

CENTRE FOR AUTISM
MIDDLETOWN

Safe Online Engagement



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INTRODUCTION

This is the thirty-fourth Research Bulletin produced by Middletown Centre for Autism, providing summaries of ten articles from 2014 to 2020.

The Bulletin commences with an interview from Kirsty Macmillan.

Kirsty is a PhD researcher at the Department of Computer Science at Heriot-Watt University, Edinburgh. Her interdisciplinary project examines online safety in autistic children. Kirsty completed an internship at the Autism Research Centre, at the University of Cambridge in 2014. She completed her BSc in Psychology in 2015 and her MSc in Children and Young People's Mental Health in 2017.

Kirsty has worked and volunteered with autistic children and adults for the past ten years and is passionate about research that helps improve quality of life among this population.

Please note that the views represented in this document do not necessarily reflect the views of Middletown Centre for Autism. Reviewers have, where possible, used the original language of the article, which may differ from UK and Ireland usage and the usage of a range of terminologies for autism.

INTERVIEW WITH KIRSTY MACMILLAN

1. How can parents and educational professionals limit the online risk for their autistic child or student?

There is no easy way to answer this question. It is important to note that online safety encompasses many areas, e.g. cyberbullying, phishing. Moreover, it could be that an autistic child may experience certain risks and not others. Therefore, it is important that parents and educational professionals take a child-centred approach and find out if there is one risk that is a particular concern and you can try to tackle it from there.

2. Can you suggest any strategies to reduce the risks of cyberbullying and access or exposure to inappropriate content?

With regards to cyberbullying, it is worth taking into account that online communications are a two-way interaction. Many autistic children experience offline bullying from their non-autistic peers. This can carry over into online contexts, so it is important to figure out if more work is needed to increase autism acceptance offline as well as increasing the confidence and skills of autistic children to report and block cyberbullying. Many apps will have age restrictions, but these can be easily worked around. There are websites and resources out there that come with tips and advice on how to limit children's exposure to inappropriate content.

3. With the increase in online activity during the pandemic, what measures can be put in place to reduce the likelihood of internet-dependence addictions?

Screen time is a heavily debated topic, particularly with regard to autistic children. In the past it has been used predominantly as a predictor of online safety. However, our research suggests

that it is not a reliable one. If we focus solely on screen time, we miss out on crucial information about how autistic children use online devices, and if other important factors such as age or pre-existing conditions influence the likelihood of encountering online safety risks or developing a dependence online. For example, knowing that I spend eight hours a day on a computer reveals very little about what I am doing or whether I am more likely to develop an over-reliance on the internet. Online activity has provided many opportunities for social and educational purposes during the pandemic that would not have been possible twenty to thirty years ago. In summary, we should move away from focusing on screen time and how autistic children spend their time online. This will help to nurture their independence and how they interact with others online and pursue their interests.

4. How can time online increase anxiety levels for autistic children and young people?

As I mentioned above, focusing solely on time means that we miss other factors that are more important, i.e. how children use online devices. There is evidence to suggest that some autistic children can find it hard to switch from one activity to another, especially if it is something that they enjoy. Therefore, we work with autistic children to manage their expectations to help with these transitions. However, thinking about why will tell us more than how long.

5. What strategies can parents and educational professionals put in place to try and reduce heightened anxiety levels in autistic children and young people engaged in online activities?

As I said above, managing transitions can help. For some autistic children, visual symbols and

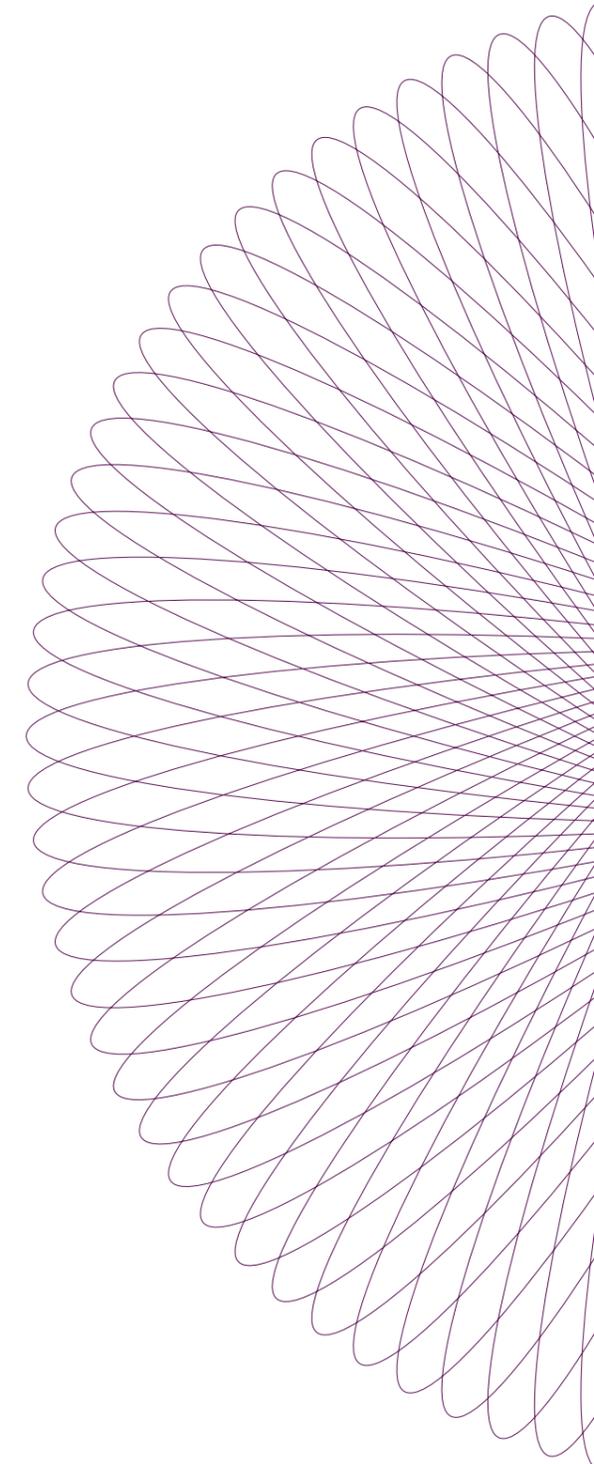
timers can help, but it is important that a child-centred approach is taken because some strategies will work for some and not others.

6. What advice can you give to a parent or educational professional to support a young person with autism who would like to meet new friends?

For many autistic young people, special interests or hobbies are very important to them. If possible, parents and educational professionals could see if there are other young people out there who share similar interests that they can share and bond over, e.g. Minecraft or a TV show. It is important that, where possible, parents and educational professionals help them with regard to understanding what personal information should not be shared online. However, our research has found that shared interests can often be the gateway for autistic young people to enjoy interacting with others online and become part of an online community.

7. What are the services that parents and educational professionals can contact should they have concern for the online safety of their child or young person with autism who they live or work with?

It is important that parents and educational professionals know that there is support out there if they have concerns. If an adult is concerned for the immediate safety of a child, they should contact the police. The NSPCC have online resources about how to keep children safe online and have good signposts to other organisations that can help with online safety concerns.



AN INTERNATIONAL SURVEY OF PARENTAL ATTITUDES TO TECHNOLOGY USE BY THEIR AUTISTIC CHILDREN AT HOME

BACKGROUND

Technology usage is increasing across the world and there are several research studies that recognise the benefits of using technology to support learning and development in children and young people. This paper looks at technology usage in children, young people and adults with autism and considers various common characteristics that impact on engagement with technology in the home setting. The authors designed a survey that was disseminated to parents in the UK, Belgium and Spain. This study reviews the findings from this survey.

RESEARCH AIMS

The aims of this study were:

- to identify how children, young people and adults with autism use and interact with technology.
- to investigate the rate of recurrent usage with respect to apps identified as autism specific.
- to explore how parental attitudes and demographics may influence belief systems regarding technology use.
- to inform an evidence base for using technology for the benefit of autistic people and how future technology can be designed to assist and support autistic learners.

RESEARCH METHODS

In this study the term ‘children’ is used to describe a broad age range of individuals, aged 0–50 years old. An online survey was used to gather data from 388 parents whose child had a diagnosis of autism, or who were awaiting a diagnosis, and included children with additional diagnoses. The parent survey was disseminated via social media

outlets, websites and the professional networks of the authors; and the content was translated into the native language of participants (i.e. parents accessing the survey from Spain accessed survey questions in Spanish).

Both closed and open-ended questions were included in the survey. Five groups were identified based on the age of the child, and subgroups were created to evaluate the effect of reading and verbal abilities and the presence of a learning difficulty or other demographics, for example, parents’ perceptions about their child’s technology use.

RESEARCH FINDINGS

Research findings identify ‘playing games, watching YouTube and listening to music’ as the most common uses of technology across the age ranges. Access to autism-specific apps is reported as rare, and only five of the 388 parental reports identified engagement with augmentative and alternative communication (AAC) devices.

The results show that children with a more proficient verbal ability and identified as fluent readers use more devices, and fluent readers also use a greater range of interfaces (e.g. mouse or keyboard) than those who could not read or who were learning to read. In addition, reading ability correlates to greater amounts of time spent using devices, as does access to multiple devices; while the level of verbal ability and the existence of a learning difficulty do not.

In terms of parents’ perceptions in relation to their child’s use of technology, greater concern is associated with longer time spent using technology, which is linked to greater reading ability, as per the previous paragraph. Other demographics, for example, parents’ age or age parents left school, were not found as influential.

The authors suggest that parents’ accounts of time spent with technology may be underestimated or overestimated with respect to their personal views and that more research may be required.

The authors of this research study similarly recommend further research with respect to autism-specific apps and AAC programmes based on finding that this software was rarely used by participants in their study.

