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Meeting the principles of inclusion in mainstream education for students with Autism/Takiwātangain Aotearoa: A scoping review

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MEETING THE PRINCIPLES OF INCLUSION IN MAINSTREAM EDUCATION FOR STUDENTS WITH AUTISM/TAKIWĀTANGA IN AOTEAROA: A SCOPING REVIEW

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Abstract

This review provides an overview of the literature related to inclusive education for students with autism/takiwātanga in Aotearoa. A search of peer-reviewed literature identified 49 potentially relevant publications; of these, 13 met the inclusionary criteria. The reviewed publications addressed issues of how best to achieve inclusive education in Aotearoa as well as teachers' and teacher aides' impact on teaching and learning. Findings suggest a need for more support and professional development for teachers and teacher aides in order to effectively create inclusive classroom/school environments which support the learning needs of students with autism/takiwātanga. The need for a whole-school approach to inclusion is highlighted as a key pathway towards inclusive education. These ideas are discussed in relation to implications for further research and the provision of effective mainstream education for autistic students in Aotearoa.

Keywords

Autism; takiwātanga; inclusive education; neurodiversity

Introduction

It is estimated that 1 in 54 young people are diagnosed with autism in Aotearoa, with recent studies suggesting that boys with autism outnumber girls by approximately 4:1 (Bowden et al., 2022). Global statistics suggest that the prevalence and awareness of autism are on the rise, owing partly to improved identification methods and changing definitions of autism to include a broader spectrum of neurodevelopmental conditions (Bowden et al., 2020). Given this evidence, it is important that we ensure our school systems can effectively meet the needs of these students and their families.

Considering the prevalence of autism amongst students in New Zealand and the limited training provided to pre-service teachers in this field, I consider this review important to investigate inclusive practice for autistic students in New Zealand schools.

As a researcher, I understand that my identity and background have an influence on the work that I do. I am a New Zealand born and based early career primary school teacher and was educated in the New Zealand school system at a time when students with special educational needs were only just beginning to attend mainstream schools. I have previous teaching experience in the secondary school sector, where my teaching practice had a significant focus on culturally responsive and inclusive pedagogies to ensure successful educational experiences for a predominantly Māori student base. I identify as New Zealand European and Māori, with whakapapa links to Te Atiawa iwi. As a mother of two primary aged children and the aunty of a 9-year-old with complex special education needs attending school in a mainstream setting, I am invested in the achievement of inclusive education where all students have equal opportunity to participate, be engaged and learn alongside their peers at their local school.

The purpose of this review is to investigate how well-equipped teachers and mainstream schools are to meet the principles of inclusion for students with autism in Aotearoa. The identified literature was analysed with three key research themes generated in line with the central focus of the review.

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- 1. What is the current understanding of inclusive education of school staff in Aotearoa?
- 2. How are teachers impacting the establishment of inclusive education for autistic students in our schools?
- 3. How is the employment of teacher aides impacting on the establishment of inclusive education for autistic students in our schools?

Through the analysis of the available literature, my aim was to identify what is currently known with regard to inclusive education and autism, and what gaps may indicate a need for further study.

Autism/Takiwātanga

Autism is a complex neurodevelopmental disorder that is defined by difficulties in social communication and the presence of restricted or repetitive behaviours, interests, or activities (American Psychiatric Association, 2022). Prior to 2019, there was no widely known specific Māori term for autism. In 2019, the term "takiwātanga" was proposed as a way of encapsulating the Māori view of autism. The derived meaning of this term is "in their own time and space" (Whaikaha – Ministry of Disabled People & Ministry of Education, 2022). While it is acknowledged that there is no one preferred view of autism for all autistic people, for many it is not seen as a disability; rather, it is considered a neurological difference.

Inclusive education

Inclusive education has been an integral part of educational practice in Aotearoa for the last two decades (Hamilton & Wilkinson, 2016). Recently it has been reinforced by the Education and Training Act 2020 (Ministry of Education, 2020) which states that all students in Aotearoa, including those with additional support and learning needs, have the right to a free state education and ensures that reasonable accommodation and support must be provided to facilitate the provision of effective education at their local school.

