Autism in Out of School Hours Care

by

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Abstract

Centres for Out of School Hours Care (OSHC) have seen increased usage in recent years due to the changing nature of the workforce and families needing care for their school-aged children before and after school. Concurrent with these increases in OSHC use, there has been an increase in the number of children diagnosed with autism. However, there is a lack of research focusing on OSHC services in Australia and the care they provide for children with autism. This study sought to investigate the prevalence of children with autism in SA OSHC services and to explore the strategies used to support children with autism in OSHC settings in South Australia.

An online questionnaire was developed and all OSHC services in South Australia (n = 350) were invited to participate in the study. The survey asked respondents questions that described the demographics of the service including the number of children with autism who attend and whether they received additional funding to support these children. Questions also asked if the service had used a particular strategy from a list of 12 strategies used in schools to support children with autism. Respondents also rated and provided reasons for the effectiveness of the strategy. Just under one-quarter (23.3%, n = 87) of the invited OSHC services returned questionnaires. Over half of the educators felt that they had seen an increase in children with autism attending OSHC services. There were mixed responses as to how many strategies a service used and the perceived effectiveness/ineffectiveness of these strategies. Strategies that involved direct contact between children and educators (interaction-based) were perceived as more effective in supporting children with autism than strategies that were environmentally based. Reasons as to why these strategies were perceived to be more effective than others by educators and directors were inconclusive.

Future research focusing on why these strategies were perceived as effective or not, would provide a greater insight into what changes can be made in OSHC to support children with autism.

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Declaration

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed Renee Mathews

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List of Abbreviations

ABS	Australian Bureau of Statistics
ACECQA	Australian Children's Education and Care Quality Authority
APA	Australian Psychological Association
APERS – PE	Autism Program Environment Rating Scale – Preschool/Elementary
CFA	Confirmatory Factor Analysis
DSM	Diagnostic and Statistical Manual of Mental Disorders
ECEC	Early Childhood Education and Care
FBA	Functional Behavioural Assessment
IDF	Inclusion Development Fund
IEP	Individual Education Plan
MTOP	My Time, Our Place
NDIS	National Disability Insurance Scheme
NQF	National Quality Framework
OSHC	Out of School Hours Care
SA	South Australia
SACERS	School Age Care Environment Rating Scale
SCAO	Supporting Children with Autism in OSHC
SPSS	Statistical Package for the Social Sciences

Autism in Out of School Hours Care

Introduction

Centres for Out of School Hours Care (OSHC) have seen increased usage in recent years due to the changing nature of the workforce and families needing care for their school-aged children before and after school (Cartmel, 2019). Statistics provided by the Australian Bureau of Statistics (ABS) show that there was a 6.9% increase from June 2014 to June 2017 in the proportion of Australian children aged between 6 and 12 who attended before or after school care (ABS, 2015; ABS, 2018). In South Australia there was an increase of 7,000 children who attended in the five years from 2013 (33,640 children) to 2018 (40,800 children) (Department of Education and Training, 2019; Department of Education, 2014). Concurrent with these increases in OSHC use, there has been an increase in the number of children diagnosed on the autism spectrum (Christensen et al., 2016; Elsabbagh et al., 2012; Morales-Hidalgo et al., 2018; Randall et al., 2016).

The ABS (2019) found that the number of Australian children aged between 5 and 9 years of age with a diagnosis of autism increased from 33,000 children in 2012 to 49,000 in 2018 - an increase of nearly 50%. These statistics raise the question of whether the rise in usage of OHSC services and the increase in the number of children diagnosed with autism translates to an increase in children with autism attending OSHC. However, data concerning prevalence rates of children with autism in OHSC services, in Australia could not be found. To address this gap in the literature, one aim of this study was to estimate the prevalence of children with autism attending OSHC's in South Australia. This is important for understanding if indeed the increase in children diagnosed with autism and the increase in children attending OSHC has resulted in an increase in children with autism accessing OSHC

services since OSHC services must meet the needs of all children, including those with autism.

Determining the prevalence of children with autism would inform OHSC services not only of what support may be needed for children with autism and their families, but also the magnitude of the support needed (Özerk, 2016). Knowing how many children with autism are attending OSHC enables educators to look at their practices and make improvements to ensure that these children can fully participate in the OHSC program offered.

Furthermore, OSHC services aim to guide their practice according to the United Nations Declarations of the Rights of the Child (United Nations Commission on Human Rights, 1990), among other documents, including the Early Childhood Code of Ethics (Early Childhood Australia, 2016). The United Nations Declarations of the Rights of the Child outlines that every child has the right to relax, play, and participate in leisure activities (United Nations Commission on Human Rights, 1990). For many children, OSHC services play a significant role in assisting their social development (Department of Education, 2011). Having support and tailored strategies ensures that children with autism can participate in activities and play and relax with their peers in OSHC.

Characteristics of Autism Spectrum

Autism is characterised by "persistent deficits in social communication and social interaction across multiple contexts...nonverbal communicative behaviours used for social interaction, and skills in developing, maintaining, and understanding relationships" (American Psychiatric Association (APA), 2013, p. 31).

For a diagnosis of autism, a child must display a minimum of two out of the four restricted and repetitive patterns of behaviour described in the DSM-V (APA, 2013).

Children with autism may experience difficulties controlling repetitive movements of the body, relying on routines and patterns to manage day-to-day tasks, or becoming oversensitive to some sensory inputs within their environment (APA, 2013). Examples of behaviour associated with these characteristics include flapping, rocking, lining up objects, repetitive use of speech, difficulty adapting to change, rigid routines, and seeking or avoiding sensory stimulation, such as touching textures and avoiding sounds (APA, 2013).

Furthermore, difficulties related to social communication and social interaction must be demonstrated in all aspects listed in the DSM-V (APA, 2013). These include having difficulty understanding the social cues of others and challenges in creating, maintaining, and engaging in meaningful relationships with others (APA, 2013). Children with autism may also struggle to interpret the gestures and facial expressions of those around them and have difficulty engaging in imaginative play (APA, 2013).

The age for a diagnosis of autism was changed in the fifth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). The criteria in the previous version of the DSM, DSM-IV-TR, stated that symptoms must have begun *before* the child had turned three years of age (McGuinness & Johnson, 2013). This requirement has now been removed, which means that children can now be diagnosed later in childhood as symptoms may become more apparent later in childhood, impacting the number of school aged children being diagnosed with autism. Whilst not the only contributor to the increase, it is a likely contributor to the number of children now diagnosed with autism.

Difficulties Children with Autism Face in the Classroom

Children with autism encounter many environmental and social communication challenges within a classroom environment that may impact their behaviour (Majoko, 2016).

In instances where a child with autism becomes overstimulated by the classroom environment, the child may find ways to escape the overstimulation by engaging in behaviour that may appear as aggressive. Such behaviour may lead to conflict and social rejection from peers (Dunn, 2014). The difficulties experienced by children with autism may be exacerbated in OSHC environments because there may be less predictability and structure, higher noise levels and numbers of children in OSHC than in classrooms.

The OSHC Environment

The OSHC environment is very different to the classroom environment. OSHC environments are often loud and overstimulating due to the spaces, activities and number of children attending. A study by Junnah-Ghelani and Stoneman (2009), reported that the size of the room and the number of children was overwhelming for some children with autism.

Services located on school grounds may have their own dedicated, purpose-built building, or may be located in classrooms or other spaces across the school, including the library and gymnasium (Simoncini & Lasen, 2012). Given the different locations and setup of OSHC services, the challenges of creating inclusive environments are dependent on individual contexts. OSHC services based in shared facilities may not be at liberty to adapt the environment to suit the needs of children with autism or create calming spaces, compared to those with designated/purpose-built areas.

The routine in an OSHC centre can be very unpredictable. This is because OSHC activities are based on individual children's interests, which can change rapidly. The unpredictability of OSHC services may cause a child with autism, who thrives on structure and routine, to become anxious and uncertain (Lord et al., 2018).

There has been an increase in children with autism that are included in general education (Banire, et al, 2020), and it is expected that teachers meet their needs to achieve

positive social and academic outcomes. As such, there are many evidenced-based strategies that teachers use within the classroom to meet the individual needs of students with autism (Hume et al, 2021).

Classroom Strategies for Children With Autism

Teachers use a variety of evidence-based strategies in the classroom to support children with autism (Crosland & Dunlap, 2012; Lindsay et al., 2012; Spencer, et al., 2014). Strategies used within the classroom aim to address difficulties with communication skills, social development, challenging behaviour, learning, sensory needs, and motor development (Hume et al., 2021).

Some classroom strategies may focus on the environment and how teachers can set up the classroom to assist with sensory sensitivities and the challenges of noise and visual stimulation (Weiner & Grenier, 2020). Other strategies may focus on individual children, equipping them with different tools to assist them in participating, regulating their emotions, processing information, and engaging with their peers in the classroom (Weiner & Greiner, 2020).

Strategies incorporating visuals have been demonstrated to be effective in supporting children with autism in the classroom to navigate the daily routine and behavioural expectations (Hume et al., 2021; Spears & Turner, 2010). For example, the use of a visual schedule can reduce anxiety in children with autism caused by sudden unexpected changes, as well as visual representation of the expected behaviours in the classroom (Hayes et al., 2010).

Researchers have acknowledged that increased teacher knowledge and self-efficacy in implementing strategies to support children with autism is associated with an increase in the effectiveness of strategies used in the classroom (Hume et al., 2021). For example, a study by

Love et al. (2020), found that teachers with high self-efficacy had stronger, more positive engagement, relationships with students and students meeting the goals outlined in their Individual Education Plans (IEP) than those teachers who had lower self-efficacy.

OSHC Strategies for Children With Autism

Similar strategies, such as visual displays and posters of expectations and service rules, as well as the creation of a quiet place to regulate emotions that aim to create a calmer and safe environment for children with autism, may be used in OHSC (Weiner & Greiner, 2020). However, given the different environments of OSHC centres as opposed to the classroom, it cannot be assumed that the same strategies that are effective in the classroom are a) effective in OSHC, and b) used by OSHC educators. To ensure that educators in OSHC are effectively supporting children with autism, researchers need to understand how strategies for classroom use can be applied in OSHC settings. This approach provides a starting point for adapting classroom strategies to support children with autism in OSHC.

Purpose, Aim and Significance of the Study

Currently, no data provide an estimate of the number of children with autism who are accessing OSHC services in the states and territories of Australia. As stated above, there have been ongoing increases in students attending OSHC services concurrent with reported increases in the prevalence of autism. This suggests that there may be an increase in children with autism utilising OSHC services. An investigation of this possibility was the first aim of this study.

Moreover, it is important to establish whether current strategies used in classrooms to support children with autism are also being used in OSHC services and furthermore, whether classroom strategies used in OSHC are considered effective by OHSC educators, or whether adaptions to these strategies are needed.

A quantitative approach was chosen for this study in order to enable data collection that would determine prevalence rates of children with autism, and if there had been an increase in children with autism, attending OSHC services. Further to this, a quantitative approach was used to establish the use in OHSC and the effectiveness of the 12 strategies commonly used in classrooms. This cross-sectional approach (Creswell, 2018) enabled the gathering of information about current practices implemented with children with autism in OHSC. A qualitative approach would not have been able to gather large amounts of information from the different centres across South Australia, and the Covid-19 pandemic limited visitors to centres to collect observational data.

The purpose of this study was to a) investigate the prevalence of children with autism using OSHC services, b) to identify what strategies are currently being used to address the needs of children with autism, and c) examine the perceived effectiveness of these strategies in OSHC settings in South Australia. The study sought to answer three research questions:

1. How many children who are attending OSHC have a diagnosis of autism?
2. What strategies are being implemented to support children with autism in OSHC)?
3. How effective do educators think these strategies are for supporting children with autism in OSHC?

Literature Review

The literature review investigated reasons provided by researchers for why there has been an increase in children diagnosed with autism and guided the questions that were used to collect data about strategies used to support children with autism in OSHC. A review of the literature revealed the different challenges children with autism face in the classroom and the evidence-based strategies currently used by classroom teachers to support them. This information formed the basis for items used in the questionnaire to assess the strategies used in OSHC settings in order to determine a) whether these strategies were used and b) whether these strategies were perceived as effective within the OSHC environment.

Autism Prevalence

Diagnoses of autism have been reported to be increasing worldwide (Christensen et al., 2016; Elsabbagh et al., 2012; Morales-Hidalgo et al., 2018; Randall et al., 2016). Current prevalence studies show that in Denmark, Finland and Iceland, children diagnosed with autism who were born between 2006 and 2008 varied between 0.76 and 2.68 reported diagnoses per 100 children, while the United States of America reported 1.68 children diagnosed with autism per 100 children (Delobel-Ayoub et al., 2020; Baio et al., 2018). The rates of children diagnosed with autism in Australia have also increased, as reported in a longitudinal study examining two cohorts of children in 2014 (May et al., 2017). These results are also supported by ABS statistics, which also reported an increase in the prevalence of autism from 2015 to 2018 (ABS, 2019).

Factors Contributing to the Increase in the Prevalence of Autism

Changes in Diagnostic Criteria

Two main reasons have been identified in the literature that may explain why countries worldwide saw increases in the prevalence of autism spectrum. In 2013 there was a change in the diagnostic requirements published in DSM-V (Morales-Hidalgo et al., 2018; May, et al., 2017; Russell, et al., 2015). In this edition, there was a move to subsume all pervasive developmental disorders, including Asperger syndrome, under the banner of the autism spectrum (McGuinness & Johnson, 2013). It has been suggested by McGuinness and Johnson (2013) that changes in the diagnostic criteria now allows for a broadening of who meets the criteria for a diagnosis of autism.

