

Inclusion

Peer-Mediated Programs Amidst a Pandemic: Perspectives on Implementation, Impact, and Future Considerations --Manuscript Draft--

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Corresponding Author:	Stephanie Therese Pulido, M.Ed. Grand Valley State University Allendale, Michigan UNITED STATES
First Author:	Stephanie Therese Pulido, M.Ed.
Order of Authors:	Stephanie Therese Pulido, M.Ed. Amy Matthews, Ph.D. Jamie Owen-DeSchryver, Ph.D. Lindsey Harr-Smith, M.A. Erik W. Carter, Ph.D.
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May 26, 2023

Dear Dr. Scott,

Thank you for the opportunity to revise our manuscript (INCLUSION-S-23-00005: *Peer-Mediated Programs Amidst a Pandemic: Perspectives on Implementation, Impact, and Future Considerations*). The reviewers' comments were very positive. We detail below how we responded to their comments.

Best,
Stephanie Pulido

REVIEWER 1:

1. The reviewer would have liked to see feedback on the impact of changes to the program from the view of participating students and families.

We agree this is an important, but missing, perspective. We have noted this omission as a limitation on page 22 and recommend that their views be sought in future studies addressing program changes.

2. The reviewer thought it would also be interesting to know if communication and contact between peers and Links extended beyond the school day, and if (or how) that contact was impacted for the 2 years studied.

We agree this would be very interesting to know. This issue comes up rarely in the open-ended questions. For example, we note on page 16 that some teachers mentioned they planned to encourage connections beyond school walls in the future. However, we did not directly ask specifically about these after-school contacts on our surveys, as it would require leaders to speculate about the extent to which peer interactions were taking place outside of school.

REVIEWER 2:

3. The reviewer asked that we clarify what "this" refers to on page 3 of the introduction.

We have clarified the two sentences that were vague with regard to referent.

4. The reviewer recommended that we specify the total number of participants.

We have clarified on page 5 that our data were drawn from one leader from each of the 91 sites.

5. The reviewer noted that media is usually plural for medium.

We have revised this sentence on page 7.

EDITOR

6. The editor asked that we include a positionality statement that provides information about how the authors' positionality shaped the research process.

We have added this information to pages 7-8.

Peer-Mediated Programs Amidst a Pandemic: Perspectives on Implementation, Impact, and
Future Considerations

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Abstract

Schoolwide peer-mediated programs have long been advocated as an avenue for promoting inclusion, friendship, and learning for students with autism and other developmental disabilities. Such interactive programs faced complexities amid the COVID-19 pandemic. We surveyed representatives of 91 elementary and secondary schools implementing a peer-mediated program called *Peer to Peer* (Ziegler et al., 2020). Participants described how the pandemic impacted program involvement, implementation, and inclusion across two school years. In open-ended questions, participants described program adaptations and how the pandemic deepened their commitment to inclusion. We discuss implications for research and practice aimed at strengthening peer-mediated programs to advance inclusion and belonging within—and after—a global pandemic.

Keywords: COVID-19 pandemic, peer-mediated interventions, inclusion, autism

Peer-Mediated Programs Amidst a Pandemic: Perspectives on Implementation, Impact, and Future Considerations

Schools should be places of inclusion and belonging for every student. This aspiration reflects the aim of longstanding calls to ensure students with autism and other developmental disabilities can participate fully and meaningfully in the academic and social opportunities that exist within their school (e.g., Agran et al., 2014; Wehmeyer et al., 2021). Although much progress has been made over the last two decades, many of these students still find themselves on the peripheries of their learning community. For example, the majority spend most or all of their day in separate classrooms (U.S. Department of Education, 2022), and involvement in extracurriculars and school-sponsored activities remains limited (Pence & Dymond, 2021). The friendships and social connections that can promote well-being are especially elusive (Lipscomb et al., 2017). Promoting inclusion and belonging in widespread ways requires intentional and ongoing investment within local schools.

Peer-mediated programs are widely advocated as a practical and effective way of advancing the goals of inclusion and belonging (Carter, 2021; Odom, 2019). Although approaches vary somewhat in substance and scope, peer-mediated programs are formal, school-wide approaches for teaching peers without disabilities about their schoolmates with disabilities, connecting them across activities throughout the school day (e.g., academic, elective, and related arts classes; lunch periods; extracurriculars), and encouraging the exchange of social and learning supports. These programs often incorporate more individualized interventions, such as peer support arrangements, peer networks, lunch bunches, and/or peer tutoring based on the unique needs of students at the school (Carter et al., 2022). Overall, they are designed to nudge schools beyond a thin veneer of inclusion, toward practices that ensure every student has an active, substantive, and valued role within their learning community. Studies suggest these

programs contribute to greater school involvement, promote access to the general curriculum, increase social interactions, promote friendships, and change mindsets (Hume & Campbell, 2019). Likewise, peers can also benefit socially, academically, behaviorally, and attitudinally from involvement (Owen-DeSchryver et al., 2022; Travers & Carter, 2022).

