team first familiarized themselves with the transcripts and data. Initial codes were then generated by selecting and highlighting (32) relevant sections of text from the focus group transcripts. Initial codes were allocated to the text that described the journey of the child, the experience of the parents and relationship between the school, ASELCC EI provider and therapy providers. These initial codes were then collated into emerging potential themes. Based on a review of the emerging themes, main-themes and sub-themes were then defined and named. Following this process, all content was re-coded according to the sub-themes and main themes. Trustworthiness was ensured by addressing the four aspects of credibility, transferability, confirmability and dependability (32). To reduce the potential for researcher bias in interpreting qualitative responses, three research members independently coded qualitative responses. The research team met frequently to discuss the coding process with disagreement resolved via discussion. An audit trail of the thematic analysis process was also maintained in accordance with guidelines provided by (33). This included maintaining a record of the raw data and process notes, as well as documenting each stage of code and theme generation. The research team included managers of ASELCC centres, facilitating member checking and ensuring that the results accurately reflected the perceptions of the participants.

Results

Thematic analysis resulted in 19 sub-themes falling under four main themes including 1) building the child; 2) building the parents; 3) building the school and 4) connecting the system (Figure 1). Here, "building" was coined to refer to development via a combination of supports and empowerment.

Building the child

The theme of building the child was built upon four sub-themes, 1) coping with change and developing routine, 2) developing a child's independence, 3) managing a child's anxiety and meltdowns and 4) understanding the child as an individual. These sub-themes were seen as key in supporting a successful

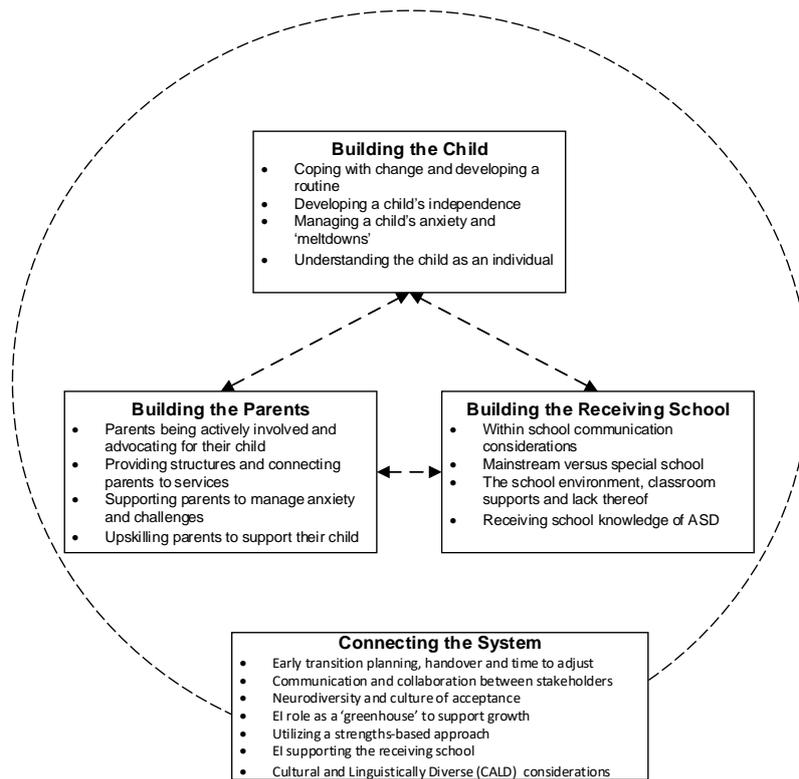


FIGURE 1. Results of thematic analysis. Headings indicate primary themes; bullet points indicate sub-themes

transition to school for autistic children. School readiness for autistic children was clearly defined as going beyond literacy and numeracy skills. For parents and EI staff, school readiness included being independent in self-care and daily routines, and having sufficient emotional and social skills to cope with setbacks or changes in routine. These skills were important in enabling autistic children to effectively engage in and transition to school:

“There’s a real academic focus on school readiness, so the almost misconception that children need to be able to read, to be able to write, to know their ABCs, to know their numbers, and I feel, not only from my background of working with children with autism, but typically developing children, those social and emotional skills are so important, and that they are able to cope with small changes in their routine” - EI respondent P16.0

EI staff identified school readiness in the area of independence as developing self-care skills such as toileting, washing hands and carrying their bags, ideally prior to the transition to school. Independence in communication, inclusive of

augmentative and alternative communication (AAC) when required, was also considered important in supporting the children’s opportunity to learn and engage:

“There’s also a certain level of independence that children benefit from having and a lot of schools require children to have that. Even things like, just putting their bags down, getting their bats out, knowing where to sit, taking themselves off to the toilet. All those kinds of expectations are required in a lot of mainstream schools. So for us, we wanted to get our kids as ready as we can before that”. – EI respondent P06.1

Preparing children to cope with change and the new demands of the school environment were seen as critical by both parents and EI staff, who perceived the school environment as vastly different from the children’s present environments, such as preschool. Children reportedly needed time to adjust to the new demands of the classroom environment, with elements such as classroom noise and the increased number of peers identified as potential sources of stress. Supporting children to cope with the future changes and differences in routine and

structure were particularly important to consider, with parents raising that changes in daily routine were likely to be particularly disruptive and distressing to their children. It was recognised that while school classrooms were structured, they were less structured than the children's current environments:

"Things other kids might find quite simple our kids have difficulty with... I think our main difficult[y]... is transitioning from one thing to the other. So, whether it's from staying in the car to getting them into the centre of the school, or from them doing one activity within the class, going to another one... it still causes a lot of anxiety within them... You need a lot of pre-warning and a lot of visuals of time to let them know that there's going to be the planned activity coming up". – Parent Respondent P10.0

According to EI staff, school environments would likely challenge autistic children in regard to sensory load, emotion regulation and managing anxiety, hindering the children's successful transition to school. EI staff saw themselves as playing a key role in building resilience in autistic children, working with them to develop techniques and skills to manage these stressors. Developing appropriate emotional coping strategies was a prerequisite for both school readiness and ensuring successful transition, with building a child's ability to self-regulate and manage their anxiety and emotions important in ensuring that they were equipped to cope with changes and engage in school. EI staff and parents focussed on providing autistic children with the necessary skills to recognize their emotions and strategies to manage and cope, including a 'toolbox' of sensory toys and other resources, enabling children to regulate their emotions independently in the school environment.

"Anxiety and stress are one of the biggest compounding factors of all these issues.... Things like sensory overload and meltdowns and what you can do is give them things that can actually help them to regulate themselves to a large degree without anybody having any knowledge of it." – EI Respondent, P04.3

Important in the process of building a child's capacities in anticipation of their upcoming transition to school, was understanding and recognizing that each child was unique. While EI staff reported that 'a formula' underpinned their approach to building children's school readiness, this was overlaid by understanding each child's unique strengths and difficulties profiles, enabling them to support

children prior to, during, and after the transition to school.

"Because a kid will obviously meltdown over different things, and also act in different ways. Like as you know, every kid on the autism spectrum is so different. They need to not see autism as "oh, they've got autism". – Parent respondent. P10.0

Building the parents

Building the parents related to references that supported developing parental capacity to support their child. The theme comprised of four sub-themes including 1) parents being actively involved in advocating for their child, 2) providing structures and connecting parents to services, 3) supporting parents to manage anxiety and challenges and 4) upskilling parents to support their child. EI staff reported that it was essential to build a collaborative partnership with the parents and carers of the transitioning children, a partnership fundamental to supporting families through this process. Good relationships with parents enabled better communication, which in turn supported EI staff:

"It's important to note, to build relationships with the parents so then if there's something happening at home, they're comfortable to talk and that's when we have good relationships. Parents will tell us things." – EI respondent. P01.1

"The parent is the conduit between the two places and when communication is effective, then it means everybody can be delivering the same supports." – EI respondent. P06.1

EI staff saw supporting parents and carers during the transition period as an essential part of their role. Several of the EI respondents noted that the transition to school was often a stressful time, not only for the child, but for the whole family. They considered themselves an important source of psychosocial and emotional support for parents, helping to feel like they were not left on their own once school started:

"Parents need a lot of support, and I think that's something we do really well. We're good at listening, hearing their concerns and if I can't deal with it then I'll pass it on to someone else who can." – EI respondent. P01.0

"Our role is supporting the families... for their child to transition to school. Letting them know step by step what is coming up, having it

all organized for them.” – EI respondent.
P017.0

EI staff highlighted that in transitioning to school parents were key advocates in ensuring that their child’s needs were met by the receiving school, a factor significantly influencing their success in the school environment. EI staff also acknowledged the challenges of advocating for autistic children, expressing that this was a difficult space for parents to navigate with their involvement not always welcomed by schools, and accommodations rarely made. EI staff sought greater transparency as to what a school could potentially offer and the available accommodations:

“As a parent it’s quite scary space in terms of how much you advocate could lead to your child ... it could either lead to your child getting a lot of resources and the right kind of intervention, or it could lead to your child getting suspended or having reduced hours and slowly moved out of that educational system.”
– EI respondent. P22.5

Building the receiving school

Building the receiving school was associated with the capacity of the receiving school to accommodate and engage with the child, their family and EI staff prior to, during, and following the transition to school as one of the most significant factors influencing transition success. The theme was built using four sub-themes including 1) within school communication considerations, 2) mainstream versus special school, 3) the school environment, classroom supports and lack thereof and 4) receiving school knowledge of ASD were identified as important to building the receiving school.

Building the receiving school’s understanding of ASD was important to a child’s success in transitioning to school. Both parents and EI staff reported that teachers who had previous experience working with autistic children, or who had an understanding of ASD, were better able to understand and support autistic children in the classroom and ensure that they were engaged, participating and learning. As part of this, teachers with experience with ASD must support and educate other teachers *“really well-trained ones who know what they’re dealing with, have a really big impact on their education. They can actually get them to learn, you know, which is fantastic”*. – Parent respondent. P03.2

The classroom routine and structure, as well as the environment and teaching methods, significantly impacted children’s engagement and learning. Respondents reported that receiving schools played an important role in ensuring that the structure of the

school environment facilitated learning and engagement for autistic children. In particular, parents often reported that their children had difficulty with a lack of structure, uncertainty in activities, transitioning between tasks and self-regulation. Successful transitions to school were facilitated by teachers implementing strategies in collaboration with parents and EI staff:

So, generally doing a lot of supports such as social stories to explain what happens when I go to school, what am I going to be doing at school, what happens when school is finished? So I think quite often they’d benefit from having those things broken down and put forward to them. Like some children are happy just to have that verbally spoken to them, other children might need that in more of a visual format in pictures or a bit of a timetable. – EI respondent. P06.2

Though teachers providing support within the school was essential for success, respondents reported that while teachers may be receptive to implementing strategies, they may lack the resources, time and support. This meant that teachers often implemented strategies which were not individualised to each unique child.

“Teachers are very enthusiastic and very helpful at the start. Come the middle of term one or the start of term two, they’re under the pump with their now mainstream teaching roles and the teachers are always time poor. They’re always resource poor and so that’s sort of when things like the child’s visual resources, they just might drop or some of the strategies the teacher is using may not be as relevant as they were. Or they’re not working but they’re still using them because that’s all she’s got.” – EI respondent. P07.0

Utilizing a strengths-based approach was important to work with autistic children. Receiving schools who recognized and fostered a child’s strengths and interests at school assisted in facilitating the child’s learning and comfort at school. While incorporating a child’s interests and strengths were important in facilitating a successful transition to school, parents noted that leveraging these were challenged by a lack of flexibility in teaching styles limiting the application of this approach in the classroom and school system.

Well, my son’s school does use some of his strengths as a reward for him. So, my son loves to run, absolutely loves running. So, if he’s had

a really good day or a really good week or something, they'll turn around and say... let's go do like a little athletics type thing on the oval. You know, he loves that. – Parent respondent. P03.1

Responses indicated that the transition process was often perceived to be more challenging when transitioning to a mainstream school. In contrast, non-mainstream schools were perceived to more likely to use a strengths-based approach, have a better understanding of autism, and to provide a more suitable classroom routine.