For the purposes of this review, in line with the research of Goodall (2014), inclusive education refers to the presence of students with autism in regular classrooms in their local schools, where they can be engaged and achieve through being present, participating, learning, and belonging alongside their peers.

Method: A scoping review

Considering the prevalence of autism amongst students in Aotearoa, it was important to explore the literature on how inclusive education is enacted for these students. To ensure the best possible representation of Māori literature and perspectives were included in the review, I opted to use a scoping review as this approach gives the best overview to identify and map the available evidence (Munn et al., 2018). The use of the method is also best suited to identify any knowledge gaps in the selected field, which is useful given the importance of Māori perspectives being included in the discussion of inclusive education for students with autism.

Given the paucity of Aotearoa-based literature available in the field of autism and primary school education, broad eligibility criteria were used to carry out the initial search for the current review and also ensure that Māori research and perspectives were included.

To be included in the review, publications needed to discuss both autism and primary school education. Research based in Aotearoa was a key consideration for inclusion; however, some closely linked countries (Australia and United Kingdom) were considered via full article reading to gauge the relevance and potential contribution of literature data to the topic of review.

Information sources and search strategy

An electronic database search was carried out in November 2022. Multiple databases were searched using the following search terms and criteria:

- 1. ("Inclusive education" OR Inclus* OR "Mainstreaming in special education" OR Mainstream*) AND (Autism OR takiwātanga) AND Zealand AND ("Primary school" OR education OR "primary education").
- 2. Date limits of 2011–2022 were applied.
- 3. Only peer-reviewed journal articles were included in the initial search.

These initial electronic searches (excluding Google Scholar) returned 67 articles. A Google Scholar search returned more than 1500 results. In addition to this, website searches of the Ministry of Education, Altogether Autism, and Autism New Zealand were also conducted using the same search terms to locate relevant grey literature. Reference and citation searches were conducted for key articles identified during the database and grey literature searches.

The 107 articles identified during the initial searches were screened to assess potential eligibility for inclusion. To be included in the review, publications needed to discuss both autism and primary school education. Publications that focused on inclusive education and disability but also made specific reference to autism (e.g., one or more of the participants identified as autistic) were also included. The inclusion of non-New Zealand based research was done via full article reading and overall judgement as to the relevance and potential contribution of literature data to the topic of review. Abstract screening, elimination of double ups and full text reading of remaining articles yielded 13 suitable articles to be included in the review. Ten of the studies were based in New Zealand, two in Australia and one cross-cultural study conducted in the Cook Islands and Australia. The majority of studies were small-scale qualitative studies conducted via interviews exploring teachers, students, and whānau experiences of inclusive education for students with autism in New Zealand schools.

Reflexive Thematic Analysis of the selected literature, as described by Braun and Clarke (2019), was used to actively code significant ideas which were then analysed and grouped into key themes. The key themes generated during this process were influenced by the central organising concept of inclusive education for students with autism in Aotearoa.

Results

The identified literature was analysed with three key research themes in mind:

- 1. The current understanding of inclusive education of school staff in Aotearoa
- 2. Skills and preparation of teachers to create inclusive educational environments for students with autism in schools
- 3. The impact of teacher aides on the establishment of inclusive education for students with autism in schools

These themes are explored further through the identification of key themes across the literature.

Current understanding of school staff in Aotearoa about inclusive education

Inclusive education aims for the full participation and achievement of all learners in their school environment. In a publication released by the Ministry of Education (2014), students in inclusive schools are described as being able to be present at their local school, participating and engaged alongside their peers, learning and achieving and experiencing success through challenging but suitable learning activities and, finally, students have a sense of belonging resulting in them enjoying going to school and having friends. For autistic students, who through their neurodiversity often sit on the fringes

of what teachers and schools could consider the typical student, achieving the above attributes within their schooling experience can pose a challenge.

Inclusive practices as beneficial to all students

The implementation of an inclusive school culture and classroom environment was highlighted by multiple studies as beneficial to all students (Bevan-Brown, 2013; Higginson & Chatfield, 2012; Page & Ferrett, 2018). In their study of nine schools, Higginson and Chatfield (2012) found that when teachers implemented inclusive pedagogies and used autism-friendly strategies they were beneficial for the students on the autistic spectrum and for most students in their classrooms.

