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*Research Study*

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# Rural Pilot of PEERS® for School-Based Professionals Program

Education and Training in Autism and Developmental Disabilities
1–18
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## Abstract

This pilot study explored preliminary findings from implementing the Program for the Education and Enrichment of Relational Skills for School-Based Professionals (PEERS-SB) in a rural high school. Participants included seven adolescents receiving special education services and seven educators (two special educators and five paraprofessionals) who delivered the curriculum. Teachers participated in structured professional development that emphasized modeling, role-play, and feedback. Pre- and postassessments using the Test of Adolescent Social Skills Knowledge (TASSK) showed significant gains in teacher knowledge of ecologically valid social behaviors. Student outcomes on the TASSK and Quality of Socialization Questionnaire–Revised were preliminary, nonsignificant, and exploratory, with variability across individuals. The study's core finding is a robust increase in educator capacity, highlighting the potential of PEERS-SB as a replicable model for building teacher knowledge to deliver social skills instruction.

## Keywords

social skills, autism spectrum disorder, emotional disturbance, peer interactions, teacher professional development

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Special educators are often expected to teach social competencies to students with disabilities, yet they frequently report limited preparation and professional development (PD) in delivering structured, evidence-based practice (EBP) in this area (Walker et al., 2024). Despite global policy shifts toward inclusion, teachers frequently lack the pedagogical training and institutional resources required to manage complex social and emotional needs effectively (Shapira & Amzalag, 2025). Recent reviews indicated many special educators still encounter limited training and inadequate support structures (Bowman & Harrison, 2025; Shapira & Amzalag, 2025). Rather than utilizing structured, evidence-based instruction, special education teachers often rely on personal judgment, or individual student needs due to limited knowledge of what constitutes an EBP for specific populations (Walker et al., 2024). This preparation gap is especially problematic for social skills instruction, where adolescents with disabilities need explicit, systematic opportunities to learn, rehearse, and generalize peer interaction skills.

Explicitly teaching social skills to proficiency is not only integral to adolescents' academic engagement but also to their long-term inclusion in community and peer networks (Van Pham, 2024). School-based social skills interventions, particularly those incorporating explicit teaching, modeling, rehearsal, and feedback, have consistently shown positive social, behavioral, and academic outcomes for adolescents with disabilities, with substantial literature emphasizing their specific efficacy for students with autism. While Bellini et al. (2007) established that interventions for children with autism often yield low treatment effects and poor generalization, they noted these limitations are primarily because interventions are frequently delivered with low fidelity and lack the intensity or naturalistic integration required for students to apply skills in real-world peer contexts.

Researchers have demonstrated that EBPs such as the Program for the Education and Enrichment of Relational Skills (PEERS®-SB) provide significant efficacy in boosting adolescents' social knowledge, peer engagement, and friendship quality (Schohl et al., 2014; Zheng et al., 2021). PEERS® is best understood as a family of manualized, evidence-based social skills interventions rather than a single curriculum. The broader PEERS® model includes developmentally and contextually adapted versions, including PEERS® for Adolescents, PEERS® for Young Adults, PEERS®-SB, PEERS® for Preschoolers, and emerging adaptations such as PEERS® for Careers (Estabillo et al., 2022; Laugeson, 2013; Laugeson et al., 2012; UCLA Semel Institute for Neuroscience and Human Behavior, n.d.; Wyman & Claro, 2020). Across versions, PEERS® interventions emphasize ecologically valid social rules, direct instruction, modeling, behavioral rehearsal, coaching, homework for generalization, and caregiver or educator support (Laugeson, 2013; Laugeson et al., 2012; Wyman & Claro, 2020). These manualized programs have been developed through systematic research and validation efforts, including randomized controlled trials and dissemination studies, prior to broader professional training

and public implementation (Laugeson et al., 2012; Schohl et al., 2014; Zheng et al., 2021). Thus, PEERS® provides a structured intervention framework that can be adapted across developmental periods and service contexts while maintaining a common emphasis on real-world social functioning.

PEERS®-SB, was developed to translate the original clinic-based PEERS® model into a school-based professional learning and instructional framework (Laugeson, 2013; Wyman & Claro, 2020). Rather than relying on outside clinicians to deliver social skills instruction, PEERS-SB provides educators with structured lesson plans, fidelity tools, training protocols, and classroom-based instructional routines adapted for school environments (Laugeson, 2013; Wyman & Claro, 2020). This adaptation is particularly important for schools because it positions educators as the primary implementers of evidence-based social skills instruction while preserving the core PEERS® components of explicit teaching, role-play, performance feedback, and naturalistic practice (Wyman & Claro, 2020). In this way, PEERS-SB functions both as a PD model for educators and as a practical instructional program for adolescents with autism spectrum disorder and related social learning needs.