The worldwide COVID-19 pandemic has had a substantial impact on the nature and quality of schooling across the United States. Temporary closures, virtual schooling, social distancing, increased absenteeism, budget tightening, staff shortages, and fatigue among both teachers and students have required refining or revamping the way schooling has typically been done (Huck & Zhang, 2021). The effects of the pandemic were especially impactful for the involvement of students with autism and other developmental disabilities in school experiences and programs grounded in interpersonal interactions (Hurwitz et al., 2022). When a foundational component of a program requires working closely with peers, requirements related to social distancing and masking can make communication and support more difficult. Such difficulties are heightened further for students with extensive support needs who are more likely to have health-related issues (Brandenburg et al., 2020). In other words, connecting students with and without disabilities within shared activities becomes replete with challenges.

The purpose of this study was to examine the ways in which peer-mediated programs across 91 schools have been affected by the COVID-19 pandemic with regard to their implementation and impact. We addressed the following research questions:

RQ1: How has the pandemic impacted *Peer to Peer* involvement, implementation, and inclusion?

RQ2: How do school responses to the pandemic impact overall program implementation?

RQ3: How have schools adapted *Peer to Peer* programming?

RQ4: How has the pandemic shaped perspectives on social relationships, connections,

and belonging?

RQ5: What have program leaders learned that will change their future implementation of *Peer to Peer*?

This timely study has implications beyond *Peer to Peer* and the recent pandemic. First, adapting school practices may be an ongoing reality. The current effects of the pandemic have yet to fully abate and there may continue to be long-term implications. Second, this study could offer creative ideas to improve *Peer to Peer* program quality and resilience outside of challenging contexts such as pandemics. Third, our findings could provide guidance to schools around the country that are adopting any of the various formal or informal peer-mediated programs, such as *Unified Champion Schools* (Siperstein et al., 2019), *Peer Buddy Programs* (Hughes & Carter, 2008), and *Peer Support Networks* (Leigers et al., 2017). Although the facets of these programs can look different across schools, they all focus on the same outcomes and student populations.

Method

Peer to Peer

Peer to Peer is a schoolwide peer-mediated program in Michigan that provided the backdrop for this study. Peers actively support their fellow schoolmates with autism and other developmental disabilities (e.g., intellectual disability, multiple disabilities) socially and/or academically each school day (Ziegler et al., 2020). During the COVID-19 pandemic, *Peer to Peer* was active in more than 400 elementary and secondary schools in Michigan. Approximately 11,000 peers were involved in supporting about 5,000 schoolmates with autism and other developmental disabilities. Core components of *Peer to Peer* include recruiting 15-35 students who volunteer to serve as “peer partners”; equipping peer partners with the skills and support strategies they will need through initial and ongoing trainings; providing staff with training on

the purpose, function, and rationale for *Peer to Peer*; matching peer partners with students with developmental disabilities who would enjoy and benefit from their support and company; creating regular opportunities for students to spend time together in classrooms, cafeterias, extracurricular activities, and other school-sponsored events; engaging peer partners in problem-solving and advocacy; and monitoring the implementation and impact of the program.

Case conferences, celebration events, and medium of exchange activities are specific *Peer to Peer* program elements. Case conferences are meetings of peer partners for a particular student with disabilities in which problem-solving and progress are discussed. The student with a disability often takes part in these meetings. Celebration events are held to recognize the efforts of students with disabilities and their peer partners. Such activities maintain engagement and excitement surrounding *Peer to Peer* and provide additional social interaction opportunities. A medium of exchange is a cooperative activity that promotes authentic interactions between the peer partner(s) and the student with a disability, specifically around common interests such as games, music, or preferred activities. Such activities emphasize fostering friendships and practicing social skills, rather than instructional or tutoring arrangements.

Participants

Participants were staff members involved in leading *Peer to Peer* programs in 91 Michigan schools. These 91 participants must have been part of a team implementing *Peer to Peer* just prior to and/or during the pandemic. Most schools (83.5%) were actively implementing *Peer to Peer*, and 16.5% temporarily placed their program on hold. The roles of participants included special education teachers (41.8%), social workers (25.3%), consultants/coaches (14.3%), speech-language pathologists (7.7%), general education teachers (3.3%), and school psychologists (3.3%). The remaining 4.4% reported other roles (e.g., specialist, counselor, etc.). Participants had been involved in *Peer to Peer* programs for under 1 year (11.0%), 1 to 2 years

(11.0%), 3 to 5 years (36.3%), 6 to 9 years (24.2%), or 10 or more years (17.6%).

Schools and Districts

Participants represented 91 schools across 66 districts throughout Michigan. School buildings were located in both rural (27.5%) and urban (72.5%) settings. The urban settings were composed of buildings in suburbs (38.5%), towns (26.4%), and cities (7.7%). Participants reported involvement in *Peer to Peer* programs at elementary schools (41.8%), middle schools (18.7%), and high schools (31.9%). A few participants reported serving on multiple building-level teams as a consultant (6.6%), and one participant (1.1%) indicated that they were involved in *Peer to Peer* at a K-12 building.

***Peer to Peer* Program Information**

Most *Peer to Peer* programs represented in this study had existed for at least 3 years (78.1%). Twenty participants indicated that the program had existed for 10 or more years. During the 2021–2022 school year, the average number of students with disabilities supported by active *Peer to Peer* programs was 17 (range, 1–64) and the average number of peer partners providing support was 33 (range, 5–130). The average and range of students with disabilities and peer partners reported by programs that went on hold were not included. Middle and high school *Peer to Peer* programs can be offered for elective credit, and a majority of buildings that were eligible (i.e., middle, high school, and multi-level buildings) offered *Peer to Peer* for credit (72.3%). Students with disabilities and their peer partners were reported to spend time together in academic general education classes (68.1%); in elective, specials, or related arts general education classes (68.1%); lunch (64.8%); self-contained classes (44.0%); recess (42.9%); extracurricular activities (38.5%); resource classes (29.7%); and/or in other settings such as field trips and while participating in *Unified Champion Schools* (13.2%).