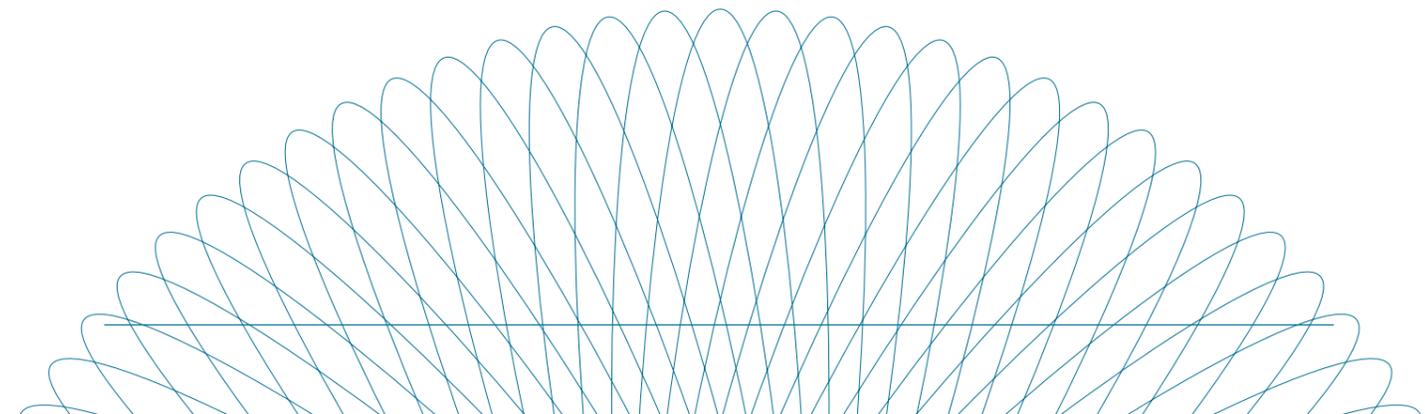
IMPLICATIONS FOR PRACTICE (by the authors)

- Children, young people and adults with autism often choose technology as a leisure activity. Since meaningful leisure activities are imperative for general well-being, it is therefore important to enable access to technology.
- When introducing AAC apps, it is essential to teach the individual how to use the app. Some apps may require the content to be simplified or additional content specific to the individual to be included. Initially communication using the device will need to be supported and modelled.

- Individuals with a deficit in reading could be taught to access content and use devices by using the voice-control function.
- Supporting access to apps or devices may require additional visual supports, for example, video modelling or an activity task system.

Full Reference

Laurie, M.H., Warreyn, P., Uriarte, B.V., Boonen, C. and Fletcher-Watson, S., (2019). An international survey of parental attitudes to technology use by their autistic children at home. *Journal of Autism and Developmental Disorders*. 49(4), pp.1517–1530.



CAREGIVERS OF SCHOOL-AGED CHILDREN WITH AUTISM: SOCIAL MEDIA AS A SOURCE OF SUPPORT

BACKGROUND

Autism is a spectrum disorder that can have an impact on a person's social, sensory, perceptual, intellectual and communication skills.

The trend towards the use of the internet and social media for help and support is on the rise. Online support provides caregivers of children with autism spectrum disorder (ASD) an opportunity to access support and information that they may not acquire from healthcare professionals. It can be used as a method of support and reassurance to discuss their concerns regarding autism with others who can relate from personal experience.

RESEARCH AIMS

The purpose of this study was to explore the use of a social media support group on WhatsApp for parents of children with ASD in KwaZulu-Natal, South Africa.

RESEARCH METHOD

For this research study, convenience sampling was used to select participants. Convenience sampling is a type of non-probability sampling. People are sampled simply because they are 'convenient' sources of data for researchers. The study invited caregivers of children with a diagnosis of ASD to participate. A caregiver was defined as any member of the family or any person who was involved directly in looking after the care of the child.

Each participant of the study had to meet the following criteria:

1. The children of the caregivers must have a diagnosis of ASD.
2. The participant must be a caregiver of a child aged 5–12 years old.

3. The participant must be a caregiver of a child in the foundation or intermediate phase of a single school for learners with special educational needs.
4. The participant must be part of an existing WhatsApp support group and participate with the research study for a period of six months or longer.
5. They must live in KwaZulu-Natal, South Africa, as face-to-face interviews were conducted.

An information letter, that had been pre-approved by the Higher Degree Ethics Committee at the researcher's institution, was sent out. To ensure there was a diverse sample, six participants were chosen to take part in the interview process. The participants were from different races and cultures and had children of varying ages and stages within the school.

A semi-structured interview schedule was designed to gather data. Questions in the schedule were open-ended so that participants could relate their experiences in detail. Interview questions covered the following areas of discussion:

1. Biographical information
2. Communication
3. Feeding
4. Other characteristics of ASD that may impact communication
5. Advantages of the support group
6. Limitations of the group
7. Suggestions and recommendations

Each interview lasted approximately thirty minutes. They were prearranged to take place

at the interviewees' homes, at a time that was suitable, and they were audio recorded.

RESEARCH FINDINGS

The findings of the research study highlighted eight emerging themes from the participants. Each of the eight themes related to a form of support that the participants got from the support group.

1. Communication support

The findings show that the caregivers on the WhatsApp support group received advice to help them better cope with communication breakdown.

2. Behavioural support

Of all emerging themes, behavioural difficulties was a topic frequently discussed in the group, particularly behavioural support relating to children's restricted and repetitive behaviours. Caregivers on this WhatsApp support group were able to receive support and strategies from other parents on how to manage behaviours.

3. Feeding support

Even though caregivers found these discussions helpful, feeding was not an area of regular discussion, hence feeding support on the group was minimal.

4. Emotional support

The caregivers of this study regularly reported feeling isolated from society. The WhatsApp group provided a form of emotional support that allowed the caregivers to share their own personal experiences with others who would have an understanding due to similar experiences themselves.

5. Informational support

Participants' positive experiences with the group confirms other previous research in this area. Caregivers on the support group share information with those who understand their unique situations due to similar experiences and can offer advice and ideas from personal experience.

6. The presence of a professional

Within this study all participants reported that the discussions were initiated and led by caregivers; however, having a speech-language pathologist in the group was stated to be a valuable resource. The professional also helped to act as the group mediator, ensuring that the purpose of the group was to offer and provide support.

7. Positive experiences in the group

All participants of the research study found the group to be a positive experience. This was partly due to WhatsApp being user-friendly, accessible and inexpensive.

The support group allowed all participants to make direct contact with fellow caregivers, get advice related to their specific concerns from others with similar experiences and relate back their own experiences to others.

8. Limitations of the group

The results of the study reflect only the findings from a single support group, hence the experiences of the caregivers are linked as all children attend the same school and are in receipt of therapy from the same professionals.

IMPLICATIONS FOR PRACTICE (by the authors)

The research study highlights the positive experiences that previous research found in relation to social media as a means of support. Many of the participants found interesting friendships as well as receiving support from the comfort of their homes.

There are, however, limitations to this study. This was one sample from a single support group, so the experiences of each of the caregivers participating had a certain level of commonality as all the children attend the same school and receive therapy from the same professionals.

WhatsApp is only to be found on smartphones that have internet access. This limits access to such support as participants could not receive the same support via a laptop with internet access.

South Africa is a widely diverse country with eleven official languages. This fact alone can impact who can receive support from such a group due to language differences.

Future research should investigate the use of other WhatsApp groups and other forms of social media support groups, i.e. Facebook and Twitter, to offer continuing support to caregivers of children with ASD. It could also examine the involvement of professionals from different backgrounds within the support groups.

Full Reference

Cole, L., Kharwa, Y., Khumalo, N., Reinke, J.S. and Karrim, S.B.S., (2017). Caregivers of school-aged children with autism: social media as a source of support. *Journal of Child and Family Studies*. 26, pp. 3464–3475. <https://doi.org/10.1007/s10826-017-0855-9>

RECOMMENDATIONS OF SCHOOL STUDENTS WITH AUTISM SPECTRUM DISORDER AND THEIR PARENTS IN REGARD TO BULLYING AND CYBERBULLYING PREVENTION AND INTERVENTION

BACKGROUND

Research has identified that the prevalence of bullying is significantly higher for students with autism spectrum disorder (ASD) than for typically developing students. In addition, the prominence and growth of social networking and the focus on cyberbullying in recent years has added a new facet to the traditional definitions, environments and experiences of bullying. The three pillars of intention, repetition and power imbalance are used to characterise the definition of bullying, which can present in physical, verbal and social behaviour, while cyberbullying involves students intentionally and repeatedly harming others through a range of technologies such as social media, text messages, websites, chat and emails. There is a public interest in bullying and cyberbullying among school-age populations as there is an awareness of the serious consequences on the mental health and well-being of victims. To date, there is little research on how best to support vulnerable students who have ASD if bullying or cyberbullying occurs.

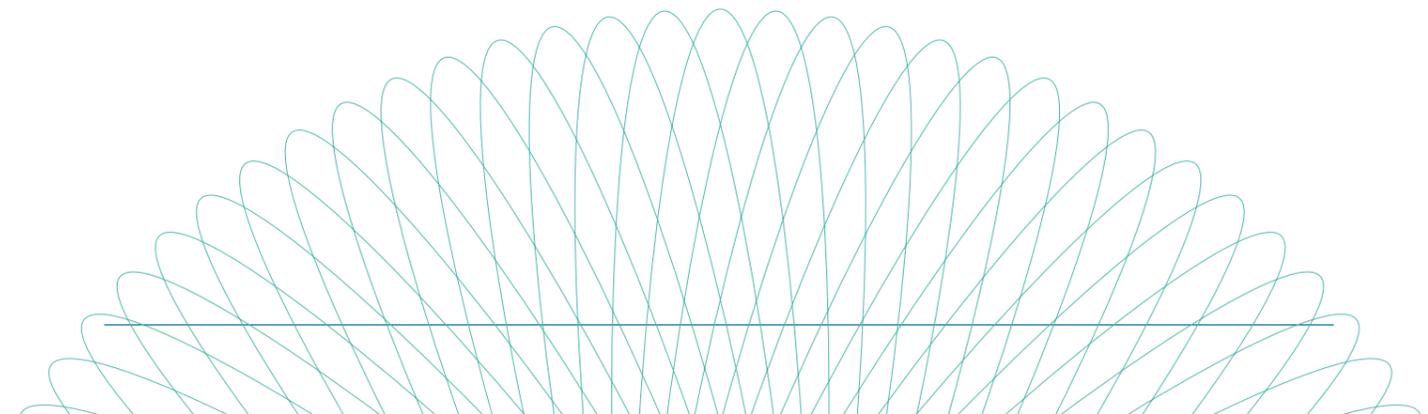
RESEARCH AIMS

The aim of this study was to gather information about the experiences of students with ASD and their parents about bullying, including cyberbullying, and to investigate their recommendations to schools and government regarding support and intervention in relation to bullying, including cyberbullying.

