Transitioning on from secondary school for autistic students: A systematic review

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Abstract

Background: Transitioning on from secondary school to further education, work, and new post-school relationships can be a challenging time for autistic young adults. The often poorer post-school outcomes of autistic young adults suggest there are some limitations on the effectiveness of current transition preparations. This warrants further investigation. Therefore, this review aimed to identify and synthesise the (a) study characteristics, (b) focus, (c) outcomes, and (d) methodological reporting of research on autistic students transitioning on from secondary school.

Methods: Authors followed PRISMA standards to conduct a systematic quantitative review. They registered a protocol with PROSPERO (ID: CRD42022358884) and conducted searches in August 2022 and April 2023 using six databases (ERIC, Scopus, PsycInfo, PubMed, ProQuest Dissertations and Theses Global, ProQuest Central). Authors used quantitative analysis to
identify research trends and gaps and used the Quality Assessment with Diverse Studies (QuADS) tool to assess methodological reporting.

**Results:** The review identified 119 studies, which focused on academic, vocational, or social transitions, or a combination of these. Included research regularly used qualitative methods to report on autistic young adults without co-occurring intellectual disability completing academic transitions in metropolitan/urban parts of the USA. It shows that planning for and supporting the transition is crucial, as is successful home-school collaboration. However, homogeneity within participant groups, and the limited involvement of autistic/autism community members in research design and conduct, often limits generalisability.

**Conclusion:** This review highlights the need for cautious application of findings to policy and practice, particularly given the limited heterogeneity of participant groups. Future research should explore how to empower young adults from diverse autistic subgroups to be leaders of their transition. It should explore the roles of parents and schools in achieving effective home-school collaboration during this transition. This will help supporters to more precisely meet the needs of autistic students entering post-school life.

**Community Brief**

*Why is this topic important?*

Autistic young adults may experience some difficulties with the move out of secondary school, a process some people call “transition”. To try and make this transition as successful as possible, we need to know what can be done to better prepare autistic young people for the change.
What is the purpose of this article?

This article aimed to find and report on all the research which looks at transitioning on from secondary school for autistic young adults. Once the research is found, we can report on who was included and what parts of the transition they reported on. By doing this, it allows us to create a summary of what is known about this topic.

What did the authors do?

We searched for all the research that looked at transitions out of secondary school for autistic people. Then we identified the focus of the research and transitions explored, how the research was conducted, and the strengths and limitations of the studies. Finally, we summarised what the research found.

What did the authors find about this topic?

We found that the research tells us a lot about autistic young adults who are transitioning from school to further education in the cities and urban parts of the USA. We also found that there is not enough research including autistic young adults with co-occurring intellectual disability. We do know that we need to support autistic students to plan for their transition and that home and school need to work well together to make transition support effective. Finally, we found that there is not enough involvement of autistic people and their supporters in helping to design and conduct research in this area.

What do the authors recommend?
We need to make sure that we support autistic young adults through this transition to post-school life. We can do this by making sure we help them to plan this transition and by providing the right support. However, we need to be careful because lots of the research that we currently have does not look at how things like living in different areas or having a co-occurring intellectual disability might alter the types of supports we provide. This is something for future researchers to explore. We also need to learn more about how schools and families can work together to provide transition supports that suit autistic students’ individual needs. Finally, we need to make sure that we include members of the autistic/autism communities when we plan and conduct research in future.

*How will this analysis help autistic adults now and in the future?*

The findings of this review have helped us to realise that we need to be careful when we think about existing research, as it might not be representative of the experience of all autistic students. However, it has helped us to identify the things that we know, and some of the things that we need to find out, to help improve the transition to post-school life for autistic students.
Background

Autism spectrum disorder (ASD; hereafter, autism) is a life-long neurodevelopmental condition which involves differences in social communication and the presence of restricted and repetitive behaviours and interests. Recent statistics suggest that over 205,000 people in Australia are autistic, and represent approximately 3.2% of all students in Australian schools. This prevalence rate is reflected globally, with studies from the United States of America (USA) indicating that one in 54 children have an autism diagnosis. Research shows that the differences that autistic individuals experience in social communication and behaviour impact school experience, and have been known to add to the complexity of navigating transitions, such as when an individual moves between tasks, settings, contexts, or life stages.

