

Objective

To report on the results of a feasibility and pilot-study utilizing Minecraft™ as a basis for group social skills training in latency age children.

Background

Behavioral difficulties are a common reason children are seen at outpatient mental health clinics. Often, regardless of the diagnosis (i.e. social anxiety, autism spectrum, ADHD) social skills training is recommended to parents. Although some manualized social skills handbooks are available, research on efficacy and targeted symptoms is scarce. In addition, access to social skills groups remain limited and anecdotally parents report that getting their children to groups is often met with resistance. In an effort to address the lack of social skills groups and develop a program in which children were excited to come to the sessions, the Bay Area Children's Association (BACA) developed, manualized and tested a group therapy based on the Minecraft™ computer game. Minecraft™, an online video game developed in 2009, is potentially a unique vehicle for delivering social skills training. As of June 2013, Minecraft™ had been purchased by over ten million gamers throughout the world.

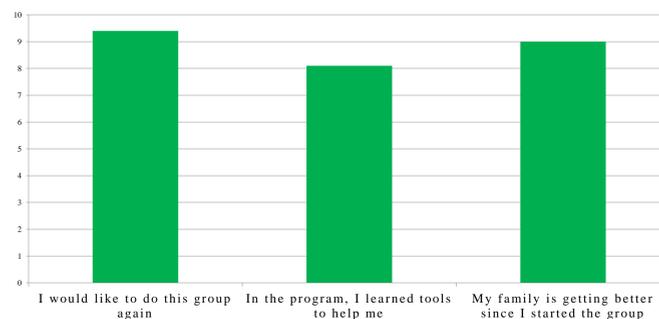
Anticipated problems during the planning phase for the treatment included issues with connectivity and information technology (i.e. computer or network malfunctions during the group), interactions among youth with heterogeneous diagnoses, integrating a parent component to reinforce skills and concerns about improving eye-contact, communication and listening while potentially being distracted by a treatment room filled with electronic devices.

Methods

A ten session group was designed to improve core social skills in elementary age children. There were no restrictions on diagnoses to attend the group. Eight outpatients from a busy, non-profit, multi-disciplinary, evidence-based clinic enrolled in the initial group. Data on social skills was collected by administering the Eyberg Childhood Behavior Inventory (ECBI) at the first parent session and at the conclusion of the ten week group. The ECBI is a well-validated, reliable tool, used for more than thirty years, in which normative samples have shown consistency across age and socio-economic levels. In treatment outcome studies, the ECBI has been a sensitive measure of change in children's conduct-problem behaviors. Manualized session guides were developed to address communication skills including listening, interrupting, tone of voice and appropriate eye contact between parents and children, as well as between group members. Special attention was given with respect to eliminating whining and encouraging more effective ways of responding. Compromise was practiced within the group context as well as emotional awareness and relaxation skills. Each session was comprised of instruction of the above mentioned tools, followed by a role play or similar exercise wherein group members practiced together. The psycho-educational component of each session was limited to fifteen minutes with the rest of the session devoted to skill practice within the virtual "BACAland" Minecraft™ server. Participants were encouraged and redirected to use appropriate social skills and support one another both on-and-off screen. Points were earned for use of good listening, kind behavior and proper communication skills toward a Minecraft™ themed final session celebration. Weekly parent sessions corresponded with the group by one of the facilitators on the principal taught during that session and parents were instructed that following through with parent homework would lead to more favorable outcomes related to desirable behavioral changes in their children. Homework was collected from the parents during a weekly check in wherein they were offered encouragement from other parents and the groups' facilitators.

Results

Participant Satisfaction with Group



N = 8:

We measured satisfaction and willingness to attend future groups by asking three likert-scale age appropriate questions. We compared the participants responses to an average score (5 = neutral) via the Mann-Whitney U test.

"I would like to do this group again":

9.4 ± 1.3, z = 3.4, p < .001

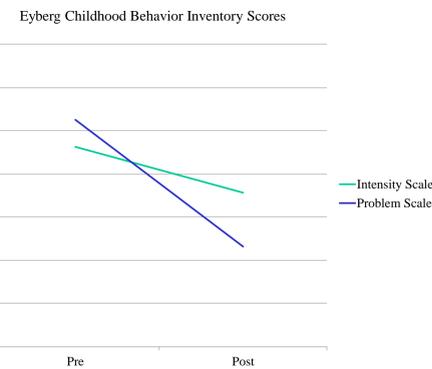
"In the program, I learned tools to help me"

8.1 ± 2.6, z = 1.7, p < .05

"My family is getting better since I started the group"

9.0 ± 1.8, z = 2.5, p < .01

Results - Continued



Due to the small sample size, the study was more to test design, operation, information technology issues and feasibility to deliver social skills training in an environment which included multiple computer systems operating on a closed local-area network (LAN). Nevertheless, results of the ECBI showed that 7 out of 8 (87.5%) of the students had improvement on the ECBI Intensity scale and 6/8 (75%) had improvement on the ECBI problem scale. The before mean value of the ECBI Intensity scale was 64.25 ± 9.9 and the post value was 62.13 ± 10.25 (Mann Whitney U test, z = .53, p=.30). For the problem scale, the pre value was 65.5 ± 9.9 and the post value was 59.63 ± 11.5. (Mann Whitney U test, z = .95, p=.17).



During the therapy sessions, not only were skills reinforced within the context of the group but also within the context of the virtual world they created together. Initially, the latter appeared to be a more comfortable context to practice new skills. In the end, the group spontaneously connected in an appropriate and caring way. Parents shared stories of their children interacting outside of the group and exchanging information. One parent was emotional as she described this exchange as it was the first time her child was received by another in such a positive manner.



Functionally, having eight students on their own, custom-built, Windows 8© personal computers went better than expected. Server connectivity with three additional systems went without problem. One power outage which disrupted a group skill training activity was handled well by the students and ultimately incorporated into the treatment manual as a test of social skills/ problem solving tools that had been taught to and practiced by the children. Word-of-mouth of the group spread without any advertising, resulting in contact from hundreds of other parents and therapists regarding referrals to the group. Issues with insurance reimbursement rates for a technology and provider intensive treatment appear to be the greatest barrier with respect to moving forward with future Minecraft™ social skills groups.

Conclusion

The development and implementation of a ten week, Minecraft™ based social skills group for elementary school children was successful. Overall, satisfaction of the group from the participants was high, parent rating of behaviors showed trends in the proper direction and concerns regarding technological barriers to completing session topics/skills training did not occur. Engagement of the children and positive feelings about attending each group support the idea of using this unique technology to engage patients in treatment. This pilot study indicates the need for a larger randomized-control trial to further explore the overall benefit. BACA plans to alter the manual to include groups' specific for middle-school and high-school students. Practical reimbursement and cost issues for a technology heavy group will likely need to be addressed before other clinics can adopt the protocol.

References

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