Procedures

Data collection spanned from April to June 2022. We took multiple recruitment approaches. As a training and technical assistance project funded by the state department of education to promote the use of evidence-based practices with students with autism and related disabilities, we have connections to all school districts in the state through our regional networks. We posted study invitations on our project website, emailed them to subscribers of our website and newsletter, posted them on our social media, and distributed them at our community of practice events and statewide annual conference. We also asked our regional network leaders to send an email invitation to programs in their regions. Study invitations explained the purpose of the study (i.e., to learn about the impact of the COVID-19 pandemic on *Peer to Peer* implementation, the ways staff adjusted their programs, and what staff learned that would inform their program moving forward). The consent form and survey were completed on Qualtrics. Using a separate survey, each participant could enter a drawing for one of three gifts: a project t-shirt (valued at \$23), complimentary attendance at a project training (valued at \$40), or a classroom resource (valued at \$25). A total of 15 participants were selected from the drawing.

Survey Instrument

We created a survey to explore participants' (a) perspectives on the impact of the pandemic on *Peer to Peer* and inclusion, (b) perspectives on the impact of specific pandemic factors on *Peer to Peer* implementation, (c) adaptations to *Peer to Peer* programming, and (d) learning from the pandemic as it pertains to social connections and how to implement *Peer to Peer* in the future. The research team was composed of faculty and staff with professional experience and scholarly knowledge pertaining to peer-mediated supports for students with disabilities. We each approached this study with a strong commitment to ensuring students with autism and other disabilities are supported to participate in the full array of social and learning opportunities available at their school. We were deeply concerned that the pandemic might

further restrict inclusive opportunities for these students and wanted to understand its impact. Based on our prior professional experiences, we also knew that many educators were quite resilient and creative. Therefore, we wanted to capture the ways they adjusted their practices so future teachers might benefit from this learning. After our team developed and revised the survey internally, the revised survey was reviewed by regional network members with professional experience pertaining to peer supports. After additional rounds of revision, we created a final version for distribution.

Demographics and Program Information

We asked participants to report their professional role, the length of time they had been involved in *Peer to Peer* as well as their district, school, and the levels it served. Participants were asked how long the *Peer to Peer* program had existed at their school, whether it was offered as an elective credit, how many students with disabilities were supported through *Peer to Peer* in the current school year, the number of peer partners providing support through *Peer to Peer* in the current school year, and the settings where students with disabilities and their peer partners spent time together through *Peer to Peer*.

Pandemic Impact on Student and Staff Participation

Participants reported the extent to which the overall numbers of students and staff involved in *Peer to Peer* changed in both the 2020–2021 and the 2021–2022 school year (see Table 1): Each of the four items was rated on a 5-point, Likert-type scale: 1 = significantly decreased, 2 = decreased, 3 = stayed the same, 4 = increased, and 5 = significantly increased.

Pandemic Impact on Peer to Peer and School Inclusion

We asked how the pandemic impacted *Peer to Peer* programs in three areas: program implementation, program maintenance, and school inclusion (see items in Table 2). Each item was rated on a 4-point, Likert-type scale: 1 = no impact, 2 = minor impact, 3 = moderate impact,

4 = major impact. Cronbach's alpha for this section was .88.

School Responses Impacting Program Implementation

As schools responded to the pandemic, they implemented an array of practices that could potentially impact *Peer to Peer* implementation (e.g., remote instruction, social distancing, restrictions on sharing materials, and student quarantines). Participants reported on the extent to which various responses to the pandemic impacted *Peer to Peer* implementation (see items in Table 3). Each item was rated on a 4-point, Likert-type scale: 1 = no impact, 2 = minor impact, 3 = moderate impact, 4 = major impact. Cronbach's alpha for this section was .88.

Adaptations to Peer to Peer Programming

We asked participants which of seven elements of *Peer to Peer* programming they were able to successfully adapt during the pandemic. These elements included recruiting peers, training peers, connecting students, engaging students, holding celebration events, holding case conferences, and staffing the program. We included an open-ended question for participants to describe at least one way they successfully adapted their program during the pandemic.

Learning From the Pandemic

The final section included two open-ended questions for participants to indicate how the pandemic affected their thinking about social relationships, connections, and belonging. We also asked what else they learned over the course of the pandemic that will change their future *Peer to Peer* implementation.

Data Analysis

We used a mixed-methods approach including descriptive statistics, independent samples *t* tests, Spearman's rank-order correlation, and thematic analysis to address our research questions. To summarize results for RQ1 and RQ2, we calculated the percentage of participants providing each rating for each item and calculated means and standard deviations. We also

conducted two exploratory analyses. First, we compared responses based on school level (i.e., elementary or secondary) using independent samples *t* tests. The seven participants reporting they served an entire district or a K-12 building were not included. Second, we examined the correlation between program length and the impact of the pandemic and specific pandemic factors using Spearman's rank-order correlation. SPSS 27 was used to carry out analyses. For RQ3, we calculated the percentage of participants selecting each area they adapted.