Transition to adulthood presents a time of complex change for young adults. This change can cause feelings of optimism, positivity, freedom, instability, and being caught in-between adolescence and adulthood. Young adults must adjust their identities in response to their experience of the societal frameworks that govern adulthood. These adaptations may be different, depending on the focus of the transition (e.g., academic transitions to post-school education; vocational transitions to post-school employment; social transitions to new post-school social structures). Young adults who successfully adapt to their new social roles experience more stable transitions. Conversely, those who encounter additional challenges may experience increased complication when adapting to their new social roles.

Autistic students are one group who may experience additional challenges during transition to adulthood. Given the profile of autism characteristics, and the complexity of adjusting to new social roles upon transition to post-school life, it is perhaps unsurprising that transitions to further education and work, and new post-school social structures, are potentially
more difficult for autistic students. For autistic young adults with co-occurring intellectual disability, the transition may be more complex, as they often receive less-effective supports\textsuperscript{13} and encounter pathways and systems that are disjointed.\textsuperscript{14} This leads to increased rumination about transition-related worries,\textsuperscript{15} and confusion about transition-related changes.\textsuperscript{16} Consequently, examining the research relating to post-school transition for autistic students, including those with co-occurring intellectual disability, is extremely important.

Earlier reviews on autistic students transitioning on from secondary school have been limited, either focusing on qualitative studies from the USA\textsuperscript{17} or providing non-systematic research synthesis.\textsuperscript{6,18} These reviews, and the small volume of additional research available, indicate that early preparation and planning are key to positive transitions.\textsuperscript{19} This planning, however, is sometimes limited in its effectiveness.\textsuperscript{18} Autistic students often have little involvement in the transition planning process, meaning that they are less likely to be making targeted preparations for the transition.\textsuperscript{20} This could contribute to autistic students experiencing much poorer post-school outcomes than their non-autistic peers.\textsuperscript{6} For example, employed autistic young adults often engage in volunteer, part-time, or supported employment.\textsuperscript{21,22} They are less likely to report active participation in social activities post-school and are more likely to report feeling a lack of independence and confidence.\textsuperscript{6} As such, research that explores autistic young adults’ transition on from secondary school is needed to assist all involved in the process to identify effective ways to support this change and to improve these outcomes.

Aims of this study

This study provides a systematic quantitative review\textsuperscript{23} of literature exploring transitioning on from secondary school for autistic students. Academic, vocational, and social transitions are
the focus of this review as they align to the aim of formal education to prepare students for their future roles in society. As such, this review will provide insight into what is currently known about this transition for autistic students and will also identify areas for future research by addressing the following questions:

- What are the characteristics of the existing research on autistic students transitioning on from secondary school?
- What is the focus of the existing research on autistic students transitioning on from secondary school?
- What are the outcomes of the existing research on autistic students transitioning on from secondary school?
- What does the Quality Assessment with Diverse Studies (QuADS) highlight as the strengths and limitations in the methodological reporting of existing research on autistic students transitioning on from secondary school?

Methods

Protocol and registration

Authors designed and registered the protocol for this systematic review on PROSPERO (registration number: CRD42022358884). They also followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards at all stages.

Positioning

All four authors are non-autistic researchers who have worked professionally with autistic individuals and their families. Authors were aware of the need for this review and its
potential for impacting policy and practice. They were also aware of the often deficit-focused perspective taken toward students with disabilities within education systems.\textsuperscript{27,28} As such, they sought the expertise of autistic people when designing the research to acknowledge and counteract potential biases.

\textit{Eligibility criteria}

The review included studies that (a) reported original research; (b) included at least one autistic person (diagnosed or self-diagnosed); (c) reported on the autistic individual’s preparation for, or the process of, transitioning on from secondary school (this could include transition support while in school or post-school); and (d) reported on transitions that were related to academic (i.e., transition to post-school education), vocational (i.e., transition to any form of employment), or social aspects (i.e., social relationships when transitioning) of the autistic individuals’ lives. The review excluded studies that did not specifically report on autistic participants transitioning on from secondary school as a separate group. Studies that reported on general transition to adulthood without exploring one of the three focus transitions were excluded (e.g., Mondesir\textsuperscript{29}). The review excluded studies that referred to transitioning on from secondary school, but did not report in replicable detail aspects of the planning or process (e.g., Kirby et al.\textsuperscript{30}). The review set no language limitations and placed no limitations on publication date. It also included grey literature, allowing the identification of all relevant evidence.\textsuperscript{31} The review excluded reviews, editorials, opinion pieces, letters to the editor, book chapters, and other descriptive pieces. When published studies and dissertations reported the same research, authors included the published study and marked the dissertation as a duplicate.
Search process