The school-based model is also relevant for students with broader intellectual and developmental disabilities, as prior research has documented improvements in social functioning among adolescents and young adults with autism spectrum disorder and cognitive deficits (Wyman & Claro, 2020). In addition, PEERS® adaptations have demonstrated flexibility across delivery formats, including in-person, hybrid, telehealth, and school-based models (Estabillo et al., 2022; Płatos et al., 2023). Recent findings indicated that gains in adolescents' social knowledge, peer engagement, and friendship quality remain robust even when delivered through telehealth or community-based frameworks, leading to reduced social anxiety and increased long-term social responsiveness (Estabillo et al., 2022; Howorth et al., 2025; Parenteau et al., 2024). For rural schools, this flexibility in delivery is especially important because geographic isolation, limited access to specialized consultants, and staffing constraints can make clinic-based or expert-dependent models difficult to sustain (Maher & Prescott, 2017; Sindelar et al., 2010). PEERS-SB therefore offers a promising mechanism for building in-house educator capacity while expanding students' access to structured, ecologically valid social skills instruction.

This study's contribution lies in testing a scalable, asynchronous PD model as a capacity-first approach to PEERS®-SB implementation in a rural high school. Rather than positioning student-level effects as the immediate primary indicator of success, PEERS®-SB emphasizes first building the capacity (i.e., educator knowledge, procedural fluency, and local delivery infrastructure) needed to support sustained implementation in rural and underresourced contexts. In doing so, the study addresses common barriers to EBP adoption in rural schools, including geographic isolation, limited access to specialized consultants, and logistical constraints, while also supporting teachers in delivering structured, ecologically

valid social skills instruction and providing students with opportunities to practice these skills (Laugeson, 2013; Wyman & Claro, 2020). The research questions were: (a) To what extent does a scalable, asynchronous PD model increase the capacity of educators in resource-limited rural settings to implement the PEERS®-SB curriculum?; (b) What is the feasibility and fidelity of PEERS®-SB implementation when delivered by rural school-based professionals following a remote coaching model?; and (c) In a pilot rural application, what are the exploratory changes in the social knowledge and behavioral outcomes of students with developmental disabilities following teacher-led PEERS®-SB instruction?

## Method

### *Participants*

A total of seven educators participated in the professional learning and implementation phases of this study. This sample included two special education teachers and five paraprofessionals (teacher aides). All educator participants were White women, ranging in age from 35 to 60 years, and each possessed over 20 years of experience in the field of special education.

Adolescent participants ($N = 15$) were recruited from a public high school in a rural community in the northeastern United States. The inclusion criteria were intentionally broad (OHI, MD, autism spectrum disorder (ASD), and intellectual disability (ID)) to reflect the diversity of students receiving social skills instruction in inclusive rural settings. This rationale is grounded in the PEERS®-SB model's design intent: to provide manualized, specially designed instruction accessible to students with diverse cognitive and developmental social learning needs. By including students across these categories, we aimed to assess the curriculum's feasibility within the varied social learning environments typical of inclusive special education classrooms, rather than limiting the intervention to a single diagnostic group. The student sample included eight males, five females, and two nonbinary adolescents between the ages of 14 and 18. The disability composition consisted of OHI ($N = 10$), ASD ($N = 3$), and ID ($N = 2$) (see Table 1). While all 15 students participated in the PEERS-SB instruction, the final analytic sample for pre- and posttest comparison was reduced to seven students due to attrition from school absences or incomplete assessment forms. Demographic data were collected at the beginning of the semester for all recruited participants across both classes. Unfortunately, specific demographic characteristics for the final analytic sample of seven students were not disaggregated due to FERPA regulations and participant confidentiality requirements. Pre- and post-intervention assessments were collected using anonymous identifiers managed solely by classroom teachers. Because the research team remained blind to the identities of the students who completed the study, it was not possible to link specific demographic or disability profiles to this final subset. Parental consent and student assent were obtained following school district and university IRB protocols.