Acceptance and belonging were identified as key components of inclusive education in the qualitative study by Alesech and Nayar (2021) investigating how New Zealand school settings help or hinder a sense of acceptance and belonging in children. The study highlighted teachers as key facilitators of these elements in the classroom. Creating a positive class culture was described as the key component to inclusiveness and this sense of inclusion occurred when the teachers purposefully engaged the children in classroom activities alongside their peers (Alesech & Nayar, 2021). The detrimental impacts of not being able to achieve inclusion in the classroom were described by Alesech and Nayar (2021) and included a lack of motivation; increased psychological and emotional needs, such as loneliness and social anxiety, as well as increased stress.

In a study conducted by Page and Ferrett (2018) about the experiences and views of teacher aides towards inclusion of students with autism, two of the key attributes of inclusion highlighted were that autistic students benefited from the social modelling provided by their classmates, while the non-autistic students benefited by strengthening their skills of tolerance, understanding, and willingness to help others. These findings are supported by those of Bevan-Brown (2013) who described the benefits of creating an inclusive and supportive culture as a key factor to the successful and enjoyable school experiences for Māori students with autism and the whānau in her study.

Synergies between the aims of inclusive practice and core Māori values

The aims of inclusive practice in education—for students to be valued, included alongside their peers, and have a sense of belonging—are key attributes also upheld by core Māori values (Bevan-Brown, 2013). In her study of 51 participants, looking at inclusion from a Māori perspective, Bevan-Brown (2013) describes the core Māori values of *whānaungatanga* (relationships), *aroha* (love), *wairuatanga* (spirituality), *āwhinatanga* (mentoring), and *manākitanga* (respect and care) as the "bed-fellows" of inclusion. These core values highlighted by Bevan-Brown (2013) were the key aspects described by parents in her study, to create a positive and inclusive school environment for autistic students. Participants in the study responded that while it was a desire for their autistic Māori students to be educated in an environment skilled in both aspects of tikanga Māori and autism effective pedagogies, this was not always possible. In many cases, cultural competencies of teachers came at the expense of autism-specific knowledge and resources or vice versa and often a trade-off had to be made (Bevan-Brown, 2013). This experience of educational trade-offs was also supported by the research of Dharan (2020), with parents in the study reporting they often had to "shop around" for schools that would best support their autistic child both culturally and with autism-specific pedagogies and expertise.

Establishment of inclusive classroom and schoolwide culture is necessary

In their study of 65 primary school principals, Duncan et al. (2021) found that supporting teachers to deliver inclusive education is fundamental to maximising academic and social well-being for autistic students. This is identified across the literature as a complex task with Basel and Hamilton (2019) describing a one-size-fits-all model of education as inadequate for those with differences (including students with autism) to achieve success in the classroom.

An inclusive classroom culture, while important, was described as insufficient to create a fully inclusive experience for autistic students (Apers, 2016; Duncan et al., 2021; Higginson & Chatfield, 2012). Apers (2016) argued that inclusion of students with autism (or any disability) cannot be achieved through the actions of the classroom teacher alone and that the whole school culture should be steered towards inclusion. Apers (2016) described inclusive schools as those which focus on removing barriers and supporting diversity, changing the schoolwide culture to embrace difference and ensuring that policies and practices are designed to accommodate all students.

An important requirement for creating an inclusive school environment is the role of the principal in actively modelling and promoting an inclusive culture. Higginson and Chatfield (2012) reported on the importance of leadership commitment and how this impacts a school-wide culture of inclusion. In their study of the effects of autism-specific training in nine schools, they found that a lack of principal engagement in the professional development programme resulted in a schoolwide lack of commitment to the development of inclusive practices and pedagogies (Higginson & Chatfield, 2012). In a study of primary school principals, Duncan and her colleagues (2021) reported that the majority (77 out of 113 responses) sighted a significant aspect of their role was to facilitate a school-wide approach to embracing diversity. Encouraging a culture of inclusion and modelling inclusive behaviours were also seen as key components of their role as a principal in an inclusive school. Leadership and strong collaboration with families and the local community were also highlighted as key components in the authors' research (Duncan et al., 2021).