RESEARCH METHOD

This study took place in Queensland, Australia. Ten students, aged between 11 years 5 months and 16 years 3 months, and their parents were interviewed. The majority of students (nine) were male. All student participants had a diagnosis of ASD and accessed the services of Autism Queensland. Nine of the ten students attended mainstream schools and one student was homeschooled. A total of nine parents were interviewed (two students were from one family), with eight out of the nine parents being mothers.

Initially participants were invited to take part in the study through invitations distributed in three different ways: posted on the Autism Queensland Facebook page, distributed to students (11–16 age range) at Autism Queensland to take home and distributed to teachers and families of new clients seen by Autism Queensland's outreach services. Out of the nine families interviewed, three interviews took place over the phone, one face-to-face interview was held at the university and five face-to-face interviews were carried out at the participants' homes. The interviews focused on questions related to experiences of bullying and questions related to the prevention of bullying.



RESEARCH FINDINGS

The findings from this study are outlined using the following three categories: understanding and experiences of bullying, recommendations to schools and recommendations to government.

Understanding and experiences of bullying

- This study revealed that all the students interviewed had a clear understanding of what acts defined bullying and cyberbullying behaviour, with 90 per cent (9/10) of the students reporting that they had experienced acts of bullying.

Recommendations to schools

Preventative measures

- The need for clearer communication between schools, parents and students regarding bullying policy and procedure in schools was highlighted by all participants.
- Parents went on to suggest that supervised activities during unstructured times (e.g. lunch, before and after school) specifically for students with ASD could alleviate incidences of bullying at school.

Intervention measures

- All participants suggested that the current systems in place for dealing with bullying behaviour in schools should be revised so that students, especially those with ASD, felt supported.
- Equally, students and parents called for harsher penalties and consequences for bullying perpetrators.

Recommendations to government

Preventative measures

- Parents recommended that bullying legislation be revisited by governments because of their lack of confidence in the power of the government and laws surrounding bullying, particularly cyberbullying.
- All participants commented on the need for improvements in education around bullying, suggesting that the government needs to set up education programmes for parents, teachers and students about bullying.
- Furthermore, students and parents felt that accountability and responsibility needed to include the family and parents of perpetrators.

Intervention measures

- Over half of the parents interviewed felt that bullying was not taken seriously enough by the law and recommended harsher penalties and consequences for bullies, particularly repeat perpetrators.
- Although most of the students interviewed were unsure of legal consequences for bullying, it was evident from their responses that they felt the government should be doing more through legal channels to address the issue of bullying.

IMPLICATIONS FOR PRACTICE (by the authors)

- While studies report higher levels of bullying among populations with a disability, and specifically the implications for students with ASD, few studies have investigated student and parent views about strategies to prevent bullying and how to intervene when bullying occurs.
- This study recommends improved communication between schools, parents and teachers; better support for students who are experiencing bullying (including specific support for students with ASD); and the need for harsher penalties for bullying perpetrators.

- The reported data in this paper indicates the need to listen to the voices of students who have ASD and are experiencing bullying and their parents, and it is clear there is a need for schools, governments, parents and young people to work together in the future.
- The authors concede that the study had the following limitations:
 - This is a small qualitative study and further research is needed to explore the implementation of bullying prevention strategies and programmes that address the core needs of students with ASD.
 - Future research should focus on the general population and students who have disabilities such as ASD.

Full Reference

Carrington, S., Campbell, M., Siggers, B., Ashburner, J., Vicig, F., Dillon-Wallace, J. and Hwang, Y., (2017). Recommendations of school students with autism spectrum disorder and their parents in regard to bullying and cyberbullying prevention and intervention. *International Journal of Inclusive Education*. 21(10), pp. 1045–1064. DOI: 10.1080/13603116.2017.1331381

MEDIA USE AMONG ADOLESCENTS WITH AUTISM SPECTRUM DISORDER

BACKGROUND

The authors note that adolescents with autism spectrum disorder (ASD) have been reported to have difficulties with peer relationships and participation in social and recreational activities, spending the majority of their free time engaging in solitary activities. Previous research has found that the two activities adolescents with ASD engaged in most frequently during free time were watching television and using a computer. Recognising the frequency with which adolescents with ASD engage in television viewing and use computers, and the lack of research in this area, authors of this study aimed to conduct research that informs an understanding of the factors associated with engagement in these activities. In this study, how adolescents with ASD use media, and the factors associated with their media use, were examined. Specifically, the television shows they watched and what they were doing when using a computer. This research contributes to an understanding of the use of media by adolescents with ASD and suggests areas for future research.

RESEARCH AIMS

The study explores how media is used by adolescents with ASD and the associated factors.

The authors cite that although there is a large body of research exploring the media habits and influences of media usage on typically developing adolescents, there is little research examining the types of television programmes and computer activities with which adolescents with ASD engage. Given the fact that engaging in different contents of media may have different influences on development, authors state that it is important to look at what content and types of media they are engaging in.

In view of the lack of knowledge of how adolescents with ASD use media in terms of patterns and companions, and the need to understand the possible associations between media usage and factors such as social skills, behaviour problems and personal relationships, the aims of the current study were to (a) describe how adolescents with autism use media in terms of frequency, amount of time and media content; (b) identify the companions with whom they spend time using media; (c) examine the factors (e.g. demographics and severity of autism symptoms) associated with their media use; and (d) examine the associations between media use and parent-child relationships and friendships.

RESEARCH METHODS

Phone interview

Prior to participation in the study, a short phone interview with parents was conducted to ascertain if the adolescents (1) had a reading level at fifth grade or higher so that the adolescents could complete the measures independently; (2) had been previously diagnosed with ASD by a licensed professional; and (3) had a score of fifteen or higher on the Lifetime form of the Social Communication Questionnaire (SCQ).

Postal written questionnaires

Ninety-one adolescents and their parents completed and returned mailed surveys. The data was collected during the summer months in the United States (May 2009–August 2009).

Background information

During the phone interview, parents provided information in relation to their child's age (participants ranged from 12–18 years old), gender (74 males and 17 females) and primary autism diagnosis. Most (64 per cent)

of participants had a primary diagnosis of Asperger Syndrome, 19 per cent with autistic spectrum disorder and 18 per cent with Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). In the questionnaires, parents reported on adolescent characteristics, such as current autism symptoms, speaking skills and comorbidity of intellectual disability. They were also asked about family characteristics such as household income, parental education level and parental employment status. The majority of participants (49.5 per cent) were from the north-east regions of the US, with the remainder from the South, Midwest and West.

Parent-child relationships

The Inventory of Parent and Peer Attachment-Revised (IPPA-R) was completed by adolescents. The IPPA-R has twenty-eight items for mother-child relationships and twenty-eight items for father-child relationships rated on a three-point scale from 1 (never true) to 3 (always true), with a higher total score indicating more positive parent-child relationships.

Friendship qualities

Adolescents completed the Friendship Qualities Scale (FQS). This measures the adolescents' friendship qualities with their best friend. The FQS has twenty-three items rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree), and it measures five dimensions of friendships: companionship, conflict, helpfulness, security and closeness.

Media use

Adolescents completed activity reports for one weekday and one weekend. Time spent watching television and engaging in computer activities, including playing video games on the computer as well as on a video game console, was

reported. Data on browsing websites, receiving and sending emails, visiting chat rooms, using social networking programmes and using instant messaging programmes was also collected.

RESEARCH FINDINGS

This study aimed to understand how adolescents with ASD use media. In this sample of participants, a large number of adolescents with ASD engaged in media activities. The most frequently watched television programmes were cartoons. On computers, websites containing information about video games and anime were frequented most, and video games that involved killing and shooting were played. Age, gender and severity of ASD symptoms were associated with whether adolescents with ASD engaged in media activities and their media content preferences. Engaging in specific activities with specific companions was associated with adolescents' relationships with those companions.

Researchers found that on average adolescents spent in excess of two hours surfing websites and two hours playing video games per day. It was found that 78 per cent of adolescents watched television for an average of 2.3 hours on any given day. Almost all adolescents (98 per cent) used a computer on any given day for an average of 4.9 hours. A small number of adolescents used computers for emailing, social networking, chatting, instant messaging and doing other activities (e.g. working on a school project or downloading software). Although instant messaging programmes and chat rooms were used less, a relatively long duration of time was spent engaging in these two activities. The range of time spent in these activities was large, which suggests that some adolescents with ASD spent large amounts of time on these activities and many did not do these activities at all. No significant differences were found in the frequency and the

amount of time spent on each of the computer activities between weekdays and weekend days.

Authors further examined the contents of television programmes, video games and websites that adolescents with ASD most frequently reported. A total of 359 television programmes (including movies played on television), 240 video games and 439 websites were listed by adolescents.

Television programmes

Cartoons were the most popular television genre, accounting for 37 per cent of television programmes reported by adolescents (Figure 1). Frequently listed cartoons included SpongeBob SquarePants, The Penguins of Madagascar, Family Guy and The Simpsons. Comedy was the second most popular television genre, accounting for 15 per cent.