**Table 1.** Student Participant Demographics ($N = 15$).

| Characteristic | Sample *N* (%) or Range | Included in Analysis *N* (%) or Range |
|---|---|---|
| **Age (years)** | 14–18 | |
| **Gender** | | |
| — Male | 8 (53) | |
| — Female | 5 (33) | |
| — Nonbinary | 2 (13) | |
| **Race/ethnicity** | All White | |
| **Classroom placement** | | |
| — Resource | 12 (80) | |
| — Self-contained | 3 (20) | |
| **Disability classification** | | |
| — Other health impairment/multiple disabilities | 10 (67) | |
| — Autism spectrum disorder | 3 (20%) | |
| — Intellectual disability | 2 (13%) | |
| **Social skills goal on IEP** | 6 (40%) | |
| **Living arrangement** | | |
| — Two-parent household | 8 (53%) | |
| — Single-parent household | 1 (7%) | |
| — Two households (divorced/separated) | 6 (40%) | |
| **IQ range** | 70–132 | |
| **Reading level** | Pre-K–Grade 9 | |

*Note.* IEP = Individualized Education Programs; PEERS = Program for the Education and Enrichment of Relational Skills for School.
All participants had IEPs and received specially designed instruction in social skills. Percentages are rounded to the nearest whole number.

## *Setting*

The intervention was conducted in a rural public high school in the northeastern United States, serving a student population of 745 students in grades 9–12, 21% of the students in this rural district have individualized education plans. With a student–teacher ratio of 13 to 1, the school provides a comprehensive special education program designed to support students with a range of disabilities, including ID, ASD, and emotional disturbance. The school serves a geographically isolated population with limited access to specialized programming compared to urban or suburban districts. Resources such as social skills instruction, counseling services, and structured academic support are embedded within students' Individualized Education Programs (IEPs).

## *Dependent Measures/Assessment Materials*

*Test of Adolescent Social Skills Knowledge.* The primary measure for both educator and student knowledge was the Test of Adolescent Social Skills Knowledge (TASSK; Wyman & Claro, 2020). The

assessment evaluates conceptual understanding across key social domains, including conversation skills, friendship management, conflict resolution, and social feedback, reflecting the ecologically valid social rules emphasized in the PEERS®-SB curriculum (Laugeson, 2013). The TASSK is a 30-item multiple-choice assessment designed to evaluate conceptual understanding of the ecologically valid social rules and strategies taught within the PEERS®-SB curriculum (Laugeson, 2013; Wyman & Claro, 2020). Each item presents a practical scenario related to peer interaction, such as starting a conversation, using appropriate humor, or managing a disagreement. Participants choose the correct answer from multiple-choice options, with total scores ranging from 0 to 30. Higher scores indicate greater acquisition of the social knowledge required to navigate peer socialization. Prior researchers found strong content validity and adequate internal consistency (alpha = 0.76 to 0.88) for the TASSK involving adolescents with social challenges (Estabillo et al., 2022; Howorth et al., 2025; Wyman & Claro, 2020).

*Quality of Socialization Questionnaire-Revised.* Student socialization patterns were assessed using the Quality of Socialization Questionnaire-Revised (QSQ-R; Estabillo et al., 2022), a self-report tool measuring the frequency and quality of peer interactions over the previous month. The measure captures three primary domains: the number of get-togethers organized by the student, the number of invitations received from peers, and the number of invitations accepted. Students also rate the quality of these interactions (e.g., "We had fun" vs. "We criticized each other") to create a composite score of positive and negative socialization indicators. The QSQ-R has established test–retest reliability ($r =$ 0.83–0.84) and is sensitive to changes in social engagement for adolescents with developmental disabilities (Estabillo et al., 2022; Howorth et al., 2025; Wyman & Claro, 2020).

## Teacher PD

To address the geographic isolation inherent in rural settings, educators participated in a scalable, asynchronous PD model designed to prepare them to deliver the PEERS®-SB curriculum. The PD sequence began with a 1-hr remote orientation via Zoom that introduced the PEERS-SB framework, the evidence-based rules and steps instructional format, expectations for curriculum delivery, and procedures for completing training activities and fidelity documentation. Following, educators were given access to 16 asynchronous training modules hosted through a private online platform (i.e., YouTube). The modules included approximately six hours of recorded video content and were designed to correspond with the 16 PEERS-SB session topics delivered during the intervention period.

Educators were expected to complete the relevant training module before teaching the corresponding PEERS-SB lesson to students. Thus, module completion followed the same general sequence as classroom implementation, allowing educators to preview each skill, review modeling examples, examine lesson materials, and prepare role-play opportunities before