Skills and preparation of teachers to create inclusive educational environments

In an inclusive school environment, teachers are required to promote a culture of achievement through high expectations for all learners. Within this environment, teachers should create a learning programme that provides all students with experiences and challenges suited to their interests, needs, and goals (Ministry of Education, 2014). The challenges faced by students with autism can vary significantly from others, and therefore a knowledge of autism and, more importantly, an understanding of how this impacts the learning and participation of a student in the classroom, is critical for effective teaching and learning to occur (Goodall, 2014). Of the 9741 autistic students included in a study by Bowden et al. (2022), only 2895 (29.7%) received high-need funding in 2018. This means that for the majority of students with autism, it is possible that there is no (or very limited) additional assistance available to help them have success in the classroom. As the key facilitators of inclusive education within the classroom, teachers need to have the knowledge and skills required to effectively plan and adapt the teaching and learning programme to suit the needs of autistic students.

Teachers are inadequately prepared to provide inclusive education for autistic students

The lack of knowledge and skills among teachers to effectively meet the educational needs of autistic students within the mainstream classroom was a major theme across many of the reviewed studies. Through their research into principals' roles in supporting teachers to meet the requirements of inclusive education, Duncan et al. (2021) concluded that teachers' lack of foundational knowledge and skills was a barrier to delivering inclusive education, and development was needed in this area. This study went on further to state that novice teachers were ill-prepared given the complexity of modern classrooms. This finding was supported by Basel and Hamilton (2019), who state that many teachers felt untrained and ill-equipped to manage students with autism. While the experienced teachers in a study by Apers (2016) had not received pre-service training in the field of autism and inclusive education, all participants felt that additional training would have been beneficial. Higginson and Chatfield (2012) reported that while participants in their study mostly agreed with the principles of inclusion, knowledge of autism and what this means for autistic learners and how to teach them, was low.

In her study of five classroom teachers, Goodall (2014) highlighted that key factors required for teachers to effectively meet the needs of students on the autism spectrum were knowledge and understanding of autism, willingness to try and meet the needs of individual students, and a positive positionality of

Teachers and Curriculum, Volume 23, Issue 1, Special Issue: Ngā Timatanga Hou: Fresh Perspectives on Education, 2023

autism as difference (not disability or deficiency). A positive positionality was described as teachers being able to see potential in all students to achieve success. The positionality of some teachers was also recognised by Duncan et al. (2021) as a barrier to inclusion, with lack of motivation, low expectations, and resistance to pedagogical change being some of the factors attributed to a deficit positionality. Goodall (2014) noted in her findings that teaching students with autism was, at times, more difficult and required more energy from teachers and that many were still on a long journey to full acceptance of students on the autistic spectrum as learners with potential. The significance of this was described by Goodall (2014), who noted that if teachers were unable to see the potential of autistic students, they were not able to be effective teachers of those students. This had the effect of compounding the cycle of ineffective teaching and learning.

The positionality and attitude of teachers was not always seen as a barrier to inclusive classroom culture. In the study by Apers (2016), the participants were all teachers with significant experience working with students on the autism spectrum. All of the teachers felt confident to deliver inclusive education to students on the autistic spectrum and were not hindered by the fact that their initial teacher training did not give them autism-specific knowledge. The positive and proactive attitudes of these teachers meant that they took opportunities to educate themselves to better their understanding and improve their knowledge and practices.

Professional development is a key driver to improving inclusive practices

In their study of parents' perspectives on school transitions, Hamilton and Wilkinson (2016) identified that the teachers who had autism-specific training were the ones who were able to create more inclusive classroom environments. Data from the case studies of Alesech and Nayar (2021) revealed the critical skills required by teachers to create an effective learning environment included effectively managing the class, having a constructive approach to identifying problems, and effectively planning and catering to student needs.

