

Executive Summary

Media Use among Adolescents with Autism Spectrum Disorder: Patterns of Use, Associated Factors, and Effects on Development

Melissa H. Kuo¹, Joyce Magill-Evans¹, Lonnie Zwaigenbaum²

¹Department of Occupational Therapy, University of Alberta ²Department of Pediatrics, University of Alberta

Background

Autism spectrum disorder (ASD) is characterized by impairments in social interaction and communication, as well as behavior, interests, and activities that are repetitive and restrictive. The most frequent free-time activities of adolescents with ASD are watching television, playing video games, and using the Internet. For typically developing adolescents, media use has been linked to well-being and personal relationships; in addition, parental involvement plays an important role in shaping responses to media. Little is known about the media-use patterns and the effects of various types of media on adolescents with ASD. Parents' roles in influencing their ASD teen's media use have not been explored although management of media use is known to cause stress within the family. A better understanding of media use patterns and parents' perspectives and mediating strategies may help other parents assess their adolescents' media use, identify effective monitoring strategies, lessen stress within families, and improve family well-being.

Purpose

This study addressed media use among adolescents with ASD, extending previously reported research. It also looked at the associations between media use and adolescents' well-being and other relevant outcomes including autism symptoms, behaviour problems, psychological well-being, parent-child relationships, and friendships. Parents' involvement and their perspectives about their adolescent's media use were investigated. Media use was defined as television viewing, Internet use, and video-game playing (including games played with a computer and games played with video game consoles such as PlayStation 3, Xbox, Nintendo Wii, and Nintendo DS). Parental strategies for mediating television viewing and video-game playing were characterized over a one year period.

Methods

Thirty-three adolescents with ASD (ages 12 through 19) and their parents participated. Adolescents completed questionnaires about their feelings of depression, loneliness, and their quality of relationships with parents and friends. They were also interviewed for their perspectives on social use of the Internet. Parents completed questionnaires that inquired about their adolescents' clinical characteristics, family background, and perspectives about their adolescents' media use. They completed media-use diaries to summarize media-use patterns of both the adolescent with ASD and his or her typically developing adolescent sibling if available. Typically developing siblings in the same age range served as a control group. Parents completed a measure of mediation strategies at the initial data collection and again one year later. Longitudinal data was available for parents of 29 adolescents with ASD and 16 siblings.

Key Findings Related to Research Questions

1. How do adolescents with ASD use media (television, video games, and the Internet)?

On average, adolescents spent 2.5 hours (0 – 8 hours) watching television, 2.5 hours (0 – 11 hours) playing video games, and 1.7 hours (0- 7 hours) surfing websites, a total of 5.7 hours of media use per day. The range of time was large with some adolescents spending a large amount of time on these activities while others did not do the activities. Adolescents most frequently watched television with parents, preferring comedy. They most frequently played video games and used the Internet alone. Role-playing and first-person shooting games, and entertainment websites (e.g., YouTube) were the most frequently used genres. Siblings had similar media-use patterns but preferred sports games and social networking websites.

2. What are adolescents with ASD's perspectives of socialization on the Internet?

A majority of participants interacted with people on the Internet either daily or two to three times per week. They were chatting, playing video games with friends (online friends or friends in every day life), as well as leaving and responding comments on other people's webpages (e.g., Facebook, blogs). Most adolescents reported that interacting on the Internet made them feel closer to others. It was easier to communicate and connect with people on the Internet than face-to-face. They had more time to think and felt less pressure without other people around.

3. What are the associations between media use and health outcomes?

Time spent videogaming, playing video games with friends, and using the Internet with friends were positively associated with more positive friendship qualities. Adolescents with ASD who played role-playing games reported more depressive symptoms. Those who visited social networking websites had fewer internalizing symptoms (e.g., depression, anxiety, withdrawal) than those who did not.

4. What are parents' concerns and perceived benefits about the adolescent's media use?

Parents perceived both negative and positive aspects of media activities. Concerns related to TV content, quantity of time spent video gaming, and lack of interest in other activities. Perceived benefits included gaining information, learning social skills and humour, and opportunities for the adolescents to interact with peers.

5. What strategies do parents use to regulate television viewing and video gaming and do they change over time?

Watching television with the adolescent and restricting video game use were the most frequently used approaches for adolescents with ASD. The same was true for siblings. These strategies did not change over time. Parents reported effective strategies that fell into six categories: (1) removing/limiting access to media, (2) setting rules and being consistent, (3) using monitoring software, (4) engaging in media activities with the adolescent, (5) keeping the adolescent busy doing other activities, and (6) using media as a motivator/removal as a punishment. Parents emphasized being consistent with the rules and indicating consequences for ignoring the rules.

6. What factors are associated with parental stress related to management of media use?

About half of the parents reported feeling stressed in relation to managing media use, particularly video game playing. Most parents reported conflicts with their teens about videogaming, with negative effects on their relationship. Other factors that contributed to their stress included adolescents' obsession with videogaming, unproductive use of time due to prolonged gaming, and negative emotions (e.g., moody, irritable) when asked to stop playing.

Implications and Recommendations

In this study, adolescents with ASD and their siblings had similar media-use patterns, in terms of amount of time and companions. However, their content preferences were different. Adolescents with ASD may use role-playing games for stress release, excitement and challenge, or escape from reality. These types of games may satisfy unmet needs in real life, or allow them to do things they dare not to do in real life. The well-being of adolescents with ASD who play role-playing games may need to be monitored, given the positive association between role-playing videogaming and depressive symptoms. The adolescents' attention to details and strong visual search and discrimination may help them perform well in shooting games and this might motivate frequent engagement in these games.

The Internet can be used as a tool to teach adolescents with ASD social skills, and videogaming may promote socialization with peers. Parents and practitioners may encourage adolescents with ASD to engage in media activities that could provide opportunities to interact with peers, and if needed, teach adolescents the skills to participate in these activities. Additional research is needed to better understand if the social skills learned through online interactions generalize to real life and if relationships established online result in face to face contacts.

Although management of media use can cause stress, parents perceived both negative and positive aspects of the adolescents' media use. Parents and practitioners can use the benefits of media activities to help adolescents with ASD develop needed skills. Future studies can build on this information and systematically create effective ways to incorporate the media activities that have positive influences on youth with ASD, into intervention and training in order to facilitate desired outcomes.

Parents may not need to apply different rules for television viewing and videogaming for their children with and without ASD. However, they may have to be more involved in monitoring and setting clear limits regarding the adolescents with ASD's video gaming. Restricting media usage with specific, consistent rules and clear consequences was the most frequent effective strategy reported by parents. Professionals need to be aware that managing media use may be stressful, and supports may be needed. Mediation strategies may also need to be tailored to the adolescent's needs and parental preferences.