Increased Awareness of Autism

Some researchers have claimed that the increase in the prevalence of children diagnosed with autism is due to greater public awareness and education about autism (Hansen, et al., 2014; May, et al., 2020; Prior, 2003). The introduction of a national autism awareness month or special days in various countries may have also increased the general public's awareness of autism (Mac Carthaigh & Lopez, 2020). DeVilbiss and Lee (2014) found an increase in online searches of autism in April, which coincided with Autism Awareness Month and World Autism Awareness Day. Whilst it is difficult to draw direct links from these data, it is thought that the increase in web searches may be related to the rise in the prevalence and diagnosis of autism as more people engage in internet searches investigating characteristics they may see in their own children (DeVilbis & Lee, 2014).

Research acknowledges that teachers have increased their knowledge and understanding of autism through various professional development courses and higher education training (Ravet, 2018; Sanz-Cervera, et al., 2017; Vincent & Ralston, 2020). As a result, they may have a greater understanding and ability to implement strategies to support children with autism in their classrooms (Hume et al., 2021). However, the extent to which educators in OSHC have had the same opportunities as teachers to attend training and develop their understanding of children with autism is unknown. Teachers may also be more confident and have the knowledge and resources to implement different strategies to support children with autism than OSHC educators (Corona, et al., 2016; Love et al., 2020).

Strategies to Support Children With Autism

Researchers have suggested several strategies for use in classrooms to assist students with autism (Crosland and Dunlap, 2012; Lindsay, et al., 2012; Spencer, et al., 2014). These include the use of visuals to display the daily routine or expectations, and peer-based interventions.

Visual Supports

The use of visual supports can provide a clear picture of what is expected throughout the child's day and what is expected of them (Hume, et al., 2021), and can be used at home as well as in the classroom (Dyrbjerg & Vedel, 2007). Within the classroom, visual supports are said to provide a concrete representation of things like daily schedules, facial expressions to understand emotions, and signs around the classroom to help the child interpret the environment around them and support receptive and expressive communication (Spears & Turner, 2010).

Peer-based Interventions

The environment and the child's peers can also assist children with autism by using strategies such as peer-based mediated intervention and support (Zagona & Mastergeorge, 2016). This strategy focuses on improving a child's social and communication skills by having classroom peers support children with autism and understanding how to respond to their social and communication attempts. This technique increases social interactions and increases opportunities for children with autism to develop social and communication skills (Zagona & Mastergeorge, 2016). There are many times throughout the day that children interact, both in the classroom and places such as OSHC, and some children will spend just as much time in OSHC as they do in the classroom, so helping children with autism develop social skills at a young age and in these settings increases the potential for friendships in later years (King, et al., 2020).

Environmental Supports

The classroom environment can have a significant impact on learning and the behaviour of children with autism. A study conducted by Zeedyk, et al. (2021) found that some classrooms were over-stimulating with too much information on display, or the environment was excessively noisy, leading to overstimulation. The same study found that some classrooms had made positive steps to ensure children with autism had the best possible chance to learn, such as specialised seating to allow for a child who is sensory seeking to remain seated whilst still meeting their learning needs (Zeedyk et al., 2021).

Furthermore, Kanakri, et al. (2017), found that there was a correlation between noise level in the classroom and behaviours exhibited including repetitive movements and covering of ears by students with autism. When the noise level reached 55-70 decibels, researchers found children were more likely to engage in these behaviours as well as hitting, eye blinking and producing loud sounds (Kanakri et al., 2017). It is important for teachers to understand how environmental factors can influence the behaviour of children with autism and be able to

implement different strategies to overcome these barriers. However, in the OSHC environment, it is not known whether these same adjustments to the environment can be implemented.

Autism and OSHC Settings

Research suggests that some experiences of children with autism in school-aged care have not been positive (Jinnah & Stoneman, 2009; Haney, 2012). Jinnah and Stoneman (2009) reported that parents had expressed concern with finding appropriate care for their child with autism. Concerns including a lack of facilities, refusal to accept enrolment and adequate care to meet the children's needs were highlighted as barriers to finding appropriate before and after school care. Furthermore, Jinnah and Stoneman (2009) found that parents expressed concern for their child's safety when centres were ill-equipped or not trained to support children with autism in out of school care settings. Haney's (2012) research also found obstacles to inclusive care. For example, parents were asked to collect their child from care due to behavioural problems and exclusionary practices were enforced that saw their child isolated from their peers.

Some aspects of after school care were identified by parents of children with autism as being necessary for inclusion of their children (Jinnah-Ghelani & Stoneman, 2009). These aspects included: adaptation of the environment, the adaptation of activities, resources to enable participation, establishing structure and routine, and developing the skills and attitudes of educators (Jinnah-Ghelani & Stoneman, 2009).

The activities in OSHC must be tailored to meet the individual needs of all children, so they feel a sense of accomplishment and are challenged, which increases their ability to adapt and builds their positive thoughts and behaviours (Danker, 2019). Furthermore, the

attitudes of educators can impact a child's sense of belonging, and positive inclusive attitudes support children with autism to participate in the program (Lindsay. et al., 2014).

OSHC Educator Skills and Attitudes

The negative attitudes and lack of understanding of inclusive practice for children with autism by OSHC educators may contribute to the barriers experienced by children and families. OSHC services report that the majority of their employees are aged between 20 and 24, and the sector experiences a high turnover rate (Department of Education and Training, 2017). The high turnover rate may be because many educators are university students looking to gain experience working with children whilst studying related fields (Cartmel & Hayes, 2016; Department of Education and Training, 2017).

Jinnah-Ghelani and Stoneman (2009) found that parents indicated that having educators with specific training on autism, not just disability, allowed the educators to develop the knowledge and skills to work alongside their child. Vincent and Ralston (2019) found that teachers who had a good understanding of autism understood that children with autism were unique, and adjustments needed to be made according to individual challenges and strengths. Although teachers had this understanding, many lacked self-efficacy and confidence in their ability to support these children (Soto-Chodiman, et al., 2012). While teachers may have undergone training and professional development courses in autism, educators in OSHC may not have had the same opportunities, particularly given their age and inexperience in the sector.

Many of the qualifications accepted by Australian Children's Education Care Quality Authority (ACECQA) to be qualified in OSHC do not have training components specific to the inclusion of children with disabilities, including autism. The Diploma of Early Childhood Education and Care has limited units that address the needs of children with autism

(Australian Government, 2021b). Some of the qualifications that enable people to be qualified to work in OSHC services in South Australia include general inclusion units within their courses. These courses include a Bachelor of Education, Bachelor of Psychology, Bachelor of Social Work, Diploma of Community Development, Diploma of Community Services and Diploma of School Aged Care. Further to this, the regulations state that services are only required to have 50% of qualified OSHC educators rostered on at any one time (Education and Care Services National Regulations, 2011).

OSHC Education and Care Programming

OSHC services are guided in their operation by ACECQA and the National Quality Framework (ACECQA, 2020). ACECQA is the national authority that aids all education and care services, including OSHC, childcare, kindergarten, family day care and long day care services, to implement the National Quality Framework (ACECQA, 2020). The framework outlines seven quality areas which together aim to provide quality education and care for all early childhood education and care services including OSHC (ACECQA, 2020). For school age children in Australia their OSHC educational program is guided by the *My Time, Our Place* Framework, which places emphasis on learning through play (Australian Government Department of Education and Training, 2011). The My Time, Our Place (MTOP) framework has five learning outcomes in which the program and children are to be evaluated against:

1. Children have a strong sense of identity.
2. Children are connected with and contribute to their world.
3. Children have a strong sense of wellbeing.
4. Children are confident and involved learners.
5. Children are effective communicators.

Within these guidelines, there is flexibility with program implementation, and each centre implements what works for them. This may be a weekly, fortnightly, or an open program that allows for flexibility of activities to cater for children's interests. All programs must focus on the children's interests, incorporate the learning outcomes within the MTOP learning framework and show an evident cycle of planning (Gowrie South Australia, n.d.).

Educators face the difficult task of ensuring that all children's interests are programmed for within each OSHC centre. For children with autism, participating in a program based on social interactions and play can be challenging (Bellini, 2016). Therefore, the planning cycle should assist educators to implement activities that encompass many children's interests but at age-appropriate levels for all children. Setting up activities is not sufficient however, as educators must also play an integral role in supporting children with autism develop their social skills and engage in the program.

Supports and Training for OSHC Services

Some OSHC specific support is provided to OSHC services in South Australia that assists services to implement new strategies, embed inclusive practices and generally support children with autism. Gowrie South Australia, a community organisation, is the Inclusion Agency for South Australia and is the first port of call when seeking assistance in supporting children with additional needs in early childhood and OSHC (Gowrie SA, 2021). The support offered by the inclusion facilitators at Gowrie SA includes providing specialist equipment, advice, and strategies on implementing inclusive practices and providing support in applying for additional funding (Department of Education, Skills and Employment, 2020). Whilst this service focuses on addressing the barriers of individual children within the care environment, the strategies implemented are not to be focused on only one child, but are to create an

inclusive environment, so all children may benefit from the implemented strategies (Department of Education, Skills and Employment, 2020).

Organisations, including Autism SA, have begun to provide OSHC specific training. This training aims to teach educators how to implement strategies in OSHC environments and explain how the OSHC environment may impact different children with autism (Autism SA, 2021). Similar to the research in OSHC, tailored support and training for OSHC educators are a relatively new concept that such organisations have only introduced in recent years, thus there are few assessment instruments that could be applicable to this study (Cartmel et al., 2020). Subsequently, a new questionnaire was developed by the researcher for use in this study.

Method

A cross-sectional survey was conducted using an online questionnaire, *Supporting Children with Autism in OSHC (SCAO),* to examine practices, and their effectiveness, presently being used to support children with autism in OSHC. Data were collected in 2019 prior to the COVID-19 pandemic and was a pilot/exploratory study

Supporting Children with Autism in OSHC Questionnaire Development

Current Research Instruments Used in School-Aged Care Settings

A review of the literature identified two different validated and reliable research instruments that have been used in studies to understand classroom program implementation. One instrument focused on teacher's perceptions of including children with autism, while the other assessed the use of specific strategies in the classroom (Dyer & Redpath, 2021; D'Agostino & Douglas, 2021; Odom et al., 2022). No instruments could be found in the literature that had been developed to investigate the effectiveness of strategies implemented in OSHC services to support children with autism. However, a review of the literature found one instrument, the School Aged Care Environment Rating Scale (SACERS) (Harms et al., 2014) specifically designed for use in OSHC studies.

While the SACERS is a measure focused on OSHC environments that explicitly evaluates school-aged programs, it does not include aspects of adapting the environment for children with autism. SACERS is an observational tool that assesses the appropriateness and quality of the school-aged care centre (Parczewska, 2020). The scale comprises 47 items presented in seven subscales: Space and furnishings, health and safety, activities, interactions, program structure, staff development and special needs supplementary items (Harms, 1996.). As such, the SACERS is limited as it does not focus on the needs of children with autism, but

children with special needs in general. Respondents use tick boxes under general headings such as “Provisions for exceptional children” and “Promoting communication” (Harms, 1996). There is no inclusion of specific strategies that are used by the service and rates involve a yes/no response. SACERS does not investigate the effectiveness or degree of implementation of strategies (Harms, 1996).

Research Instruments Associated with Autism in School Settings

The Autism Program Environment Rating Scale - Preschool/elementary (APERS-PE) (Odom et al., 2018) is an assessment tool that is used by a third party to assess the quality of educational programs for students with autism. The APERS-PE is designed to be used with children between 3 and 10 years of age in school or preschool classrooms. The observation areas include the learning environment, positive learning climate, assessment/individualised education plan (IEP) development, curriculum and instruction, communication, social, personal independence and competence, functional behaviour, family involvement and teaming (Odom et al., 2018). Within each of these subscales, tick boxes are used by the assessor to rate practices based on observation, documents and interviews; for example, under a positive learning climate a service would be rated a 5 if the following was met “All team members in the classroom/setting engage students in positive, respectful and warm interactions” and “All team members’ interactions appear respectful of students’ cultural or linguistic diversity” (Odom, et al., 2017, pg. 917).

Whilst the individual constructs of the APERS-PE may apply to OSHC services, the wording within the instrument is tailored for the classroom environment, which often differs from the OSHC environment. Furthermore, the APERS-PE focuses on evaluating the school programs rather than strategies perceived as effective. As a result, the wording of items does

not reflect the uniqueness of the differing OSHC environments. This instrument too, could not be used in this study.

Instrument for this Study

After analysing both the SACERS and APERS-PE it was concluded that the items and observational structure of the instruments were not suitable for the current study. As a result, an instrument specific to this research was developed. This was done by selecting items from both the SACERS and APERS-PE and rewording items to ensure suitability to the study. Key areas such as emotional regulation, learning environment, program structure, communication and educator-child interactions were highlighted as important for investigation, so items were chosen around these areas. Conversations with professionals who specialise in autism supported these key areas and assisted in identifying what might influence a service's ability to effectively implement strategies to support children with autism.

An example of questions that were reworded for this instrument include, "Does your centre take measures to ensure the environment is not overstimulating to children with autism? (e.g., too noisy, crowded, lots of activity)" and "Do educators at your centre offer support to children with autism to engage in social situations? (e.g., assist to join in play with other children, connect them with a buddy, engage small group play)".

The purpose-built questionnaire also sought to determine if strategies commonly used in classrooms to support students with autism were being implemented in OSHC by using a yes/no response. The strategies in the questionnaire were based on the SACERS, APERS – PE constructs that included space and furnishings, activities, and interactions from SACERS (Harms et al., 2014), and learning environments, communication, social competence, personal independence and competence, teaming, and positive learning climate from APERS – PE (National Professional Development Centre on Autism Spectrum

Disorders, 2013). Table 1 shows the items in the SCAO and the instruments upon which they were based.