Video games

Almost half (46 per cent) of reported video games played were action games. Shooting games were the most frequently reported games in the action genre (Figure 2). Simulation games and role-playing games represented about 10–20 per cent of reported games. Adolescents less frequently played classic games (including board games, card games, puzzles, gambling, word games and game shows), racing games and adventure games, with each of them accounting for less than 5 per cent of reported games.

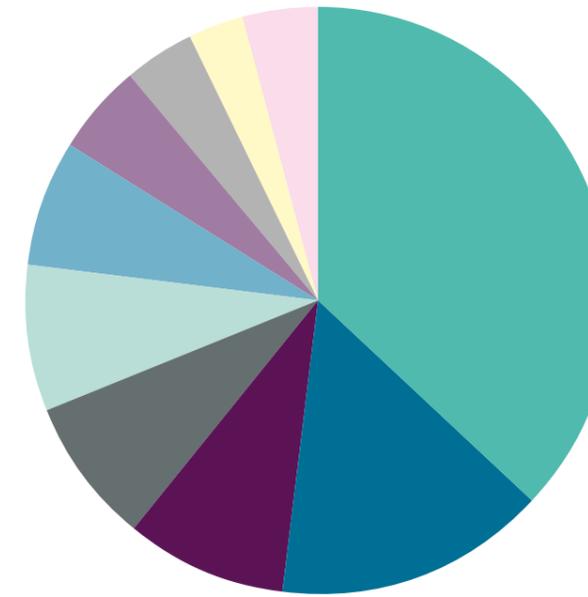
Websites

The majority of reported websites were used for information and research (37 per cent), and those containing information on video games were the most common sites while those containing information on anime were the second most frequently reported sites (Figure 3). Adolescents also visited sites for entertainment (e.g. watching online anime, reading online comics and sharing and viewing video clips), sites for either maintaining or establishing relationships (e.g. friendships and intimate relationships) and sites for playing games. The remainder of the reported websites accounted for less than 10 per cent and included search engine websites, shopping sites, online news and family/children sites.

Companions

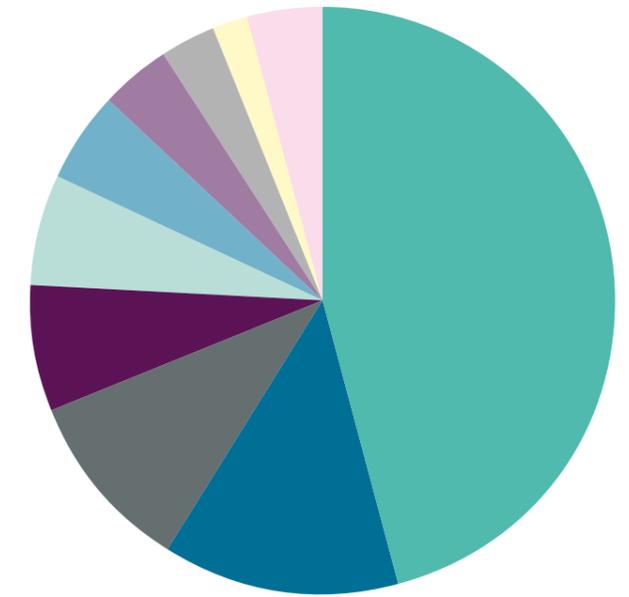
Forty-two per cent of adolescents who watched television did so alone. Of those accompanied by relatives, it was most frequently their mothers (37 per cent), followed by siblings (35 per cent) and then fathers (30 per cent). They less frequently watched television with peers and other companions. Companions for television viewing did not differ significantly between weekdays and weekend days.

More than a half of adolescents (65 per cent) played video games alone and 24 per cent played with peers. Peers were also the companions with whom adolescents most frequently used instant messaging programmes and either sent or received emails.



- Cartoons: 37% (132)
- Comedy: 15% (54)
- Movies: 9% (31)
- News: 8% (29)
- Drama: 8% (29)
- Documentary: 7% (27)
- Reality TV: 5% (18)
- Game show: 4% (14)
- Sports: 3% (11)
- Other (e.g., Children's TV, Music videos, Talk show): 4% (14)

Figure 1. Percentage and number of television programme categories (N = 359).



- Action games: 46% (111)
 Shooter (n=50)
 Action Adventure (n = 24)
 Platformer (n = 19)
 Fighting (n = 11)
 Rythmn/Music (n = 7)
- Role-playing games: 13% (31)
- Simulation games: 10% (23)
- Sports games: 7% (16)
- Strategy games: 6% (15)
- Classic games: 4% (10)
- Racing games: 4% (10)
- Free games: 3% (6)
- Adventure games: 2% (5)
- Others: 4% (10)

Figure 2. Percentage and number of video game categories (N = 240).

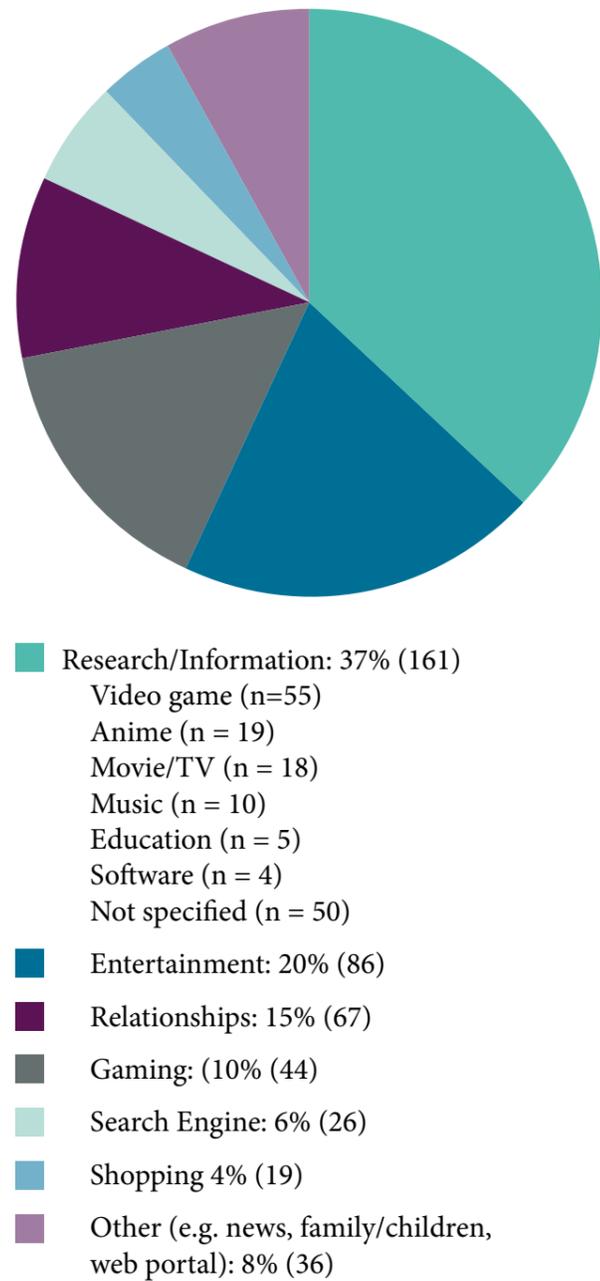


Figure 3. Percentage and number of website categories (N = 493).

Authors found that adolescents’ media content preferences were associated with ASD symptoms. Adolescents with more ASD symptoms were more likely to watch news programmes than those with fewer ASD symptoms. News programmes primarily report current events. The content is usually straightforward, rarely requiring viewers to interpret the emotions and intentions of others or to understand meanings of metaphors therefore, news programmes may be relatively easy to understand. It is also possible that teens were passively watching the television programmes that their parents preferred.

This study also found that adolescents with ASD who used computers for social purposes reported more positive friendships than those who used computers for other purposes. Authors note that peers were the companions with whom adolescents with ASD most frequently engaged in these computer activities.

The findings of this research also show that more positive parent–child relationships were reported by adolescents with autism who watched television with their parents than those who did not watch television with their parents. However, researchers do not know the causal relationship between watching television together and parent–child relationships.

IMPLICATIONS FOR PRACTICE (by the authors)

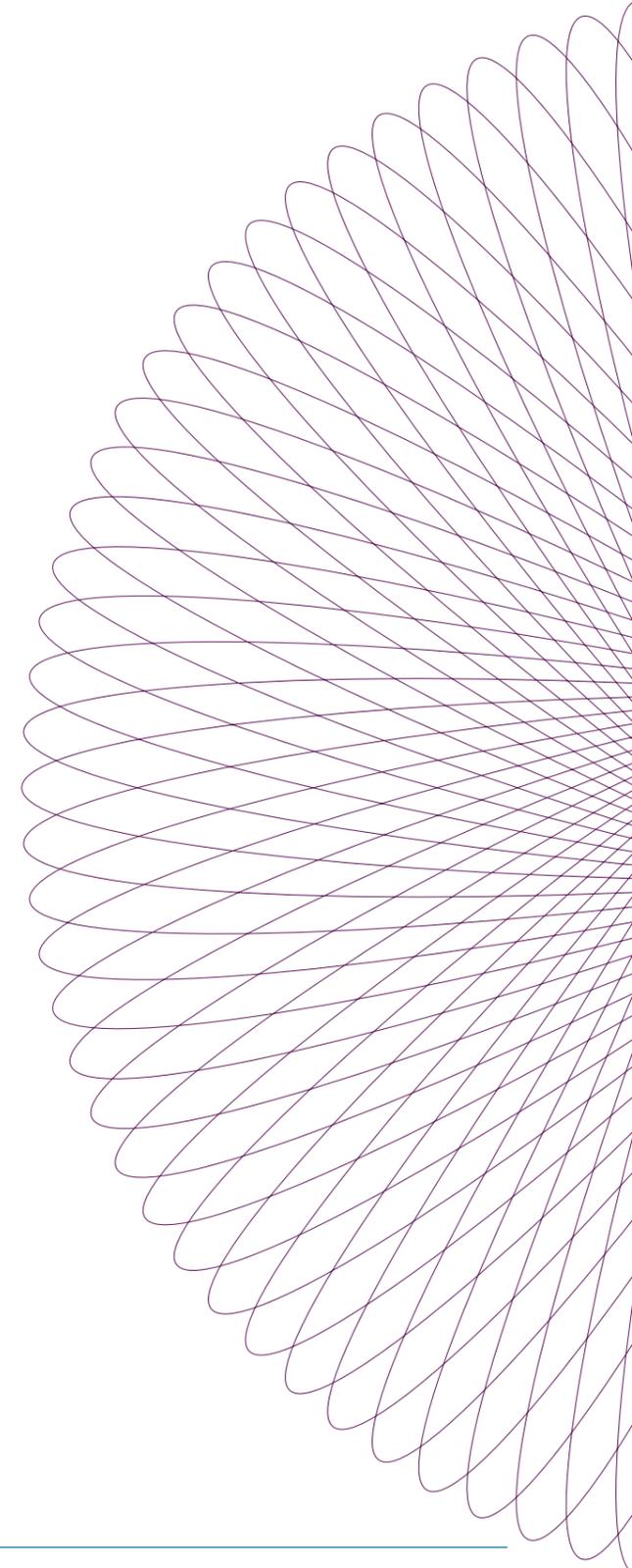
Authors note that this study provides a better understanding of how adolescents with autism use media and this may help parents’ concern about their adolescents’ frequent media use and help them monitor their adolescents’ exposure to media.

