



Measuring the Impact of a School-Based, Integrative Approach to Play Therapy on Students With Autism and Their Classroom Instructors

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The authors of this study measured the impact of a school-based, integrative approach to play therapy (PT) on four elementary- and middle-school-aged students with autism and their classroom instructors. The play therapist conducted 15 weekly PT sessions with each student to work on their social and emotional awareness individualized education program (IEP) goals and then debriefed students' instructors to encourage generalization of PT outcomes to the classroom setting. A combination of quantitative and qualitative data were collected, including the Autism Social Skills Profile, psychometric equivalence-tested goal attainment scales aligned with students' IEP goals, case notes, and end-of-intervention interviews with classroom staff. Findings indicated that three students made gains on the Autism Social Skills Profile, and that all students made more progress than expected on IEP goals, both during PT sessions and in the classroom. Further, students' instructors described substantial benefits associated with post-PT session debriefings with the play therapist, including improved rapport with students and better understanding of strategies for supporting them during challenging situations.

Keywords: play therapy, social skills, emotional awareness, autism, interdisciplinary collaboration

According to [Bratton, Ray, Rhine, and Jones \(2005\)](#), play therapy (PT) offers a particularly apt means of treating children's emotional and behavioral difficulties because of its responsiveness to children's developmental needs. Most preadolescent children lack the cognitive capacity for abstract thought, a necessary precursor to traditional talk therapy, which requires sufficient receptive and expressive language to discuss motives and emotions ([Bratton et al., 2005](#)). The underlying assumption of a therapeutic play approach is that children, with support from a play therapist, will act out their

thoughts and feelings—either literally or symbolically—using play materials.

Many play therapists believe that PT is most effective when directed by the child as opposed to the therapist. According to [Guerney \(2001\)](#), child-centered PT allows the child to set the agenda of each therapeutic session, while the therapist follows the child's lead, and assumes a nonjudgmental and accepting attitude. This approach builds on the work of [Rogers \(1976\)](#), who believed that the child's self-actualization is facilitated by the therapist's empathy and unconditional positive regard for the child. Like basic PT, the assumption of child directed PT is that play is children's natural way of expressing themselves, and that children will work out their problems through concrete and/or symbolic play, and conversation accompanying play ([Nedelcu, Chicos, & Dobrescu, 2010](#)).

A review of the literature uncovered two reviews of PT research (although neither disaggregated findings by child-centered vs. basic, nondirective approaches). The first, a meta-

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analysis by [LeBlanc and Ritchie \(2001\)](#) reviewed 42 studies and found that PT consistently resulted in positive outcomes, including improved emotion regulation and social skills. A second meta-analysis by [Bratton et al. \(2005\)](#) compiled results from 67 more recent studies and again found that participation in PT resulted in positive outcomes, including improved social skills, self-concept, and relationships. Based on these findings, it appears that PT can offer an effective means of supporting children's social and emotional learning.

Autism and Play Therapy

Some of the key characteristics of autism include poor social cognition or the inability to read and respond flexibly and appropriately to spontaneously unfolding social situations, challenges related to the ability to assume other people's perspectives, and difficulties with language and symbolic play ([Klin, Jones, Schultz, & Volkmar, 2003](#); [Sigman & Capps, 1997](#)).

Although there is very limited research measuring the impact of PT—and specifically, child-centered PT—on children with autism, the few studies that do exist suggest that children with autism, especially those with relatively unimpaired verbal and cognitive abilities, may also benefit from PT. For example, a case study by [Kenny and Winick \(2000\)](#) reported that an integrative approach (i.e., combining child-centered PT, social skills interventions, and parent education) over the course of 11 sessions, resulted in increases in the 11-year-old child's social behaviors and compliance at home, as well as reduced irritability. A second case study by [Josefi and Ryan \(2004\)](#) examined the impact of child-centered PT on a 6-year-old with autism over the course of 16 sessions. The study included both quantitative and qualitative measures, and found that the child-centered PT intervention resulted in increased child-initiated physical contact with the therapist, child-initiated play activities, time spent by the child on play activities, and child-initiated interactions with the therapist; as well as reductions in stereotypic behaviors. A third case study by [Parker and O'Brien \(2011\)](#) examined the impact of 11 sessions of school-based, sand tray-focused PT, on a 7-year-old boy with autism. Informal observation suggested that PT resulted in significant changes to the boy's classroom