We used thematic analysis (Braun & Clark, 2006) to examine the three open-ended questions addressing the ways participants adapted their programs (RQ3), how the pandemic affected their views on social relationships (RQ4), and what they learned that will influence programming in the future (RQ5). The first author iteratively developed a set of codes for each open-ended question and labeled each quote to summarize the answer given by the participants to the research question. Some of the written responses received multiple labels to address separate ideas expressed by the participants. Similar labels were grouped into an initial set of codes. As coding continued, new codes emerged, definitions were adjusted, and some codes were merged. Two other team members read through all of the qualitative responses and coding to gauge agreement and provide feedback. The first author adjusted the individual codes based on this feedback and the existing coding framework. The coding framework did not need revision.

Results

How Has the Pandemic Impacted *Peer to Peer* Involvement, Implementation, and Inclusion?

Table 1 displays the reported changes in staff and student involvement in *Peer to Peer* during each year of the COVID-19 pandemic (*M* range, 2.12–3.16). Over half (61.5%) of participants indicated that there was a decrease or significant decrease in the number of students

involved in the 2020–2021 school year (i.e., the first full school year of the pandemic). One third (33.0%) reported that student involvement stayed the same and few described increases (5.5%). In contrast, decreases in student involvement were less common (29.7%) during the 2021–2022 school year (i.e., the second full school year of the pandemic). Instead, 27.5% of schools said student involvement stayed the same and 42.9% described some level of increase. Staff involvement followed a similar pattern of heavier decreases in 2020–2021 and maintenance or increases in 2021–2022. We found no differences for school level (i.e., elementary, middle, and high school) in the change of staff and student involvement during each year of the COVID-19 pandemic. No correlations were found between length of program and changes in staff and student involvement during each year of the COVID-19 pandemic.

Table 2 displays ratings of how the pandemic impacted *Peer to Peer* implementation and inclusion. With the exception of two participants, everyone indicated some level of impact in at least one of the nine areas we listed. Indeed, the average number of items participants identified as being impacted in a moderate or major way was 4.3 ($SD = 2.94$). Regarding the implementation of *Peer to Peer*, most participants reported the pandemic had a moderate or major impact on recruiting and training peers (59.3%), holding case conferences (54.9%), and holding celebration events (76.9%). Regarding the maintenance of *Peer to Peer*, participants reported the pandemic had a moderate or major impact on maintaining commitment from administrators and school staff (38.5%), on maintaining commitment from families (29.7%), and on devoting staff capacity to *Peer to Peer* (53.9%). Regarding school inclusion through *Peer to Peer*, less than half of participants reported the pandemic had a moderate or major impact on including students with disabilities in instructional settings (35.2%), in social experiences at school (46.2%), and in extracurricular experiences (39.6%).

We found significant school-level differences in just two areas. Compared to secondary

schools, participants leading programs in elementary schools reported that the pandemic had a greater impact on holding case conferences, $t(82) = 2.17, p = .033$, and maintaining a commitment to *Peer to Peer* from administrators and school staff, $t(82) = 2.65, p = .01$. We found no significant correlations related to program length.

How Do School Responses to the Pandemic Impact Overall Program Implementation?

Table 3 displays ratings of how school responses to the pandemic impacted overall implementation of *Peer to Peer*. All of the participants indicated some level of impact resulting from at least one of the eight areas we listed. Indeed, the average number of school responses participants identified as having a moderate or major on overall program impact was 5.8 ($SD = 2.51$). More than half of participants reported that the following school responses to the pandemic had a moderate or major impact on the overall program: remote instruction (82.4%), student quarantines (82.4%), social distancing and student grouping restrictions (79.1%), staff stress/burnout (75.8%), restrictions on sharing materials (72.5%), staff shortages (67.0%), staff quarantines (60.4%), and substitute teacher shortages (56.0%).

We found significant school-level differences in just two areas. Compared to secondary schools, participants leading programs in elementary schools reported that staff shortages, $t(82) = 2.45, p = .016$, and substitute teacher shortages, $t(82) = 2.03, p = .046$, had a greater impact on overall program implementation. We found no significant correlations related to program length.

How Have Schools Adapted *Peer to Peer* Programming?

Nearly all of the participants (90.1%) indicated at least one area in which they adapted their programming as a result of the pandemic. Specifically, they adapted the ways they connected students in their programs (57.1%), their engagement of students in medium of exchange activities (50.6%), the ways they recruited peers (35.2%), the ways they trained peers (26.4%), how they staffed the program (25.3%), the ways they held celebration events (25.3%),

and the ways they held case conferences (23.1%). In analyzing the open-ended findings, participants elaborated on their adaptations in six areas: student connections, medium of exchange, adherence to safety protocols, key program activities, and peer recruitment/training.

Student Connections

Forty-seven participants described adapting how they brought students with and without disabilities together. This often involved connecting students virtually through video chat technology when schools were closed or students quarantined. One high school program leader explained:

Although we were remote for several months, we were able to meet via Zoom. I met weekly with the students enrolled in the [*Peer to Peer*] course to go over the content and conference with them about how things were going with their peers. They joined their students for a couple of academic-based Zoom calls a week. We also had one weekly group Zoom that the students planned activities for. This gave them a sense of ownership and helped them look forward to these sessions. When we returned to in-person learning, we were not able to bring the peer students face-to-face for a while. During this period, students joined Zoom from their classrooms and came up with activities to do together. They created games to play, talked, watched short videos, and discovered several of there [sic] creative things they could do together.