Authors recommend additional research be conducted to better understand if the social skills applied to or learned from online interactions as well as the relationships established online could be generalised to real lives.

Authors suggest longitudinal studies are needed to investigate the developmental consequences of media use for this population.

Full Reference

Kuo, M. H., Orsmond, G. I., Coster, W. and Cohn, E., (2014). Media use among adolescents with autism spectrum disorder. *Autism* 18(8) pp. 914–923.



ARE AUTISTIC CHILDREN MORE VULNERABLE ONLINE? RELATING AUTISM TO ONLINE SAFETY, CHILD WELLBEING AND PARENTAL RISK MANAGEMENT

BACKGROUND

Online activity participation, social media, online gaming and sharing interests may be regarded as a culturally and contextually appropriate means of interaction and pastime for many children today, both autistic and non-autistic; however, research suggests that it can be challenging for autistic children to find an alternative means of leisure that would involve switching off the computer and coming offline to do something else when they have such easy access to their special interest. This may also raise questions of whether autistic children are managing the safety risks related and are aware of the impact, positive or negative, on their individual well-being, and whether their parents have the confidence and skills to oversee these online interactions to successfully support their child.

RESEARCH AIMS

The research was designed to assess the differences of online experiences and vulnerability, in particular, of autistic and non-autistic children while they used online resources, and if time spent online was a contributory factor. The online safety risks that can have a negative impact on well-being, causing distress and even being ostracised by peers, and thereby increase the chance of social isolation were seen as:

Contact risks

Participating in risky peer or personal communication, cyberbullying and sexual grooming. Many autistic children find social interaction and communication easier online, but do they spend longer on social media platforms? An autistic child is seen as twice as likely to be a victim of cyberbullying or sexual exploitation than their non-autistic peers.

Content risks

Being a recipient of inappropriate communication and interpreting it as such, including phishing and harmful malware download.

As many autistic children are visual learners, some research suggests that autistic children may use these skills to successfully recognise and discriminate nefarious phishing and hacking tactics.

Conduct risks

Being the perpetrator of the contact or content risks, thus leaving the child open to negative consequences, poorer well-being and including peer and community rejection.

RESEARCH METHODS

Length of time spent onscreen is not the only variable worth considering when evaluating or investigating online vulnerability. Researchers felt that safety, well-being, risk management and parental self-efficacy must also be addressed. Thus, a parental online-safety survey comprising parents of sixty-three autistic children and forty-one non-autistic children, aged 6–22 years, was conducted for comparison purposes.

The questionnaire covered:

1. Reasons for online device use
2. Child online-safety awareness
3. Child and parent online-safety risk management, including the Strengths and Difficulty Questionnaire (SDQ) covering:
 - a. emotional symptoms
 - b. conduct problems
 - c. hyperactivity/inattention
 - d. peer relationships
 - e. prosocial behaviour
4. Child well-being
5. Parental self-efficacy

RESEARCH FINDINGS

This current research found that autistic children, in comparison to their non-autistic peers, are more vulnerable to online risks.

- Autistic children were exposed to greater numbers of online safety risks and made significantly more unauthorised online purchases than others, which may have been dictated by their special interests, thus displaying a level of susceptibility.
- It was also noted that as autistic children spent the majority of their time watching television programmes, films and playing video games rather than with direct social media interaction, and so there were fewer opportunities where they could experience sexual exploitation or cyberbullying.
- Autistic children carried out fewer online-safety risk-management activities such as blocking content from individuals and unsolicited sites (five times less likely) and were significantly less likely (eight times) to protect personal information in comparison to their non-autistic peers.
- Parents of autistic children also carried out fewer online-safety management strategies and had lower levels of parental self-efficacy when their children were exposed to online safety risks.
- When autistic children experienced safety difficulties online, it was found that that their SDQ scores and well-being scores were significantly lower than non-autistic peers experiencing the same influence.

IMPLICATIONS FOR PRACTICE (by the authors)

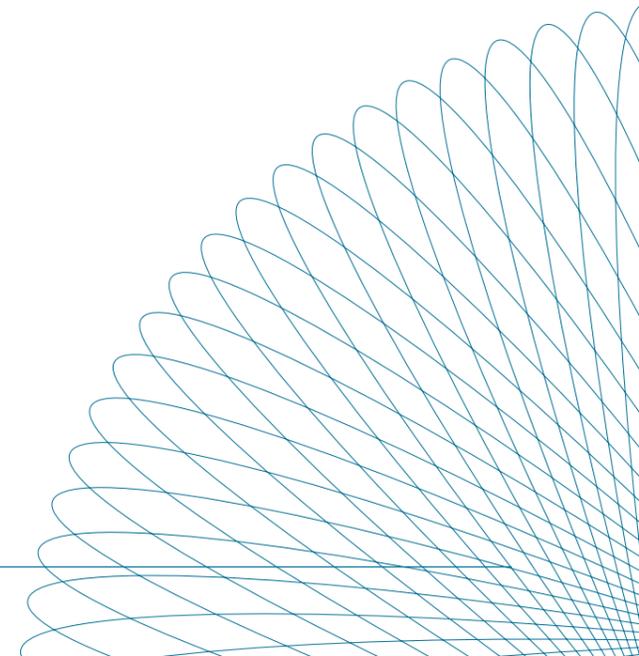
As autistic children have been found to be more vulnerable to online risks, it is therefore necessary to safeguard against those risks.

- Recognise the child's vulnerability to spending a great deal of money on items relating to their special interests and teach the child and parents ways of managing the environment and putting in place barriers where money cannot be taken without their knowledge.
- Teach children and adults about the various platforms available and what can be experienced on each. This would include offering insight to appropriate digital security tools, which allows for a greater sense of well-being for parents and children. Safety rules may include spending a higher proportion of time on watching television programmes and films and playing video games than being on social media platforms where they may be more vulnerable and susceptible to abuse.
- Teach children and their parents how to block unwarranted interactions from other people and unsolicited websites, and that although it may appear daunting it is quite easy and advisable. As the research found that autistic children used the internet for other things rather than social media, they may not simply have the experience or confidence of blocking others.
- As well as learning how to block others, children and parents need to be specifically taught how to protect their personal information as this can lead to greater levels of confidence, independence and ultimately well-being when using this media form.

- Restricting screen time will not necessarily protect children from online risks, but accruing online-safety knowledge, interventions and confidence for both parents and children allows the child to explore and experience their special interest in a secure and protected manner.

Full Reference

Macmillan, K., Berg, T., Just, M. and Stewart, M., (2020). Are autistic children more vulnerable online? Relating autism to online safety, child wellbeing and parental risk management. *Proceedings of the 11th Nordic Conference on Human-Computer Interaction: Shaping Experiences, Shaping Society*. Article 14, pp. 1–11.



EFFECTS OF FUNCTIONAL COMMUNICATION TRAINING USING GOTALKNOW™ IPAD® APPLICATION ON CHALLENGING BEHAVIOR OF CHILDREN WITH AUTISM SPECTRUM

BACKGROUND

Language and communication deficits are among the main characteristics of children diagnosed with autism and can often appear as challenging behaviours such as aggression, destruction of property and self-injury. Research has indicated that 30 per cent of children with autism never develop functional spoken language. Research also reports that 50 per cent of children with autism who have behaviours deemed challenging are using them as a form of communication. Furthermore, the learning of children who exhibit such types of behaviour, i.e. causing harm to themselves and others, can be impeded and they may find it more difficult to integrate in school and community and are also at risk of long-term inpatient care. In recognition of the effects of such behaviours, the importance of treating such behaviours in early childhood is not surprising.

RESEARCH AIMS

The aim of this study was to investigate the effects of a functional communication training intervention that consisted of a systematic prompting and natural reinforcement on behaviours of concern of two children with autism.

RESEARCH METHOD

Institutional Review Board approval was obtained from a local university before commencing this study. Two children, one aged five years the other aged six years participated having met the following inclusion criteria:

1. A medical or educational diagnosis of autism.
2. No functional speech or limited speech skills that were defined as non-functional.
3. Engaged in behaviours of concern such as aggressive, self-injurious behaviour or disruptive behaviour.
4. No prior history of using an iPad as a speech-generating device (SGD).

The children were taught to request preferred stimuli through the GoTalkNow™.

RESEARCH FINDINGS

Findings reported a functional relation between functional communication training with the use of the GoTalk Now™ application and decreased levels of behaviours of concern.