and playground social behavior, including a reduction in challenging behaviors. All three of these studies were single case studies. A fourth study, by [Salter, Beamish, and Davies \(2016\)](#), examined outcomes of 10 weeks of individual child-centered PT for three children with autism ranging from four to six years of age. This study was the first to incorporate psychometric measures, both the Adaptive Behavior Assessment System (ABAS) and the Developmental Behavior Checklists, as well as psychometric equivalency tested goal attainment scaling (PET-GAS). This study specifically looked at the impact of child-centered PT on the social and emotional learning of children with autism, and consistent with much of the research on PT for typically developing children, found that child-centered PT supported social and emotional growth in all three participants.

Significantly, [Kenny and Winick \(2000\)](#) recognized the limitation of a traditional, descriptive case study approach, which often leaves out any sort of formal measurement. They recommended that researchers and play therapists use some type of psychometric measurement tools to reliably assess children's responses to PT. [Parker and O'Brien \(2011\)](#) further noted the importance of intervention taking place in a school setting, thereby addressing a limitation of many existing PT studies conducted in more artificial, clinical laboratory settings.

Interdisciplinary Collaboration

The collaboration among mental health staff and other school staff, such as special education teachers, plays a vital role in successful school-based mental health intervention (e.g., [Feinstein, Fielding, Udvari-Solner, & Joshi, 2009](#); [Flaherty, Garrison, Waxman, et al., 1998](#); [Franklin, Kim, Ryan, Kelly, & Montgomery, 2012](#); [Wolmer, Hamiel, & Laor, 2011](#)). According to [Adi, Killoran, Janmohamed, and Stewart-Brown \(2007\)](#), the importance of this interdisciplinary collaboration may be due to the fact that classroom teachers are with the child for most of the school day, and therefore have more frequent opportunities to reinforce mental health interventions than mental health providers alone. [Flaherty et al. \(1998\)](#) defined interdisciplinary collaboration as a "sharing of information from varied perspectives to develop a complete picture of the child" (p. 423). This

definition suggests that if the school-based mental health provider shares information with classroom instructors about the child's progress, classroom instructors will not only acquire a deeper understanding of the child's strengths and needs, but also be better poised to exploit those strengths and meet those needs. Further, a study by [Goddard, Goddard, and Tschannen-Moran \(2007\)](#) found that teacher collaboration is associated with increased levels of students' academic achievement.

A few studies have looked at interdisciplinary collaboration specifically within the context of special education. For example, a single-subject study by [Hunt, Soto, Maier, Müller, and Goetz \(2002\)](#), found that three students using augmentative and alternative communication (AAC) being served in inclusive classrooms, demonstrated increases in engagement and interactions with peers in response to a collaboratively developed "Unified Plan of Support" that listed both communication and social supports to be implemented by classroom staff. A follow-up study by [Hunt, Soto, Maier, and Doering \(2003\)](#) resulted in similar findings from interdisciplinary collaboration on the social interactions of three students with significant disabilities. Both of these studies support the notion that interdisciplinary collaboration results in more consistent and appropriately targeted social and emotional learning supports for students.

Study Purpose and Research Questions

In hopes of contributing to the small but growing body of literature on PT for children with autism, the purpose of this study was to measure the impact of a school-based, integrative PT intervention (i.e., combining child-centered PT with more traditional social skills instruction and support) on four elementary- and middle-school-aged students with autism and their classroom instructors using a mixed methods approach that included psychometric measurement. We also hoped to contribute to the growing body of literature that supports interdisciplinary collaboration as a means of expanding the reach of school-based mental health services beyond the mental health office and into the classroom. The following research questions were addressed:

Research Question 1: Did PT sessions—which, like [Kenny and Winick \(2000\)](#), took an integrative approach by combining child-centered PT with more traditional social skills instruction—have a positive impact on students' Autism Social Skills Profile (ASSP) scores and/or mastery of their social and emotional awareness IEP goals?