Connecting the system

The theme connecting the system was linked to references associated with communication integration and transition. Sub-themes including 1) early transition planning, handover and time to adjust; 2) communication and collaboration between stakeholders; 3) neurodiversity and culture of acceptance; 4) EI role as 'greenhouse' to support growth; 5) utilizing a strengths-based approach; 6) EI staff supporting the receiving school and 7) cultural and linguistically diverse (CALD) considerations formed this theme. For parents, being able to talk with teachers and discuss strategies, enabling their child to more successfully integrate into the school environment, ensuring that their child's needs were met, supported transition:

"The kindergarten teacher... came here for a meeting. We had this marvellous collaborative partnership, identifying his needs, addressing his needs. I was so grateful. The fact that two people went out of their way, one on a school day, one on a day off to come here, to say, "This is what his needs are, this is how we should address it." – Parent respondent. P02.2

Respondents however often reported poor communication and collaboration between the parents, the EI staff and the receiving school. This often led to difficulty in the transition planning process and ensuring a smooth transition to school.

"...we can reach out so much, but if we're not getting information from parents about where their children are going and information from schools looking at the kids that we're transitioning to their settings, it's very difficult. It depends on the school." – EI respondent. P21.8

Communication within the receiving school was a challenge during the transition period, with parents

expressing that transferring information was confusing, particularly when it was being sent to various contact points within and outside the school. A lack of consistency in teacher boundaries, changing expectations and different approaches contributed to the confusion of autistic children. Mainstream and non-mainstream schools adopted different approaches to transition, influencing the experiences of autistic children and their families, with some parents holding the belief that the understanding and support available in non-mainstream settings facilitated the transition process:

"As far as all the teachers have an understanding of what they're going to get, whether low or high children, they do seem to really understand our point of view I suppose if you were going into mainstream, I would struggle in the fact that [son] was a runner. That would be a huge issue for me if they didn't have fences, and obviously if you're not exposed to autism, it is very hard to understand the aspects, because there are so many, with each child, it differs so highly, so I would just have to say I'm really lucky that I got a place in [a non-mainstream school], with people who have dealt with autism. – Parent respondent. P20.0

Discussion

Findings of this study highlight the importance of considering key ingredients in developing school readiness and transitioning autistic children to school. A holistic, interactionist approach considering the influence of both personal and contextual factors aligns with both the findings of this study and key concepts of school readiness and transition planning (17, 19).

School readiness and preparing autistic children for the transition to school was considered by both parents and EI staff as going beyond academic skills, to include developing social skills, language, play, and self-care skills. These skills were fundamental considerations in supporting a child's independence, their ability to build relationships with others, and engage within the school environment. Importantly, the environment surrounding the child, including their teachers, EI staff and parents must also be prepared in order to facilitate a successful transition. These findings are similar to that of a previous smaller-scale West Australian based study which found that in addition to a child's skills, their teachers, education assistants and peers also influence transition experiences (34).

Key stakeholders noted that EI staff played a crucial role in developing an autistic child's skills and working towards school readiness. Central to

transition planning was acknowledgement that each child is an individual with their own strengths and challenges. Employing a strengths-based approach was also important in fostering successful transitions. Strengths-based approaches, focus on harnessing a child's unique skills, abilities and strengths, promoting learning rather than focusing solely on deficits, or what a child cannot do (35, 36). Strength's based approaches require tailoring as a child moves through the transition process into school and are heavily reliant on effective communication and collaboration between stakeholders.

It is important to acknowledge the importance, expertise, and roles of all key stakeholders in supporting the development of school readiness and transition planning for children with disabilities (5). Findings of this study suggest that this may be particularly important for autistic children, and in fact it was noted that without input from all stakeholders, autistic children were at risk of poor transition outcomes. Difficulties collaborating and communicating between key stakeholders has been identified by the Organisation for Economic Co-operation and Development (OECD) as a challenge to successful transitions to school for children (5). Reports of poor collaboration and communication between stakeholders emerged within the current study, along with evidence suggesting that the impact of poor collaboration may be particularly damaging to the transition experience of children with disabilities, such as ASD. Findings of this study suggest that EI staff are particularly well placed to facilitate a successful transition in a coordinated capacity, preparing the child, family and receiving teacher for the specific needs of the child.