Table 1

Questionnaire items Q1-Q12 in the Supporting Children with Autism in OSHC (SCAO).

Item	Adapted from		Construct
	SACERS	APERS-PE	
Q1 Does your centre have a "calming area" set up?	✓		Space and furnishing/Emotional regulation
Q2 Does your centre take measures to ensure the environment is not overstimulating to children with autism? (e.g., too noisy, crowded, lots of activity)		✓	Learning Environment
Q3 Are the views and opinions of children with autism reflected in the program?	✓		Program structure
Q4 Do educators in your centre actively engage children with autism to develop a greater understanding of their needs? (e.g., engage in conversation about the child's interests, offer activities based on the child's interests etc.)	✓	✓	Educator – child Interactions
Q5 Do educators at your centre offer support to children with autism to engage in social situations? (e.g., assist to join in play with other children, connect them with a buddy, engage small group play)	✓	✓	Educator–child interactions
Q6 Do educators in your centre use visuals to help explain behavioural expectations to children with autism? (e.g., pictures showing behaviour expectations, picture representations of the rules)		✓	Communication and behaviour
Q7 Do educators in your centre use visual aids such as timers and visual schedules to help children with autism navigate transition periods?		✓	Communication/Functional behaviour
Q8 Do educators at your centre use positive reinforcement to help children with autism develop positive behaviours? (e.g., praise children, provide rewards – stickers, prizes etc.)		✓	Positive learning climate
Q9 Do educators in your centre use strategies to prevent escalation, including redirection to support children with autism when responding to problem behaviours?	✓	✓	Educator–child interactions
Q10 Does your centre use a buddy system for children with autism to help create social connections with peers?		✓	Social competence
Q11 Have you or educators at your centre participated in autism-specific professional development courses in the last 12 months?		✓	Teaming/Professional development
Q12 Do you or any of your educators work with other professionals to help support children with autism, e.g., occupational therapist, speech therapist?		✓	Teaming/Collaboration

The strategies assessed for use in OSHC services included in the questionnaire included strategies designed to help children with autism communicate, support their emotional regulation, participate in social situations, as well as how educator and child interactions could be facilitated and how the environment could be adapted to support the child using visuals, sensory activities/areas . There was an option for respondents to include strategies not listed in the survey and for their perceptions of the effectiveness of the strategy for children with autism.

Respondents were asked 1. to indicate whether they used each of 12 different strategies at their service and then 2. to rate how often they were used and 3. how effective they were in assisting children with autism in their OSHC setting using, using 5-point Likert-type scales (see Appendix A). For example, 1. “Does your centre have a "calming area" set up? – yes/no”, 2. “How often in one week is the "calming area" used by children with autism? - Everyday, 3-4 times a week, 2-3 times a week, Once a week, Never” and 3. “How effective is the calming area in assisting children with autism to regulate their emotions?”- extremely effective, very effective, moderately effective, slightly effective, and not effective at all”.

The questionnaire also included questions asking respondents why they assessed strategies as effective or ineffective and the reasons for their response. For example, if they answered that the strategy was not effective at all or slightly effective, they were then prompted to select from the following reasons with the ability to choose more than one as well as provide an open answer. Based on the wording of items in the APERS-PE, reasons were identified as a means to classify whether a strategy was deemed ineffective. These included “lack of resources, lack of space, lack of time to set up the area, does not meet the needs of the children in the centre” and an open-ended section which allowed participants to list other reasons the strategy was ineffective. The reasons listed in the questionnaire as to

why the strategy was considered effective were similar, and included “adequate resources, adequate space, adequate time to set the area up, meets the needs of the children” and an open-ended section which allowed participants to list any other reasons as to why they believed the strategy was effective in their service (see Appendix A).

Demographic questions about the OSHC service included asking respondents to describe the size of the centre, the management structure, and if the centre was receiving additional funding for children with autism. The demographic breakdown enabled an examination of the structure of the different OSHC services and facilitated an understanding of factors that may influence the service’s ability to implement various strategies to help children with autism participate in their program. Questions regarding sources of funding received by the service aimed to assist our understanding of what support the centre currently receives to support children with autism. Services with access to inclusion professionals, and additional funding, may have a greater knowledge and understanding of strategies implemented, therefore, this question could be used as an independent variable in the analysis of data.

Strategy Clarification

When considering the 12 strategies, it became apparent that the strategies could be divided into two separate categories, namely direct engagement and indirect engagement. Strategies included in the direct engagement category were defined as strategies that involve ongoing interaction between an educator and a child. For example, the strategy “views and opinions of children with autism reflected in the program” is a direct engagement strategy. Whereas strategies included in the indirect engagement category were defined as strategies that may be educator initiated, but do not involve ongoing interaction between educator and child. For example, minimising noise is an indirect engagement strategy. Indirect engagement

strategies have a stronger focus on the environment and the factors within the environment and aim to provide ways to overcome environmental obstacles.

Questionnaire Cognitive Interviewing

Prior to administering the questionnaire, the instrument was subjected to concurrent cognitive interviews with my OSHC co-workers who have been OSHC directors in their current or previous roles (Willis, 2005). Because it was my place of employment, this OSHC centre was excluded from the research. I asked a selection of questions from the instrument and gained my co-workers' feedback about each questionnaire item. Feedback was based on their understanding of the question and whether the responses options provided the expected information. The cognitive interview process did not identify any items which were unclear, and feedback was that the items were useful for the purpose of the study. One interviewee stated that the items "resonated to the OSHC environment" and that "the strategies used in the questionnaire were applicable to OSHC services".

Data Analysis

Data were analysed using descriptive statistics, which shows the reported numbers of children with autism. Inferential statistics, including Spearman's Rho were used to analyse the relationship between the effectiveness of strategies used and variables relating to the service demographics. Spearman's Rho was used due to the data not adhering to the assumptions associated with Pearson's r, specifically normal distribution (Mat Roni & Djajadikerta, 2021). Skewed variables included the number of children in the service and effectiveness of the strategy, as well as the relationships between different variables including the number of children who attended each session, support the service received and the reasons why strategies were effective or not effective. All statistical analyses were completed

using the statistical program SPSS v27. Questionnaire reliability was measured using Cronbach's alpha.

The data used for analysis included all returned survey responses that had less than 75% missing data (Madley-Dowd, et al., 2019).

Participants

The research targeted current OSHC Directors or Educational Leaders of services within South Australia. As this was the first study in Australia, South Australia was chosen as the focus state to understand if there was a statistical reason to expand the research in the future. Directors were thought to be best placed as participants for this research due to their involvement in guiding and supporting educators within their service to implement the OHSC program and strategies for different practices, such as inclusive practices. The position of the OSHC Director is to ensure the educational program in OSHC is being implemented. They would have a good understanding of the practices implemented when involving all children within the centre. Educational leaders may also offer deeper insights into the effectiveness of practices and strategies due to their role within the service.

Inclusion Criteria

OSHC services included in this study provided either before school care or after school care or both, to school aged children.

Participants were sent an email invitation to participate in the study using email addresses listed on the National Register found on the Australian Children's Education and Care Quality Authority (ACECQA) website, which is free to access. A search of the ACECQA database using the keywords "OSHC" and "vacation care" was conducted to collect contact details of all services within South Australia. There were approximately 350 OSHC services

listed on the national register operating within South Australia, and each received an invitation to participate in the study.

The email invited directors to participate in the research and it was made known to them that this was the first known study of its kind in Australia and their input was important in "shaping the field of OSHC and how we assist children with autism in our unique setting".

The survey was sent out to every OSHC centre in South Australia (n= 373). The target sample size was 190 which was just over 50% of services in South Australia.

Ethics

Ethics approval was provided by the Human Research Ethics Committee, Catholic Education South Australia, along with approval and support offered from OSHC SA. An article was prepared for publication in the OSHC SA newsletter, that outlined the aims of the study and the benefits for the sector that the research aimed to achieve. The purpose of this article was to increase the awareness of the study and to reach potential participants.

At no time throughout the study were participants asked their name, or their workplace, allowing for complete anonymity and confidentiality of returned questionnaires. The survey only asked the respondent the area (urban, rural) in which their service was located. All invitations were sent out electronically and accessed by a link included in the email, with an introductory letter stating voluntary participation. Once collected, all data were stored electronically on the Flinders University OneDrive cloud data storage system.

Results

Participants

There was a total of 87 responses providing a response rate of 23.3%, however, 8 responses were not included in the analysis due to having greater than 75% of missing data. However, given the study was a pilot exploratory study, the sample of 79 responses collected was considered acceptable and used in the analysis.

As shown in Table 2 most participants identified as female (86.4%, n=57) and the remainder as male (13.6%, n=9). The percentage of female workers in this study reflects data in the Early Childhood Education and Care (ECEC) National Workforce Census, which reported 81.7% of the employees in OSHC as female (Department of Education and Training, 2017). Almost ninety percent of respondents, (87.9%, n=58) were OSHC directors, while 6.1% (n=4), were the centre's Educational Leader or had another role at the centre. The average age of respondents who gave their age (73.4%, n=58) was 39.22, (S.D. = 12.45). Of the respondents, over half (59.1%, n=39) had held their position for less than five years, while only one quarter of the participants (25.8%, n=17) had been at the centre for 6-15 years (see Table 2).

Table 2

Participant Demographics

		Number	Percentage	Valid Percentage
Gender: Female		57	72.2%	86.4%
Male		9	11.4%	13.6%
Missing		13	16.5%	
	Total	79	100%	100%
Position: Director		58	73.4%	87.9%
Educational Leader		4	5.1%	6.1%
Other		4	5.1%	6.1%
Missing		13	16.5%	
	Total	79	100%	100%
Age: 22 – 30		21	26.6%	35.6%
31- 40		13	16.5%	22%
41- 50		13	16.5%	22%
51 – 60		9	11.4%	15.3%
60 plus		3	3.8%	5.1%
Missing		20	25.3%	
	Total	79	100%	100%
Time in position:	Less than 1 year	13	16.5%	19.7%
	1 – 5 years	26	32.9%	39.4%
	6-10 years	11	13.9%	16.7%
	10 – 15 years	6	7.6%	9.1%
	16 years plus	10	12.7%	15.2%
	Missing	13	16.5%	
	Total	79	100%	100%

As shown in Table 3, 70.9% (n=56) of the centres in the study sample were in the Adelaide Urban area, and 29.1% (n=23) of services were in Rural South Australia. All services, (n=79) were situated on school grounds. When comparing rural OSHC services and those located in urban Adelaide, there was a significant difference in the number of OSHC services in Urban South Australia in the sample compared to OSHC services in rural South Australia ($\chi^2(1) = 13.78$, $p < .001$). This was expected as approximately one quarter of OSHC (24.1%, n=90) services in South Australia were located in rural areas (ACECQA, 2021).

Schools were the approved providers for 72.2% (n=57) of OSHC services, and private companies ran 21.5% (n=17, see Table 3). Of the 79 services, just over half (53.2%, n=42)

had their own designated space. Services that used a shared space within the school utilized areas in the school, including the school gym, library, classrooms, and multipurpose rooms such as a performing arts room.

The services ranged in the number of children they were licensed for, with the lowest being 15 children, and the highest number of children a service was licensed for being 165 (see Table 3).

Table 3

OSHC Centre Demographics

		Number	Percent
Location: Urban		56	70.9%
Rural		23	29.1%
	Total	79	100%
Located on: School grounds		79	100%
	Total	79	100%
School		57	72.2%
Approved Private company		17	21.5%
Providers: Community Org.		1	1.3%
Other		4	5.1%
	Total	79	100%
Own Space		42	53.2%
Shared Space		37	46.8%
	Total	79	100%
Service License: 15-30		15	19%
31-45		11	13.9%
46-60		12	15.2%
61-75		15	19%
76-90		10	12.7%
91-105		5	6.3%
106-120		2	2.5%
121-135		2	2.5%
136-150		4	5.1%
151-165		3	3.8%
	Total	79	100%

During the time of the study attendances ranged from 1 child to 95 in before school care with 74% of services (n=50) having between 1 and 30 children per session, as shown in Table 4. The average number of attendances before school was 24.21, (SD =

17.13). The most common attendance range was 16-30 children in before school care (33.8% of responses). However, one service, located in urban Adelaide had before school attendance of 95 students.

Table 4

Before School Attendance

	Number of services	percent
0 (No before school care)	7	9.1%
1-15	24	31.2%
16-30	26	33.8%
31-45	11	14.3%
46-60	8	10.4%
91-105	1	1.3%
Total	77	100.0%

Missing = 2

After school care ranged from 5 children per session to 145 children per session, with 77.7% of services (n= 56) having between 5 and 60 children per session (see Table 5). The average after school attendance was 47 (SD = 32.56) children per session. The most common attendance range was 16-30 and 31-45 children in after school care (19% of responses).

Table 5

After School Attendance

	Number of children	percent
1-15	14	19.4%
16-30	15	20.8%
31-45	15	20.8%
46-60	12	16.7%
61-75	5	6.9%
76-90	4	5.6%
91-105	2	2.8%
106-120	2	2.8%
121-135	2	2.8%
136-150	1	1.4%
Total	72	100.0%

Missing = 7

Children with Autism in OSHC services

Services who had between 1 and 5 children diagnosed with autism enrolled at their service accounted for over half (54.8%, n=40) of the responses received (as shown in Table 6). A further one quarter (26%, n=19) of services stated that between 6-10 children with autism attended their service. Overall, the average number of children diagnosed with autism enrolled in OHSC services in South Australia was 6.6 (SD = 5.0). Hence, based on the standard deviation, the average range of children with autism in South Australian OHSC centres is in the vicinity of 1 – 11 children per service.