The first author searched six electronic databases on 18 August 2022 and on 3 April 2023 (ERIC via ProQuest, Scopus, PsycInfo via Ovid, PubMed, ProQuest Dissertations and Theses Global via ProQuest, ProQuest Central). Authors searched ProQuest Dissertations and Theses Global as the review included grey literature appraised methodological reporting. All database searches used the following terms:

1. (autis* OR ASD OR Asperger* OR “pervasive developmental disorder” OR PDD*)
2. transition*

The generation of search terms was in consultation with a discipline librarian and based on the authors’ knowledge of relevant literature on autism and transition. All searches involved joining search terms 1 and 2 with AND.

Review strategy

Database searches returned 9,241 records, which the first author imported into the systematic review management system Covidence. The PRISMA flow diagram (Figure 1) details how many records came from each database, and how these were managed at each stage of the process.26 As per Figure 1, the first author assessed 6,409 records at the title/abstract screening and 567 at full-text review. Two dissertations were under embargo. Given the number of included studies, authors excluded these dissertations, as doing so was unlikely to significantly impact results. The first author identified five additional items through forward and backward citation searches (through Google Scholar) and consequently screened the full text of 565 items. Of these, 117 items met inclusion criteria. Two of these items contained dual research projects
Authors included these dual projects as separate studies to allow for all research to be considered, so this review includes 119 studies (from 117 items).

***INSERT FIGURE 1 APPROX HERE***

**Data extraction and synthesis**

The first author developed a data extraction template in Covidence and extracted the following: study information (authors, date, country, locality, publication type); focus (of transition and research); methods (study design, informants) and participant characteristics for autistic participants (gender, autism diagnosis, type and sector of school, age, co-occurring conditions, ethnicity, parent/family contextual details); and key findings. The same author grouped the key findings and placed them within Bronfenbrenner’s ecological models of human development. This model considers development in relation to the five systems in which an individual exists: the microsystem, mesosystem, exosystem, macrosystem, and chronosystem (see Supplemental Figure 1).

**Assessment of strengths and limitations in methodological reporting**

Authors used the QuADS appraisal tool to appraise the methodological reporting of included studies. QuADS assesses diverse study types against 13 measures, scored using a 4-point scale (0: not mentioned/stated to 3: explicit/detailed discussion). QuADS considers the theoretical basis of the research, research design, data collection and analysis, community involvement, and critical analysis of strengths and limitations. As the aim of this review was to gather all literature in this area to enable identification of what is known and what is yet to be researched, no studies were excluded based upon quality.
Reliability

Two raters assessed reliability at four stages. At title/abstract screening, they reported agreement on 90.2% of records. At full-text screening, they reported agreement on 94.5% of articles. At data extraction, they reported agreement on 96.8% of extracted data. Finally, agreement on QuADS ratings was 94.8%. At all four stages, raters discussed and rectified discrepancies, resulting in 100% agreement.

Results

Included papers

Overall, the review includes 119 studies. These studies reported on (a) academic transitions \((k = 53)\), (b) vocational transitions \((k = 22)\), (c) social transitions \((k = 3)\), or (d) a combination of two or more of these transitions \((k = 41)\). Supplemental Table 1 provides a summary of these studies. In the following sections, the review will consider each study in relation to the research questions.

Study Characteristics

To answer Research Question 1, the first author extracted study characteristics, as follows.

Publication type, date, and location. Of the 119 included studies, 67 (56.3%) were from peer-reviewed journals and 52 (43.7%) were dissertations. Publication dates ranged from 2003 to
2023, with over half (55.5%) published between 2018 and 2023. Researchers conducted studies in eight countries, with most being conducted in the USA (k = 90, 75.6%), the United Kingdom (UK; k = 14, 11.8%), and Australia (k = 11, 9.2%). Researchers specified the geographical location (e.g., urban, rural, metropolitan, suburban, regional) in which research was conducted in 43 (36.1%) of the included studies. Of these, urban was most common (k = 21, 48.8%), followed by rural (k = 15, 34.9%), metropolitan localities (k = 13, 30.2%), suburban (k = 12, 27.9%), and regional (k = 7, 16.3%). Sixteen studies (37.2%) were conducted over multiple localities.

