

Increasing Access to Empirically-Validated Interventions for Autism Spectrum Disorder:

Dissemination of PEERS into Community Health Settings

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Abstract

Objectives: This research project aims to build capacity for social skills interventions for ASD for adolescents in community mental health settings in Delaware, using The Program for the Education and Enrichment of Relational Skills (PEERS), a social skills group program developed at UCLA. **Methods:** Aim 1: A two-day education on PEERS was provided to community clinicians (n=15), and clinicians completed a survey assessing their perception of implementing a social skills group intervention for families at three time points. Aim 2: Five PEERS groups were held at three community mental health locations. Caregivers (n=14) completed rating scales assessing family quality of life, social skills, or parenting stress. **Results:** Clinicians reported increased confidence in their ability to deliver social skills intervention following two-day education on PEERS. Furthermore, the clinicians who facilitated a PEERS group (n=9) reported a clinically significant increase in confidence. Fourteen families completed PEERS; no difference was reported regarding family quality of life, social skills, or parenting stress. **Conclusions:** This study shows the feasibility of expanding social skills interventions for children and families affected by ASD into community mental health settings, as 15 clinicians received additional education regarding social skills interventions and five more group opportunities using the PEERS program were made available in the community.

Introduction

Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disorder marked by significant impairment in social communication and interaction and the presence of restricted, repetitive patterns of behavior and interests.¹ At the present time, it is estimated that approximately 1 in 59 children have a diagnosis of ASD in the United States.² ASD is also

commonly associated with other conditions such as intellectual disability (ID) and other mental health comorbidities such as anxiety, depression, obsessive-compulsive disorder (OCD), and attention-deficit/hyperactivity disorder (ADHD).³ Thus, individuals and families affected by ASD often experience daily functional challenges.

Social skills groups have been found to be one way to teach social skills to individuals with ASD. In one meta-analysis, Reichow, Steiner, and Volkmar found that individuals with ASD who participated in a group-based social skills intervention reported less loneliness and an increase in social competence and quality of friendships than those individuals with ASD who did not participate in a social skills group.⁴ Many studies have shown that group social skills interventions are effective for adolescents with ASD in that group settings serve as an in vivo opportunity to practice new skills.⁵ Researchers have shown that teaching both basic and more complex social skills in a group context has been supportive of both improved relationships and quality of life (QoL) for adolescents with ASD and their families.⁶ With an increase in social skills, adolescents with ASD are more able to effectively communicate their needs and desires, as well as attend to the needs and desires of others, including their peers and other family members.⁷ Adolescents also benefit from an increase in social skills development in school with teachers as well as in employment situations.⁸

One program that has been particularly effective in teaching social skills to adolescents with ASD is the UCLA Program for the Education and Enrichment of Relational Skills (PEERS)^{9,10} The PEERS intervention intends to improve social skills of adolescents with ASD and support caregivers in helping their adolescent navigate novel social experiences like calling a friend or joining a new peer group. PEERS is unique because it emphasizes ecologically-valid skills, role playing between group leaders and participants, practicing of skills in session, and homework assignments that are facilitated by caregiver involvement. Research indicates that basic social skills development programming increases relationship satisfaction among adolescents with ASD and their caregivers¹⁰⁻¹² and that increased functioning in children and adolescents with ASD leads to a positive increase in overall family functioning.¹⁰

Community Engagement Plan in Delaware

A recent needs-assessment of families affected by ASD in the state of Delaware identified a critical need for social skills interventions among caregivers of children with ASD.^{13,14} Furthermore, this needs-assessment also highlighted the dearth of all services for families affected by ASD in Southern Delaware. At the time of the study, the PEERS social skills group program was available to families in an outpatient hospital clinic (at Nemours/AIDHC in Wilmington, DE) and in select school districts across the state. However, opportunities for social skills group interventions for ASD in the community were rare, not based on an empirically-validated programs, and restricted primarily to northern parts of the state.

The ACE Research Awards of the Delaware-CTR ACCEL program, a partnership between the University of Delaware and Delaware institutions, offered a unique opportunity to take an existing evidence-based practice (the PEERS program for families affected by ASD) and disseminate this program into the community. This undertaking involved the engagement of several community partnerships: Dr. Dewey as the academic investigator from Nemours/AIDHC, Ms. Rose as the community investigator from Delaware Guidance Services for Children and Youth, Inc (DGS), Dr. Freedman as mentor from the University of Delaware, and Autism Delaware as a source of study recruitment and support.