Research Question 2: Did social and emotional awareness IEP goal mastery generalize to students' classrooms?

Research Question 3: How did the play therapists' post-PT session debriefings impact students' classroom instructional staff (i.e., what was the impact of interdisciplinary collaboration)?

Method

Participants

A purposive sample of four students was selected based on their school mental health provider's informal determination that they would each potentially benefit from PT, and the fact that they had not yet been exposed to PT. Participants were four elementary- and middle school-aged students ranging in age from 6.6 to 12.8 at the beginning of the study. Three were male and one was female. Educational records indicated that all were diagnosed with autism, and that their cognitive abilities were average to above average. All participants were students in a specialized program in Maryland, designed to meet the needs of students with higher functioning autism. Each participating student had at least two individualized education program (IEP) goals addressing deficits in perspective taking and/or emotion regulation that were designed to be worked on during weekly therapy sessions with their mental health provider. For the purposes of this article, pseudonyms were used for each student.

According to his classroom instructors, Jack, a 6.6-year-old boy with a combined diagnosis of autism and attention-deficit/hyperactivity disorder (ADHD) initially demonstrated very poor perspective taking skills and had not yet mastered any strategies for coping with frustration. As a consequence, he experienced significant social anxiety because he did not know what to expect during social interactions. He was work-

ing toward goals of (a) identifying characters' actions and reactions to a behavior and (b) labeling his feelings using the Zones of Regulation.

Patrick, an 8.10-year-old boy with a combined diagnosis of autism, ADHD, and obsessive-compulsive disorder, initially experienced significant emotion dysregulation. According to his classroom instructors, even though he was able to take others' perspectives when he was calm, his ability to do so was compromised whenever he got upset, and he would tend to project negative intentions onto his teachers and peers. He was working toward goals of (a) identifying how he was feeling when upset by a situation and (b) identifying one or more strategies that are helpful when experiencing an emotional trigger.

Annie, a 12.8-year-old girl, was diagnosed with Tourette's in addition to autism, and demonstrated tics and noises that, according to her classroom instructors, annoyed everyone around her. She was working toward goals of (a) identifying one or more strategies that are helpful for managing excitement and (b) answering questions about how the therapist or a pictured character is feeling.

According to his classroom instructors, Jasper, an 11.7-year-old boy, struggled with social anxiety in addition to autism and ADHD. Like Patrick, his perspective taking skills were limited during times when he was upset, and he would frequently express feelings of paranoia. He was working toward goals of (a) identifying the perspective of someone he does not agree with or cannot relate to given a hypothetical situation or scenario and (b) making a plan to handle disappointments.

Study Design

This study was designed as a mixed methods study, combining quantitative and qualitative measures, including a formal pre- and postassessment using an established social skills measure, PET-GAS, case notes, and end-of-intervention interviews with participants' classroom instructional staff. These analyses were used to determine whether there were any perceived changes over time for students and/or their instructors. Triangulation of multiple data sources helped authors ensure that findings were consistent, and that all sources were indicative of similar outcomes. Triangulation was also

used to demonstrate trustworthiness and reliability of the analytic process.

Data Collection

Two types of quantitative data were gathered: The ASSP and PET-GAS. The ASSP measures the social and emotional skills of students on the autism spectrum, and a recent study indicated that the tool has excellent psychometric properties with respect to internal consistency, test/retest reliability and concurrent validity (Bellini & Hopf, 2007). PET-GAS is ideal as an ideographic measurement approach when instructional outcomes, plans, and starting baseline levels differ from student to student (Ruble, McGrew, & Toland, 2012). Each PET-GAS scoring form is tailored to reflect individual student goals, and a 5-point scale is used to measure progress over time (i.e., where 1 = *no improvement*, 2 = *does not reach 15-week goal*, 3 = *reaches 15-week goal*, 4 = *exceeds 15-week goal*, and 5 = *far exceeds 15-week goal*). PET-GAS forms were developed by the first author, the students' mental health provider (also the second author), and classroom instructors. Two IEP goals relating to perspective taking and/or emotion regulation were chosen for each of the four participating students. The mental health provider and one instructor independently used PET-GAS to score each student's performance on a weekly basis.

