Published in final edited form as:

Autism. 2015 August ; 19(6): 694–703. doi:10.1177/1362361314548078.

Services for children with autism spectrum disorder in three, large urban school districts: Perspectives of parents and educators

Suzannah Iadarola¹, Susan Hetherington¹, Christopher Clinton¹, Michelle Dean², Erica Reisinger³, Linh Huynh², Jill Locke³, Kelly Conn¹, Sara Heinert¹, Sheryl Kataoka², Robin Harwood⁴, Tristram Smith¹, David S Mandell³, and Connie Kasari²

¹University of Rochester Medical Center, New York, USA

²University of California, Los Angeles, USA

³University of Pennsylvania, Pennsylvania, USA

⁴Health Resources & Services Administration, Maternal and Child Health Bureau, Maryland, USA

Abstract

This study used qualitative methods to evaluate the perceptions of parents, educators, and school administrators in three large, urban school districts (Los Angeles, Philadelphia, and Rochester) regarding services for children with autism spectrum disorder within the context of limited district resources. Facilitators followed a standard discussion guide that contained open-ended questions regarding participants' views on strengths and limitations of existing services and contextual factors that would facilitate or inhibit the process of introducing new interventions. Three primary themes were identified: (1) tension between participant groups (teachers and paraprofessionals, staff and administration, teachers and parents, special education and general education teachers), (2) necessity of autism spectrum disorder-specific and behavioral training for school personnel, and (3) desire for a school culture of accepting difference. These themes highlight the importance of developing trainings that are feasible to deliver on a large scale, that focus on practical interventions, and that enhance communication and relationships of school personnel with one another and with families.

Keywords

autism; community-based participatory research; qualitative research; school-based intervention; urban environments

Introduction

A wide gap separates university-based research findings from school-based interventions for children with autism spectrum disorder (ASD) (Kasari and Smith, 2013). Investigators have

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Corresponding author: Suzannah Iadarola, Department of Pediatrics, University of Rochester Medical Center, 601 Elmwood Avenue, Box 671, Rochester, NY 14642, USA. Suzannah_Iadarola@URMC.Rochester.edu.

identified numerous efficacious intervention strategies for teaching new skills to children with ASD (Odom et al., 2012); however, related studies have generally taken place in specialized centers or other highly controlled settings such as experimenter-run summer camps and classrooms (Kasari and Smith, 2013). Interventions often are developed without consideration for school resources, which may limit the adoption and sustainability of these treatments. For example, many interventions were designed to be delivered through one-to-one therapy, rather than through the whole group instruction that is more traditionally used in schools (Stahmer et al., 2012). Some interventions target problems such as difficulty with basic discrimination learning that seem more prevalent in research samples than in schools (Reed et al., 2013). There also may be a mismatch between the intervention goals in research trials and the goals that school personnel have for their students. Given this misalignment between research and practice, it is unsurprising that although most educators endeavor to adopt interventions supported by research (Stahmer and Aarons, 2009; Stahmer et al., 2005), they tend to implement these interventions inconsistently and alongside untested interventions (Stahmer, 2007). Even with individualized training and ongoing consultation, educators' adherence to recommended intervention procedures can be limited (Mandell et al., 2013).

To increase the probability that interventions will be used in school settings the way they were designed, investigators have begun to seek feedback from the educators responsible for delivering the interventions (Parsons et al., 2013). In one study, educators gave detailed feedback about which intervention components were or were not feasible and helpful, and they offered detailed recommendations for adaptations (Stahmer et al., 2012). In another, teachers expressed a strong preference for opportunities to provide feedback rather than a unidirectional flow of information from researchers to educators (Parsons et al., 2013).

In the current study, we extended this work in two ways. First, we focused on large, urban school districts. In the United States, these districts serve a disproportionately large percentage of children with ASD, yet they are often under-resourced, limiting their capacity to deliver specialized interventions (National Center for Education Statistics (NCES), n.d.). Second, we explored the perspectives and experiences of different groups of stakeholders (educators, administrators, and parents) who select, implement, and sustain school-based interventions. Third, we conducted this research in three cities: Los Angeles, CA; Philadelphia, PA; and Rochester, NY. All three school districts were under significant budgetary constraints (Los Angeles Unified School District 2013; School District of Philadelphia 2013; Rochester City School District 2013). Although national statistics document the disparities in resources available to urban school districts compared with suburban districts (NCES), there is little information about urban districts' decision-making processes. We therefore relied on qualitative methods, which provide a systematic means of gathering in-depth information to understand commonalities and discrepancies in perspectives among participants (i.e. parents, educators, administrators) (Charmaz, 2006; Gill and Liamputtong, 2009).