Goodall (2014) identified the key factors involved in teachers effectively meeting the needs of students on the autism spectrum were an understanding of autism and how this translates to classroom practice. Professional development was seen as the key driver towards more effective teaching pedagogies for teachers and other school staff. Higginson and Chatfield (2012) found that teachers who partook in ongoing mentoring and professional development showed an increase in the use of inclusive strategies over time and expressed increased confidence in teaching autistic students. This resulted in several key changes in practice, such as not withdrawing students from class, and the ability to create more appropriate learning conditions for the benefit of autistic students (Higginson & Chatfield, 2012).

The importance of ongoing professional development was also highlighted by Apers (2016), with the experienced teacher participants in the study stating they had been able to develop their effective pedagogies for working with students with autism on the job through collaboration with colleagues and professional development sessions. These teachers were able to use all of the professional support available, including interprofessional collaboration and teacher aide support and individual education plans, to both support and shape their knowledge of the autism spectrum and inclusive practices. The participant teachers spoke highly of the effectiveness and importance of utilising these supports and felt that through years of experience, they had become confident to deliver inclusive education for students with autism (Apers, 2016).

The impact of teacher aides on the establishment of inclusive education

For students with autism to actively participate in classroom activities, it is often necessary to make adjustments and provide additional support. Just under a third of all school aged students with autism receive additional funding to enable extra support to be put in place (Bowden et al., 2022). Funding allows for schools to employ additional staff to support students and can be used to also provide additional resources or support programmes as the school sees fit. The role of a teacher aide (TA), as

defined by the Ministry of Education (2014), is as an aide to the teacher and not a "helper" to individual students. The findings of this review highlighted that rather than working in the aforementioned capacity, many TAs instead worked to facilitate the main teaching and learning for the specific students with whom they were "assigned" (Page & Ferrett, 2018; Woodhams, 2018).

Teacher aides are often left responsible for the teaching of high needs students

TAs in the Page and Ferrett (2018) study commented that teachers would often leave them to deal with the teaching and learning responsibilities for particular students, which is not their intended role. They went on to state that the teachers and schools were not appropriately resourced to manage students with autism. Woodhams (2018) points out that while TAs are often knowledgeable and skilled, there is no specific training required to hold this position. She goes on to further explain that without the necessary curriculum and pedagogy knowledge, TAs cannot equitably compensate for time with the trained teacher, which the students not only need but are entitled to (Woodhams, 2018).

The lack of training received by TAs was also highlighted by Dharan (2020), with respondents stating that TAs were only seen as being effective when they had autism-specific training. The findings of this study of 334 participants in an online survey and 13 families in focus group interviews noted not only teacher training but also training of TAs as a top priority for effective education of students on the autism spectrum. Woodhams (2018) suggested that teachers and TAs should receive training on how to work better together as co-educators to more effectively promote an inclusive educational experience for all students.

Teacher aide assistance should facilitate participation and inclusion

In a study of the effect of high-needs education funding and suspension rates of autistic students, Bowden et al. (2022) concluded that with appropriate support, school and classroom environments can be made more inclusive and successful for autistic students. This study found that autistic students with additional support were less likely to experience problems in school resulting in suspension. Research conducted by Sharma et al. (2019) and Woodhams (2018) also highlight the important role that appropriate support, such as a TA, can play in the successful inclusion of autistic students at school. However, while they mention that TAs are often skilled individuals who know their students very well, they are critical of the way TAs are put to work most commonly within classrooms.

Across three of the reviewed studies, TAs' time was utilised in a one-on-one capacity to individually support the student to whom they were assigned (Bowden et al., 2022; Sharma et al., 2019; Woodhams, 2018). This student-aide model was the most reported response in the study on perspectives of TA roles in inclusive education (Woodhams, 2018). While in some cases this was noted to produce positive outcomes, such as by reducing bullying (Bowden et al., 2022), or to monitor sensory overload and the need for a time out (Woodhams, 2018), this was not the only view represented across the publications.

By providing individual learning and behavioural support, TAs noted that this limited the distraction caused by the students and it freed up the classroom teacher to spend more time with the other students in the class (Woodhams, 2018). TAs also reported being required to modify learning tasks and in some cases plan activities and lessons in order for the student to be included in the learning. In addition to this, students were also withdrawn from class due to the classroom environment and/or learning activities being unsuitable for them (Woodhams, 2018). This approach to utilisation of TAs was reported to lead to many students spending the majority of their day with the TA, often in isolation of the rest of the class. These factors lead to concerns highlighted by Woodhams (2018) that TA assistance in this manner was contributing to the isolation and exclusion of autistic students rather than helping to facilitate active participation and inclusion in the classroom.