**Table 2.** Overview of PEERS®-SB Session Topics With Practitioner Notes.

| Wk | Session Topic | Practitioner Notes for Implementation |
|---|---|---|
| 1 | Introduction and trading information | Model how to find common ground. |
| 2 | Two-way conversations | Teach how to ask follow-up questions and balance talking and listening. Use visual scripts as prompts. |
| 3 | Electronic communication | Role-play texting and emailing etiquette. Discuss differences between formal and informal contexts. |
| 4 | Choosing appropriate friends | Teach characteristics of healthy friendships. Include peer-mapping activities. |
| 5 | Appropriate use of humor | Use video examples to illustrate sarcasm, timing, and audience awareness. |
| 6 | Peer entry strategies | Practice joining conversations. Give real-time feedback. |
| 7 | Peer exit strategies | Teach polite ways to leave conversations. Have students write their own exit lines to rehearse. |
| 8 | Good sportsmanship | Use games to simulate winning/losing and coach positive language responses. |
| 9 | Planning get-togethers | Practice extending invitations and setting plans. Tie into transition goals around community participation. |
| 10 | Handling arguments | Model calming strategies and assertive communication. Role-play common peer conflicts. |
| 11 | Changing reputations | Encourage reflection on behavior. Discuss growth mindset and making amends. |
| 12 | Handling teasing and embarrassing feedback | Distinguish between teasing and bullying. Teach neutral responses and assertiveness. |
| 13 | Handling physical bullying | Emphasize safety and seeking help. Use role-play with "trusted adult" identification. |
| 14 | Handling cyberbullying | Discuss digital footprints. Use real-world case examples from school or work. |
| 15 | Minimizing rumor and gossip | Use social autopsy to analyze rumor cycles. Practice redirecting conversations. |
| 16 | Graduation and review | Review skills with a Jeopardy-style game or quiz. Celebrate skill growth and set next steps. |

*Note.* Practitioner notes are designed to enhance classroom integration.
*Source.* Adapted from Table 3 in Howorth et al. (2025).

delivery. Each module targeted a specific social skill, such as trading information, two-way conversations, electronic communication, choosing appropriate friends, appropriate use of humor, peer entry and exit strategies, good sportsmanship, planning get-togethers, handling disagreements, managing teasing and bullying, addressing cyberbullying, minimizing gossip and rumors, and reviewing learned skills. Table 2 provides an overview of the 16 PEERS-SB session topics and practitioner notes used to support classroom integration. Each module included three primary components: (a) instructional videos that modeled the target skill and demonstrated examples of curriculum delivery, (b) lesson planning resources,

including standardized scripts and materials from the *PEERS® Curriculum for School-Based Professionals* manual (Laugeson, 2013), and (c) self-assessment activities to support educator readiness prior to student instruction.

## Intervention Protocol and Context

Following the training phase, educators embedded the PEERS®-SB curriculum into their specially designed instruction schedules over 16 weeks, with lessons occurring twice weekly. One teacher delivered lessons in a resource room for students spending at least 40% of their day in general education, while the other facilitated a self-contained life skills classroom for students spending over 85% of their day in special education. The standardized instructional cycle included the introduction of skills (e.g., conversational turn-taking, conflict resolution, appropriate humor, and managing bullying), teacher modeling, guided role-play with immediate feedback, and homework assignments for naturalistic practice (Laugeson, 2013). To maintain implementation quality, researchers conducted monthly Zoom check-ins with the teaching teams to troubleshoot rural-specific barriers and review lesson pacing.

## Data Collection Procedures

Teacher-level TASSK data were collected electronically via Google Forms to accommodate the remote nature of the study and to ensure consistent administration across educators. Teachers completed the pretest TASSK prior to accessing the asynchronous PEERS®-SB training modules, providing a baseline measure of their knowledge of ecologically valid social skills before PD. After completing the training modules which were recorded on Zoom and posted to a private YouTube channel, teachers completed the posttest TASSK to assess changes in knowledge following exposure to the PEERS-SB instructional content and preparation materials. Pre- and posttest responses were linked using participant identifiers, allowing researchers to examine within-educator change over time.

Fidelity of educator implementation of PEERS-SB was monitored using checklists based on the manualized PEERS-SB curriculum (Laugeson, 2013) completed by the lead researcher after remotely observing two sessions for each lead teacher (see Figure 1). Fidelity ratings focused on adherence to lesson structure, provision of corrective feedback, and facilitation of student practice opportunities. Fidelity of implementation was monitored through a multimethod approach: (a) observation (i.e., researchers observed two sessions per educator using a standardized fidelity checklist); (b) self-reporting (i.e., educators maintained reflective logs and completed the Figure 1). Teacher Fidelity Checklist for PEERS Implementation for each session to self-monitor and document adherence to the lesson structure; and (c) adherence review (i.e., monthly Zoom meetings served as a second-tier fidelity check, where researchers and educators reviewed completed checklists to ensure 100% adherence to curriculum protocols during the two observed sessions per educator.