Teachers are critical to a successful school transition for all children, however, similar to previous studies, a lack of communication and inconsistency in approaches were identified as significant barriers to transition (4, 18). In a large survey study of parents and teachers, teachers reported having greater concern overall for the transition of autistic children than children with other developmental disabilities, however, despite this higher level of concern, teachers were not found to dedicate any additional resources to autistic children beyond those dedicated to children with other developmental disabilities (6). Even in cases where parents and teachers were highly involved in transition planning and preparation, the practices employed by both groups were often generalised and not individualised (6), with a need for more individualised approaches being required to support the successful transition to school (18). Similar to these previous studies, teachers were reported to have difficulty implementing individualised and effective strategies, with time demands and

inadequate resourcing and support identified as potential barriers. Responses from this study suggest that additional resources allocated to teachers may better enable them to support students with disabilities, such as ASD, in their classrooms. While receiving schools have a responsibility to work with EI staff and parents in preparing an autistic child for the classroom. These limitations in the availability of resources may limit their ability to collaborate with EI staff and parents. Future research may benefit from exploring the most effective means of allocating resources to support teachers.

Findings of this study highlight the role that EI staff play in not only developing the school readiness of autistic children, but in educating receiving teachers on ASD and how to establish an inclusive classroom. Developing teachers understanding of the common difficulties autistic children experience such as over-stimulation, anxiety, distress over unexpected change, and understanding how to implement relevant supports (e.g. AAC, social stories), supports better transition outcomes. Interventions for teachers must take into account the potential for limited resourcing and time to ensure that they are feasible to implement. For example, the Schedules, Tools, and Activities for Transitions (STAT) program to support transitions for autistic children in the classroom provides special consideration of how this intervention could be employed in under-resourced schools (37).

Parents are key in the transition process and their involvement contributes to successful transition outcomes (38). In this study, parents played a pivotal role as intermediaries between the early intervention team and the school, with this role coming more readily to some parents than to others. This intermediary role may likely be particularly challenging for parents from culturally and linguistically diverse backgrounds who may face additional stressors, such as language and communication barriers, and differing cultural perspectives as to what constitutes a "good" outcome (10, 18). Further, parents who are also autistic or in the broader autism phenotype may also experience difficulties advocating for their child. Parents understanding what to expect in the transition process removes the fear of the unknown, and reduces their anxiety and stress (39), with findings of the current study showing that while parents were key to ensuring a successful transition for their child, they also required assistance and support from EI staff and schools throughout this process.

While the present findings identify several key factors imperative for supporting the transition to school, it is noted that the perspectives of school professionals, that is, professionals who receive

autistic children as part of transition, were not collected, which is noted as a limitation of the present study. Given that the perspectives of school professionals may further inform a better transition to school, future research may benefit from seeking to recruit an additional sample of school professionals. It should also be noted that this study was undertaken in an Australian context, including EI staff and parents from ASELCCs across Australia, therefore different results may be seen in different educational or EI contexts. As part of their participation in the ASELCCs, each child had received an autism diagnosis prior to commencing school and have had access to EI. It is possible that experience of transitioning to school may vary for families who differ on these considerations. For instance, children who present with certain challenging behaviours in a school setting may be responded to differently depending on whether they do or do not have a known autism diagnosis. Future research may seek to explore the perspectives and experiences of families with autistic children who were not diagnosed until well after commencing school. It was also not possible to empirically determine whether the reported challenges to school transition were specific to autism, or a general concern for families. While the present study primarily sought to obtain the perspectives of families with autistic children, future research may seek to directly compare and contrast the challenges faced by families with and without autistic children. Similarly, it is also possible that individual differences in the profiles of autistic children, such as their constellation of strengths and difficulties across developmental domains, may affect the challenges experienced by families. Future research may benefit from exploring how these individual difference factors may moderate school transition outcomes. Due to ethical restrictions, a profile of the children was not able to be reported in the current study. Information including the child's gender, age, intellectual and adaptive functioning, as well as the parents' educational and socio-economic backgrounds may assist to better understand the experiences of these families and how they can be better supported.