Both children displayed decreases in behaviours of concern when the intervention was in place and required minimal prompting. One of the children in fact demonstrated zero levels of behaviours of concern while the other child displayed a less substantial decrease of behaviours of concern during intervention phases.

The study did, however, also find that while one child reached a zero level of behaviours of concern in the second intervention stage, the other child did not, and continued to engage in some behaviours of concern during the intervention phase by keeping their hand on a preferred object and pulling it towards themselves at the same time as they touched and activated the corresponding icon on the iPad.

IMPLICATIONS FOR PRACTICE (by the authors)

There still remains the need for future research to explore the generalisability of the use of SGDs across different communicative partners. As this study was conducted over a short time frame, maintenance data was not collected.

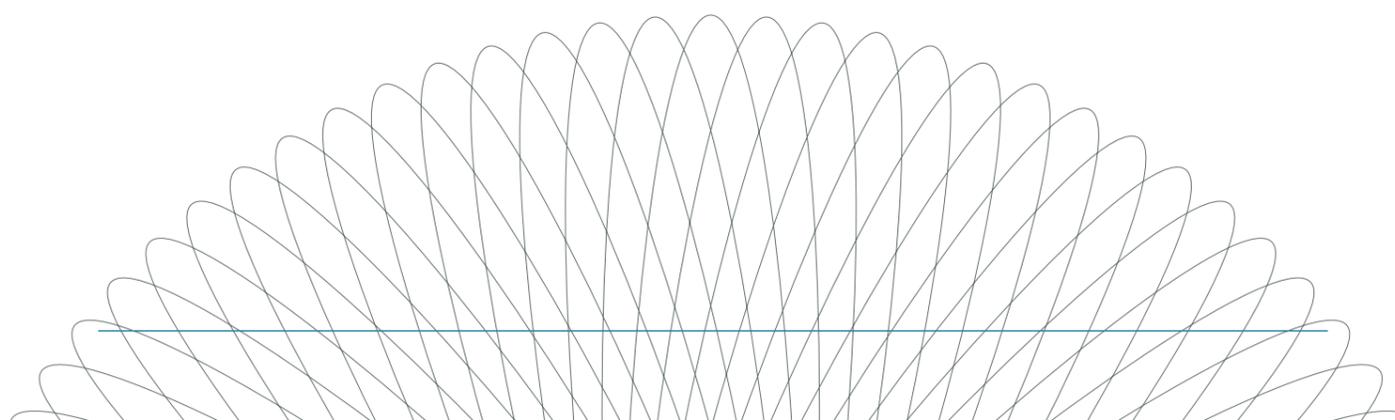
Future research should examine whether the use of SGDs to request items continues after termination of the intervention and whether challenging behaviours maintain at zero or low levels.

To address the issue of touching and activating corresponding icons on the iPad, future research should incorporate differential reinforcement procedures whereby touching and activating the corresponding icon on the iPad without engaging in challenging behaviour produces reinforcement, while touching and activating the iPad without engaging in a behaviour would produce no reinforcement.

This study was conducted by a researcher. The social validity of a single case study could be enhanced in future if it were conducted by a teacher and/or parent.

Full Reference

Muharib, R., Correa, V.I., Wood, C.L. and Haughney, K.L., (2019). Effects of functional communication training using GoTalkNow™ iPad® application on challenging behavior of children with autism spectrum. *Journal of Special Education Technology*. 34(2), pp. 71–79.



SOCIAL MEDIA AND AUTISM SPECTRUM CONDITIONS

BACKGROUND

Social media incorporates a range of online tools and platforms, including Facebook, Instagram, Twitter and messaging services, and has changed the way people interact with each other. Moreau identified the many advantages and disadvantages of using social media, with the main advantages being ease of access, users not being limited by geography, the opportunity to connect with large numbers of people and that most services are free to use. The list of disadvantages highlights the lack of privacy, security issues, the risk of bullying and exploitation and the cost of maintaining devices required to access social media services.

The risks of cyberbullying, exploitation, trolling and grooming are particularly high for more vulnerable members of the community.

RESEARCH AIMS

The author is using this article to highlight the benefits and risks for autistic people using social media, and the role of the nurse in supporting safe use of online tools and platforms.

RESEARCH METHODS

The author highlights the benefits of social media use for those with autism, and then examines the risk of hate crimes and incidents, drawing on information from relevant literature.

RESEARCH FINDINGS

The key points made in the article were:

- Social media can be a useful tool to support people with autism in communicating with others and in developing friendships. Online interactions remove the demands associated with face-to-face communication, such as interpreting facial expressions and body language.
- Autistic people can interact with others without having to go to social environments that can often feel overwhelming.
- Friendships can be initiated online, and then continued by meeting face-to-face once people feel ready.
- It is possible to connect to people globally and it is relatively easy to connect to people with mutual interests and hobbies. People with autism can join online groups connected to their specific interests and passions.
- Autism does not automatically make people vulnerable to cyberbullying and exploitation, but it does increase the risk.
- The risks of using social media include bullying, trolling, grooming, identity theft and exposure to inappropriate content.
- People with autism are at risk of hate crimes and hate incidents online. Hate crimes are defined as crimes targeted at a person because of their religion, ethnicity, disability or sexual orientation. Hate incidents are non-criminal activities motivated by prejudice against a person. Such incidents online may include bullying, and while they may not be criminal acts, they can be threatening and cause high levels of stress.

- There is very little reliable data and research on the risks experienced by autistic people using social media, but their social and communication differences are likely to make them more vulnerable to bullying and hate incidents/crimes.

IMPLICATIONS FOR PRACTICE (by the authors)

- Autistic people may need education and support in safe use of the internet and social media.
- Nurses working with people with autism should fully understand the advantages and disadvantages of social media use, and how it can be useful when there are differences in social communication.
- People with autism can be both victims or perpetrators of bullying and hate incidents. If they are the perpetrator, they need to be supported in understanding the consequences of their actions on others, and how to change their online behaviours.
- Nurses and other health professionals can assist in safe surfing projects, which may be set up and run by autistic people.
- Mencap suggests the following modules for safe surfing projects:

1. The advantages of using social media.
2. What online abuse is.
3. Personal privacy and who can see the post.
4. Breaking the law and its consequences.
5. Dealing with upsetting content.
6. The social and mental health and wellbeing of those who use social media.
7. Keeping social media users safe both on- and offline.
8. Managing online relationships.
9. Noticing when online activity is not helpful.
10. Maintaining online–offline balance.
11. Avoiding potentially harmful social media sites and content, such as the dark web.
12. Getting further support and useful contacts.

Full Reference

Barber, C., (2017). Social media and autism spectrum conditions. *Practice Nursing*. 28(7), pp. 292–298.

SOCIAL MEDIA USE, FRIENDSHIP QUALITY AND THE MODERATING ROLE OF ANXIETY IN ADOLESCENTS WITH AUTISM SPECTRUM DISORDER

BACKGROUND

Adolescents with autism often experience difficulties with social interaction, and research reports that they tend to have less friends than that of their typically developing peers. Increasing the capacity for social interaction among this group of youths is considered important because social media can facilitate social engagement. Social media platforms are well-suited for adolescents as they can capitalise upon the unique features of social media, which require less decoding of complex social information.

RESEARCH AIMS

The aim of this study was to assess social media use, anxiety and friendship quality in forty-four adolescents with autism compared to a controlled group of fifty-six adolescents who did not have autism.

RESEARCH METHODS

This study was a cross-sectional study consisting of one hundred participants aged 12–19 years old with a mean age of fifteen years. Among the one hundred participants, forty-four had a diagnosis of autism. Recruitment involved approaching youths who were currently studying or receiving clinical treatment at the Yale Child Study Center and providing them with information about the study and an opportunity to participate. All participants had a standard level of intelligence and were currently enrolled in school and lived with a parent/guardian who also completed measures of the study. The remaining fifty-six youths who did not have a diagnosis of autism were also recruited from clinical settings at Yale Child Study Center and had a diverse range of anxiety symptoms.

The study was approved by the University of Yale Human Subjects Committee. Prior to participation, parents/guardians of youths under eighteen years old provided signed informed consent and adolescents provided informed assent. Participants over eighteen years of age provided signed informed consent. A cross-sectional design was employed involving the administration of rating scales to the adolescents in both groups as well as to their parents/guardians. Data on time spent using social media was obtained from the adolescent and demographic information was gleaned from parents/guardians.

Data was collected at one time point with adolescents and parents/guardians completing rating scales, with a subsample (n=24) also providing data on their social media use one week later. All assessments were completed in the presence of either the primary investigator or a research assistant and received a monetary incentive.

The Friendship Questionnaire (FQ)

This assessment was used to measure friendship quality using both parent and child versions. Each version includes a subscale for positive and negative interactions and consists of thirty-six items.

Multidimensional Anxiety Scale for Children 2nd Edition (MASC-2)

Levels of anxiety symptoms were measured using the fifty items within the parent and child versions of MASC-2. This scale includes items such as 'My child feels tense or uptight' on the parent version and 'I worry about other people laughing at me' in the child version. Both parents and children were asked to rate how often the statement is true on a Likert scale from 0 (never) to 3 (often).

Social Media Experience Scale (SMES)

The SMES was specifically developed for this study. It consists of eleven items designed to have two subscales, one which assesses social media anxiety (SMES-Anxiety) and one which assesses social media utility (SMES-Utility). Items within this measure were derived from a previous qualitative study of the social media experience in a clinical population. The subscale of the social media utility aspect of the measurement was chosen to measure active engagement on social media rather than measurement of time spent, which may also represent passive observation of social media platforms.

To assess the moderating role of youth anxiety on the relation between social media use and friendship quality, a multiple regression analysis using product terms was used. The parent report of the FQ to assess friendship, parent-rated MASC-2 to assess youth anxiety and youth-rated social media using the SMES-Utility subscale. A second set of analysis was repeated using the child versions of friendship quality and anxiety and total time spent using social media.