A few participants noted facilitating student connection through promoting technologies such as texting and email. A suburban special education teacher explained, “We were able to get students chatting more through technology and some of our students felt more comfortable that way.”

One district incorporated a “pen pal” program to keep students in contact. Some participants also mentioned community activities. For example, a middle school social worker said their school’s program coordinated a Halloween walk, and a high school special educator noted their school’s program held a car parade during school closure.

Medium of Exchange

Twenty-one participants explained how they adapted medium of exchange activities with the purpose of promoting interaction between students. Several program leaders described how

they and their students coordinated online games as a way to ensure students were interacting socially, especially during periods of remote instruction. According to a middle school special education teacher:

As needed, we had online lunch bunches with students between home and school several times a week. Links [peer partners] and targeted students created online games for students to play. At Christmas, our Lunch Bunches had online scavenger hunts - with items they had to find around their homes. We did some emoji song games.

Another middle school special education teacher explained how students learned to play Uno™ virtually and did so weekly as a group. Likewise, a high school special education teacher described hosting a virtual escape room to connect students in the *Peer to Peer* program.

Adherence to Safety Protocols

Twenty participants described how they adapted in-person programming at school while still following COVID-19 safety protocols. An elementary social worker with a long history of implementing *Peer to Peer* explained, “We moved our lunch and group room to a larger space to comply with social distancing AND have *Peer to Peer* gatherings.” Further, some schools required that students be grouped into cohorts, which allowed *Peer to Peer* to continue using small groupings. Other participants noted that they carried out their programs while wearing masks. As an elementary special educator recalled, “When our Peer Links [peer partners] came to our room to play, they happily wore masks when in our classroom.”

Key Program Activities

Thirteen participants described how they adapted key program activities, including case conferences and celebration events. Participants who explored their adaptations of case conferences focused on gathering in smaller groups or meeting virtually. Celebration events were held virtually or outside. A social worker from a brand new *Peer to Peer* program explained, “Our first celebration at Camp [name redacted] was held outside and we wore masks when on

the bus and if someone needed to go inside.”

Peer Recruitment and Training

Eleven participants adapted how they recruited and trained peers. According to one middle school special education teacher, “We relied on Links [peer partners] recruiting other Links.” The teacher went on to explain, “During *Peer to Peer* training, Google Classroom was available for students to join from home and continue to participate.”

How Has the Pandemic Shaped Perspectives on Social Relationships, Connections, and Belonging?

We identified four themes related to the impact of the pandemic on program leaders’ perspectives in these areas: affirming the value of social connection, changing implementation specific to building relationships, navigating challenges, and experiencing isolation.

Affirming the Value of Social Connection

Forty-seven participants reflected on the value of and need for strong and enduring social connections. One autism consultant illustrated this point when saying, “It has magnified the need to feel a sense of belonging and I have strived to bring back programs that were impacted by the pandemic and staff early retirement (due to the pandemic).” An elementary special educator reflected on the difference between students who had and had not been involved in *Peer to Peer*:

Social relationships, connections, and belonging are so important! We really need this program back to offer some of our kids those connections with others. Some of the older kids who made some of those connections pre-Covid [sic] have been able to maintain them with others who were in their cohort, but we are really missing that component for our younger students!

Several participants felt it was more important now than ever to invest in relationships for the promotion of well-being among all students, including those with disabilities. According to a coach from a rural school, “It has supported the importance of fostering and supporting opportunities for all students to have social interactions and relationships in order to maintain

and grow a student's emotional well-being and the overall positive culture of a school system.”

One middle school special educator reflected on the need for belonging at their school:

The pandemic made me see how much I take inclusion for granted. Before the pandemic, I didn't realize how important high fives in the hallway were. During the pandemic I saw how isolated students with autism and other disabilities really are. Now that we are back to mostly normal, I don't take those times for granted, and am much more intentional about making students with disabilities feel like they belong.

Finally, a high school special educator from a rural community explained how the pandemic opened their eyes to the impact of *Peer to Peer* on all involved:

The pandemic helped us realize that everyone needs connections and relationships, not just our students with disabilities. The *Peer to Peer* program benefits everyone involved, including the Links [peer partners], peers and staff. Students who struggle in a variety of social/emotional areas can make great Links, and the program helps them be successful.

Changing Implementation Specific to Building Relationships

Fifteen participants described new actions they would take moving forward to promote relationships, connections, and belonging. Connections to technology were especially prominent.

For example, a high school social worker from a rural school explained:

This has opened up my thinking about how students connect in a virtual setting, such as video games or texting and how we may need to adapt more for the future in order for students to be able to connect in that way. I still feel very strongly about face-to-face interactions, but since all students have had to adapt to virtual connection, it seems to be the way we should be moving at least in the sense of encouraging social connection in that way.

Others mentioned that they will encourage connections beyond school walls. For example, a middle school social worker noted, “I would like to help students connect with their peers outside of school so that the connections are not 100% reliant on in-person, in-school.”