**Study design.** The majority of studies used qualitative research designs (k = 81, 68.1%) to report on all transition types (academic: k = 41, 50.6%; combined focus: k = 27, 33.8%; vocational: k = 11, 13.6%; social: k = 2, 2.5%). Almost half of the experimental studies (k = 18, 15.1%) reported on vocational transitions (k = 8). Across the other three focus transitions, they represented a small body when compared to qualitative research designs (n academic = 5; n social = 0; n combined focus = 5). The body of research that utilised a quantitative design (k = 10, 8.4%) had a relatively even spread across transition types (academic: k = 3; vocational: k = 2; social: k = 1; combined focus: k = 4). There were 10 (8.4%) studies that utilised mixed-methods, reporting across each transition type (academic: k = 4; vocational: k = 1; social: k = 0; combined focus: k = 5).

**Informants.** In total, 77 studies (64.7%) reported the perspectives of autistic young adults, either as sole participants (k = 35, 45.5%) or as part of a larger participant group (k = 42, 54.5%). Parents/family members participated in approximately half of the studies (k = 60, 50.4%), being the sole participants in 15 (25%) of these studies. Other professionals (e.g., university inclusion
staff) were participants in 41 (34.5%) studies, being sole participants in 10 (24.5%) of these. Teachers were participants in 31 (26.1%) studies, and were rarely sole participants (k = 3, 9.7%).

**Setting.** Only 41 studies (34.5%) reported the school type attended by participants. In total, 26 studies (63.4%) included at least one participant who attended a mainstream secondary school and 32 (78.0%) included at least one participant who attended a specialist secondary school. Of the 44 studies (37.0%) that reported school sector, 22 (50.0%) reported on at least one participant who attended an independent or private school and 39 (88.6%) reported on at least one participant who attended a government school.

**Participant characteristics.** Autistic participants whose transition was reported ranged in age from 12 to 59 years. Retrospective data were provided by, or reported on, older participants who had exited secondary school. The mean age of the sample (reported in 69 studies) ranged from 14.8 to 27.1 years. Sample sizes for transitioning participants ranged from one to 1,250 (M = 61.3; SD = 199.27). Most studies had one to 50 participants (k = 87, 73.1%) and a notable proportion of those (k = 46, 52.9%) had 10 or fewer participants. Table 1 presents a summary of the demographics for the transitioning autistic participants across studies. Supplemental Table 2 shows that 40 (33.6%) studies reported co-occurring conditions, with anxiety and/or depression the most often included (k = 28, 23.5%). Relatively few studies included autistic participants with co-occurring intellectual disability (k = 15, 12.6%).

Of the 89 (74.8%) studies that reported gender of autistic participants, 55 (61.8%) had at least 75% male participants; the average number of male participants across these studies was 76.7%. Nearly half (k = 52; 43.7%) of studies reported participant ethnicity. Of these, 34 (65.4%)
had a greater number of White participants than the average proportion of White participants represented in autism research from 1990 to 2017 (i.e., 64.8%\textsuperscript{35}). There were 38 (31.9%) studies that reported contextual family details. These included family income ($k = 17$), parent employment status ($k = 11$), family structure ($k = 11$), parent education status ($k = 13$), and parent ethnicity ($k = 9$).

***INSERT TABLE 1 APPROX HERE***

Research findings relating to post-secondary transitions

To answer Research Question 2, the first author extracted the research and transition foci of each study, as follows.

Transition. The preparation for, or process of, transitioning out from secondary school was the primary research focus in 98 (82.4%) studies. The remaining studies reported on autistic individuals’ transitioning on from secondary school as a secondary focus (e.g., as part of reporting on experiences in higher education or the workplace). The proportion of studies which focused on each type of transition (i.e., academic, vocational, social) is summarised in Figure 2; definitions for each transition type are in Table 1.

***INSERT FIGURE 2 APPROX HERE***

Key outcomes of included studies
To answer Research Question 3, the first author extracted and grouped key outcomes or research findings in relation to transitions into six categories: (a) transition support in secondary school \((k = 65, 54.6\%)\); (b) transition support post-secondary school \((k = 21, 17.6\%)\); (c) supporting adults’ roles in transition \((k = 74, 62.2\%)\); (d) collaboration during transition \((k = 37, 31.1\%)\); (e) barriers and enablers to successful transition \((k = 86, 72.3\%)\); and (f) impact of transition support programs \((k = 22, 18.5\%)\). There were 90 studies \((75.6\%)\) that reported outcomes across two or more of these categories. The main findings within these six categories are discussed below.