Table 6

Number of Children with Autism Enrolled in OSHC Services

Number of children enrolled with autism	Frequency	Percent
0	1	1.4%
1-5	40	54.8%
6-10	19	26.0%
11-15	9	12.3%
16-20	3	4.1%
21-25	1	1.4%
Total	73	100.0%

Missing = 6

Perceived Increase in Children Diagnosed with Autism Attending OSHC Services

Just over half 59.1% (n=39) of respondents stated they believed they had seen an increase in children with autism attend their service. It was thought that the number of years at the service may be a factor in their response. However, it was established that the number of years at the service was not statistically significant after conducting a Spearman's Rho test ($r(66) = .007$, $p = .956$).

Support for Children with Autism

To support children with autism, almost two-thirds (63.3%, n=50) of respondents stated that their centre received extra assistance from professionals for support and guidance to implement strategies to help children with autism.

Funding Support for Children with Autism in OHSC Services

As shown in Table 7, of the 79 services, 50 (63.3%) accessed additional funding, while almost a fifth of services (19%, n=15) accessed more than 2 sources of funding to support children with autism.

Table 8 shows the breakdown of sources of funding accessed with the Inclusion Development Fund (IDF), which was accessed by 88.5% (n=31) of services. It can be concluded that IDF was accessed alongside Intervac for many of the services who received more than 2 sources of funding.

Table 7

Sources of Funding Services Accessed

Number of funding sources	Number	Percent
None	29	36.7%
One source of funding	35	44.3%
Two or more sources of funding	15	19.0%
Total	79	100%

Table 8

Funding Options Services Accessed

Funding	Number	Percent
Services who received 1 source of funding		
IDF	31	88.5%
Intervac	1	2.9%
NDIS	1	2.9%
Other	2	5.7%
Total	35	100%
Services who received 2 or more sources of funding		
IDF	14	45.1%
Intervac	13	42.0%
NDIS	3	9.7%
Other	1	3.2%
Total	31	100%

***** IDF = inclusion development fund, NDIS = National Disability Insurance Scheme

There was a statistically significant relationship between the number of funding sources a service accessed and the number of children with autism who received funding ($r(75) = .783$, $p < .001$). These results suggest that the more children with autism in OSHC who received funding, the more likely was the OHSC service to utilise more than one funding source.

OSHC Services Unfunded for Children with Autism

Of the 36 .7% (n=29) of services that reported that they did not receive any additional funding to support the inclusion of children with autism, nearly all (n=26) had children enrolled at their centre who had a diagnosis of autism.

The number of children with a diagnosis of autism varied amongst these unfunded services, as seen in Table 9. However, over three-quarters (76.9%, n=20) of unfunded OHSC services had between 1 and 5 children with autism attend their centre and a further 15.4% (n=4) had between 6 and 10 children with autism enrolled at their centre.

Table 9

Children with Autism Enrolled at Centres Without Funded Services

Number of children enrolled with autism	Frequency	Valid Percent
1-5	20	76.9%
6-10	4	15.4%
11-15	1	3.8%
16-20	1	3.8%
Total	29	100.0%

Missing = 3

Strategies Used by Services to Support Children with Autism

Reliability of the items measuring perceived effectiveness was measured using Cronbach's alpha which was found to be .960. This result shows that the items are reliable for their purpose.

Calming Areas

Approximately three quarters (73.4%, n=58) of respondents indicated that their service had a calming area set up for children with autism. Of the 58 centres who did have a calming area set up, approximately half (48.3%, n=28) said that the calming area was either "very effective" or "extremely effective" at assisting children with autism to regulate their emotions, as shown in Figure 4. Of the services that utilized a calming space, 66.7% (n=38) said the area was used multiple times a week, with over one quarter (28.1%, n=16) stating the area was used every day.

Directors identified three reasons for the effectiveness of calming areas. These were, a) that the service had adequate resources to implement the calming area, b) that they had adequate space to set up the calming area, and c) that the calming area assisted children with autism to regulate their emotions.

Services that reported the calming area was slightly effective or not effective at all (17.6%, n=10) (see Figure 4), identified that a lack of space (6.3%, n=5) and not meeting the children's needs (5.1%, n=4) were the main reasons for being ineffective to support emotional regulation. Other reasons provided included having large numbers of children, loud environments, and a shared space that hindered the effectiveness of setting up and utilizing a calming area.

Minimizing Overstimulation

Approximately three quarters (74.4%, n=58) of services took measures to ensure the environment was not overstimulating for children with autism. Of those 58 services that used this strategy, nearly two thirds (65.5% (n=38) found this strategy extremely or very effective. It was effective because it met the needs of the children (53.4%, n=31). However, having adequate resources to create an environment that is not too stimulating (31%, n=18) and having educators with adequate knowledge about what makes an environment overstimulating (36.2%, n=21) was also deemed necessary in ensuring this strategy was effective.

Only 5% of services (n=4) indicated that ensuring the environment was not overstimulating for children with autism was not effective at all or only slightly effective in maintaining or creating a calm and relaxed environment. Some Services stated that this strategy did not meet the needs of the children (3.8%, n=3). At one service, the respondent stated that "children have no trouble blending with their peers... " (female, urban service). Another reason explaining why minimising the overstimulation within the environment was not effective was due to the lack of space and the number of children attending the service, as stated by one respondent "given the space and number of children, it's almost impossible" (female, urban service).

Of the services that took measures to ensure the environment was not overstimulating, approximately one third (n=19, 33.9%) made adjustments within the environment every day. A further 42.8% (n=24) of services changed the environment 1- 3 times a week.

Views and Opinions of Children with Autism Reflected in the Program

The views and opinions of children with autism were reflected in 80.5% of services (n=70). For services that included the views of children with autism in their program, 63.8% (n=44) found this strategy to be extremely effective or very effective in creating a program inclusive of children with autism. Only three centres (3.4%) indicated that having the views and opinions of children with autism reflected in the program was only slightly effective or not effective at all in creating an inclusive environment.

Reasons as to why this strategy was considered effective included educators having adequate knowledge (31.4%, n=22), adequate resources available to implement the program (31.4%, n=22) and the ability to meet the needs of children with autism by including their views and opinions in the program (51.4%, n=36). Some of these services mentioned there were not enough resources (4.3%, n=3) or time to set up the environment to meet the needs of children with autism in their program (4.3%, n=3).

Actively Engage and Build Relationships with Children with Autism

A majority (89.9%, n=71) of respondents said educators within their centre actively engaged with children with autism and built relationships. Almost three quarters (83.5%, n=66) of respondents claimed it was either extremely effective or very effective in assisting children with autism to be included within the service. Over half, 53.2% (n=42) of respondents claimed that educators engaged with children with autism to gain a greater understanding of their needs every day. Adequate knowledge and meeting the needs of the children were two main reasons given for why this strategy was effective, 53.2% (n=42) and 72.2% (n=57), respectively.

Support Offered to Children with Autism to Engage in Social Situations

Over three-quarters of respondents, 83.5% (n=66), reported that educators assisted children with autism to engage in social situations. Noteworthy was that 6.3% (n=5) of respondents stated that their educators did not support children with autism to engage in social situations. Of the 66 respondents that said their educators did assist children with autism in social situations, approximately half 51.9% (n=41) noted that this assistance was either extremely effective (16.5%, n=13) or very effective (35.4%, n=28). Only 3 (3.8%) respondents said that educator support was slightly effective.

It is noted that adequate knowledge of how to assist children with autism in social situations and meeting the needs of the children were the most prominent reasons for why this strategy was effective. Approximately one third (34.2%, n= 27) of respondents believed their educators had adequate knowledge to assist children with autism to engage in social situations, making this strategy effective. A further 40.5% (n=32) of respondents stated that having educators assist children to engage in social situations effectively met the children's needs.

Visuals to Explain Behavioural Expectations

Just over half, 50.6% (n=40, missing 12.7%, n=10) of services used visuals to help explain behavioural expectations of children while at OSHC. However, over one third of services (36.7%, n=29) did not use this strategy to support children with autism. Services that used visuals to help explain behavioural expectations did not find them as effective as other strategies, with less than one quarter (20.3%, n=16) finding these to be extremely effective or very effective. A further 22.8% (n=18) of respondents found this strategy to be moderately effective.

The reasons as to why visuals to help explain behavioural expectations were effective varied, with 12.7% (n=10) of respondents claiming that they had the adequate knowledge and

resources to implement this strategy, and 17.7% (n=14) of services said that it met the needs of the children. Out of the six responses which indicated that visuals to support behavioural expectations were only slightly effective, five respondents (83.3%) believed the strategy did not meet the needs of the children.

Visual Aids to Support Children with Autism Navigate Transitions

A similar number of respondents stated that their educators used visual aids to assist children in navigating transition periods compared to visuals to explain behavioural expectations. A total of 51.9% (n=41) of respondents used this strategy. Of those using this strategy, 48.8% (n=20) believed that this strategy was either extremely effective or very effective at helping children with autism navigate transition periods at OSHC. A further 46.3% (n=19) found the strategy to be moderately effective, and 4.9% (n=2) found this strategy to be slightly effective.

When looking at why visual aids were effective for some centres, there was an equal spread of reasons. The use of visual aids to support children through transition periods were viewed as effective by 43.9% (n=18) of respondents due to meeting the needs of the children. A further 24.4% (n=10) respondents believed their centre had adequate knowledge, resources, and time to use visual aids they considered effective at supporting children through transition periods in OSHC. Even though 43.9% found the strategy effective, over half of the services (56.1%, n=23) that implemented this strategy, did so every day.

Positive Reinforcement

When asked about using positive reinforcement to help children with autism develop positive behaviours, 78.5% (16.5%, n=13) stated that their educators did use this strategy. Only 5.1% of respondents (n=4) indicated that they did not use this strategy. Just over half of the respondents (51.6%, n=32) who said their educators used positive reinforcement found this strategy to be either extremely effective or very effective.

The reasons why educators believed positive reinforcement effectively assists children with autism to develop positive behaviours were quite varied. The main reason for its effectiveness was that it met the needs of the children (45.2%, n=28). Adequate knowledge also played a significant part in educators' perceptions of the effectiveness of positive reinforcement, with 37.1% of respondents stating this as the reason for effectiveness. Positive reinforcement was used every day in 62.9% (n=39) of centres.

Prevention of Escalation Strategies

Three-quarters of respondents, 82.3% (n=65), stated that educators used strategies to avoid the escalation of negative situations. Almost two thirds (61.5%, n=40) of respondents believed that prevention strategies were either extremely effective or very effective at redirecting children with autism when responding to problem behaviours. Educators having adequate knowledge of prevention strategies, including redirection, was the main reason this strategy was considered effective (47.7%, n= 31). Prevention strategies such as redirection were used regularly throughout the week, with 47.7% (n=31) using this strategy every day and then 16.9% (n=11) services using this strategy 3-4 times a week.

However, other reasons were also provided, with 32.3% (n=21) identifying that having adequate resources to implement strategies such as redirection was the reason it was effective, while 44.6% (n=29) of respondents claimed that prevention strategies were effective because they met the needs of the children.

Buddy System

Only 20.3% (n=16) of respondents stated that they used a buddy system in their centre to help children with autism create social connections with their peers. Half (50%, n=8) of the respondents believed a buddy system was extremely effective or very effective in their service. As stated by five (6.8%) respondents, educators with adequate knowledge of the child and how to incorporate a buddy system were identified as reasons a buddy system was

effective. Meeting the needs of the children was identified by 50% of respondents whose centres implemented a buddy system as a reason for its effectiveness.

Autism Specific Professional Development

A little over a quarter of respondents (26.6%, n=21) stated that their educators had attended autism-specific professional development in the last 12 months before the survey. Of these 21 responses, 19% (n=4) said that all their educators had participated in the training, whilst another 38.1% (n=8) stated that more than half of their educators had attended autism-specific professional development courses. Notably, nearly half (47.6%, n=10) of respondents had found the professional development to be either extremely effective or very effective at increasing educators' knowledge about how they could support children with autism.

Relationships Between External Allied Health Professionals and OSHC Services

Nearly one-third (31.6%, n=25) of participants reported that they received support from other professionals such as occupational therapists and speech therapists within their service. Just over half of those receiving this support (56%, n=14) indicated that this relationship was extremely effective or very effective in supporting children with autism in the OSHC environment. Consultation occurred between the centres and professionals once a month in 40% (n=10) of services that worked alongside the professionals. A further 24% (n=6) of services liaised with professionals 2-3 times a month.

Adequate knowledge (48%, n=12) and adequate consultation (48%, n=12) were highlighted as two reasons this strategy was considered effective. It was also noted that by utilizing the expertise of other professionals that already work with the children, services were able to meet the needs of the children (48%, n=12).