Student participants completed the TASSK and QSQ-R one week before

Teacher Name: _____Session Date: _____ Session Topic: _____

| ✓ | **Fidelity Indicator** |
|---|---|
| | Preparation and Set-Up |
| ☐ | Reviewed the session protocol from the PEERS manual before the session. |
| ☐ | Organized necessary materials and resources outlined in the manual. |
| ☐ | Ensured confidentiality procedures (e.g., identifiers, secure handling of documents). |
| | Session Implementation |
| ☐ | Clearly stated session objectives at the start of the lesson. |
| ☐ | Followed the structured sequence as outlined in the PEERS manual. |
| ☐ | Delivered all instructional components of the session. |
| ☐ | Facilitated interactive components (e.g., role-playing, group discussion). |
| ☐ | Used recommended scripts or guidelines provided in the PEERS manual. |
| ☐ | Ensured adequate pacing to cover all planned content within the allocated session time. |
| | Student Engagement |
| ☐ | Encouraged active student participation throughout the session. |
| ☐ | Monitored and managed student behavior effectively. |
| ☐ | Provided feedback to students consistent with PEERS curriculum guidelines. |
| | Homework Assignment |
| ☐ | Assigned homework clearly and explicitly as described in the manual. |
| ☐ | Provided students with the necessary materials and instructions for homework. |
| | Follow-Up and Communication |
| ☐ | Recorded session notes and reflections as recommended by the PEERS protocol. |
| ☐ | Participated in monthly check-ins with researchers, addressing fidelity and implementation issues. |
| ☐ | Communicated any significant issues or barriers encountered during implementation. |
| | Post-Session Reflection |
| ☐ | Evaluated adherence to the session plan and identified areas for improvement. |
| ☐ | Noted any adjustments needed for future sessions based on student feedback and session outcomes. |

Comments:
Teacher Signature: _____ Date: _____

**Figure 1.** Teacher fidelity checklist for PEERS implementation.
PEERS = Program for the Education and Enrichment of Relational Skills for School.

the intervention. The completed assessments were submitted electronically via Google Forms. To preserve confidentiality and link responses across time points, students were instructed to generate unique identifiers based on personal codes (e.g., first initial and birth date). These preintervention measures provided baseline data for evaluating changes in both teacher and student knowledge and social interaction patterns from pre- to postintervention. Posttest data were not

collected for the typical peers, limiting between-group comparisons to baseline reference only.

## Data Analysis

Data were analyzed in alignment with the study's capacity-first implementation model, which prioritized educator readiness and implementation feasibility while treating student outcomes as preliminary and exploratory. Analyses were conducted separately for educator and student outcomes to ensure consistency among the study's research questions, measures, procedures, and interpretation of findings.

For educator outcomes, researchers examined pre- to post-PD changes in knowledge of ecologically valid social skills using the TASSK. All seven educator participants completed the TASSK before beginning the asynchronous PEERS®-SB PD modules and again after completing the modules and delivering the curriculum. Because the educator research question focused on whether the scalable PD model increased educator capacity, the primary analysis examined within-participant change in TASSK scores from pretest to posttest. Descriptive statistics, including means, standard deviations, medians, and ranges, were calculated. A paired-samples $t$ test was used to test pre- to postintervention change, and Cohen's $d$ was reported to estimate the magnitude of change. A Wilcoxon signed-rank test was also conducted as a nonparametric sensitivity analysis due to the small sample size. Exact $p$-values and 95% confidence intervals for mean differences were reported where appropriate.

For student outcomes, researchers examined preliminary changes in social knowledge and socialization patterns following teacher-led PEERS-SB instruction. Student social knowledge was measured using the TASSK, which students completed 1 week before the intervention and one week after the final lesson. Although 15 students participated in PEERS-SB instruction, the matched analytic sample for student TASSK analyses included seven students with complete pre- and posttest data. Descriptive statistics were calculated, and pre- to postintervention change was examined using paired-samples $t$-tests and Wilcoxon signed-rank tests because of the small, matched sample and violations of normality assumptions. Cohen's $d$ was reported for paired-samples $t$-tests, and effect size $r$ was reported for Wilcoxon signed-rank tests.