FINDINGS

The authors reported that youths with autism were significantly less likely to use Facebook. Anxiety scores for both parent and child ratings were significantly higher in the non-autism sample (which also included youths recruited from an anxiety programme) than the autism sample. Scores from friendship quality according to both parent and child ratings were higher in the non-autism sample than with those with autism.

This study found that social media use was significantly associated with high friendship quality in adolescents with autism, which was moderated by the adolescents' anxiety levels. The

authors reported that this association with better-quality friendships is not seen in adolescents without autism. There were no associations found between social media use, anxiety and friendship quality among youths without autism. Social media was further found to be a potential way for adolescents with autism without significant levels of anxiety to improve the quality of their friendships.

IMPLICATIONS FOR PRACTICE (by the authors)

An opportunity exists to broaden the opportunities for social engagement for adolescents with autism through effective use of social media.

Clinicians working with youths who have autism should carefully consider for both baseline anxiety and anxiety in the course of social media use. The authors have suggested that the SMES is a promising instrument for assessing social media anxiety in a clinical setting and for identifying targets for possible intervention.

Future work should seek to develop interventions that support adolescents with autism not only to spend time on social media platforms but to identify ways to be effectively and actively engaged.

Full Reference

van Schalkwyk, G.I., Marin, C.E., Ortiz, M., Rolison, M., Qayyum, Z., McPartland, J.C., Lebowitz, E.R., Volkmar, F.R. and Silverman, W.K., (2017). Social media use, friendship quality, and the moderating role of anxiety in adolescents with autism spectrum disorder. *Journal of Autism and Developmental Disorders*. 47(9), pp. 2805–2813.

HOW STUDENTS WITH AUTISM SPECTRUM CONDITIONS UNDERSTAND TRADITIONAL BULLYING AND CYBERBULLYING

BACKGROUND

In this paper the authors focus on two categories of bullying:

1. Traditional bullying that takes the form of physical (e.g. hitting), verbal (e.g. nasty teasing) or social (e.g. social exclusion).
2. Cyberbullying, which refers to electronic communication technologies being used to contact a person who cannot easily defend themselves. It encompasses text-based name-calling, cyberstalking or sending humiliating photos or video messages.

According to the authors, even though there are similarities between the two, the use of the long-established traditional bullying criteria to identify cyberbullying is not appropriate. They provide examples to explain that in traditional bullying aggressive behaviour directed to different people at different times is not recognised as being repetitive, whereas with cyberbullying a single cyber-act of aggressive behaviour, such as posting an embarrassing picture online or sending it to multiple recipients, can lead to repeated humiliation for a person over time.

Another example is anonymity. In traditional bullying the aggressive behaviour takes place in face-to-face situations; therefore the perpetrator is not anonymous. Whereas the perpetrator of cyberbullying often perceives themselves to be anonymous because they say and do things they would not say or do in face-to-face situations.

While bullying is a significant problem for all students, the authors cite previous studies that found autistic students are at increased risk of traditional bullying. To the authors knowledge, to date, no research focuses on cyberbullying. Furthermore, existing studies rely on data from adults due to the belief that autistic students may not have a clear understanding of bullying because of the nature of autism. As this restricts

understanding of traditional and cyberbullying from the autistic student's perspective, this study was conducted to close this gap.

RESEARCH AIMS

This study had three aims:

1. To identify how accurately autistic students and neurotypical students understand traditional bullying and to identify if there are differences in understanding traditional bullying between the two groups.
2. To identify how accurately autistic students and neurotypical students understand cyberbullying and to identify if there are differences in understanding traditional bullying between the two groups.
3. To identify if students' age, gender and autism status are associated with an accurate understanding of traditional bullying and cyberbullying.

RESEARCH METHODS

Two groups of participants took part in this study: autistic students and neurotypical students.

- The families of 613 autistic students who received outreach school advisory services from Autism Queensland in the two years prior to this study were contacted by post by the authors. They were sent packages containing introductory and participant information about this study along with a set of child and parent questionnaires and twenty vignettes (ten possible traditional bullying situations and ten possible cyberbullying situations) designed to investigate understanding of traditional bullying and cyberbullying. Seventeen per cent of recipients responded and subsequently eighty-nine autistic students (78 male, 11 female) aged 11–16 years took part in this study.

- The neurotypical student participants (3122) originated from twenty-nine different schools in three Australian states. The neurotypical students were sent questionnaires for completion in school. When the questionnaires were returned to the authors, they matched for age and state of residency. In total 490 neurotypical students participated in this study. The authors used linear multiple regression analyses to overcome the limitation of unequal sample sizes.

Prior to viewing the vignettes, brief definitions and examples of traditional and cyberbullying in the introductory section of the questionnaire were explored by families or school to facilitate participants forming their own judgements. Each vignette was then presented with a question that required a 'Yes' or 'No' response to discern whether or not the participant identified traditional bullying and cyberbullying as established by bullying experts.

Chi-square tests were conducted to examine whether the autistic students and neurotypical students showed differences in their understanding. Two linear multiple regression analyses were also conducted to determine if the autistic students' status, gender and age predicted their understanding of traditional bullying and cyberbullying.

RESEARCH FINDINGS

Overall, autistic students made more accurate responses than inaccurate ones when viewing vignettes on traditional bullying. The exception was Vignette 1 (physical fight) but the authors surmised that understanding Vignette 1 was more difficult for autistic students to understand.

Autistic students demonstrated sound understanding of what constitutes cyberbullying with higher accuracy rates for all cyberbullying vignettes than neurotypical students.

Findings of this study suggest that understanding of cyberbullying is significantly associated with students' age regardless of autism status and that older students rather than younger students are more likely to interpret cyberbullying accurately. This may be because older students are more likely to be involved in social media and so it is to be anticipated that their understanding will be more accurate.

IMPLICATIONS FOR PRACTICE (by the authors)

These findings highlight the ability of autistic students to understand bullying.

The findings of this study are in line with prior research that found that autistic students are more able to understand traditional bullying and cyberbullying than their neurotypical peers.

The understanding or misunderstanding of traditional bullying and cyberbullying reported in this study is based on the students' interpretations of bullying vignettes, which were simulations of real events. While vignettes are useful for capturing perceptions, the understanding of bullying for autistic students may differ in real-life situations.

In this study, only data concerning autistic students attending inclusive schools was analysed. Therefore the findings cannot be generalised to autistic students with coexisting intellectual difficulties and those who attend special schools.

Full Reference

Hwang, Y.S., Dillon-Wallace, J., Campbell, M., Ashburner, J., Saggars, B., Carrington, S. and Hand, K., (2018). How students with autism spectrum conditions understand traditional bullying and cyberbullying. *International Journal of Inclusive Education*. 22(4), pp. 391–408.

SOCIAL SKILLS TRAINING FOR ADOLESCENTS WITH AUTISM SPECTRUM DISORDER USING FACEBOOK (PROJECT REX CONNECT): A SURVEY STUDY

BACKGROUND

The researchers highlighted that autistic teenagers benefit from Social Skills Training (SST); however, access to traditionally run programmes that are face to face is limited. This may impact on the successful transition to adult life. The researchers continue that teenagers with autism engage with social media platforms, such as Facebook, for longer periods of time than their neurotypical peers. Facebook has been successfully used in the past as a platform for providing treatment for mental health conditions. Given these findings, in addition to teenagers' willingness to engage with the online platform led the researchers to hypothesise that utilising Facebook to deliver SST programmes would be feasible and favourable in terms of clinical outcomes.

RESEARCH AIMS

The study aimed to explore the effectiveness and accessibility of Facebook as a platform to deliver SST to teenagers with autism.

RESEARCH METHODS

Participants were recruited through Project Rex, an SST programme of the Medical University of South Carolina. Parents of teenagers known to the service were asked to complete a survey to indicate whether they would be interested in their child receiving a web-based programme aimed at building social skills and supporting friendships. Six male participants were recruited with an age range of 12–19 years old. All participants had a diagnosis of ASD and their IQs were all within normal range.

Online pre- and post-treatment questionnaires were administered, which included the Social Responsiveness Scale – 2 (SRS-2), the Social Skills Improvement System Rating System (SSIS-RS), the Project Rex Parent Survey, which measures

teenagers use of social skills in the last two weeks, and the Project Rex Connect Participants Survey, aimed at finding participants' opinions about the project.

Participants had previously met during a live Project Rex SST and therefore were acquainted with each other. Participants were added to a closed Facebook group and a number of privacy settings were used to ensure confidentiality and appropriate online communication. For example, participants were instructed on what privacy settings to be used and were asked to make an anonymous username. Participants could not add people into the group, and a training session of appropriate use of the group took place with parents and teenagers.

The programme lasted eight weeks during which shared topics were posted to the private group that aimed to encourage the use of social skills taught during the live Project Rex SST. Topics included starting a conversation, exchanging information with peers and giving compliments. Participants were encouraged to discuss each topic and ask questions. Moreover, to ensure online social engagement, participants were encouraged to access Facebook for at least fifteen minutes each day for a minimum of six days per week.