**Transition support in secondary school.** Of the studies that reported on transitions supports in secondary school, a large number \((k = 40, 61.5\%)\) reported findings concerning autistic students’ involvement in transition planning while in school. Of these, 13 \((32.5\%)\) highlighted the importance of student involvement in the planning process. Studies also reported the importance of early \((k = 4, 10.0\%)\) or individualised \((k = 10, 25.0\%)\) planning; however, over half of these studies \((k = 22, 55.0\%)\) reported that student involvement was limited. There were 24 studies \((36.9\%)\) that reported factors influencing planning or preparation for transition while in secondary school. These included factors relating to the individual \((k = 6)\), such as race and immigration status; the school \((k = 13)\), such as location and school type; and supportive adults \((k = 10)\), such as professional knowledge or parental involvement. Multiple studies \((25; 38.5\%)\) reported the activities that participants considered helpful when preparing for transition. For vocational transitions, these activities included social skill support and work-preparation programs and activities. For academic transitions, helpful preparation activities included specialised transition programs, social support, and pre-transition familiarisation activities. For
social transitions, structured social participation in high school was identified as helpful. Finally, studies with a combined transition focus reported that supports for social skills, finances, and self-care, as well as access to volunteer or paid work experience, were helpful.

Transition support post-secondary school. Within the studies that reported on transition supports post-secondary school, eight (38.1%) reported on the need for supporting skill development in transition to the post-school context, which included self-advocacy, social, and academic skills. There were five (23.8%) studies that reported the reluctance or difficulty in disclosing diagnosis in the post-school context. Just under half of the included studies ($k = 10$, 47.6%) reported factors that were beneficial to transition. Some of these included: availability and choice of transition activities and programs; reduced course load; engagement with services; support from a dedicated contact; faculty awareness of autism; and access to specialist spaces.

Supporting adult roles in the transition. Studies that reported on adult roles in transition most frequently explored the roles of parents or families ($k = 53$, 71.6%). These studies described parent or family advocacy as crucial, and autistic students reported that parents were particularly important. Parents needed preparation, information, and support, which were not always available. Parents were sometimes dissatisfied with the planning process or were perceived to be overinvolved, leading to conflict. There were 30 (40.5%) studies that reported the role of school staff in the transition. These studies reported that school staff support was essential, but their level of engagement and training and available resources impacted on the success of the transition. Finally, 24 studies (32.4%) reported on other professionals’ roles in the transition.
Open communication with actively involved post-school professionals was important, and autistic individuals benefited from access to a supporter in their post-school context.

Collaboration during transition. Of the studies considering collaboration during transition, 25 (67.6%) reported the importance of collaboration amongst supporters during transition. There were 10 (27.0%) studies that reported on aspects of unsuccessful collaboration. Common reasons for lack of success were parent-teacher disjuncture and lack of communication. There were 15 (40.5%) studies that reported aspects of successful collaboration. These included regular, positive communication between all supporters, parent-teacher alliance, and formalising the process.

Barriers and enablers to successful transition. Over half (52; 60.5%) of studies reported barriers to successful transition. Some regularly reported barriers relating to the individual included: lack of access to appropriate services or supports ($k = 36$); differences in social communication and interaction ($k = 21$) and executive functioning ($k = 3$); feeling unprepared for the transition ($k = 4$); and transition plans not being implemented ($k = 2$). Family barriers included lack of preparation ($k = 5$) and limitations on resources ($k = 1$). Enablers were discussed within 53 studies (61.6%). The largest enabler of successful transition was early, individualised transition planning ($k = 25$). Other reported enablers within studies included students’ independence ($k = 24$), involvement in supportive relationships ($k = 14$), and self-motivation and persistence ($k = 5$). Several studies ($k = 4$) also reported the use of technology during transition as an enabler, as it was likely to increase organisation, study skills, and time management.
Impact of transition support programs. There were 22 (18.6%) studies that reported outcomes related to the impact of specialised transition support programs, with pre-post measures used in 17 (77.3%) of these studies. There were 11 specialised transition supports or programs, explored in 19 (86.4%) studies, that were shown to have a consistently positive impact on transition-related outcomes for the majority of participants. Details of these specialist programs are included in Supplemental Table 1.

Key findings in relation to Bronfenbrenner’s ecological models of human development.