We also gathered two types of qualitative data: case notes and classroom instructor interviews. A form for entering case notes was created especially for the purposes of this study. Sections included (a) therapeutic context, which was broken down into subsections for description of activities, materials used, and therapeutic techniques, and (b) student participation, which was broken down into subsections for how the student played, what the student said, level of student engagement, relational dynamics/interactions with the therapist, and significant learning moments/turning points in therapy. The interview protocol, also developed for the purposes of this study, included both Likert-type and open-ended questions, and addressed the following questions: (a) whether and how PT sessions generalized to the classroom; (b) whether and how the debrief meetings with the mental health provider affected the way instructors understood the student, interacted with the

student, and supported the student through difficult times; and (c) whether and how the debrief meetings affected instructors' relationships with the student.

Procedure

Prior to the intervention, students' classroom instructors completed the ASSP for each participating student. The PT sessions took place weekly over the course of a 15-week period, aligned with students' academic semester. Students met individually with their mental health provider, who was certified as a registered play therapist, and sessions lasted 30 min. Similar to the study conducted by [Kenny and Winick \(2000\)](#), the structure of each session combined child directed PT, including sand tray therapy, with more directed social and emotional skills-based interventions. Decisions on which components to emphasize during each session were made by the mental health provider based on her knowledge of participants' social and emotional needs. PET-GAS forms for each goal were filled out weekly by the students' mental health provider (to determine to what extent goals were mastered within a 1:1 therapeutic setting) and classroom instructor (to determine to what extent students' goal mastery generalized to a classroom setting) over the 15-week period. Directly following each PT session, students' mental health provider filled out the case notes form and met with participants' classroom instructors to "debrief" about key takeaways from the session that she believed could be useful for classroom staff to know and understand. After the 15-week intervention came to an end, instructors again completed the ASSP, and phone interviews were conducted by the first author with each of the students' classroom instructors for a total of four interviews, each lasting between 30 and 45 min.

Data Analysis

In terms of quantitative data, authors compared baseline and end-of-intervention ASSP scores to see if there was an increase in students' scores over time. To assess student outcomes using PET-GAS, authors used Excel to create line graphs for each student—with two lines per skill: one for the 1:1 therapeutic setting and one for the generalization/classroom setting. Graphs were then reviewed to determine

whether students made progress (i.e., meeting or exceeding expectations) by the end of the 15-week intervention.

In terms of qualitative data, both authors reviewed the case notes for each student, and used these notes to summarize any changes in students in terms of perspective taking and emotion regulation. Any notable "breakthroughs" during PT were also reported in the Findings section. Interviews were transcribed verbatim at the time of the interview. Authors then organized responses by question, and summarized the key points that were made by instructors in response to each. Authors then met to compare and consolidate findings, revising summaries in the event of minor discrepancies, and going back to the data to confirm accuracy. Because there were only four interviews, authors did not identify common themes, and instead sought to identify instructor comments that "typified" their responses as a group (i.e., points that were made and illustrated by three or more instructors).

A member check enabled us to ensure the accuracy and thoroughness of our findings, and to demonstrate trustworthiness and reliability of our analytic process. Authors shared a list of key findings with instructors, who were given the opportunity to provide feedback prior to publication.

Findings

Findings are reported in two separate sections: (a) perceived impact of PT on participating students and (b) perceived impact of PT and debrief sessions on students' classroom instructors.