RESEARCH FINDINGS

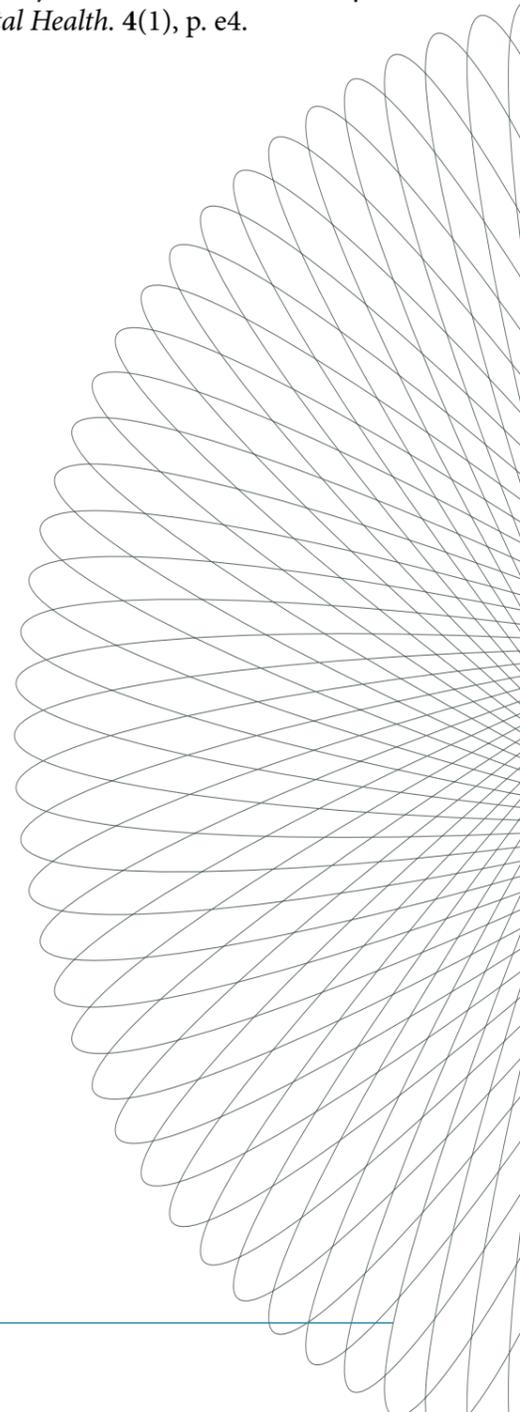
Following completion of the programme, results indicated that there were no statistically significant differences in pre- and post-treatment measures according to parent and participant measures. Overall, 80–100 per cent (n=5) were 'satisfied' with the programme, while one participant did not complete the participant survey. There were no adverse events or negative online interactions between participants, and all completed the programme materials.

IMPLICATIONS FOR PRACTICE (by the authors)

- The researchers outlined that the small sample size limited outcome measures in the study. Nevertheless, as the first study to explore the use of Facebook for SST for adolescents, it demonstrates the feasibility and participants' satisfaction with this modality. However, the clinical effectiveness remains unclear.
- The researchers highlighted that using a social media platform may be an effective way of reaching young people who may not have access to a face-to-face social skills programme.
- The researchers made a number of observations about the participants' online interactions. For example, the online platform did not mask the participants' social communication challenges. For example, at times participants engaged in one-sided dialogue and posted content that was solely of interest to that individual. Such observations could be used to inform future programme content.
- Several participants requested a gaming component to the group, which highlights the importance of incorporating specific interests to increase enjoyment and support interactions.
- The researchers outlined that the privacy settings used in the study may have restricted practice of online engagement; however, they were necessary to provide a safe and controlled environment for online communication. Given the risk of posting material publicly online, autistic teenagers may benefit from a closed social networking platform that provides additional privacy and user-contribution support.

Full Reference

Gwynette, M.F., Morriss, D., Warren, N., Truelove, J., Warthen, J., Ross, C.P., Mood, G., Snook, C.A. and Borckardt, J., (2017). Social skills training for adolescents with autism spectrum disorder using Facebook (Project Rex Connect): a survey study. *JMIR Mental Health*. 4(1), p. e4.



CONCLUSION

Social media has changed the way in which people interact. For many autistic children and young people (CYP), technology is often viewed as a leisure activity. Furthermore, many research studies give recognition to the benefits of technology, which include supporting development, learning, communication and building friendships (that are often of a high quality) and opportunities to connect with greater numbers of people from across the globe. For caregivers, the use of the internet and social media further provides them with the opportunity to access support and information and a way of connecting with others who have shared experiences.

Despite these benefits, research also highlights that it may be challenging for autistic children to find an alternative means of leisure that involves removing themselves from technical devices and in many instances a focused interest. This raises questions on whether autistic CYP are managing the safety risks they could be exposed to.

Key points extracted from the articles included within this Bulletin are provided below, giving practical advice in relation to online safety.

- Autistic adolescents frequently engage in watching television programmes such as cartoons or news programmes. Often these activities are conducted alone or in the presence of a parent. Websites containing information about video games and anime as well as video games that involve killing and shooting are also either played alone or with peers.
- Understanding the difference between traditional bullying and cyberbullying is important for all young people when engaging in online activities.

- Restricting screen time may not necessarily protect CYP from online risks.
- Autism does not automatically make people vulnerable to cyberbullying and exploitation, but they may be exposed to greater online risks such as making significantly more unauthorised online purchases than non-autistic children, bullying, trolling, grooming, identity theft, exposure to inappropriate content and hate crimes due to their social and communication differences.
- Some autistic people may also be both victims and perpetrators of bullying and hate incidents.
- Autistic CYP tend to conduct fewer online-safety management activities, e.g. blocking content from individuals and unsolicited sites, and may not protect their personal information compared to their non-autistic peers.
- When experiencing safety difficulties online, the well-being of the autistic child can often be compromised.
- Research has reported that parents of autistic children carry out fewer online-safety management strategies.
- There are opportunities to broaden social engagement, particularly for adolescents, through the effective use of social media. Engaging in social skills training, for example, via a social medium such as Facebook may be beneficial especially for those who may not have access to face-to-face social programmes. While utilising an app such as GoTalkNow™ may impact positively on behaviours of concern.

- Accruing online-safety knowledge and interventions can help build confidence in the young person and their caregivers allowing the CYP to safely explore and experience their interests in a secure and protected manner.

As autistic CYP have been identified to be more vulnerable to online risks, it is necessary to put strategies in place to protect them. Below are some key strategies as highlighted within this Bulletin.

- To allow parents and children to have a greater sense of well-being, it is necessary to teach the child and their supporting adult about the various platforms available to them and what can be experienced from each, e.g. exploring digital security tools available such as privacy settings. Maintaining an online-offline balance may be helpful. Clinicians should also consider the CYP's anxiety levels prior to and in the course of their social media use. Interventions to encourage the young person how to be effectively and actively engaged outside their social media use should further be explored.
- To prevent autistic children and young people spending significant amounts of money on items related to their focused interest, it is important to teach parents ways to manage the environment by putting in place barriers so money cannot be utilised without their prior knowledge.
- Teaching the CYP and their caregivers how to block unwarranted interactions from other people and unsolicited websites and how to protect their personal information is important.
- When introducing apps and technology it is important to teach the young person how to use the app. Initial communication may need to be supported and modelled.

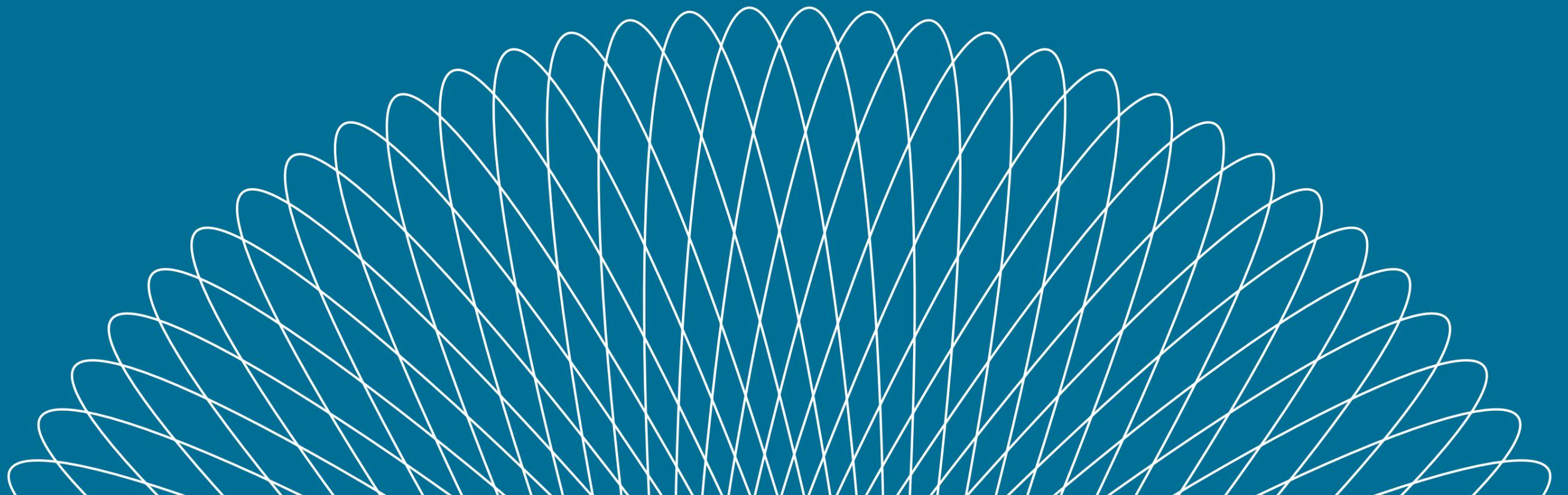
- For those children and young people who have difficulties with reading, access to content and how to use a device could be explained through activating the voice-control function.
- Visual supports, such as video modelling or an activity task system, may also be required to support access to apps or devices.
- For those who may be perpetrators of cyberbullying and hate incidents it is important to help them understand issues around breaking the law and the consequences of their actions on others and how they can change their online actions.
- There are many websites and resources available providing tips and advice on how to limit exposure to inappropriate content.

As highlighted by Kirsty Macmillan, it is important not to put too much emphasis on the amount of screen time a young person is engaged in but on how they are spending their time online, as this may mean that we miss out on potential risk factors. Supporting the young person to transition to other activities while appreciating that shared interests online can help autistic CYP to enjoy interacting with others without the constraints of traditional face-to-face social interactions may be deemed equally important.

YOUR OPINION

The Centre trusts that you have found this Research Bulletin informative. It would be appreciated if you would take a few minutes to provide the Centre with feedback in relation to this bulletin by clicking on the survey link below.

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The Centre's Research and Information Service welcomes any correspondence including suggestions for future Bulletins to: research@middletownautism.com

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