Navigating Challenges

Fourteen participants addressed challenges faced during the COVID-19 pandemic with respect to relationships, connections, and belonging. Many spoke to the impact of missed social opportunities on the social development of all students. For example, an elementary general

educator from a newly established program shared about the setbacks she saw for all students:

I feel that all children have been at a social disadvantage. From kindergarten to 12th grade each age group has missed out on a huge chunk of social development that will take time to overcome. I hope to help build positive relationships to help students bridge the gap that they missed in socialization.

Others noted that it was difficult to foster relationships when instruction was provided remotely.

For example, one coach noted, “Starting friendships virtually is tough so really looking at ways to get kids face-to-face is needed.”

Experiencing Isolation

Ten participants reflected on the isolating effects of the pandemic for students with autism. According to a rural high school social worker, “It has emphasized the extent to which some students with autism are isolated when outside the school building.” The beneficial effect of peers was noted by a high school teacher with a long history of *Peer to Peer* implementation, “Students became very isolated and lethargic. Interactions with peers keep students engaged and interested.” Similarly, a high school social worker reflected:

The pandemic showed me how isolated some of our students were. They really looked forward to and frankly relied on the weekly connections and social interactions offered through virtual Zoom groups such as weekly trivia. This has caused me to encourage [sic] students in *Peer to Peer* to remain connected during summer breaks and encourage a sense of community through *Peer to Peer*.

What Have Program Leaders Learned That Will Change Their Future Implementation?

We identified four aspects of *Peer to Peer* implementation that program leaders plan to change as a result of the COVID-19 pandemic: program operations, buy-in and support, marketing to and training staff, and staffing.

Program Operations

Forty-one participants offered new insights into carrying out key functions of *Peer to Peer* programming. Many reflected on their recruitment, training, and involvement of peers in

their programs. One high school special educator explained, “I would like to get where the staff are more facilitators and the peers take charge and organize more events with minimal staff direction.” An elementary special educator likewise shared, “Students are more than willing to try and help keep the program alive at my school.” A handful of participants noted the benefit of taking small steps to improve programming. Others mentioned more specific actions they would take such as pushing into the general education setting, partnering with other schoolwide initiatives, and involving parents more fully in program implementation.

Buy-In and Support

Twenty participants reflected on the importance of maintaining and building buy-in and support for their program. For one coach, administrative support helped bring their programs back, “Our district is VERY supportive of P2P and we started all programs (K-12) back up in the Fall of 2021.” Buy-in from general education staff was valued by an elementary special educator who explained:

Gen Ed Staff buy-in is key. They like swag, food, and need a refresher every year about what P2P [Peer to Peer] is and what it isn't. I think reviewing this at one of the first staff meetings of the school year - even if there is no change in staff members - helps them to help their Peer LINKs [peer partners].

Marketing to and Training Staff

Seventeen participants explored how the benefits of *Peer to Peer* must be communicated to fellow staff. A coach from a rural school noted, “Starting from the basics and educating staff on the power of peers again will be key. Having to take a few steps backwards in order to build up again when Covid [sic] tore down.” Another coach in a new *Peer to Peer* program suggested, “Allow staff to experience the program, let them see the importance for themselves.”

Staffing

Twelve participants emphasized the importance of having multiple staff involved and

sharing the workload of implementing *Peer to Peer*. An elementary social worker new to *Peer to Peer* suggested, “Ensuring multiple staff members are involved so when there is a staff shortage the program can still run.” Likewise, an elementary social worker from a long-established *Peer to Peer* program noted that they learned, “To create a team of staff that shares in the responsibilities. This reduces burn out [sic] and stress level of staff if there are shared responsibilities.” Considering a broader perspective, one autism coach pointed out, “I learned that it may look different in different schools based on staff availability.”

Discussion

The COVID-19 pandemic has had a significant impact on the ways students learn and spend time together. Yet little is known about how schoolwide peer-mediated programs have fared amidst these challenging times. Our study explored *Peer to Peer* implementation in 91 schools during the COVID-19 pandemic. This study brings important new insights into the complexities of fostering relationships and learning when being present together becomes difficult or impossible.

First, the impact of the COVID-19 pandemic on all aspects of the *Peer to Peer* program was varied but considerable. This impact spanned program elements such as recruiting and training peers; holding case conferences; holding celebration events; maintaining a commitment to *Peer to Peer* from administrators, school staff, and families; devoting staff capacity to *Peer to Peer*; and including students with disabilities in instructional settings, social experiences at school, and extracurricular experiences. This is not unlike the pandemic’s impact on other aspects of schooling (e.g., Hurwitz et al., 2022; Morando-Rhim & Ekin, 2021). The ways in which schools responded to the pandemic—such as remote instruction, student quarantines, social distancing and student grouping restrictions, and restrictions on sharing materials—all coalesced to make overall implementation of *Peer to Peer* even more difficult. Leading a

thoroughly social endeavor, *Peer to Peer* program staff persevered even through the most restrictive phases of the pandemic when schools were shut down. Such ripple effects of these challenges are likely to continue amidst ever-worsening staff shortages.