Impact on Students: ASSP, PET-GAS and Case Notes

Jack's ASSP scores increased considerably over time (i.e., by 20 points out of a possible 160), from 95 to 115 (see [Figure 1](#)). Based on examination of the line graph for Jack's PET-GAS, it appears that he demonstrated consistent and meaningful growth for both goals in the 1:1 therapeutic and classroom/generalization settings (see [Figure 1](#)). For both goals, Jack exceeded growth expectations in the 1:1 therapeutic setting, and met expectations within the classroom/generalization setting.

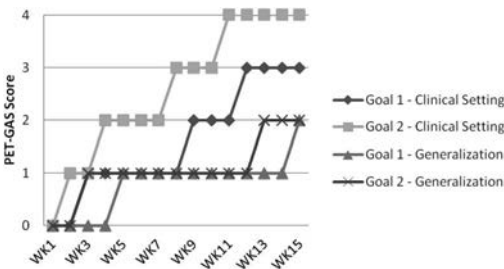


Figure 1. Jack’s psychometric equivalency tested goal attainment scaling (PET-GAS) scores. WK = Week.

Therapy notes indicated that the play therapist first built rapport with Jack, and then worked closely with him to develop his theory of mind skills.

Patrick’s ASSP scores decreased very slightly over time (i.e., by 4 points out of a possible 160), from 100 to 96. Based on examination of the line graph for Patrick’s PET-GAS, it appears that he demonstrated consistent and meaningful growth for both goals in the 1:1 therapeutic setting, but not in the classroom/generalization setting (see Figure 2). Patrick exceeded growth expectations in the 1:1 therapeutic setting, but performed inconsistently in the classroom/generalization setting, with occasional regression. Therapy notes indicate that Patrick’s ability to use his coping strategies improved over time, and as his peers became more familiar with his mental health challenges, were less likely to stigmatize him for socially inappropriate behaviors like licking his hands.

Annie’s ASSP scores increased dramatically over time (i.e., by 51 points out of a possible 160), from 92 to 143. Based on examination of the line graph for Annie’s PET-GAS, it appears

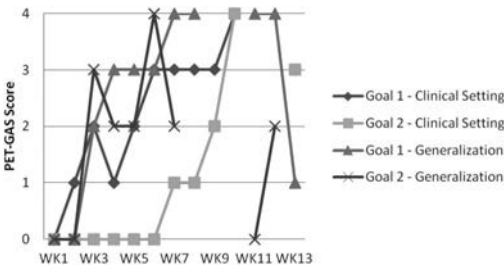


Figure 2. Patrick’s psychometric equivalency tested goal attainment scaling (PET-GAS) scores. WK = Week.

she demonstrated consistent and meaningful growth for both goals in the 1:1 therapeutic setting, but only for one goal in the classroom/generalization setting (see Figure 3). For both goals, Annie exceeded growth expectations in the 1:1 therapeutic setting. She exceeded expectations for one goal in the classroom/generalization setting, and met expectations for the second goal in the classroom/generalization setting. Based on therapy notes, Annie developed greater understanding of her bodily sensations and emotions and expressed more interest in her own and others’ feelings. Most importantly, she realized that she needed to learn to self-regulate, or she would not be able to make and keep friends.

Jasper’s ASSP scores also increased dramatically over time (i.e., by 38 points out of a possible 160), from 97 to 135. Based on examination of the line graph for Jasper’s PET-GAS it appears that he demonstrated consistent and meaningful growth for both goals in the 1:1 therapeutic setting, and classroom/generalization setting (see Figure 4). For both goals, Jasper exceeded growth expectations in the 1:1 therapeutic setting, and exceeded growth expectations for one goal in the classroom/generalization setting. Although growth was less linear within the classroom setting, and Jasper exhibited regression at some points throughout the study, by week 14, he had exceeded growth expectations in this context as well. Jasper frequently used sand tray therapy to work through his social anxieties, and by the end of the intervention, was often emotionally available enough to use some of the coping strategies identified during PT when he was experiencing difficulties in the classroom.