Other Strategies

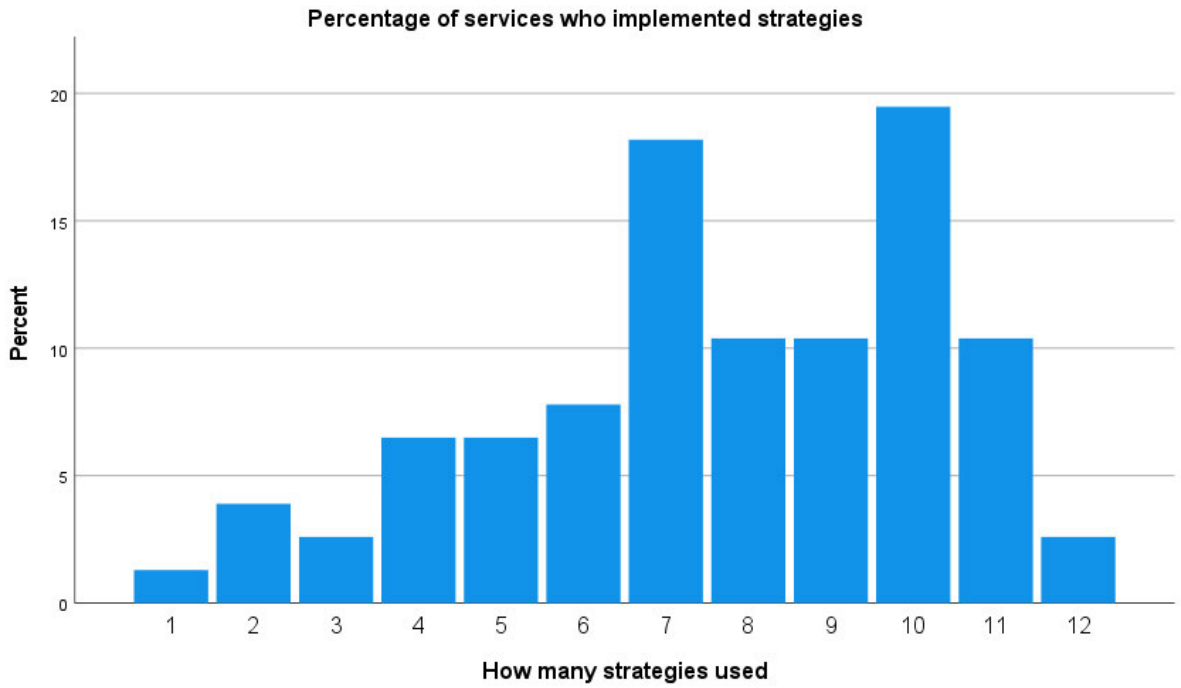
Respondents were given the option of mentioning other strategies to help support children with autism in their centre and just over one-third (36.7%, n=16) of respondents provided further insights. Individual strategies such as noise-cancelling headphones to help reduce noise stimulation or break/sensory boxes for children with autism to self-regulate their emotions and meet their sensory requirements were used. Respondents also mentioned they collected children with autism before the school bell, so they had time to settle in the environment before it could become too overwhelming. However, two strategies mentioned on multiple occasions were ensuring consistency throughout all aspects of the centre and utilizing the 'Zones of Regulation' method to assist children with autism in developing skills to regulate their emotions.

Number of Strategies Used

The average number of strategies used across all respondents was 9.97 (SD=14.67). Of the 79 respondents, only two stated their service implemented all twelve strategies. Figure 1 highlights that 10% (n=8) of services utilized 11 strategies and 19% (n=15) of services implemented 10 of the 12 included strategies. Of the two respondents that used all 12 strategies, one service was licensed for 15 children and reported having only one child with autism enrolled at the service. The other service was licensed for 45 children and reported having five children with autism attend the service. There was a moderately statistically significant relationship found by using a Spearman's Rho correlation between the number of children with autism who attended the service and the number of strategies used ($r(77) = .401$, $p < .001$). Therefore it can be concluded that there is a low correlation between the number of strategies used by the service and the number of children with autism who attended the service.

Figure 1

Number of Strategies Implemented by Services

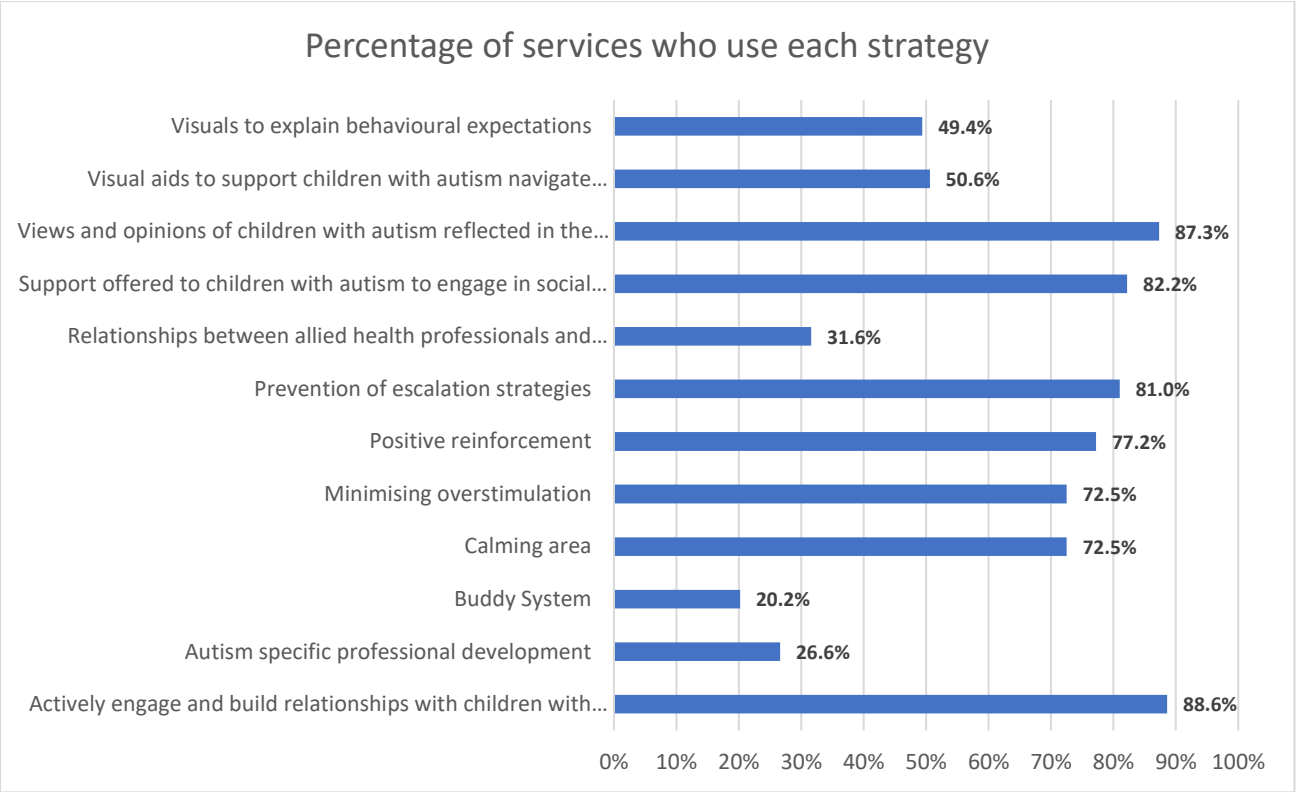


Four strategies were used by more than 80% of respondents as seen in Figure 2. A further three strategies were used by more than 70% of services. These strategies were ‘views and opinions of children with autism reflected in the program’, ‘support offered to children with autism to engage in social situations’, ‘prevention of escalation strategies’, positive reinforcement’, ‘minimising overstimulation’, ‘calming area’ and ‘actively engage and build relationships with children with autism’.

All of these strategies apart from ‘calming area’, involve some form of direct engagement between educators and children, although it is acknowledged that depending on the type of intervention within the strategy, some may fall into both categories of direct engagement and indirect engagement.

Figure 2

Percentage of Services Who Stated they Used Each Strategy



Effectiveness of Strategies

Shown in Table 10 is the percentage of respondents who believed the strategies were either ‘extremely effective’ or ‘very effective’ and their corresponding reasons as to why the strategy was effective for their service. Whilst the percentage of services who rated a strategy as extremely effective or very effective differed, over 70% who implemented each strategy stated that it met the needs of the children. This was the same reason that the strategy of actively engaging children with autism was considered effective. Indeed, 83.5% of respondents provided this reason for using a strategy.

The strategy of using a buddy system was only rated extremely/very effective by 10.1% of respondents, although all who implemented it found that it too met the needs of the children. Having adequate time to implement this strategy did not feature highly as a reason

the buddy system was considered effective, with all responses being 50% or below. Furthermore having adequate resources as a reason for why a strategy was considered effective, was evident for half or fewer of the strategies.

Table 10

Reasons for Very or Extremely Effective Strategy

Strategy	Extremely /very effective	Adequate resources	Adequate knowledge	Adequate space	Adequate time	Meets the needs of children	Other
Calming area	35.4%	67.8%	NA	67.8%	21.4%	78.5%	10.7%
Ensure the environment is not overstimulating	48.1%	47.3%	55.2%	NA	36.8%	81.5%	13.1%
Views and opinions of children with autism reflected in the program	55.7%	50%	50%	NA	29.5%	81.8%	11.3%
Actively engage children with autism	83.5%	37.8%	63.6%	NA	45.4%	86.3%	16.6%
Educators support to engage in social situations	51.9%	41.4%	65.8%	NA	41.4%	78%	9.7%
Use visuals to help explain behavioural expectations	20.3%	62.5%	62.5%	NA	31.2%	87.5%	12.5%
Use visual aids to navigate transition periods	25.3%	50%	50%	NA	50%	90%	15%
Positive reinforcement	40.5%	53.1%	71.8%	NA	43.7%	87.5%	-
Strategies to prevent escalation, including redirection	50.6%	52.5%	77.5%	NA	42.5%	72.5%	10%
Buddy system	10.1%	37.5%	62.5%	NA	50%	100%	25%
Autism-specific professional development	12.7%	NA	NA	NA	NA	NA	NA
Collaborate with professionals e.g. occupational therapist, speech therapist	17.7%	85.7%	85.7%	NA	42.8%	85.7%	21.4%

Table 11 shows the reasons respondents believed the strategies were not effective and having a calming area had the highest percentage, with 12.7%, (n=10) of respondents reporting that it was not effective or only slightly effective at helping children with autism in their service.

Of those strategies that were deemed not effective or slightly effective, many respondents believed it was because they did not meet the needs of the children. Whilst there was a small number of respondents who believed the strategies were not effective, a lack of resources and time were represented strongly against some of the strategies. Many respondents utilised the "other" option and stated the reasons they thought the strategies were not effective in their individual service. Other reasons included that the children would not use the area properly, they would misuse the resources and that children with autism were able to participate with their peers without additional support.

Table 11

Reasons for Ineffectiveness

Strategy	Not/slightly effective	Lack of resources	Lack of knowledge	Lack of space	Lack of time	Does not meet the needs of children	Other
Calming area	12.7%	40%	NA	50%	20%	40%	70%
Ensure the environment is not overstimulating	5.0%	-	-	NA	-	75%	75%
Views and opinions of children with autism reflected in the program	3.8%	100%	33.3%	NA	100%	33.3%	66.6%
Actively engage children with autism	-	-	-	NA	-	-	-
Educators support to engage in social situations	3.8%	-	-	NA	-	-	100%
Use visuals to help explain behavioural expectations	7.6%	16.6%	-	NA	-	83.3%	33.3%
Use visual aids to navigate transition periods	2.5%	-	-	NA	-	50%	50%
Positive reinforcement	3.8%	-	33.3%	NA	-	100%	-
Strategies to prevent escalation, including redirection	5.1%	-	-	NA	-	50%	50%
Buddy system	-	-	-	NA	-	100%	100%
Autism-specific professional development	2.6%	NA	NA	NA	NA	NA	NA
Collaborate with professionals e.g. occupational therapist, speech therapist	3.8%	33%	33%	NA	100%	-	33%

As shown in Figure 3, the strategy used that was considered the most effective was actively engaging and building relationships with children with autism. Nearly two-thirds

(63.7%, n=44) of respondents believed it to be an extremely effective strategy for supporting children with autism within their OSHC service. A further four strategies were highlighted as being effective at supporting children with autism with over 40% of respondents reporting these strategies to be very effective. These included ‘views and opinions of children with autism reflected in the program’, ‘support offered to children with autism to engage in social situations’, ‘prevention of escalation strategies’, and ‘minimising over stimulation’.

On the other end of the scale, there were three strategies that over 10% of respondents believed were only slightly effective at supporting children with autism. These strategies were ‘visuals to explain behavioural expectations’, ‘relationships between allied health professionals and OSHC services’, and ‘calming area’. However, there was an apparent divide among respondents concerning the strategy of ‘relationships between allied health professionals and OSHC services. It had the second highest percentage of respondents that considered the strategy to be extremely effective (36%) however, 12% believed that it was only slightly effective.