Student socialization outcomes were examined using the QSQ-R, which assessed students' peer social engagement during the previous month. Analyses focused on QSQ-R domains with usable paired numeric data: number of get-togethers organized and number of invitations received. Paired QSQ-R data were available for six students for get-togethers organized and seven students for invitations received. For these domains, descriptive statistics were calculated and paired-samples $t$-tests were conducted to examine pre- to postintervention change. The accepted invitations/attended get-togethers domain was not analyzed inferentially because numeric data were insufficient for analysis. Typical peer QSQ-R data were used only as baseline descriptive reference points because posttest data were not collected for

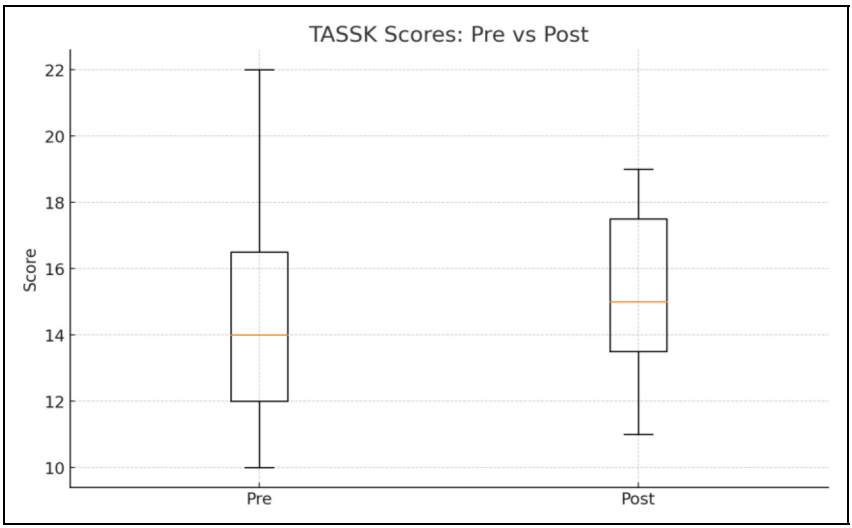


**Figure 2.** Student participant TASSK.
TASSK = Test of Adolescent Social Skills Knowledge.

typical peers; therefore, no between-group comparisons were conducted.

Implementation feasibility and fidelity data were summarized descriptively. Fidelity evidence included researcher observations of two sessions per lead teacher using a standardized PEERS-SB checklist, educator self-monitoring logs, and monthly Zoom check-ins. Because fidelity data were collected to document feasibility and adherence rather than to test intervention efficacy, results were reported descriptively, with attention to adherence to lesson structure, delivery of instructional components, provision of feedback, facilitation of student practice opportunities, and completion of remote coaching procedures.

Given the pilot design, small sample sizes, attrition in student matched data, absence of a comparison condition, and limited 16-week implementation period, inferential results were interpreted cautiously. Educator outcomes were interpreted as evidence of change in implementation capacity, whereas student outcomes were interpreted as exploratory indicators of possible change in social knowledge and social engagement that may inform future research with larger samples, longer follow-up periods, and more robust fidelity and social validity measures.

## Results

### *Teacher Outcome*

Teacher knowledge of ecologically valid social skills significantly increased following participation in PEERS-SB training and lesson delivery. All seven educators completed both pre- and postintervention assessments, yielding no

attrition in the educator sample. As shown in Table 3, teachers' TASSK scores increased from pretest ($M = 9.63$, $SD = 9.78$, $Mdn = 9.50$, range = 0–20) to posttest ($M = 21.63$, $SD = 13.12$, $Mdn = 28.00$, range = 0–30). A paired-samples $t$-test indicated a statistically significant increase in teacher knowledge, $t(6) = 3.42$, $p = .011$, $d = 1.21$, 95% CI [3.71, 20.30]. A Wilcoxon signed-rank test also indicated significant improvement, $W = 0.00$, $p = .027$, $r = .78$. Together, these findings suggest robust growth in educator knowledge following PEERS-SB PD.

## Student Outcomes

TASSK results for the matched analytic sample of seven students indicated no statistically significant improvement from pretest to posttest. Students' TASSK scores were similar at pretest ($M = 14.71$, $SD = 4.11$, $Mdn = 14$, range = 10–22) and posttest ($M = 15.29$, $SD = 2.98$, $Mdn = 15$, range = 11–19). A paired-samples $t$-test indicated that this change was not statistically significant, $t(6) = 0.45$, $p = .668$, $d = 0.17$. A Wilcoxon signed-rank test similarly indicated a nonsignificant change, $W = 11.50$, $p = .812$, $r = .09$ (see Figure 2).