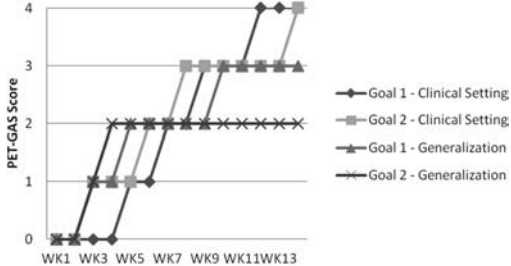


Figure 3. Annie’s psychometric equivalency tested goal attainment scaling (PET-GAS) scores. WK = Week.

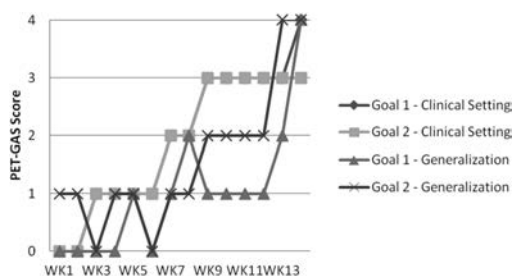


Figure 4. Jasper's psychometric equivalency tested goal attainment scaling (PET-GAS) scores. WK = Week.

Impact on Instructors: Interviews

Perceived generalization of PT outcomes to classroom setting. When asked whether the PT conducted with the student during 1:1 therapeutic sessions had generalized to the classroom, instructors' responses averaged 1.5 out of 2.0 or halfway between "somewhat" and "a lot." All four provided ample evidence of generalization taking place. Typical comments included the following:

[During PT] he was able to work through [issues] himself, and then come back and tell me . . . about it, and then generalize it to what was happening in the classroom.

[The student] really enjoyed her time with [the play therapist]. She was always willing to talk about different strategies she can use in the classroom, and how she wanted to use them to impact her friendships in class. She was okay with [the play therapist] talking with me, and working with me to implement strategies in the classroom. . . . She uses almost all the strategies she practiced with [the play therapist] in the classroom now.

Perceived impact of PT on instructors' understanding of students. When asked whether debriefing sessions with students' mental health provider following students' PT sessions impacted their understanding of students, classroom instructors responded with 2.0 out of 2.0 or "a lot." All four provided examples of this, and typical comments included the following:

We now realize [student] has beeps, tics, meows she has no control over. . . . The biggest change is realizing she can't control these tics, so we don't punish her on her point sheet. Instead, we . . . support her by giving her strategies to use in the classroom.

Having [the play therapist] help us understand where the breakdowns are in his interactions really opened

my eyes. . . . Having [the play therapist] hear him, and gauge where he's at, and then explain it to me was really helpful.

From [the play therapist] I was able to get the intent behind what [the student] was saying . . . I learned that he's much more aware of what he's doing and his friendships at school. He's not only aware of it, but he cares about it, as well.

Perceived impact of PT on instructors' interactions with students. When asked whether debriefing with students' mental health provider following students' PT sessions impacted their interactions with students, instructors' responses averaged 1.75 out of 2.0, or slightly less than "a lot." All four provided examples of this, and typical comments included the following:

After talking with [the play therapist], I realized how important it was to constantly point out to him and remind him that others were having thoughts that were different from his, explain what those thoughts were, and how I knew that.

[The play therapist] got him from catastrophic statements to saying what he really meant. Instead of ignoring [his] statements, I got him to process more, so [my behavior] changed in that way.

Perceived impact of PT on supporting students through difficult moments. When asked whether debriefing with students' mental health provider following their PT sessions impacted their ability to support students through difficult moments, classroom instructors' responses averaged 1.5 out of 2.0, or halfway between "somewhat" and "a lot." Three provided examples of this, including helping a student make a plan when she was calm that she could use when she got upset, helping a student utilize calming strategies, helping a student "break it down" (e.g., recognize that he was feeling upset, understand why he was upset, and work to fix the problem), and helping a student verbally process social anxiety.

Perceived impact of PT on instructors' relationships with students. When asked whether debriefing with students' mental health provider following their PT sessions impacted their relationships with students, classroom instructors' responses averaged 1.75 out of 2.0, or slightly less than "a lot." All four provided examples of this, and typical comments included the following:

I think he came in kind of “Teachers are against me”. . . . We’re so trained not to reinforce some of those negative, inappropriate behaviors, that taking a few moments to listen to him was a turning point. He’d be like, “Oh, they do care. They do want to understand and hear what I have to say—not just ignore me.”