Conclusions

Findings indicate a number of factors associated with building the child, building the parents, building the receiving school and connecting the system, which facilitate the transition to school for autistic children. This study highlights the need for clear, collaborative and ongoing communication between parents, teachers and EI staff in supporting autistic children during the transition to school. EI staff are recommended to provide support to families and

receiving teachers, to develop knowledge and understanding of ASD. Using a strength based approach, harnessing a child's skills and individualizing the transition process are essential for success.

Ethics

This project was approved by the Human Research Ethics Committee at Curtin University (HRE2017-0645) and reciprocal ethical approval was received at all sites where a university partner took part.

Conflicts of interest

The authors received grants from Australian Government, Department of Social Services and Cooperative Research Centre for Living with Autism.

References

1. Forest EJ, Horner RH, Lewis-Palmer T, Todd AW. Transitions for young children with autism from preschool to kindergarten. *J Posit Behav Interv* 2004;6(2):103-12.
2. Denkyirah A, Agbeke W. Strategies for transitioning preschoolers with autism spectrum disorders to kindergarten. *Early Childhood Educ J* 2010;38(4):265-70.
3. McIntyre LL, Blacher J, Baker BL. The transition to school: adaptation in young children with and without intellectual disability. *J Intellect Disabil Res* 2006;50(5):349-61.
4. Stoner JB, Angell ME, House JJ, Bock SJ. Transitions: perspectives from parents of young children with autism spectrum disorder (ASD). *J Dev Phys Disabil* 2007;19(1):23-39.
5. OECD. *Starting strong V: Transitions from early childhood education and care to primary education*. Paris: OECD Publishing; 2017.
6. Quintero N, McIntyre LL. Kindergarten transition preparation: A comparison of teacher and parent practices for children with autism and other developmental disabilities. *Early Childhood Educ J* 2011;38(6):411-20.
7. Hirst M, Jervis N, Visagie K, Sojo V, Cavanagh S. *Transition to primary school: A review of the literature*. Canberra, Australia; 2011.
8. McIntyre LL, Eckert T, Fiese B, DiGennaro Reed F, Wildenger L. Family concerns surrounding kindergarten transition: a comparison of students in special and general education. *Early Childhood Educ J* 2010;38(4):259-63.
9. Podvey M, Hinojosa J, Koenig KP. Reconsidering insider status for families during the transition from early intervention to preschool special education. *J Spec Educ* 2013;46(4):211-22.
10. Starr E, Martini TS, Kuo BCH. Transition to kindergarten for children with autism spectrum disorder: a focus group study with ethnically diverse parents, teachers, and early intervention service providers. *Focus Autism Other Dev Disabil*. 2016;31(2):115-28.
11. Kemp C. Investigating the transition of young children with intellectual disabilities to mainstream classes: an Australian perspective. *Int J Disabil Dev Educ* 2003;50(4):403-33.
12. Fleury V, Thompson J, Wong C. Learning how to be a student: an overview of instructional practices targeting school readiness skills for preschoolers with autism spectrum disorder. *Behav Modif* 2015;39(1):69-97.