Second, some differences existed in the ways program leaders from elementary and secondary programs assessed the impact of the pandemic. Program leaders from elementary buildings rated the impact of the pandemic higher than those from secondary buildings with respect to holding case conferences and maintaining a commitment to *Peer to Peer* from administrators and school staff. Elementary program leaders also reported a higher impact of staff and substitute teacher shortages on their implementation than secondary program leaders. Given the high percentage of accredited secondary programs, it may be that the accreditation is a protective factor. When *Peer to Peer* is an established class, dedicating staff capacity to its implementation is a must. At the elementary level, *Peer to Peer* implementation might be viewed as an extra activity on top of the existing staff obligations and thus more likely to be paused. Further, case conferences are required for some *Peer to Peer* elective classes as part of a peer partner's grade. This is not the case at the elementary level, so it might be more difficult for a program leader to advocate for case conferences.

Third, the adaptations made by program leaders were innovative and individualized. Not only were these adaptations important during the pandemic, they could be drawn upon well beyond the pandemic and in the midst of yet-to-be-seen local or national challenges. A critical player in adapting to the pandemic was the utilization of technology. Many program leaders referenced using Zoom in order to bring students together for shared activities. Considering a different context, a *Peer to Peer* program might be able to utilize Zoom during a closure related to a natural disaster or if a student is hospitalized or homebound for an extended period of time and craves ongoing connections with peers. Program leaders also connected students during the

pandemic by facilitating online games and encouraging students to send messages via text or email. A different scenario where this may be beneficial is during periods of inclement weather or during school breaks. Students can play games, email, or text each other to remain in contact whenever there is a situation where school is closed. Program leaders also reduced the sizes of groups during the pandemic. If a student with a disability wants to participate in case conferences but is overwhelmed by large groups, the team might consider smaller groups for case conferences. Finally, increasing staff involvement in *Peer to Peer* will improve a program regardless of the current social climate.

Fourth, the pandemic clearly impacted program leader perspectives on the place and priority of inclusion and belonging within schools. After experiencing the absence of the traditional means of social connection, leaders emphatically expressed how much they value relationships and belonging and the need for *Peer to Peer* in schools. Some leaders reflected on the jarring absence of the connections between students with disabilities and their peers. Other leaders expressed a heightened awareness of the isolation of students with disabilities outside of the school context. Taken together, program leaders agree that students with disabilities and their peers need to be together to promote mental health and a positive school culture.

Limitations and Future Research

Several limitations of this study should be considered and may suggest future research directions. First, it was challenging to recruit program leaders to participate in the midst of a pandemic because program leaders were particularly busy. Leaders who were more significantly impacted might have opted not to take time to complete the survey. As such, the results may indicate that the impact of the pandemic was less substantial than it actually was. Additionally, the pandemic may have caused programs that existed prior to the pandemic to permanently close. Leaders of such programs would not have completed this survey. Second, for most schools, only

one perspective regarding the impact of the pandemic on *Peer to Peer* was shared. Further, the participants were composed primarily of special education teachers and other special education service providers (e.g., social worker, speech-language pathologists). In practice, most programs involve multiple staff members and often include general educators and paraprofessionals. Future studies should seek out these additional perspectives as program leaders may not have a full picture of the impact of the pandemic and the adaptations implemented. Third, we did not ask for the insights of students with disabilities and their peer partners, who are the most likely to feel the impact firsthand. In the midst of the ongoing pandemic, coordinating meetings with students may have added to existing stressors experienced by schools and families. However, their perspectives on program changes—along with those of their parents—should be explored in future studies. Fourth, this study focused solely on one type of peer partner program carried out in one state. Although *Peer to Peer* is a prominent program in Michigan, it would be beneficial to learn about program leader's perspectives on carrying out other types of peer partner programs, such as peer support arrangements, peer tutoring, or more individualized peer-mediated interventions.

Implications for Practice

Our findings have important implications for school staff who are currently involved in or plan to become involved in the implementation of any type of peer partner program. First, social connections are critical for the health and well-being of every student. The participants in this study were in overwhelming agreement that everyone benefits from experiencing such connections. Many participants reflected on how *Peer to Peer* benefitted not only the students with disabilities but also their peers and the staff members. The COVID-19 pandemic took a severe toll on the mental and physical health of the global population. With so many school teams seeking out curricula and programs to promote the mental health of students, *Peer to Peer*

is an option schools might consider.

Second, the pandemic taught participants how much technology can be used as a point of communication and connection. Many participants indicated that they connected students through virtual means such as Zoom meetings, encouraged texting and emails, and encouraged online activities as a medium of exchange. Continuing to capitalize on positive social connections through technology, even when students have consistent face-to-face opportunities allows students another avenue to stay connected and build relationships in an age-appropriate way. Using technology as a means of connection can also help to address barriers such as transportation which can inhibit an individual's access to opportunities for social engagement.

Third, program resilience and maintenance could be promoted by increasing the number of program leaders, training all school staff on *Peer to Peer*, and establishing buy-in from both staff and administration. Participants indicated they will change the way they implement *Peer to Peer* by increasing the number of staff involved to share the workload. This would also help ensure that if a leader were to leave the building or the profession, *Peer to Peer* would be sustained rather than shut down. Increasing awareness of *Peer to Peer* throughout a building by training all staff can facilitate buy-in. Staff who do not have a good understanding of the purpose and benefits of *Peer to Peer* could serve as a barrier to implementation. Participants also reflected on the importance of buy-in from both building staff and administrators. If *Peer to Peer* becomes an essential component of the building culture and operations through staff action and/or administrator leadership, it is more likely to be sustained over time. More specifically, as one participant mentioned, getting influential staff on board can facilitate growing buy-in and involvement in *Peer to Peer* from others in the building.