Having [the play therapist] pull me into some sessions really upped our relationship skills, communication skills, and trust and understanding.

In the beginning, we didn’t understand each other a lot. Through the work he did with [the play therapist], and my debriefs with her, I was able to learn more effective ways to communicate with him.

Social Validation

Authors conducted a “member check” with participating staff to ensure that identified findings were thorough and accurate. We sent a bulleted list of key outcomes via e-mail, and gave classroom instructors two weeks to comment on the list and suggest any changes. All confirmed that the findings fairly represented their perceptions of major PT outcomes.

Discussion

In the following section, we highlight some of the key findings from this study, explore some of the possible implications of these findings, identify limitations and suggest future research directions. Three of the participants scored higher on the ASSP, and all four participants appeared to make progress toward their social and emotional learning goals—as measured by PET-GAS—by the end of the 15-week intervention. Significantly, participants demonstrated goal mastery not only within the sheltered environment of the mental health provider/play therapist’s office, but also in the context of participants’ special education classrooms (even when the mental health provider/play therapist was no longer present). Although Patrick demonstrated inconsistent growth over time, his performance is likely explained in part by the fact that he was hospitalized for the first few weeks of the 15-week intervention period.

Parker and O’Brien (2011) suggested a few reasons why PT may offer a useful option for mental health providers serving students with autism—especially students with higher functioning autism, like the participants in this study. They argued that because of the social-cognitive deficits and pragmatic language chal-

lenges experienced by students with autism, PT may offer school mental health providers tools for working with children with autism that more cognitively based therapies do not. The importance of developmentally appropriate PT interventions cannot be overstated, however. Depending on students’ symbolic and play skills, PT may not always be appropriate for all students with autism, especially those with extremely limited cognitive skills and/or inability to engage in imaginative play (Mastrangelo, 2009; Nedelcu et al., 2010).

One of the most important findings from this study related to the classroom instructors’ uniformly enthusiastic responses to the debriefings they received from the participants’ mental health provider/play therapist. All four described ways in which they were able to support participants’ generalization of skills to the classroom, establish more meaningful relationships—especially rapport and trust—with participants, understand that many of participants’ “problem” behaviors were not intentional, but rather the result of their lack of social and emotional skills, and better support participants’ emotion regulation during difficult moments.

Limitations

Findings from this study should be interpreted with the following limitations in mind: First, although this study included more participants than any existing studies of autism and PT, a sample size of four is still extremely small, and we cannot be confident that these findings would generalize to other settings. Furthermore, all four students received PT intervention from the same mental health provider/play therapist. This means that results could have been related to her professional skill and expertise, as opposed to her use of a play therapeutic approach. Third, this study was a school based study, conducted by school staff. While this helped ensure that the intervention was socially valid, and feasible within a naturalistic school-based context, the second author was also the interventionist, suggesting that we cannot entirely rule out the possibility of bias. Finally, and perhaps of greatest concern, this was not a controlled experimental study. This means that the quantitative data we gathered (i.e., pre- and posttests and weekly PET-GAS ratings) do not provide evidence of causality,

only correlation. The qualitative data we gathered (i.e., weekly case notes, and end-of-intervention interviews) help to address this limitation, but because both these forms of data are inherently subjective, we are hesitant to make any claims as to whether PT was solely responsible for the changes instructors and therapists observed.

Conclusion

This study contributes to a small but growing body of literature that suggests PT may offer a viable option for school mental health providers and others trained in PT who wish to support the development of students with autism's perspective taking and/or emotion regulation skills. Although we did not establish a causal relationship between PT and changes to students' behavior, the triangulation of multiple data sources helped to build a case for the impact of PT on students' growth. We believe our findings warrant further study of this important topic, and hope to conduct more rigorously controlled assessment of PT and students with autism in future.

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