Study Aims

The aims of this study were twofold; Aim 1: Build capacity for ASD interventions by providing formal education to community clinicians at DGS in PEERS; and Aim 2: Assess parent perspectives following participation in PEERS regarding social skill symptoms, parenting stress, and family QoL. This project explored the feasibility of disseminating PEERS into community mental health settings by assessing community clinician's perceptions of implementing PEERS prior to formal two-day education, after the education, and again following PEERS intervention. Additionally, this project expanded on the current research by using measures aimed to assess caregivers' parenting stress and QoL, in addition to perceived social skills improvement, at baseline and following the PEERS intervention.

Method

Aim 1: Build capacity for ASD interventions by providing formal education to community clinicians in PEERS

The first part of the study design involved educating community mental health clinicians on implementation of PEERS. The clinical director at DGS identified clinicians interested in expanding their clinical competency on ASD and providing social skills interventions from the agency's five locations across the state of Delaware; these clinicians hold at a minimum a master's degree in a mental health field. A two-day formal education in PEERS for these clinicians (n=15) was held at the DGS location in Dover, a central location in the state. The education included an overview of ASD and adolescence led by the study authors, as well as instruction on using the PEERS manual led by a University of Delaware instructor who also disseminated PEERS into school-based settings. Support was provided to the clinicians regarding logistics as well, such as considerations when recruiting participants, information to be provided to families, and billing/documentation to support sustainability. In order to understand the feasibility of successfully holding PEERS in the community, clinicians completed a survey developed by the researchers three times over the course of the study: prior to the two-day education, after the two-day education, and following PEERS group completion (see Appendix A). Prior to the beginning of PEERS education, the study was explained to the clinicians and written informed consent was obtained.

Implementation of PEERS

After the two-day education in PEERS, two sets of PEERS groups were conducted: Set A consisted of three PEERS groups held at three DGS sites (Seaford, Lewes, and Dover); Set B consisted of two PEERS groups held at two DGS sites (Lewes, Seaford) conducted following completion of Set A. The reduction from three sites to two sites occurred due to attrition of the clinicians trained in PEERS. Each PEERS group was held for one-hour, once a week, for 14 weeks in the evenings. Two clinicians ran the adolescent group in order to role-play social skills, and one clinician ran the concurrent parent group. Topics covered included: trading information, two-way conversations, electronic communication, choosing appropriate friends, appropriate use of humor, entering a conversation, exiting a conversation, get-togethers, good sportsmanship, teasing and embarrassing feedback, bullying and bad reputations, handling disagreements, rumors and gossip, and graduation and termination. Families that participated in 11 of the 14 sessions were considered to have completed the treatment. At each of the first sessions, clinicians

explained the study to the adolescents and their caregivers; written informed consent from the caregivers and written assent from the adolescents was obtained.

Aim 2: Assess parent perspectives following participation in PEERS regarding social skill symptoms, parenting stress, and family QoL.

The second part of the study aimed to understand the impact of the PEERS group on caregivers' perspectives of social skills improvements and family functioning. The participants were the caregivers of adolescents with ASD recruited from the community by flyers distributed by Nemours/AIDHC, DGS, and Autism Delaware. Inclusion criteria included caregivers of individuals with a historical diagnosis of ASD and evidence of average language and cognitive ability (based on either school/medical records or clinician judgment) between the ages of 10 and 18. Exclusion criteria included non-English speaking families. In total, five PEERS groups were held at three DGS locations across the state of Delaware. Thirty families enrolled in PEERS (age range of child: 10-17; M=13 years; Males=23, Females=7), and 14 families were considered to have completed PEERS (attended 11 or more sessions and the same caregiver completed both pre and post measures). Caregivers (n=14) completed:

- 1) Social Responsiveness Scale, Second Edition (SRS-2)¹⁵ to measure social skills;
- 2) Stress Index of Parents of Adolescents (SIPA)¹⁶ to measure parenting stress; and
- 3) Beach Center Family Quality of Life Scale (FQOL)¹⁷ to measure family quality of life.

Results

Regarding dissemination, this research study allowed for 15 community mental health practitioners to gain increased competency in understanding and supporting families affected by ASD as well as concrete training on the implementation of empirically-validated social skills interventions. These clinicians serve communities across the state of Delaware, and it is hoped that this opportunity positively influences their clinical practice.