Paired QSQ-R data were available for six students for the number of get-togethers organized and seven students for the number of invitations received. Neither domain showed a statistically significant change from pretest to posttest. For get-togethers organized, scores decreased from pretest ($N = 6$, $M = 1.83$, $SD = 1.94$) to posttest ($M = 1.00$, $SD = 1.10$), but this change was not statistically significant, $t(5) = 1.26$, $p = .265$,

**Table 3.** Teacher Knowledge of Ecologically Valid Social Skills Pre- and Postintervention.

| | *N* | Pre *M* (*SD*) | Pre *Mdn* [Range] | Post *M* (*SD*) | Post *Mdn* [Range] | *t*(*df*) | *p* (*t*-Test) | *d* | 95% CI ΔM |
|---|---|---|---|---|---|---|---|---|---|
| TASSK | 7 | 9.63 (9.78) | 9.50 [0.03–20.00] | 21.63 (13.12) | 28.00 [0.03–30.00] | 3.42 (6) | .011* | 1.21 | [3.71, 20.30] |

*Note.* TASSK = Test of Adolescent Social Skills Knowledge; PEERS-SB = Program for the Education and Enrichment of Relational Skills for School-Based Professionals.
Scores represent teacher performance on the TASSK before and after PEERS-SB professional learning. Values shown are mean (*M*), standard deviation (*SD*), median (*Mdn*), and observed range.

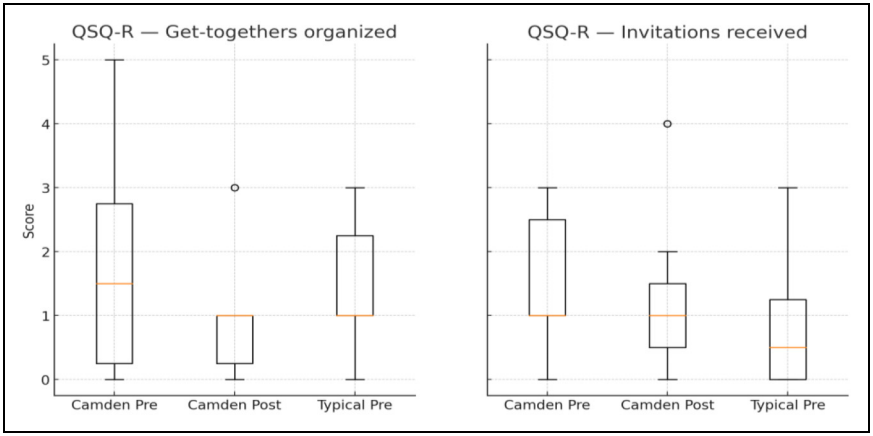


**Figure 3.** Boxplots of student participants' pre- and posttest scores.
*Note.* Compared with typical peers' baseline-only scores on the QSQ-R domains "Number of get-togethers organized" and "Number of invitations received." Typical peers did not provide posttest data. QSQ-R = Quality of Socialization Questionnaire-Revised.

$d = 0.51$. For invitations received, scores were also similar from pretest ($N = 7$, $M = 1.57$, $SD = 1.13$) to posttest ($M = 1.29$, $SD = 1.38$), $t(6) = 0.39$, $p = .710$, $d = 0.15$. The accepted invitations/attended get-togethers domain was not analyzed because numeric data were insufficient for analysis. As a baseline-only point of comparison, typical peers reported a mean of 1.50 get-togethers organized ($N = 8$, $SD = 1.07$) and a mean of 0.83 invitations received ($N = 12$, $SD = 1.03$; see Figure 3).

## Discussion

This pilot study investigated the implementation of the PEERS®-SB curriculum in a rural high school with students with autism, intellectual disability, and OHI using a scalable, asynchronous PD model. The study supports the feasibility of building school-based implementation capacity for PEERS-SB in a rural context. While the strongest finding was growth in educator knowledge of ecologically based social skills, student outcomes were preliminary and should be interpreted cautiously as student-level data were limited by the small pilot sample, lack of a comparison condition, and the short implementation period, which constrain conclusions about intervention effectiveness.

The asynchronous PD model was associated with substantial gains in educator knowledge, with mean TASSK scores rising from $M = 9.63$ to $M = 21.63$ ($d = 1.21$). These gains are consistent with a growing body of literature demonstrating online and asynchronous PD can produce meaningful improvements in teacher knowledge and instructional practice (Philipsen et al., 2019; Powell & Bodur, 2019). This is salient in rural contexts, where limited access to specialized expertise constrains professional learning (Maher & Prescott, 2017; Sindelar et al., 2010). In the present study,

the use of a 1-hr remote orientation, 16 asynchronous modules, standardized lesson materials, and monthly Zoom check-ins provided a structure through which educators could access specialized PEERS®-SB training without requiring travel or ongoing in-person consultation.

Video-based modules therefore represent an approach to addressing persistent workforce and training shortages, particularly in rural districts (Billingsley & Bettini, 2019). This shift is important for sustainability because it allows schools to build an internal pocket of expertise that can continue beyond a single implementation cycle. For rural districts facing staffing instability, geographic isolation, and limited access to specialized behavioral consultants, asynchronous PD may offer a practical pathway for strengthening local implementation infrastructure while expanding student access to evidence-based social skills instruction (Billingsley & Bettini, 2019; Maher & Prescott, 2017; Sindelar et al., 2010).

