

The Use of Theatre to Develop Social and Communication Behaviors for Students with Autism Spectrum Disorders: A Preliminary Investigation

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F Y W Y] j Y X' X U h Y: September 18, 2015, 5 W W Y d h Y X' X U h Y: November 04, 2015, D i V'] g \ Y X' X U h Y: November 05, 2015

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and playwright who is also the artist-in-residence at the school the students attend. He teaches drama at that school.

Content of sessions during the 10 week program: The theatre program was designed to help students learn about scripts, the rehearsal process, costume design, and scenery construction, as well as to prepare for a final performance. Drama activities, exercises to help students be creative and interactive, were included in the theatre program. The sole focus of the program was on the process of creating theatre. Social skills and functioning were not specifically targeted. The first session was conducted at the theatre; students toured the theatre building and learned about the scene shop, costume shop, and main stage. Students were then introduced to the story and the script; discussion focused on the content of the story. Students received a script and their assigned role (all had a speaking part on stage), and were led through an initial reading of the script. Sessions 2-3 were conducted at the school; students discussed the meaning of words, the content of the story, and the characters. Students were encouraged to figure out what their characters wanted, the means by which characters got what they wanted, and why characters behaved the way they did. These sessions focused on understanding the motivation and perspective of the characters, the meaning of the words used by the characters, and the overall story content. Sessions 4-5 were at the theatre and involved students in making props, construction of scenery, and staging the play. Leaders provided specific instructions on blocking, body-space relationships, voice projection, clear articulation, and cuing. Students learned terminology associated with theatrical productions such as stage right and stage left. Students practiced the script on stage and were expected to have the script mostly memorized. During sessions 6-9, at the school, students discussed aspects of the play and were coached on their roles, including suggestions for improvement. Students were led in a dialogue with specific instructions to give a compliment about another person's performance. The tenth and last session culminated in the production, scenes from *The Adventures of Tom Sawyer*, performed by the theatre participants in front of an actual live audience (not only parents and friends). A reception provided a celebratory event upon the conclusion of the program. See Appendix A for more details about the sessions.

At times, some students found it difficult to participate productively in the theatre activities. Students who had difficulty or became disruptive were removed from the activity and were able to return when their behavior was under control. Removal from the activity involved taking a walk and talking through the problem with one of the leaders or a supervisor from the school who was also present. Usually disruption occurred with non-structured activities, such as making scenery or props. In the scene shop, students wore earplugs because of the loud equipment noise (standard practice in the theatre). At the beginning of the 10-week program there were more occurrences of disruptive behavior than at the end; it was observed that students

did not want to be removed from activities and were able to keep their own behavior in line with expectations.

Measurement of Social Behaviors

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As indicated, the inter-rater reliabilities were acceptably high, with all subscales having inter-rater reliability indices above 0.70. The results reported in this paper were calculated using only the ratings of Rater A, who was blind to participant condition and not otherwise involved in this study.

Table 1 also presents the internal consistency (Cronbach's alpha) reliabilities for the four subscales as well as the number of items that comprised each subscale. As shown, alpha reliabilities were sufficiently high, with all internal consistency measures at 0.80 or above.

The RSB was used to rate the behaviors of the eight participants and the eight students in the control group at two different times, prior to beginning the theatre experience (Time 1) and immediately following the theatre experience (Time 2).

Results

Each of the four subscales from the RSB was analyzed in a 2 (Condition: Theatre Participants versus Controls) X 2 (Time: Prior to the theatre experience and immediately following) mixed design ANOVA with Condition as a between-subjects factor and Time as a within-subjects factor. The results for each subscale are discussed in turn below.

The 2 X 2 mixed design ANOVA for the Language Use and Conversation subscale revealed a significant effect of Condition ($F(1,14)=16.53, p=0.001, \eta^2=0.54$) where theatre participants showed higher levels of Language Use and Conversation ($M=4.7, SEM=0.18$) than non-participants ($M=3.6, SEM=0.18$). Neither Time nor the Condition by Time interaction was significant. These results are depicted in Figure 1.

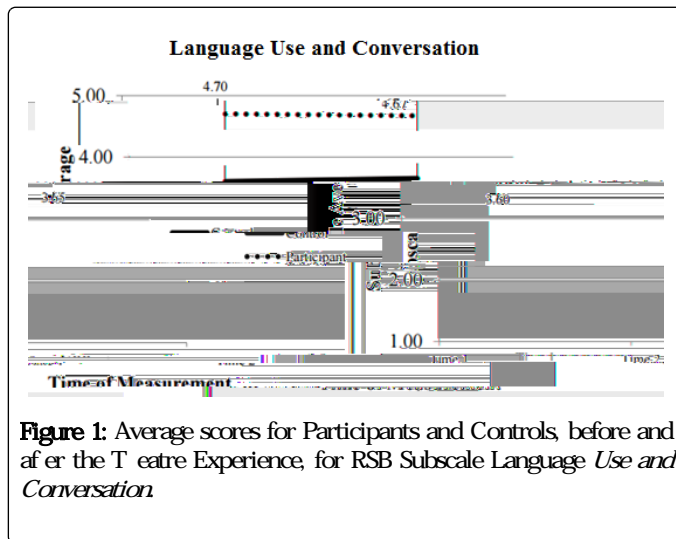


Figure 1: Average scores for Participants and Controls, before and after the Theatre Experience, for RSB Subscale *Language Use and Conversation*

The 2 X 2 mixed design ANOVA for the Social Responsiveness subscale revealed a significant effect of Condition, ($F(1,14)=11.95, p=0.004, \eta^2=0.46$), where theatre participants showed higher levels of Social Responsiveness ($M=4.4, SEM=0.17$) than non-participants ($M=3.6, SEM=0.17$). Although no main effect of Time was found, there was a significant Condition X Time interaction ($F(1,14)=4.63, p=0.049, \eta^2=0.25$). As depicted in Figure 2, participants in the theatre program showed a significant increase in Social Responsiveness after having participated in the theatre experience (as compared to Time 1), whereas control students did not show a gain in Social Responsiveness.