Figure 3

Strategy Use by Effectiveness of Each Service

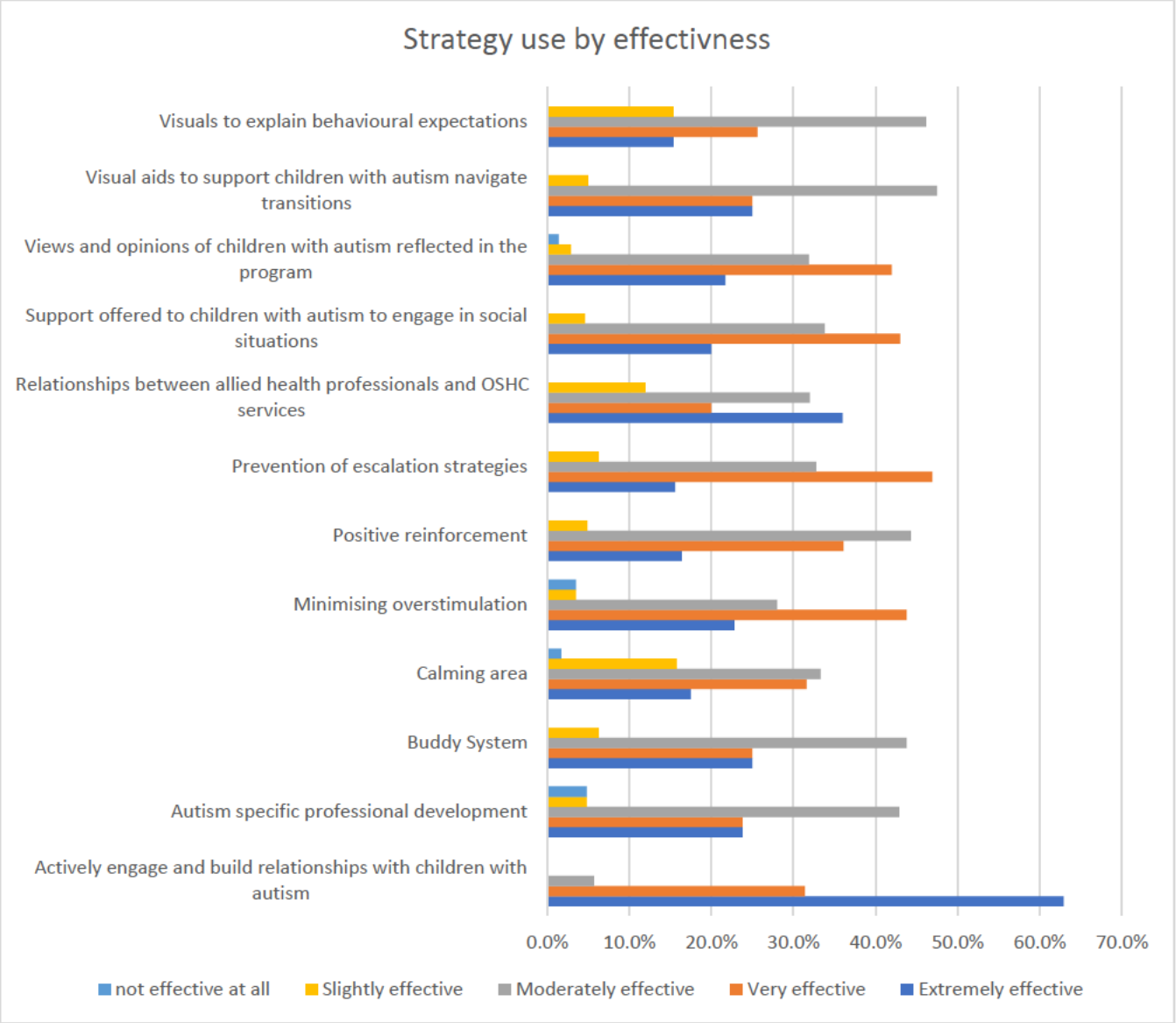


Figure 4 shows that there were six strategies implemented by more than 50% of respondents who claimed that it was either extremely or very effective at supporting children with autism in their service. These strategies were ‘actively engage and build relationships with children with autism’, ‘minimising overstimulation’, ‘positive reinforcement’, ‘prevention of escalation strategies’, ‘support offered to children to engage in social situations’ and having 'the views and opinions of children with autism reflected in the

program'. Many of these strategies would need direct, ongoing engagement between educator and child to be implemented effectively. The exception to this would be 'minimising overstimulation' which is more closely related to the environment and changes made within the environment.

There were a further two strategies that were used by more than 50% of services but less than 50% were deemed effective (as shown in Figure 4). Use of a calming area was implemented by 72.5% of respondents however, just under half of these services thought that this strategy was very effective or extremely effective. The use of visual aids to assist in navigating transition periods were implemented by 50.6% of respondents but again only half of the services thought that they were either extremely effective or very effective.

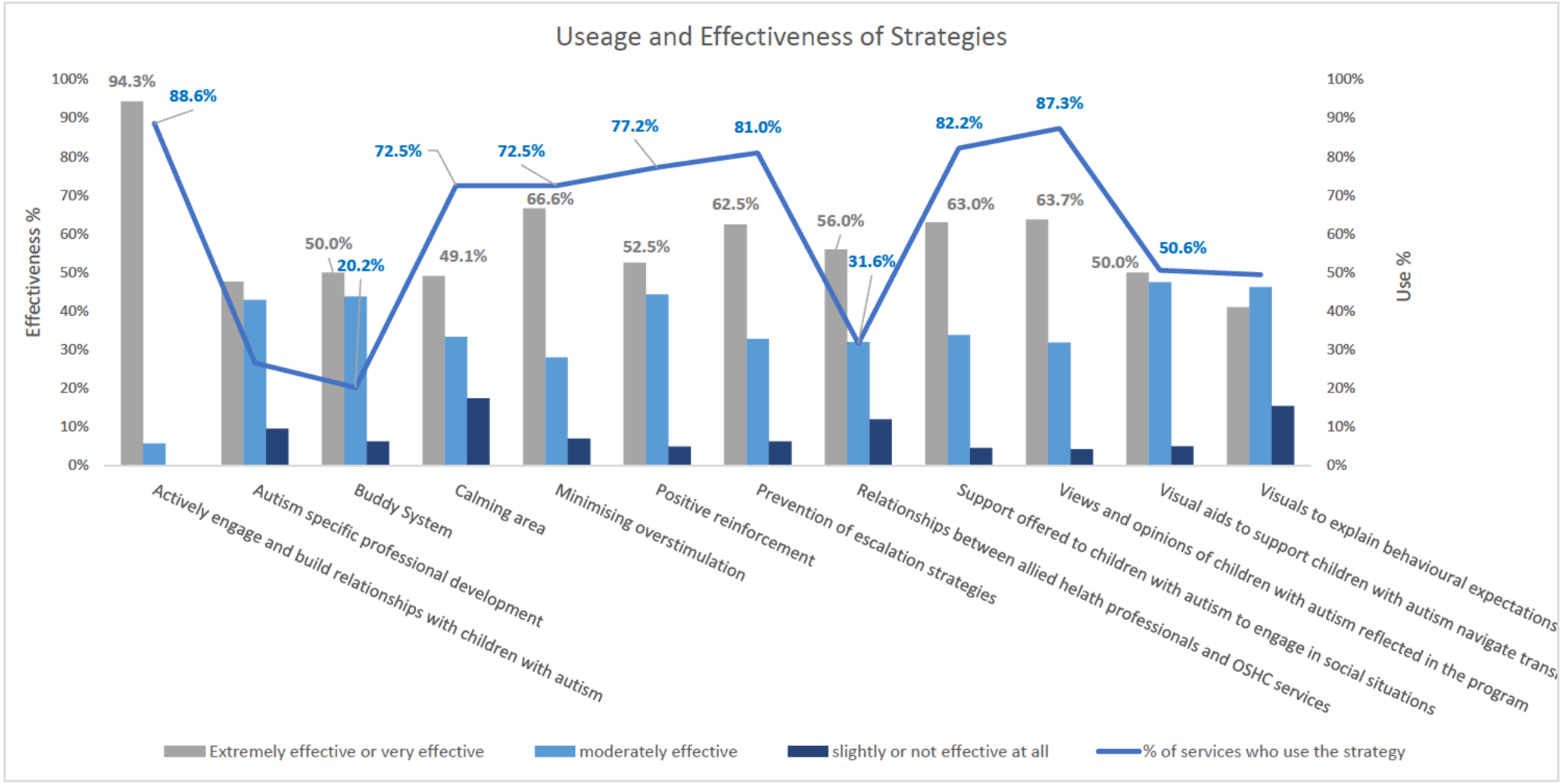
By contrast, two strategies were implemented by less than 50% of services but over 50% of these respondents believed they were extremely or very effective at supporting children with autism in the service. The buddy system was implemented by only 20% of services but of these services, 50% believed the strategy was either very effective or extremely effective at supporting children build social connections. Similarly, relationships between OSHC services and allied health professionals were utilised by only 31.6% of respondents, but 56% of these thought the strategy was either very effective or extremely effective at offering additional insights into supporting children with autism in their service.

There were two strategies identified that were not highly used and those services who did implement them did not believe they were effective at supporting children with autism in their service. Autism specific professional development was only used in the twelve months prior to the survey by 26.6% of services and less than half of these, 47.6%, found it to be extremely or very effective in expanding educators' knowledge of autism. The other strategy was visuals to explain behavioural expectations of children, where 49.4% of services implemented the strategy but 41% of these found it to be very effective or extremely effective

at assisting children with autism to understand the behavioural expectations at OSHC services.

Figure 4

Usage and Effectiveness of Strategies



Strategies with Direct Engagement Between Educators and Children with Autism

As seen in Table 12, of the six strategies that involved direct engagement with children with autism, 80% (n=4) had high implementation rates and were said to be more effective when compared with non-direct engagement strategies.

After conducting a Spearman's rank correlation, it was found there was a positive relationship between the services who used four or more direct engagement strategies and the perceived effectiveness of these strategies (r (77) .533, p <.001). These results indicate that if services used four or more direct engagement strategies, they were more likely to find them effective.

Table 12

Percentage of Services Which Used the Strategies and Their Perceived Effectiveness

Strategies Involving Direct Engagement with Children with Autism	**% Of services that use the strategy**	**Extremely effective**	**Very effective**	**Moderately effective**	**Slightly effective**	**Not Effective at all**
Actively engage and build relationships with children with autism	88.6%	62.9%	31.4%	5.7%	0.0%	0.0%
Positive reinforcement	77.2%	16.4%	36.1%	44.3%	4.9%	0.0%
Prevention of escalation strategies	81.0%	15.6%	46.9%	32.8%	6.3%	0.0%
Support offered to children with autism to engage in social situations	82.2%	20.0%	43.0%	33.8%	4.6%	0.0%
Views and opinions of children with autism reflected in the program	87.3%	21.7%	42.0%	31.9%	2.9%	1.4%
Buddy System	20.2%	25.0%	25.0%	43.8%	6.3%	0.0%
Strategies not Involving Direct Engagement with Children with Autism						
Autism specific professional development	26.6%	23.8%	23.8%	42.9%	4.8%	4.8%
Calming area	72.5%	17.5%	31.6%	33.3%	15.8%	1.7%
Minimising overstimulation	72.5%	22.8%	43.8%	28.0%	3.5%	3.5%
Relationships between professionals and OSHC services	31.6%	36.0%	20.0%	32.0%	12.0%	0.0%
Visual aids to support children with autism navigate transitions	50.6%	25.0%	25.0%	47.5%	5.0%	0.0%
Visuals to explain behavioural expectations	49.4%	15.4%	25.6%	46.2%	15.4%	0.0%

Strategies with Indirect Engagement Between Educators and Children with Autism

As seen in Table 13, indirect engagement strategies have an overall lower implementation percentage compared to strategies that involve direct educator and child engagement. Furthermore, indirect strategies were rated not as effective as direct strategies,

with a higher percentage being rated as moderately effective compared to direct strategies being rated as very effective.

As shown in Table 13 there were five direct strategies with greater than 50% implementation and only one strategy with indirect engagement with greater than 50% implementation. The perceived effectiveness of these strategies shows that all the direct contact strategies had greater than 50% perceived effectiveness compared to three indirect engagement strategies. This can be explained by using the odds ratio to calculate the likelihood of services using a direct strategy and respondents perceiving it as effective. It was determined that participants were five times were likely to use a direct strategy perceived to be effective than an indirect strategy perceived to be effective.

Table 13

Strategies with Implementation Rate Over 50% and Perceived Effectiveness

Strategy Type	Used		Perceived Effective	
	Yes	No	Yes	No
Direct	5	3	6	0
Indirect	1	3	3	3
Total	6	6	9	3

Discussion

Aligning with current literature about the increased prevalence of children with autism worldwide (May et al., 2017; Randall et al., 2016), this study has found that there was a perceived increase in the number of children with autism attending OSHC services in South Australia over the past 5 years (2017 – 2021). Whilst the number of children with autism attending OSHC in Australia could not be found in the literature, 91% of services in this research stated they had children with autism enrolled. This number ranged from 1 child to 20 children per centre. These numbers approximately equate to somewhere between 150 to 500 children with autism who attend OSHC in South Australia. With such a large number of children, it is important to meet their needs and have supports and strategies in place that are effective in ensuring an inclusive environment for these children.

Strategies that saw high implementation rates along with perceived high effectiveness included actively engaging and building relationships with children with autism, support offered to children with autism to engage in social situations and views and opinions of children with autism reflected in the program. A facilitating factor associated with this could be the increased ratio that is mandated in OSHC services of 1 educator to 15 children. This allows educators to get to know the children and build strong relationships, creating inclusive environments and programs with a focus on the children's individual interests. Another reason for this could be that educators instinctively assist all children, not just children with autism, to engage in social situations as a part of their role as an educator. Further to that, the NQF guidelines emphasise educator and child interactions (Australian Children's Education and Care Quality Authority, 2020).

The comparison of direct and indirect engagement strategies revealed that the strategies that involved direct engagement with the children such as actively engaging and building relationships with children with autism reported higher implementation alongside a

higher effectiveness rate compared with strategies that involved changes to the environment and minimal contact with children with autism. This suggests that educators have an important role to play in supporting children in the OSHC environment, than the environment itself. Given the importance of the educator's role, more time and training should be invested in the professional development of educators to ensure they are providing the best possible support to children in their care.

Direct educator support for children with autism was endorsed in a study by McNeill (2019), which showed that evidence-based practices that involved direct contact with children had high implementation rates in classrooms. The reason behind this was that other strategies were more rigid and required too much time and resources to be implemented effectively (McNeill, 2019). However, this study found that the reason some strategies were deemed ineffective was because they did not meet the needs of the child, which may be associated with the uniqueness of each child with autism. Although, given the ambiguity of the wording in the question, some respondents may not have understood what resources were adequate to implement this strategy, and this may have skewed the data.