While positive outcomes were found for educators, there is less to be said regarding students. The divergence between significant educator gains and nonsignificant student outcomes reflects a broader pattern in autism intervention research, where proximal implementation variables often improve prior to detectable changes in student social behavior (Stahmer et al., 2025; Zhang et al., 2024). The absence of statistically significant student effects should be interpreted as informative and may be attributable to several factors. First, the high attrition rate resulted in a small matched analytic sample ($n = 7$), which substantially limited statistical power to detect small-to-moderate effects (Gates et al., 2017). Second, student social outcomes may require a longer duration of exposure than the single 16-week implementation cycle examined in this study, consistent with an implementation lag (Lyon et al., 2018). Third, the effectiveness of social skills interventions is often closely tied to generalization opportunities outside formal lessons. In rural contexts, where dispersed social networks and transportation barriers make naturalistic practice difficult, progress on behavioral measures may lag social knowledge acquisition because students have fewer opportunities to generalize skills outside of the resource room setting (Azano & Stewart, 2016; Wolstencroft et al., 2018). Fourth, the measures used in this study may not have been sufficiently sensitive to detect subtle or early changes in social behavior (Bottema-Beutel et al., 2021). Accordingly, the null findings are informative in that they underscore the challenges of measuring complex behavioral change in under-resourced settings.

## Limitations and Future Directions

Several limitations warrant careful consideration when interpreting the findings of this pilot study. The most significant limitation was the small student sample size and the high rate of attrition. While 15 students initially enrolled, missing data resulted in a final matched analytic sample of only seven students, which substantially constrained the statistical power to detect student outcomes. Further, the researchers were unable to determine the demographics for the seven from the original 15, which included

students with ASD, ID, and OHI. Student results must be interpreted as preliminary and exploratory indicators rather than definitive reflections of curriculum efficacy. While educators achieved high adherence during observed sessions, the rigor of fidelity monitoring was limited to only two observed sessions per educator, supplemented by self-reports and check-ins. The study also relied heavily on student self-report measures, which may lack the sensitivity required to capture subtle behavioral changes in students with complex support needs.

Additionally, the 16-week intervention period may have been insufficient to support the generalization of complex social skills across non-structured school environments, particularly given the geographic isolation and transportation barriers characteristic of the rural context. Finally, the measures used in this study may not have been sufficiently sensitive to detect subtle or early changes in social behavior. Researchers in autism intervention research have highlighted the challenges associated with capturing incremental social change, particularly in small samples and over relatively short intervention periods (Bottema-Beutel et al., 2020). As such, the absence of statistically significant findings should be interpreted with caution and not assumed to reflect a lack of meaningful student progress.

Although educators were given access to the full asynchronous PEERS®-SB training sequence and observed adherence to core curriculum procedures was high during sampled sessions, the study did not include a mechanism for independently verifying whether educators completed all training videos or viewed each module in full. As a result, conclusions about the relationship between PD exposure, educator knowledge gains, and classroom implementation should be interpreted cautiously. Additionally, the effectiveness of social skills interventions is closely tied to opportunities for generalization beyond structured instructional settings. In the present study, QSQ-R data suggested such opportunities were constrained by the geographic isolation and transportation barriers characteristic of the rural context. Limited access to extracurricular and peer social environments may reduce opportunities for students to practice and generalize newly acquired skills, thereby attenuating measurable outcomes within the study timeframe (Azano & Stewart, 2016; Wolstencroft et al., 2018).

Future researchers should replicate these findings with larger and more diverse samples, including multiple school sites, to strengthen external validity, as well as confirm the demographics of included students. Rigorous designs, such as randomized controlled trials or longitudinal follow-up, could clarify the relationship between teacher knowledge gains and student outcomes. Future researchers should also employ more frequent, independent observations to establish a robust measure of implementation fidelity and incorporate multimethod outcome measures (e.g., teacher ratings, peer sociometric data) to capture outcomes more comprehensively.

## Implications

The primary implication of this pilot study is that rural schools may benefit from capacity-first implementation models that

prepare existing school personnel to deliver structured social skills instruction. Rather than treating PEERS-SB solely as a student intervention, teacher preparation programs and district-university partnerships could use the model as a practice-based professional learning tool for special educators and paraprofessionals. Embedding PEERS-SB training into coursework, practicum experiences, or rural PD systems may help address persistent gaps in teacher readiness to support adolescents' social development. Future implementation efforts should pair asynchronous modules with stronger fidelity monitoring, coaching, and planned opportunities for students to generalize skills across school and community settings.

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