The first author placed each group of key findings within the ecological models of human development.34 Supplemental Figure 1 shows that 19 groups (86.4%) related to the microsystem and 3 groups (13.6%) related to the mesosystem. Groups placed within the microsystem34 included those that examined students’ interaction with the direct environment, such as involvement in transition planning, helpful transition activities, and the role of adult supporters. Groups placed within the mesosystem34 considered the interactions that occur between those immediate environments, such as the importance of collaboration and elements that helped or hindered its success.

Strengths and limitations in methodological reporting

To address Research Question 4, the first author assessed the strengths and limitations in the methodological reporting of each study using the 13-item QuADS25 appraisal tool. The maximum score available for this assessment was 39. The average score across all studies was a reasonable 28.10, with notable variability in scores ranging from 10 to 38 ($SD = 5.15$). The item with the lowest endorsement across studies was inclusion of evidence that community members
had been considered in research design or conduct \((M = 0.63; SD = 0.95)\), with a large proportion of studies \((k = 77, 64.7\%)\) not reporting on any involvement of the autism/autistic communities. Other items with low mean scores related to the level of recruitment data being provided \((M = 1.76; SD = 0.91)\); justification of analytic method selected \((M = 1.79; SD = 1.13)\); and critical discussion of strengths and limitations \((M = 1.85; SD = 0.68)\). As already discussed, 51 \((42.9\%)\) included studies were dissertations and the average quality score of these dissertations was 30.39 \((SD = 3.94)\), which was higher than the average quality rating of the included peer reviewed studies \((M = 26.39; SD = 5.33)\).

**Discussion**

This review aimed to quantitatively review and summarise the research exploring transitioning on from secondary school for autistic students by identifying the characteristics, focus, outcomes, and methodological and reporting quality of the included studies. A purposefully broad search strategy allowed authors to identify 119 studies that met the inclusion criteria. Examining the characteristics and focus of the research reveals that the underreporting and limited heterogeneity of some participant and study characteristics, limits the generalisability of research findings. This was also limited by the number of studies focusing on academic transitions at the expense of other transition types. Much of the research was qualitative and conducted in metropolitan/urban areas of the USA. Participant groups were most often composed of autistic White males completing transitions with an academic focus, while autistic individuals with co-occurring intellectual disability rarely participated. This has implications for policy, practice, and future research given that there are subgroups of autistic people under-represented in the research.
When considering the reported outcomes of included studies, this review corroborates the findings of previous reviews, highlighting that early, individualised transition planning for autistic students and the provision of appropriate supports are key to a successful transition. However, there is more to learn about how to facilitate effective student involvement in transition planning, and about how factors across ecological systems may impact this planning. Furthermore, while research has shown that access to specialist transition support programs generally improves transition outcomes, there are a limited number of studies that report on these programs. This review also identified that families/parents are significant advocates for autistic students as they transition on from secondary school, but less is known about the role played by school staff. However, studies show that collaborative partnerships between key supporters during the transition are important, but not always successful. Finally, assessment of the methodological reporting of included studies using QuADS revealed that disparity between the highest (study designs that reflect research aims) and lowest (involvement of members of the autism/autistic community) endorsed items may limit research reliability.

Research Generalisability

In response to research questions 1 and 2, this review has shown that the characteristics and focus within the literature may impact generalisability. This has implications for policy, practice, and future research. Most studies \((k = 90, 77.2\%)\) were conducted in the USA, where post-secondary transition planning for autistic pupils is mandatory.\(^{36}\) Post-school transition planning is not mandated globally,\(^{37}\) so the experience of students reflected in much of the research may not reflect the experience of students living in countries with different legislative frameworks. Furthermore, previous research has shown that factors such as school type, sector,
and locality can impact educational experiences, including post-school outcomes and transition experience for non-autistic student groups. It is also widely agreed that autistic individuals living in non-metropolitan areas can have additional barriers to accessing appropriate supports and services. As only 36.1% of studies provided detail of the geographic locality within which the research was conducted, researchers being more consistent in reporting this characteristic will enable clearer identification of if/how it may impact the transition.