13. Sterzing PR, Shattuck PT, Narendorf SC, Wagner M, Cooper BP. Bullying involvement and autism spectrum disorders: prevalence and correlates of bullying involvement among adolescents with an autism spectrum disorder. *Arch of Pediatr Adolesc Med* 2012;166(11):1058-64.
14. Donno R, Parker G, Gilmour J, Skuse DH. Social communication deficits in disruptive primary-school children. *Bri J Psychiatry* 2010;196(4):282-9.
15. Rotheram-Fuller E, Kasari C, Chamberlain B, Locke J. Social involvement of children with autism spectrum disorders in elementary school classrooms. *J Child Psychol Psychiatry* 2010;51(11):1227-34.
16. Bruder MB. Early childhood intervention: a promise to children and families for their future. *Except Child* 2010;76(3):339-55.
17. Britto P. School readiness: a conceptual framework. United Nations Children's Fund, New York, NY; 2012.
18. Nuske HJ, Hassrick EM, Bronstein B, Hauptman L, Aponte C, Levato L, et al. Broken bridges—new school transitions for students with autism spectrum disorder: a systematic review on difficulties and strategies for success. *Autism* 2018;23(2):306-25.
19. Mashburn AJ, Pianta RC. Social relationships and school readiness. *Early Educ Dev* 2006;17(1):151-76.
20. Beamish W, Bryer F, Klieve H. Transitioning children with autism to Australian schools: social validation of important teacher practices. *Int J Spec Educ* 2014;29(1):130-42.
21. Marsh A, Spagnol V, Grove R, Eapen V. Transition to school for children with autism spectrum disorder: a systematic review. *World J Psychiatry* 2017;7(3):184-96.
22. Schreibman L, Dawson G, Stahmer AC, Landa R, Rogers SJ, McGee GG, et al. Naturalistic developmental behavioral interventions: empirically validated treatments for autism spectrum disorder. *J Autism Dev Disord* 2015;45(8):2411-28.
23. Eapen V, Grove R, Aylward E, Joosten A, Miller S, Van Der Watt G, et al. Transition from early intervention program to primary school in children with autism spectrum disorder. *World J Clin Pediatr* 2017;6(4):169-75.
24. Fontil L, Petrakos HH. Transition to school: the experiences of Canadian and immigrant families of children with autism spectrum disorders. *Psychol Schools* 2015;52(8):773-88.
25. Dockett S, Perry B. What makes a successful transition to school? Views of Australian parents and teachers. *Int J Early Years Educ* 2004;12(3):217-30.
26. Creswell JW. *Qualitative inquiry and research design: choosing among five approaches*. Thousand Oaks, CA: Sage; 2013.
27. Liamputtong P. *Focus group methodology: principles and practices*. 1 ed. Thousand Oaks, CA: Sage Publications; 2011.
28. Australian Curriculum Assessment and Reporting Authority (ACARA). *Australian Curriculum*. Canberra, Australia; 2020.
29. Australian Government Department of Social Services. *Overview of early intervention services and supports* Canberra, Australia: Australian Government; 2020 [updated 18 Feb 2020]. Available from: <https://www.dss.gov.au/>.
30. Welsh E. Dealing with data: using NVivo in the qualitative data analysis process. *Forum: Qual Soc Res* 2002;3(2).
31. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77-101.
32. Krefting L. Rigor in qualitative research: the assessment of trustworthiness. *Am J Occup Ther* 1991;45(3):214-22.
33. Lincoln YS, Guba EG. *Naturalistic inquiry*. Newbury Park: Sage Publications; 1985.
34. Larcombe T, Joosten A, Cordier R, Vaz S. Preparing children with autism for transition to mainstream school and perspectives on supporting positive school experiences. *J Autism Dev Disord* 2019;49(8):3073–88.
35. Lopez S, Louis M. The principles of strengths-based education. *J Coll Character* 2009;10(4):1-8.
36. Jones M, Falkmer M, Milbourn B, Tan T, Sheehy L, Bolte S, et al. A strength-based program for adolescents with autism. Bankwest Curtin Economics Centre; 2018. Report No.: Research Report No. 17/18.
37. Iadarola S, Shih W, Dean M, Blanch E, Harwood R, Hetherington S, et al. Implementing a manualized, classroom transition intervention for students with ASD in underresourced schools. *Behav Modif* 2018;42(1):126-47.
38. Schulting A, Malone P, Dodge K. The effect of school-based kindergarten transition policies and practices on child academic outcomes. *Dev Psychol* 2005;41(6):860-71.
39. McIntyre LL, Eckert T, Fiese B, DiGennaro F, Wildenger L. Transition to kindergarten: family experiences and involvement. *Early Childhood Educ J* 2007;35(1):83-8.