A key trend observed across the reviewed research was that funding could be used more effectively and more specifically with regard to how TAs are utilised to support inclusive classroom environments (Bowden et al., 2022; Sharma et al., 2019; Woodhams, 2018). In the role of aide-to-the-teacher,

Woodhams (2018) discusses how TAs and teachers can work together to promote inclusive practice. Rather than freeing up the teacher to work with the rest of the class, working in a more collaborative aide-to-the-teacher role, TAs are able to work with other students to free up the teacher to provide the additional support needed by the student with the learning needs. This was seen as the most effective way for TAs to positively contribute to the equitable inclusion of students with autism in the classroom.

Discussion and implications

The aim of this review was to investigate how the principles of inclusion are being met in mainstream education for students with autism in Aotearoa. Key themes were generated which provide some insight into potential barriers and pathways towards inclusive education for autistic students in Aotearoa.

One of the most significant barriers identified in this review was the lack of professional knowledge and pedagogical skills amongst teachers in order to effectively meet the educational needs of autistic students. To effectively teach, teachers must be able to adapt their practice to meet the needs of students. Without an understanding of autism, teachers will struggle to identify students' strengths and effectively accommodate their weaknesses to allow them to participate in learning. Given that at primary school level most teachers are the sole educators of students for a school year, this finding raises concerns. The findings of this review highlight several examples of professional development (e.g., interprofessional collaboration, ongoing mentoring and practical skills sessions, and school-wide programmes to enhance inclusive culture) that had a positive impact on improving teachers' implementation of inclusive pedagogies through increased knowledge and understanding of autism.

Teacher aides (TAs) play an important role, providing much needed support for both teachers and students and are often highly skilled and competent individuals. The finding that TA assistance can lead to isolation of students is not only counterproductive to the objectives of inclusive education but could also have adverse effects on the students' overall well-being. The significance of this finding suggests there is a need for further research in this area to provide a more comprehensive picture of how both teachers and TAs can be best supported to ensure quality outcomes for autistic students to not just cope but thrive at school.

This review highlights that the implementation of a school-wide inclusive learning environment and culture will have a far reaching impact beyond benefiting only those students with special education needs. As our society becomes more diverse, the core values underpinned by inclusion will stand to benefit all students. Having an acceptance of diversity and difference as commonplace and approaching teaching and learning by looking at how the environment can be changed to suit the needs of the student (rather than the other way around) will benefit not just autistic students but their classmates as well.

While the findings of Bevan-Brown (2013) presented the important experiences and perspectives of autistic Māori students and their whānau, this one study does not provide enough evidence to make broad generalisations or conclusions about the experiences of Māori people in inclusive education. The need to ensure equal representation of voice through the support and inclusion of Māori research has been highlighted in this review by the lack of available publications in this field.

Conclusion

The aim of this review was to investigate how the principles of inclusion are being met in mainstream education for students with autism in Aotearoa. This research has highlighted the need for teachers and teacher aides to be provided with the support and professional development to have the knowledge and understanding of autism required to create inclusive teaching and learning programmes. Further research into how teachers and TAs are currently working with students in Aotearoa and the type of professional development and resources needed to improve the effectiveness of their support would be beneficial. By doing this, autistic students will be better supported to thrive and achieve success alongside their peers at school.

Achieving inclusion for students with additional learning needs in education cannot be attained at an individual teacher/classroom level alone and requires school-wide culture development driven by

Teachers and Curriculum, Volume 23, Issue 1, Special Issue: Ngā Timatanga Hou: Fresh Perspectives on Education, 2023 support from school leaders and the wider community. The findings of this review provide important considerations for teachers and school leaders to be able to bridge the gap between theory and practice when it comes to inclusive education design.

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Teachers and Curriculum, Volume 23, Issue 1, Special Issue: Ngā Timatanga Hou: Fresh Perspectives on Education, 2023

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