The underrepresentation of some subgroups may also limit generalisability of current findings. Many studies reported large proportions of male participants, and when studies reported ethnicity, there were regularly a greater number of White participants than the average across autism research. Additionally, few studies included participants with co-occurring intellectual disability. This is particularly noteworthy as autistic young adults with co-occurring intellectual disability often experience poorly coordinated transition planning in which they may have little to no involvement. Post-school, young adults with intellectual disability experience higher levels of unemployment and have limited participation in the community. As such, this underrepresentation of multiple subgroups means that those planning programs to support autistic young adults during transition to adulthood must exercise caution. Findings of this review may not be completely representative of the diverse experience of all autistic students making this transition. Therefore, it is important for future research to involve students from these under-represented subgroups, to ensure future policy and practice is based on findings that are more inclusive of diverse transition experiences. In particular, the experiences of autistic individuals with co-occurring intellectual disability are often absent in research across all autism fields, so it is essential that future research on this transition includes autistic young adults with co-occurring intellectual disability.
Finally, the predominate focus on academic transitions and the use of qualitative methods to report on these may also impact the generalisability of findings. Although many autistic young adults go on to further study, more research is needed to better understand how to support the social changes that occur during this transition to post-school life. This is important as, contrary to the general population, post-school, autistic young adults are reported to have fewer friends and to engage in a limited amount of structured and unstructured social activity. Given that increased social participation and integration leads to more positive social outcomes for autistic adults, it is important to consider if transition planning incorporating more effective support in managing the social changes that occur post-school for autistic young adults could be beneficial.

Furthermore, many studies within the review, including 77.4% focusing on academic transitions, utilised qualitative methods. Qualitative research allows for deep and comprehensive representations of experience, however the typically smaller participant numbers limits its generalisability. Moreover, qualitative research is context specific so may not be applicable to the experiences of the broader autistic population. Exercising caution when considering review findings in policy and practice is therefore advisable, given the focus on academic transitions and the underrepresentation of non-qualitative research designs.

Transition Planning and Support

In response to research question 3, this review has reinforced the findings of previous reviews that planning is critical to support autistic students as they prepare to transition on from secondary school (e.g., Rydzewska). Moreover, it has recognised that early, coordinated, and precise transition planning (previously focusing on primary-to-secondary-school transition; e.g., Richter et al.) is key to successful transition to post-school life for autistic students. Providing
autistic students with early, individualised planning enables transition success. Allowing students to set goals, problem solve, and to make decisions, is considered best practice within broader disability literature; this review indicates that approach is also best practice for post-school transition planning for autistic students. However, included studies show this is not regularly the experience of autistic students. This is problematic, as it is widely accepted that effective school practices are shaped by the views of the autistic students, and incorporating these students’ views is essential, especially when facilitating supportive transition. Finally, much of what is known about this planning relates to the students’ immediate environment (microsystem). This means that there is scope to further explore the influence of factors outside this system. For example, consistent with wider autism literature, the cultural system of the individual (macrosystem), is not routinely examined as part of post-school transition research. As such, deeper exploration of how all systems impact transition planning may enable the provision of more precise support.

Importantly, the review found that access to transition support programs is likely to lead to improved outcomes for autistic students. It is accepted that transition programs are effective in supporting students completing transitions and that post-secondary transition programs have a positive impact on the experience of students from minority backgrounds, and for students with disabilities. However, studies reporting on these programs for autistic students represent less than 20% of research in this area. This review has therefore reinforced earlier calls for the development and trailing of additional specialised post-school transition programs to support autistic students.

Supporter Involvement
Continuing the response to research question 3, it is important to consider who the review has shown to be supporting autistic young adults during transition to post-school life. Nearly half of studies identified the central role families/parents play in the transition planning and process, supporting previous research highlighting the importance of families/parents during autistic young adults’ transition to post-school life.\(^6\,17\) This advocacy can become overwhelming and exhausting for families/parents (e.g., Baker et al.\(^60\)), which can lead to fractures in home-school relationships (e.g., Pillay et al.\(^61\)). This is consistent with broader research on parental advocacy for autistic children, showing advocacy at schools can lead to parents feeling disempowered and not reaching suitable outcomes.\(^62\) This is associated with increases in parent stress, which can impact well-being.\(^63\) While the cost of this advocacy for families/parents can be high, this review highlighted that their involvement can lead to increased access to supports and services for their child. This reflects what is known about the important role of parental advocacy leading to improved support for autistic children throughout their education.\(^64,65\)