McNeill (2019) found that positive reinforcement and redirection (prevention of escalation) were in the top 5 strategies used by teachers. These findings align with the results from this study, which also saw high implementation rates of positive reinforcement and redirection. A review of literature undertaken by Wong and colleagues (2015) also found that positive reinforcement and redirection supported children with autism in the classroom. Findings from the current study suggest that the strategies that are perceived to be effective with children with autism in OSHC services are based on working directly with the child.

For services to implement direct engagement strategies, higher educator-student ratios may be needed to adequately support children with autism as well as provide adequate

supervision to the other children in the service. The increased ratio will allow for services to utilise other areas within the school or service to provide experiences that are tailored to children in smaller group settings.

However, given the diverse range of settings in which OSHC services operate, supervision at the current ratio may not allow for adequate support to be provided for children with autism. An example may be on a large school oval and playground area, there may be 30 children and only 2 educators, in a school hall there may be 40 children engaged in many different activities but only 3 educators, OSHC may operate over different spaces in the school with up to 15 children and only 1 educator in a library or computing room space. Given the complex dynamics of the OSHC group, the need for differentiated activities across multiple age ranges ensuring children are engaged, the additional needs of children may not be adequately supported due to the educator also supervising other children in a free-flowing environment.

Partnerships between OSHC services and professionals allow for open communication, continuity of support and as a team, are able to achieve more than an individual (Biggs, Gilson & Carter, 2016). By having open communication and a consistent approach, the partnership between allied health professionals and educators allows for the centre to ensure adjustments and strategies are implemented that are specific to the child with autism and are more likely to be effective in addressing areas of concern. A meta-analysis investigating the effectiveness of allied health professionals supporting children with autism in schools concluded that allied health professionals in schools have a positive effect on supporting children with autism (Walker, et al., 2020). The results from this research showed that while services who did have relationships with allied health professionals acknowledged that these relationships were effective in supporting children with autism, the strategy was implemented by few services. Less than one third (31.6%) reported utilizing the expertise of

allied health professionals, despite over 50% of responses stating the strategy was either extremely effective or very effective at supporting children with autism in OSHC. Some school-operated OSHC services may benefit from the relationship between schools and allied health professionals. Information regarding children's ongoing goals for learning and in the school environment can be shared with OSHC services. Therefore, OSHC services may not develop the relationships with allied health professionals.

Peer mediated interventions such as buddy systems have been shown to be effective in increasing the social communication abilities of children with autism in school settings (Aldabas, 2020; Charlop, et al., 2018). However, only a small proportion (20%) of respondents used this strategy, and of these respondents, only 50% believed this strategy was effective in supporting children with autism to increase their social skills. The implementation of peer mediated interventions mirror the results published in a study by McNeill (2019), where only 25.4% of respondents stated they used the strategy daily. It was found that the strategies that were more well known, had greater daily use (McNeill, 2019). Peer mediated strategies only recorded being known by 79.2% of respondents, ranking 23 out of 26 strategies investigated in the study, resulting in the lower implementation rate (McNeill, 2019).

The complexities of the OSHC environment may not allow for buddy systems to be an effective strategy in OSHC. This may be because of the varied attendance of children, the short period of time spent in the centre and unstructured routine of OSHC services. The varied attendance of children in OSHC may not allow for consistent relationships to be built between the child with autism and their buddy. Further to this inconsistency, is the time spent in OSHC. Unlike school, children are only at OSHC for a short period of time. The amount of time spent in OHSC is generally controlled by caregivers and their individual work schedules, which could change without notice. Thus, there may not always be time to develop

the relationship between child and their buddy. However, further investigation is needed to determine whether OSHC specific factors influence the perceived effectiveness of this strategy, which has been reported effective in classrooms (Lahgi, et al., 2018; O'Donoghue, et al., 2020). In the study by Laghi and colleagues (2018) it was found that students with autism had greater positive social interactions with selected peer buddies than social interactions between students with autism and peers not selected as a part of buddy program. O'Donoghue and colleagues (2020) also found an increase in social communication of children with autism who had limited speech ability. Both studies showed how peer mediated interventions can assist children with autism in supporting their communication development and social interaction skills. Given these positive results, it is noteworthy that the buddy system was not a highly used or deemed effective strategy in supporting children with autism in OSHC services. However, as discussed, it may not be a strategy that is as effective or prominent in OSHC settings.

Among the strategies that had limited implementation were the use of visual supports to assist children to navigate transitions and visuals to explain behavioural expectations. Only approximately half of respondents stated they used visuals in their service to assist children with autism. This finding is surprising as many studies have found that the use of visual supports is one of the most used evidenced based strategies in helping children with autism in the classroom (McNeil, 2019; Dettmer, et al., 2000; Sulek, et al., 2018). Sulek et al. (2018) found that the use of visuals was the strategy most frequently used by teachers, and that it was the strategy they had the most knowledge of and that was the most applicable in the classroom setting.

OSHC services, however, may find visual supports difficult to implement due to the changing nature and unpredictability of each session, making a visual routine quite difficult to follow when children are able to choose their own activities. Further, in-depth questioning

as to why so few services found visuals effective or why so many did not implement this strategy at all is needed to understand how services may be able to implement this strategy successfully. Whether it is due to the lack of professional learning, training, high educator turnover or another reason requires further investigation.

With limited research specific to OSHC services, the needs of children with autism and their educators may not be recognised in the field or by policy makers. Practices currently implemented by educators in OSHC settings may not be suited to the OSHC environment because of the differences in the classroom and OSHC environments. These differences include the numbers of children in the setting and different age groups, and the ratios of educators to children.

Current available professional development may not be based on practices effective within the OSHC setting. State autism service agencies offer several trainings and webinars to support children with autism, but only one is tailored to OSHC services. A national autism agency offers a number of different webinars with a focus on three subcategories: early years, therapy support and adult support (Autism Spectrum Australia, 2022).

However, with the increasing prevalence and a large number of centres potentially having more than one child with autism enrolled, educators may not be supporting the children to best meet their needs. This could be due to a lack of knowledge and experience of educators in understanding and supporting children with autism. This research found that only 26.6% of services had supported their educators to undertake autism specific training. Additional training in supporting children with autism in OSHC settings should aim to look at the differences of OSHC compared to classrooms and how strategies can be adapted and implemented to support these children. As shown in the study by McNeill (2019), teachers who had undergone training had greater knowledge and used the strategies more frequently

than those teachers who were self-taught. This may also be the case for educators in the OSHC field.

The qualifications needed in OSHC may not include any training in supporting children with autism. The Diploma of School Aged Care has two units that discusses people with a disability, with a further two units that discuss diversity and working with school aged care (Australian Government, 2021a). Out of the required 25 units to complete the diploma, 18 are core units, with the four mentioned above being compulsory core units. However, in the Diploma of Early Childhood Education and Care there are two units that look at supporting children using a holistic approach and one unit that discusses the strategies of inclusion of all children (Australian Government, 2021b).

These are the two main courses apart from teaching that allow for a person to be qualified to work in OSHC however, there are no specific topics addressing the support for children with autism. This would lead one to believe that many centre directors or qualified educators have not undertaken training in autism as a part of their qualifications. With a lack of professional development courses tailored to OSHC and supporting children with autism, there appears to be a large gap in this area.

It is reported that the average length of tenure in OSHC is only 3 years (Department of Education and Training, 2017). The results from this study show that there is a greater percentage of people who have worked in OSHC for less than 5 years compared with people who have been in the field between 6 and 10 years. This high turnover is not ideal for continuity within OSHC and educators with not a lot of time in the position, particularly for children with autism who thrive on continuity and structure (Department of Education and Training, 2017).

Limitations

The sample used in the study may have been biased, as all respondents reported having children with autism at their service. Only educators with children with autism in OHSC may have felt that they could contribute information for this study. Further, the sample included minimal responses from private organisations (n = 17, 21.5%) compared to school run services (n = 57, 72.2%). Since responses collected were anonymous, although the survey was sent to directors and educational leaders, there is no guarantee of who completed the survey. All of these factors pose threats to the external validity of the study, so the generalization of findings should be accepted with these limitations in mind.

There were limitations identified within the survey, including the reasons for effectiveness and ineffectiveness were quite broad and do not define what 'adequate/inadequate resources', 'adequate/inadequate knowledge' could be. Because of this, the reasons as to why a respondent may select the answer could be vastly different to another with no further means of comparison. A further limitation was identified when asking about other strategies. Respondents mentioned a number of sensory tools that they utilized within their service, but these were not mentioned when asked about other prevention strategies. By including a sensory question, these strategies may have been identified and the frequency of use and effectiveness/ineffectiveness would be known.

The study did not include observation of strategies which may add strength to the research by allowing for researchers to observe educators in practice and assess observed effectiveness. This study relied upon participants' self-reporting of strategy use and their perceived effectiveness. Observation would help to identify environmental factors that may influence the effectiveness of strategies. Furthermore, researchers would be able to observe interactions between educators and children to see how the educator facilitates support for children with autism.

Future Research

This research has begun a discussion into how OSHC services are currently supporting children with autism in South Australia. However, there are still many areas that require further research. Future research could focus on specific strategies and their implementation. This could include further investigation into why strategies are effective or ineffective, for example not just adequate or inadequate resources or knowledge.

Data collected about assisting children with autism in OHSC could be richer with the inclusion of interviews and focus groups with centre directors, educators and students . Questions may look to address why they believe some strategies are more effective than others and the barriers they experience in their service.

There are also questions unanswered regarding services who stated they had children with autism who attend their service but did not receive funding within their service. Questions as to why this is the case could be further investigated. There are limited data with which to compare results that are specific to OSHC. Comparisons have been made to similar research in classrooms however, as discussed, the OSHC environment can be very different to the classroom. Studies could investigate the differences in OSHC and school in a comparative study and investigate how services adapt strategies to be used in OSHC.

Implications for practice/services

This study has highlighted some key areas which need to be addressed so that educators can provide quality, inclusive care to children with autism in OHSC. Of the twelve strategies suggested in the survey, seven had high implementation rates over 70% whereas 5 strategies were implemented by only 50% of services or fewer. This may relate back to the qualifications that are required for OSHC educators and the lack of education and training in

the Diploma of School Aged Care that relates to children with disabilities and more specifically, autism.

To close this gap, increased autism specific training could be included in the qualification offered by training organisations. Individual services could offer training as part of their induction process, information about children with autism in their service and strategies used within the service upon employment at the service. Access to online autism training tailored to OSHC could be made a part of the induction process prior to commencing employment. An increase in support from organisations that assist children and families after receiving a diagnosis of autism could be extended to OSHC as a part of the continuity of care. This would also build relationships between services and allied health professionals to support OSHC educators in providing inclusive programs and care for children with autism.

Conclusion

OSHC services are a unique setting that have seen an increase in demand and attendance. This study has found that over 50% of services included in the study had between 1 and 5 children with autism enrolled at their centre and a further 26% had between 6 and 10 children with autism attend their centre. It was identified that eight out of the twelve strategies listed in the study were used by more than 50% of respondents, but only four strategies were perceived as extremely effective or very effective by more than 50% of respondents. These strategies were ‘ views and opinions of children with autism reflected in the program’, ‘actively engage with children with autism’, ‘educators support children to engage in social situations’ and ‘strategies to prevent escalation including redirection’. It would suggest that services need further assistance in implementing strategies that are effective in supporting children with autism in their centre. This study has started the conversation about how services could better support children with autism and the perceived effectiveness of the strategies currently used.

It is hoped that this research will assist services in their practice in supporting children with autism in OSHC, by encouraging services to look at their practices and how they can improve the ways in which they are currently implementing strategies to support children with autism in their centre. However, this research has initiated questions about why some of the classroom strategies may not be as effective or utilised in OSHC, and highlights the lack of training, professional development, environmental and program structures specific to OSHC that have not been addressed in the evidence-based practice research.

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Appendix A

Autism in Out of School Hours Care

QC1 **PARTICIPANT INFORMATION SHEET AND CONSENT FORM**

Title: 'Autism in Out of School Hours Care'

Chief Investigator
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My name is Renee Mathews and I am a Flinders University Masters student. I am undertaking this research as part of my degree. For further information, you are more than welcome to contact my supervisor. Her details are listed above.

Description of the study

Over time research has suggested that there has been an increase in both the use of before and after school care as well as the prevalence of Autism Spectrum Disorder. There has been no research conducted investigating if this trend in the prevalence of autism has flowed into OSHC services and if they have also seen an increase of children with autism attend their service. Furthermore, there has been minimal research into whether strategies that are used to support children in the classroom are still as effective in the unique settings of OSHC.

This study asks directors views on how many children with autism attend their OSHC services in South Australia to understand if there is a relationship between current increase in demand of services and an increase in the prevalence of autism. The study will also investigate the strategies these services are implementing and their perceived effectiveness.

This project is supported by Flinders University, College of Education, Psychology and Social Work.

Purpose of the study

This project aims to find out the prevalence of children with autism who attend OSHC services in South Australia. The project will also aim to understand what strategies are currently being used in OSHC services to support children with autism as well as the strategies perceived effectiveness based on the views of the director.

Benefits of the study

While there are no direct benefits to the participants. The findings will provide information of the prevalence of autism in OSHC settings and what strategies are deemed effective in the unique OSHC environments. This study may lead the way in creating a dialogue for those working with children with autism in OSHC and identify strategies to support children with autism in OSHC settings that are specific to OSHC.

Participant involvement and potential risks

If you agree to participate in the research study, you will be asked to:
Complete an online questionnaire
The questionnaire will take about 15 minutes and participation is entirely voluntary.

There are no risks to participants physical wellbeing, psychological wellbeing, or other risks of harm.