Conclusion

The COVID-19 pandemic abruptly changed everything about daily life, especially

education and social interaction. Still, many *Peer to Peer* program leaders found creative ways to connect students with disabilities and their peers amidst such challenges as lockdowns, student quarantines, and social distancing. The feedback provided by program leaders not only offers insight on how to implement peer-mediated programs during the ongoing challenges of the COVID-19 pandemic, these insights can be applied to implementing and sustaining peer-mediated programs during both non-crisis times and times of alternative crisis such as staffing shortages, natural disasters, and other health emergencies.

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Table 1

Reported Changes in Staff and Students Involvement in Peer to Peer During the Pandemic

Item	Percentage responding					<i>M (SD)</i>
	Significantly decreased	Decreased	Stayed the same	Increased	Significantly increased	
Overall number of students involved in <i>Peer to Peer</i> in 2020-21	33.0	28.6	33.0	4.4	1.1	2.12 (0.96)
Overall number of students involved in <i>Peer to Peer</i> in 2021-22	8.8	20.9	27.5	30.8	12.1	3.16 (1.16)
Staff involvement in <i>Peer to Peer</i> in 2020-21	18.7	28.6	48.4	3.3	1.1	2.40 (0.87)
Staff involvement in <i>Peer to Peer</i> in 2021-22	7.7	13.2	48.4	25.3	5.5	3.08 (0.96)

Table 2

Perspectives on Impact of COVID-19 Pandemic on Peer to Peer and Inclusion

Item	Percentage responding				<i>M (SD)</i>
	No impact	Minor impact	Moderate impact	Major impact	
Implementing <i>Peer to Peer</i>					
Recruiting and training peers for <i>Peer to Peer</i>	16.5	24.2	29.7	29.7	2.73 (1.07)
Holding case conferences	26.4	18.7	27.5	27.5	2.56 (1.16)
Holding celebration events	6.6	16.5	27.5	49.5	3.20 (0.95)
Maintaining <i>Peer to Peer</i>					
Maintaining a commitment to <i>Peer to Peer</i> from administrators and school staff	36.3	25.3	19.8	18.7	2.21 (1.13)
Maintaining a commitment to <i>Peer to Peer</i> from families	41.8	28.6	14.3	15.4	2.03 (1.09)
Devoting staff capacity to <i>Peer to Peer</i> (e.g., time, availability, energy)	22.0	24.2	22.0	31.9	2.64 (1.15)
Other areas of inclusion					
Including students with disabilities in instructional settings	37.4	27.5	19.8	15.4	2.13 (1.09)
Including students with disabilities in social experiences at school (e.g., lunch, recess)	30.8	23.1	25.3	20.9	2.36 (1.13)
Including students with disabilities in extracurricular experiences (e.g., clubs, sports, events)	33.0	27.5	18.7	20.9	2.27 (1.14)

Table 3

Perspectives on the Impact of COVID-19 Pandemic Factors on Implementation of Peer to Peer

Item	Percentage responding				<i>M (SD)</i>
	No impact	Minor impact	Moderate impact	Major impact	
Remote instruction	9.9	7.7	17.6	64.8	3.37 (1.00)
Social distancing and student grouping restrictions	5.5	15.4	25.3	53.8	3.27 (0.92)
Student quarantines	3.3	14.3	34.1	48.4	3.27 (0.83)
Staff stress/burnout	7.7	16.5	31.9	44.0	3.12 (0.95)
Restrictions on sharing materials	7.7	19.8	26.4	46.2	3.11 (0.98)
Staff shortages	14.3	18.7	27.5	39.6	2.92 (1.08)
Staff quarantines	15.4	24.2	24.2	36.3	2.81 (1.09)
Substitute teacher shortages	22.0	22.0	19.8	36.3	2.70 (1.18)

May 26, 2023

Dear Reviewers,

Thank you for your valuable comments on our manuscript (INCLUSION-S-23-00005: *Peer-Mediated Programs Amidst a Pandemic: Perspectives on Implementation, Impact, and Future Considerations*). Our responses are detailed below.

Best,
Stephanie Pulido

REVIEWER 1:

1. The reviewer would have liked to see feedback on the impact of changes to the program from the view of participating students and families.

We agree this is an important, but missing, perspective. We have noted this omission as a limitation on page 22 and recommend that their views be sought in future studies addressing program changes.

2. The reviewer thought it would also be interesting to know if communication and contact between peers and Links extended beyond the school day, and if (or how) that contact was impacted for the 2 years studied.

We agree this would be very interesting to know. This issue comes up rarely in the open-ended questions. For example, we note on page 16 that some teachers mentioned they planned to encourage connections beyond school walls in the future. However, we did not directly ask specifically about these after-school contacts on our surveys, as it would require leaders to speculate about the extent to which peer interactions were taking place outside of school.

REVIEWER 2:

3. The reviewer asked that we clarify what “this” refers to on page 3 of the introduction.

We have clarified the two sentences that were vague with regard to referent.

4. The reviewer recommended that we specify the total number of participants.

We have clarified on page 5 that our data were drawn from one leader from each of the 91 sites.

5. The reviewer noted that media is usually plural for medium.

We have revised this sentence on page 7.

EDITOR

6. The editor asked that we include a positionality statement that provides information about how the authors' positionality shaped the research process.

We have added this information to pages 7-8.