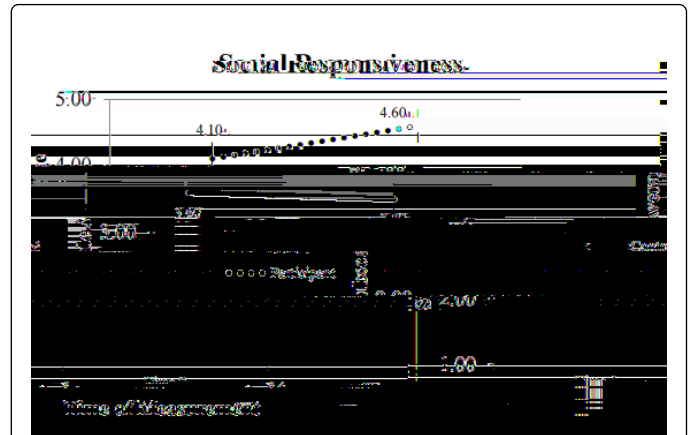


Figure 2: Average scores for Participants and Controls, before and after the Theatre Experience, for RSB subscale *Social Responsiveness*

The 2 X 2 mixed design ANOVA for the Perspective of Others subscale revealed a significant effect of Condition ($F(1,14)=12.92, p=0.005, \eta^2=0.44$), where theatre participants showed higher levels on the Perspective of Others subscale ($M=3.9, SEM=0.27$) than non-participants ($M=2.6, SEM=0.27$). There was also a Time of Measurement effect ($F(1,14)=11.06, p=0.005, \eta^2=0.44$) found, where all students averaged higher levels on the Perspective of Others subscale at Time 2 ($M=3.4, SEM=0.18$) as compared to Time 1 ($M=3.1, SEM=0.20$). That Time effect, however, was qualified by the finding of a significant Condition X Time interaction ($F(1,14)=5.29, p=0.037, \eta^2=0.28$). As depicted in Figure 3 it was predominantly the participants in the theatre program who showed a significant increase on the Perspective of Others subscale (at Time 2 as compared to Time 1), and not the control students.

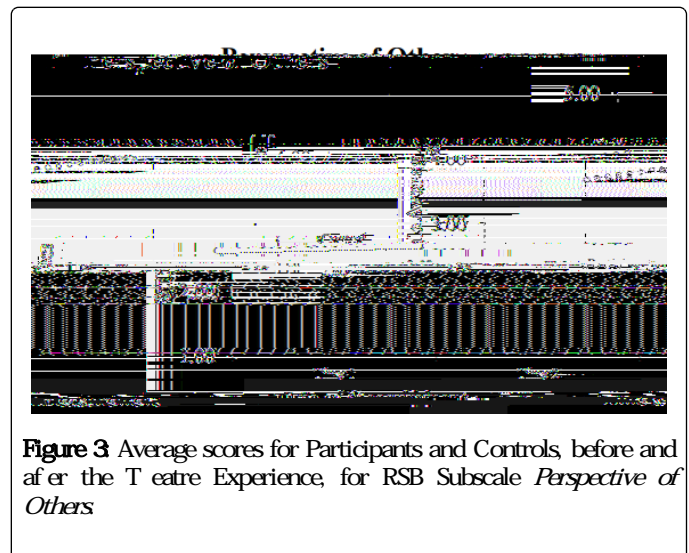


Figure 3: Average scores for Participants and Controls, before and after the Theatre Experience, for RSB Subscale *Perspective of Others*

Finally, the 2 X 2 mixed design ANOVA for the Participation and Cooperation subscale revealed neither a main effect of Condition nor Time. However, there was a significant Condition X Time interaction ($F(1,14)=4.55, p=0.051, \eta^2=0.24$). As depicted in Figure 4, participants in the theatre program showed a significant increase in Participation

It is important to recognize that this study is a preliminary investigation into the involvement of adolescents with ASD in a theatre project. This is a report of a project, and as such, there are inherent limitations to a non-experimental design. While random assignment is desirable, it was not possible or ethical when considering the potential benefit of this program with an at-risk population such as students with ASD. Therefore, it was necessary to rely on individuals who were willing to be included and thus random assignment was precluded. Furthermore, there were only eight participants, a small number. Because of these limitations, the results of this study do not lead to firm conclusions about the benefits of theater for students with ASD.

Emotion

- Display of emotions is appropriate for the environmental context

Accepts praise

- Given a compliment, either smiles and/or says variations of *Thank you*

Response to directions

- When prompted, responds within 10 seconds of request

Humor

- Laughs, jokes, and finds humor during appropriate situations

Subscale 3: Perspective of Others

Understanding

- Notices mistakes of others and says variations of *That's okay, It's not a big deal, We'll try it again*
- Acknowledges personal mistakes and says variations of *I'll keep trying, I'll keep practicing, I'll do better next time, I'll try harder*

Interest in Others

- Shows verbal expressions of interest in the hobbies and activities of others

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