

Autistic children could be the real winners from online games

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The University of Adelaide's Dr Abi Thirumanickam is investigating if online games such as Minecraft could be beneficial for pre-teens on the autism spectrum. Credit: University of Adelaide

Online gaming could be beneficial for pre-teens on the autism spectrum, with new research by the University of Adelaide indicating the popular pastime can help improve social skills and expand friendship networks.

Australian children aged between 10 and 12 recently took part in a small, feasibility study focusing on the easily accessible video game Minecraft. The off-the-shelf game encourages players to work together to build 3D worlds from digital blocks. Consumers with lived experience, including autistic Minecraft players and parents of autistic Minecraft players, were involved in informing the design and implementation of the program.

Participants had the opportunity to play the game in both online and face-to-face settings. The low intensity sessions involved two hours of gaming once a week during the school term, while the high intensity sessions involved two hours of game play three times a week during the school holidays.

"The preliminary findings are very promising with both children and their parents reporting improvements in the participants' social skills and expansion of their social networks," said principal investigator Dr. Abi Thirumanickam from the University of Adelaide's School of Allied Health and Practice.

The most substantial changes were observed in the low-intensity (weekly sessions over 6 weeks of the school term) online and high-intensity (three times a week over the 2-week school term holidays) face-to-face sessions.

"The feedback we received from the participants was that they enjoyed making friends, meeting new people and communicating with others. Social communication is one of the areas where autistic people typically face challenges so this suggests that gaming could be used as another therapy option."

The children's [social skills](#) were assessed using several different measures including questionnaires completed by both participants and their parents, as well as other tools to monitor changes to their social networks.

"While the children would initially start off talking about the game, this then led to other conversations about life away from the game which was really positive to see," said Dr. Thirumanickam.

"We also observed eagerness to continue playing Minecraft beyond the session times. The social aspects of the program even extended outside of the children's participation, with some parents forming connections as well."

Approximately one in 150 Australians are autistic. The developmental condition affects how people engage, interact and respond with the world around them. Characteristics can include differences with social interaction and communication, as well as challenges in processing sensory information.

"Despite some reports regarding differences in gaming styles among children, with several children having more experience with the game than others, overall satisfaction with the program remained high, as indicated by consistent attendance and enthusiasm for continued participation," said Dr. Thirumanickam.

Autism SA was a partner in the research and the project also involved researchers from Flinders University. The [pilot study](#) was supported by the Faculty of Health and Medical Science's Emerging Leaders Development grant in 2022 awarded to Dr. Thirumanickam.

As the industry partner, Autism SA expressed excitement about the early findings of the study.

"Minecraft is a platform that many of our clients engage with and enjoy. We wanted to see if this was something that we could utilize to develop skills in various areas to assist individuals achieve their [personal goals](#)," said Niki Welz, Research, Project and Resources Creative with Autism SA.

Researchers say although the findings are positive, they need to be interpreted with some caution due to the small sample size and high variability.

There are now plans to conduct larger trials of primary school-aged students over 2024 to solidify the findings.

"Gaming provides a natural platform for peer interaction and collaboration through rules, and shared points for conversation. While current research on the use of off-the-shelf games for therapeutic purposes is limited, we hope that further studies will provide a strength-based approach to help autistic pre-teens build friendships and lifelong social competency," said Dr. Thirumanickam.

Provided by University of Adelaide

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