The first aim of this study sought to understand the impact of the two-day education on PEERS on clinician's confidence in delivering social skills group intervention, based on their ratings on a Likert Scale questionnaire developed by the researchers. Results showed that clinicians (n=14) reported increased confidence in their ability to deliver social skills intervention following two-day education on PEERS, as rated on a Likert Scale with 0 being no confidence and 5 being most confidence (pre: M=3.2, SD=1.3; post: M=4.1, SD=.9; $t(14)=-2.82, p=.014$). Furthermore, the clinicians who facilitated a PEERS group (n=9) reported a clinically significant increase in confidence ($t(8)=-2.309, p=.05$) from post education to post facilitation of a PEERS group.

The second aim of this study sought to expand understanding of parent perceptions on changes in social skills, family quality of life, and parenting stress pre- and post-PEERS participation. Given the attrition of families, there was a small sample size (n=14). Results showed that no difference was reported regarding parent perception of family quality of life (FQOL: $t(13)=-.737, p=.474$), social skills (SRS-2: $t(11)=-1.183, p=.261$), or parenting stress (SIPA: $t(11)=.549, p=.594$).

Discussion

This study extends the evidence base for social skills interventions from hospital and school-based settings to community mental health clinicians. Primarily, this project explored the impact of formal education on PEERS for clinicians implementing this intervention. Second, this project assessed the possibility of changes in parent stress, family quality of life, and perception of social skills changes after participation in PEERS. Furthermore, this project allowed for the formation of novel and innovative partnerships between Nemours/AIDHC, DGS, the University of Delaware, and Autism Delaware. These organizations each contribute valuable knowledge of the research and treatment for mental health difficulties that affect children and families.

Given the results, this study shows the feasibility of expanding social skills interventions for children and families affected by ASD into community mental health settings, as 15 clinicians received additional education regarding social skills interventions and five more group opportunities using the PEERS program were made available in the community. Although the PEERS program did not show changes in parental perception of family quality of life, adolescent's social skills, or parenting stress, the study was limited by a small sample size of 14 families completing the intervention. Future research is needed to understand family characteristics and barriers that may impact completion of social skills programs in the community.

Successes

This research study allowed for the formation of novel partnerships and increased community engagement around the ASD population in Delaware. The willingness of community agencies to be involved in opportunities to increase clinical competencies for ASD and serve families affected by ASD across the state was inspiring; DGS and Autism Delaware recognized the need to increase opportunities for social skills and proved willing and able partners. Nemours/AIDHC and the University of Delaware gained greater understanding of the challenges associated with real-world implementation of empirically-validated interventions, such as billing and insurance restrictions, time and questionnaire burdens on families, and ways to successfully communicate with community partners.

It is a testament to the strength of Delaware's collaborators in the ASD community that made this research study a success; Delaware gained several more clinicians willing and able to provide social skills interventions for ASD in communities where the need is the greatest, such as in Southern Delaware. At least one PEERS group is still being held at DGS in Southern Delaware at the time of this publication.

Lessons Learned

This research study also illuminated future opportunities to make community-engaged research a success. First, it is critically important to have a champion identified in the community who is able to push the cause forward; without leadership support from DGS, there would have been numerous insurmountable burdens preventing the clinicians from taking part in a two-day training and creating a new program (e.g., work requirements, billing difficulties, space identification, etc.). Second, ongoing consultation or coaching through the learning and implementation of empirically-validated interventions is critical; no formal ongoing consultation was provided as part of this study, but it may have prevented attrition, helped to problem-solve

barriers to family attendance, increased the support available, and provided additional opportunities for ASD-related learning. Follow-up coaching following training has proven successful to increase fidelity of the intervention and outcomes for evidence-based practices in working with children with ASD.¹⁸ Third, the community mental health field is transient; though 15 clinicians were originally trained in PEERS, six clinicians had left DGS by the end of the study. This poses challenges in planning for the pre- and post-data needed for empirical research studies.