Although transitions occur from school, only one quarter of studies reported on the role that school staff play in supporting autistic students. A positive impact on transition was achieved by school staff who knew their students well and had the necessary resources, knowledge, and training to support the transition.\(^66-68\) School-based professionals’ knowledge and understanding of autism is a key factor in the successful inclusion of autistic students in mainstream schools.\(^69\) Research on autistic students moving from primary to secondary school has shown that teacher behaviour impacts transition experience.\(^57\) This review has shown that the role played by school staff is equally relevant during the preparation for transition to post-school life, but that increasing the number of studies exploring their role may help to identify additional ways that autistic students can be supported.
Finally, this review emphasised earlier research findings (e.g., Anderson et al.\textsuperscript{17}) that collaboration between autistic individuals and their supporters is key to transition success. Successful collaboration was encouraged through the inclusion of families, shared goals, and clear communication.\textsuperscript{68,70,71} This mirrors findings of previous research on successful home-school collaboration when supporting autistic students, which encourages authentic involvement of parents, and schools’ use of positive communication.\textsuperscript{72-75} This review has reinforced the importance of home-school collaboration during the transition to post-school life, but the limited number of studies in this review exploring this partnership suggests that there is more to learn about how to make this collaboration successful.

Methodological Reporting

In response to research question 4, this review has shown that, despite the overall reasonable quality of included studies, reliability is impacted by the variability of scores between the highest ($M = 2.76$) and lowest ($M = 0.63$) endorsed QuADS items. Evidence of the lowest endorsed item—consideration of community members in research design and conduct—was absent from nearly two thirds of all included studies. Therefore, to begin to overcome this limitation, authentic community collaboration must be embedded within future research design. The importance of research having an autistic voice is well documented (e.g., Pearson et al.\textsuperscript{76}), so planning and conducting of future research in this area must include the autism and autistic community in meaningful and prominent roles.\textsuperscript{77,78}

Areas for Further Research and Limitations
This review has shown that planning and support for the transition on from secondary school is key, but some aspects of this planning and support remain underexplored. Researchers have more to learn about how to effectively engage autistic students in their own transition planning, and there is also need for studies that explore the development and implementation of additional specialised transition programs. The findings of future research on effective home-school collaboration, which could potentially be gained through studies that more deeply explore the role of school staff in the transition process, should be embedded in these programs. Furthermore, it is important to explore how factors such as school location, sector, and type might impact preparations. Future research must explore these areas and must more regularly include the experience of different autistic subgroups.

Future reviews may wish to explore more broadly the transition to adulthood, as the inclusion criteria for this review stipulated that a study must report on transitions related to the academic, vocational, or social aspects of autistic young adults’ lives. Therefore, there are potentially other studies that could have added to the knowledge within this review that were not included, and future reviews may wish to broaden the inclusion criteria to allow the inclusion of these studies. Significantly, this review included grey literature, which has resulted in a high number of dissertations being included. However, the average quality of these dissertations was higher than the included peer reviewed studies, and their inclusion has ensured the review is thorough and provides an overview of available evidence.

Conclusion
Autistic young adults often experience poorer post-school outcomes, so the identification of ways to more effectively support them as they prepare to transition on from secondary schooling has the potential to address this issue. This review has reiterated earlier findings that planning for and supporting this transition is key. It has also highlighted the important role played by families/parents, and the significance of their successful collaboration with school, during the transition. However, the review has also shown that there is more to learn about this transition, including about how to more effectively empower autistic young adults to be the leaders of their own transitions, and the potential for specialised transition programs to improve outcomes. It has also shown that there is more to learn about the role of school staff during the transition, and how to encourage ongoing, positive, home-school collaboration. Finally, the generalisability of findings may be impacted by the underreporting and limited heterogeneity of some characteristics within the included studies, as well as the predominate focus on academic transitions. This means caution must be exercised when considering research findings, given the lack of research including the experience of autistic young adults with co-occurring intellectual disability and those who live in non-metropolitan areas. It is therefore important that future research addresses the identified gaps, as the increase in knowledge may improve precision in the support provided by schools and families to autistic young adults as they prepare for, and make, the move on from secondary school and into adult life.

**Author Contribution**

Louise White designed the study, wrote the protocol, conducted the literature searches and the screening of articles, extracted data, assessed study quality, synthesised results, and contributed to the discussion. Dawn Adams, Kate Simpson, and Stephanie Malone designed the study,
synthesised results, and contributed to the discussion. All authors contributed to and have approved the final manuscript.

**Declaration of Competing Interest**

None

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**Supplementary Material**

Supplemental Table 1

Supplemental Table 2

Supplemental Figure 1
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