The researchers do not expect the questions to cause any harm or discomfort to you. However, if you experience feelings of distress as a result of participation in this study, please let the research team know immediately. You can also contact the following services for support:
Lifeline – 13 11 14, www.lifeline.org.au
Beyond Blue – 1300 22 4636, www.beyondblue.org.au

Withdrawal Rights

You may, without any penalty, decline to take part in this research study. If you decide to take part and later change your mind, you may, without any penalty, withdraw at any time without providing an explanation. To withdraw, please contact the Chief Investigator or you may just close the internet browser and leave the online survey. Any data collected up to the point of your withdrawal will be securely destroyed.

Confidentiality and Privacy

Only researchers listed on this form have access to the individual information provided by you. Privacy and confidentiality will be assured at all times. The research outcomes may be presented at conferences, written up for publication or used for other research purposes as described in this information form. However, the privacy and confidentiality of individuals will be protected at all times. You and your service will not be named, and your individual information will not be identifiable in any research products without your explicit consent.

No data, including identifiable, non-identifiable and de-identified datasets, will be shared or used in future research projects without your explicit consent.

Data Storage

The information collected may be stored securely on a password protected computer and/or Flinders University server throughout the study. Any identifiable data will be de-identified for data storage purposes unless indicated otherwise. All data will be securely transferred to and stored at Flinders University for at least five years after publication of the results. Following the required data storage period, all data will be securely destroyed according to university protocols.

How will I receive feedback?

On project completion, a short summary of the outcomes will be provided to all participants via email or published on Flinders University's website.

Ethics Committee Approval

The project has been approved by Flinders University's Human Research Ethics Committee (Project ID: 2212)

Queries and Concerns

Queries or concerns regarding the research can be directed to the research team. If you have any complaints or reservations about the ethical conduct of this study, you may contact the Flinders University's Research Ethics & Compliance Office team via telephone 08 8201 3116 or email human.researchethics@flinders.edu.au.

Informed consent to participate in the study
I DECLARE

- that I have read the above information and I understand the information contained;
- that I have understood that participation in the study is entirely voluntary and free;
- that I can withdraw from the study at any time, without having to give explanations and without any disadvantage or prejudice;
- that I have understood the nature and activities of the participation in the study and the risks involved;
- that I have understood that participation in this study will not result in recognition of any direct or indirect economic benefit.

Thank you for taking the time to read this information sheet which is yours to keep. If you accept our invitation to be involved, select the 'I agree to participate' button to proceed to the questionnaire.

QC2 Accordingly,

- ○ I agree to participate in the study
- ○ I do not agree to participate in the study

QS1 Where in South Australia is your service located?

- ○ Adelaide Urban Area
- ○ Rural South Australia
- ○ Island off SA

QS2 Is your service located on school grounds?

- ○ Yes
- ○ No

QS3 Who is the approved provider?

- ○ Privately owned (e.g. Camp Australia, Life be in it)
- ○ School (Principal, committee)
- ○ Community group (Church, YMCA)
- ○ Other

QS4 Do you have your own space or share a space (e.g. hall, classroom, library)? If shared space, please describe your setting.

- ○ Own space
- ○ Shared space _____

QS5 How many children is your service licensed for?

_____

QS6 How many children on average would attend before school care on a typical day (pre-Covid19)?

_____

QS7 How many children on average would attend after school care on a typical day (pre-Covid)?

_____

QS8 This year, do you have children enrolled in the service with disabilities? (including Autism, ADHD, physical disabilities, cognitive disabilities)

- ○ Yes
- ○ No

QS9 If yes, how many of these children have a diagnosis of Autism Spectrum Disorder (ASD)?

_____

QS10 Has the number of children with autism increased in the last 5 years?

- ○ Yes
- ○ No
- ○ Unsure

QS11 Does the centre receive extra assistance from professionals for support to develop and implement strategies to assist children with autism?

- ○ Yes - continue
- ○ No - Move onto next question

QS12 If yes, select which professionals (as many as required)

- ☐ Inclusion facilitator
- ☐ Support worker
- ☐ Speech therapist
- ☐ Occupational therapist
- ☐ Other _____

QS10 Has the number of children with autism increased in the last 5 years?

- ○ Yes
- ○ No
- ○ Unsure

QS13 Does the centre receive additional funding to support the inclusion of children with autism?

- ○ Yes
- ○ No

QS14 Please indicate which funding your service has accessed in the last year:

- ☐ Inclusion Development Fund (IDF)
- ☐ Intervac Funding
- ☐ NDIS
- ☐ None
- ☐ Other _____

Q1a Does your centre have a "calming area" set up?

- ○ Yes
- ○ No

Q1b How effective is the calming area in assisting children with autism to regulate their emotions?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q1c You have indicated that a calming area is 'not effective at all' or 'slightly effective' in your service. Please identify the reasons for this (select all that apply):

- [ ] Lack of resources
- [ ] Lack of space
- [ ] Lack of time to set up the area
- [ ] Does not meet the needs of the children in the centre
- [ ] Other _____

Q1d You have indicated that a calming area is 'extremely' or 'very' effective in your service. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate space
- [ ] Adequate time to set up the area
- [ ] Does meet the needs of children in the centre
- [ ] Other _____

Q1e How often in one week is the "calming area" used by children with autism?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q2a Does your centre take measures to ensure the environment is not overstimulating to children with autism? (e.g. too noisy, crowded, lots of activity)

- ○ Yes
- ○ No

Q2b How effective is having an environment that is calm and relaxed for children with autism?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q2c You have indicated that having an environment that is not overstimulating for children with autism is 'not effective at all' or 'slightly effective' in your service. Please identify the reasons for this (select all that apply)

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time to set up the area
- ☐ Does not meet the needs of the children in the centre
- ☐ Other _____

Q2d You have indicated that having an environment that is not overstimulating for children with autism is 'extremely' or 'very' effective in your service. Please identify the reasons for this (select all that apply):

- ☐ Adequate resources
- ☐ Adequate knowledge
- ☐ Adequate time to set up the area
- ☐ Meets the needs of the children
- ☐ Other _____

Q2e How often in one week is the environment adjusted to ensure it is not over stimulating to children with autism?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q3a Are the views and opinions of children with autism reflected in the program?

- ○ Yes
- ○ No

Q3b How effective is having the views and opinions of children with autism reflected in the program in ensuring the program is inclusive of children with autism?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q3c You have indicated that having the views and opinions of children with autism reflected in the program is 'not effective at all' or 'slightly effective' in ensuring the inclusion of children with autism. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time to set up the area
- ☐ Does not meet the needs of the children in the centre
- ☐ Other _____

Q3d You have indicated that having the views and opinions of children with autism reflected in the program is 'extremely effective' or 'very effective' in ensuring the inclusion of children with autism. Please identify the reasons for this (select all that apply):

- ☐ Adequate resources
- ☐ Adequate knowledge
- ☐ Adequate time to set up the area
- ☐ Meets the needs of the children
- ☐ Other _____

Q3e How often in one week are the views and opinions of children with autism reflected in the program?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q4a Do educators in your centre actively engage children with autism to develop a greater understanding of their needs? (e.g. engage in conversation about the child's interests, offer activities based on the child's interests etc.)

- ○ Yes
- ○ No

Q4b How effective is building relationships between educators and children with autism in developing a greater understanding of their needs?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q4c You have indicated that building relationships between educators and children with autism is 'not effective at all' or 'slightly effective' in developing a greater understanding of their needs. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q4d You have indicated that building relationships between educators and children with autism is 'extremely effective' or 'very effective' in developing a greater understanding of their needs. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q4e How often in one week do educators engage with children with autism with the goal of developing a greater understanding of the child's needs?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q5a Do educators at your centre offer support to children with autism to engage in social situations? (e.g. assist to join in play with other children, connect them with a buddy, engage small group play)

- ○ Yes
- ○ No

Q5b How effective is the support offered by educators to assist children with autism to engage in social situations?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q5c You have indicated that the support offered by educators to assist children with autism to engage in social situations as being 'not at all effective' or 'slightly effective' in helping children with autism build social skills. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q5d You have indicated that the support offered by educators to assist children with autism to engage in social situations as being 'extremely effective' or 'very effective' in helping

children with autism build social skills. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q5e How often in one week do educators offer assistance to children with autism to engage in social situations?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q6a Do educators in your centre use visuals to help explain behavioural expectations to children with autism? (e.g. pictures showing behaviour expectations, picture representations of the rules)

- ○ Yes
- ○ No

Q6b How effective is the use of visuals to help explain behavioural expectations to children with autism?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q6c You have indicated that the use of visuals is 'Not effective at all' or 'slightly effective' to help explain behavioural expectations to children with autism. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q6d You have indicated that the use of visuals is 'extremely effective' or 'very effective' to help explain behavioural expectations to children with autism. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q6e How often in one week do educators use visuals to help explain the behavioural expectations?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q7a Do educators in your centre use visual aids such as timers and visual schedules to help children with autism navigate transition periods?

- ○ Yes
- ○ No

Q7b How effective is the use of visual aids such as timers and visual schedules to help children with autism navigate transition periods?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q7c You have indicated that the use of visual aids such as timers and visual schedules is 'Not effective at all' or 'slightly effective' to help children with autism navigate transition periods. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q7d You have indicated that the use of visuals is 'extremely effective' or 'very effective' to help explain behavioural expectations to children with autism. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q7e How often in one week do educators use visuals to assist children with autism navigate transitions?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q8a Do educators at your centre use positive reinforcement to help children with autism develop positive behaviours? (e.g. praise children, provide rewards - stickers, prizes etc.)

- ○ Yes
- ○ No

Q8b How effective is the use of positive reinforcement with children with autism in helping to develop positive behaviours?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q8c You have indicated that the use of positive reinforcement is 'Not effective at all' or 'slightly effective' to help children with autism develop positive behaviours. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q8d You have indicated that the use of positive reinforcement is 'Extremely effective' or 'Very effective' to help children with autism develop positive behaviours. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q8e How often in one week do educators use positive reinforcement with children to help develop positive behaviours?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q9a Do educators in your centre use strategies to prevent escalation including redirection to support children with autism when responding to problem behaviours?

- ○ Yes
- ○ No

Q9b How effective are prevention of escalation strategies such as redirection to support children with autism when responding to problem behaviours?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q9c You have indicated that the use of prevention of escalation strategies is 'Not effective at all' or 'slightly effective' to help children with autism when displaying problem behaviours. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q9d You have indicated that the use of prevention of escalation strategies is 'Extremely effective' or 'Very effective' to help children with autism when displaying problem behaviours. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q9e How often in one week do educators use prevention of escalation strategies with children with autism when responding to problem behaviours?

- ○ Everyday
- ○ 3-4 times a day
- ○ 2-3 times a day
- ○ Once a week
- ○ Never

Q10a Does your centre use a buddy system for children with autism to help create social connections with peers?

- ○ Yes
- ○ No

Q10b How effective are buddy systems in developing social connections of children with autism?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q10c You have indicated that the use of a buddy system is 'Not effective at all' or 'slightly effective' to help children with autism develop social connections. Please identify the reasons for this (select all that apply):

- ☐ Lack of resources
- ☐ Lack of knowledge
- ☐ Lack of time
- ☐ Does not meet the needs of the children
- ☐ Other _____

Q10d You have indicated that the use of a buddy system is 'Extremely effective' or 'Very effective' to help children with autism develop social connections. Please identify the reasons for this (select all that apply):

- [ ] Adequate resources
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q10e How often in one week is the buddy system used to help children with autism develop their social connections?

- ○ Everyday
- ○ 3-4 times a week
- ○ 2-3 times a week
- ○ Once a week
- ○ Never

Q11a Have you or educators at your centre participated in autism specific professional development courses in the last 12 months?

- ○ Yes
- ○ No

Q11b What proportion of your educators have participated in autism specific professional development courses in the last 12 months?

- ○ All of them
- ○ More than half of them
- ○ Less than half of them
- ○ None of them

Q11c How effective has attending autism specific professional development courses been in increasing educators knowledge about how to support children with autism?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q12a Do you or any of your educators work with other professionals to help support children with autism e.g. occupational therapist, speech therapist?

- ○ Yes
- ○ No

Q12b How effective is the relationship between the centre and other professionals in supporting children with autism in the OSHC environment?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all
- ○

Q12c You have indicated that the relationship between the centre and other professionals is 'Not effective at all' or 'slightly effective' to help support children with autism in your centre. Please identify the reasons for this (select all that apply):

- ☐ Lack of consultation
- ☐ Lack of knowledge

- [ ] Lack of time
- [ ] Does not meet the needs of the children
- [ ] Other _____

Q12d You have indicated that the relationship between the centre and other professionals is 'Extremely effective' or 'Very effective' to help support children with autism in your centre. Please identify the reasons for this (select all that apply):

- [ ] Adequate consultation
- [ ] Adequate knowledge
- [ ] Adequate time
- [ ] Meets the needs of the children
- [ ] Other _____

Q12e How often in one MONTH do other professionals liaise with educators with the aim of supporting children in your centre?

- ○ Everyday
- ○ 3-4 times a month
- ○ 2-3 times a month
- ○ Once a month
- ○ Never

Q13 Are there any other strategies that educators in your centre use to help support children with autism that aren't already mentioned in this survey? Please give details below:

_____

Q14 Gender:

- ○ Male
- ○ Female
- ○ Non-binary
- ○ Other

Q15 Age:

_____

Q16 Position held at your centre:

- ○ Director
- ○ Educational Leader
- ○ Other

Q17 How long have you been employed at your centre?

- ○ 1-5 years
- ○ 6-10 years
- ○ 10-15 years
- ○ 16 years or more

If you experience feelings of distress as a result of participation in this study, please let the research team know immediately. You can also contact the following services for support:

Lifeline – 13 11 14, www.lifeline.org.au

Beyond Blue – 1300 22 4636, www.beyondblue.org.au

We thank you for taking your time spent taking this survey.

Your responses have been recorded