Last, the sample size in this study was small, both in terms of the numbers of clinicians trained and the number of families who participated. Though it represents a success in terms of increased community engagement in utilizing empirically-validated interventions for ASD, it creates a challenge for ongoing empirical research. There are numerous family barriers that need to be better understood and considered when embarking on a research study to expand empirically-validated interventions; these interventions might work well in a grant-funded academic institution, but in the community they might not be feasible. One burden on both families and institutions is that of insurance issues; insurance may not cover the cost of social skills groups, and reimbursement for the clinicians may be minimal. Furthermore, families of children with ASD are often burdened with transportation, child care, and financial responsibilities that prohibit consistent participation in a structured, one-hour a week time commitment lasting several weeks. These considerations highlight the need to consider how to adapt and modify interventions to meet the realities of families in real world, community settings.

Overall, results of this study support the continued collaboration between medical centers, universities, and community partners to extend evidence-based practices into the community. This project enabled evidence-based interventions currently utilized in medical and school settings to become more readily available to families impacted by autism spectrum disorder. The education and support of a community mental health agency in the needs of a unique, specialized mental health population will result in increased access to specialized mental health services. As rates of ASD grow in the United States,² this sort of specialized training in community mental health agencies is essential for establishing competent care for those typically underserved in communities.

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Appendix A: Clinician Surveys

Clinician Survey – Pre PEERS Education

1. How confident do you feel in understanding the symptoms of Autism Spectrum Disorder (ASD)?

1 2 3 4 5

None Very

2. How confident do you feel in treating ASD?

1 2 3 4 5

None Very

3. How confident are you that you can effectively deliver social skills groups for ASD?

1 2 3 4 5

None Very

4. How confident are you that social skills groups for ASD result in improvements for children and families?

1 2 3 4 5

None Very

5. How satisfied are you with the current interventions you use for ASD?

1 2 3 4 5 N/A

None Very

6. What are you hoping to learn from the education in PEERS?

Clinician Survey – Post PEERS Education

1. How confident do you feel in understanding the symptoms of Autism Spectrum Disorder (ASD)?

1 2 3 4 5

None Very

2. How confident do you feel in treating ASD?

1 2 3 4 5

None Very

3. How confident are you that you can effectively deliver social skills groups for ASD?

1 2 3 4 5

None Very

4. How confident are you that social skills groups for ASD result in improvements for children and families?

1 2 3 4 5

None Very

5. How satisfied are you with the current interventions you use for ASD?

1 2 3 4 5

None Very

6. How much do you believe the PEERS education improved your understanding of ASD?

1 2 3 4 5

None Very

7. How much do you believe the PEERS education improved your interventions skills for ASD?

1 2 3 4 5

None Very

8. How confident are you in using PEERS moving forward?

1 2 3 4 5

None Very

9. What do you think will be helpful aspects of PEERS in your setting? Check all that apply.

- structured program
- didactics for adolescents
- opportunity for adolescents to interact
- caregiver participation
- other _____

10. What do you think will be barriers to using PEERS in your setting? Check all that apply.

- Program is too structured
- Adolescents will not benefit from didactics
- Adolescents will not interact with each other
- Families will not attend consistently
- Other _____

11. What was most helpful about the PEERS education?

12. What would you change about the PEERS education?

Clinician Survey – Post PEERS Intervention

1. How confident do you feel in understanding the symptoms of Autism Spectrum Disorder (ASD)?

1 2 3 4 5

None Very

2. How confident do you feel in treating ASD?

1 2 3 4 5

None Very

3. How confident are you that you can effectively deliver social skills groups for ASD?

1 2 3 4 5

None Very

4. How confident are you that social skills groups for ASD result in improvements for children and families?

1 2 3 4 5

None Very

5. How satisfied are you with the current interventions you use for ASD?

1 2 3 4 5

None Very

6. How much do you believe the PEERS education improved your understanding of ASD?

1 2 3 4 5

None Very

7. How much do you believe the PEERS education improved your interventions skills for ASD?

1 2 3 4 5

None Very

8. How confident are you in using PEERS moving forward?

1 2 3 4 5

None Very

9. What do you think were the most helpful aspects of PEERS? Check all that apply.

structured program

didactics for adolescents

opportunity for adolescents to interact

caregiver participation

other _____

10. What do you think were the biggest barriers to using PEERS? Check all that apply.

- Program is too structured
- Adolescents will not benefit from didactics
- Adolescents will not interact with each other
- Families will not attend consistently
- Other _____

11. How likely are you to use PEERS in the future?

1 2 3 4 5

None Very

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