Method

Across the three sites (Los Angeles, Philadelphia, and Rochester), we conducted 16 focus groups (six with professional educators, five with paraprofessionals or aides, and five with parents), three key informant interviews with administrators and non-English-speaking parents, and three town hall meetings open to the public. These activities were intended to generate open discussion among participants who had experience with services for children with ASD. Methods included (1) following a standard discussion guide with general, open-ended questions; (2) developing codes, categories, and themes inductively rather than imposing a priori hypotheses on the data; and (3) incorporating feedback from participants and community partners to refine themes.

Participants and school districts

All three school districts were under significant budgetary constraints (Los Angeles Unified School District 2013; School District of Philadelphia 2013; Rochester City School District 2013). Participants were recruited through informational posters and flyers, and volunteered to participate based on their relationship with children with ASD in the collaborating public schools. A subset of parents was approached directly by district employees who were members of the community partnership. Parents were primary caregivers of at least one child with ASD; educators served children with ASD in their classrooms, and administrators were involved in the special education system. Table 1 summarizes participant characteristics. Parent and educator characteristics were representative of the population of collaborating school districts, with the exception that Caucasian parents were over-represented in Philadelphia and highly educated parents were over-represented in Rochester.

Procedures

Each site formed a partnership group composed of ten–twelve members, which included educators, administrators, and parents affiliated with the school district, as well as university investigators. To establish these partnerships, investigators at each site approached the district superintendent or their designee to explain the study. Once each district agreed to participate, these personnel facilitated referrals to schools and teachers who they felt would be appropriate for the study. Parents involved in the partnerships had existing relationships with the study teams through previous research projects.

Based on feedback from the community partnership, focus groups that had four–ten participants and in-depth, one-to-one interviews were organized separately for parents, paraprofessionals, and teachers in Rochester and Los Angeles, and town hall meetings containing four–eight participants were conducted in Philadelphia. Both Los Angeles parent groups were conducted in Spanish; all other sessions were conducted in English. Los Angeles scheduled an additional parent focus group at a school with a low-income, predominately Spanish-speaking catchment area, but no parents attended.

Each session took place at a centrally located school site and lasted approximately 1.5 h. Sites provided childcare for parents and vouchers for those who required public transportation. A facilitator led each session and used a discussion guide, developed in

collaboration with the partnerships, which contained broad, open-ended questions followed by more specific, probing questions to clarify and explore participant responses. Study personnel served as facilitators and included a Caucasian male and female in Rochester (assisted by a Latino male for the key informant interview in Spanish), a Caucasian male in Philadelphia, and five females in Los Angeles (one Caucasian, one African-American fluent in Spanish, two Hispanic fluent in Spanish, and two Asian-American). Participants were asked about their perceptions of existing services and recommendations to address service gaps (see Table 2). The guides focused primarily on issues related to schools, with an openness to broader systems-level factors, should they be raised by participants.

The facilitators were interviewers trained in qualitative research. Group and individual interviews were audio-taped, transcribed by a professional transcriptionist who had no other affiliation with the study, and checked for accuracy by the facilitators. Intermittent meetings with the community partnerships were convened to debrief. This process of incorporating feedback from the team and participants is consistent with grounded theory, which relies on a reflexive, iterative process (Charmaz, 2006).

Data analysis

De-identified transcripts were coded by two teams at the University of Rochester. One team was composed of four study investigators from the University of Rochester Medical Center's Division of Neurodevelopmental and Behavioral Pediatrics. This group had extensive clinical, research, and service experience in the field of developmental disabilities. The second team included two individuals from the Center for Research Support, an independent group in Rochester's Clinical and Translational Sciences Institute with expertise in qualitative data analysis. These individuals had backgrounds outside the field, with no prior experience with developmental disabilities. Coders primarily used a modified grounded theory methodology, such that they eschewed forming preconceived expectations and instead allowed ideas and patterns of ideas to emerge from the transcripts (Charmaz, 2006; Dey, 1999; Strauss and Corbin, 1998) leading to the findings.

The first stage of analysis involved line-by-line coding to identify repeating ideas or patterns as categories. The two teams met together and collaboratively discussed the initial codes and created preliminary categories and themes by grouping similar codes together for each transcript. During the second stage, the teams conducted axial coding, in which the major and minor themes and their properties were described, categorized, and organized. Transcripts were then reviewed, and supporting quotations were inserted within the context of these themes to substantiate that the themes were truly representative of the data. Review of themes and categories with supporting quotations, as well as in-depth review and editing of discordant themes and categories, all led to an established set of themes across all sites and all participant groups (teachers, paraprofessionals, parents). Throughout the process, emerging codes and themes were discussed with investigators at all three sites. As a final step in the data analysis process, investigators at the two collaborating sites (Los Angeles and Philadelphia) independently reviewed the transcripts, codes, and themes. Additional checking of themes was accomplished by consulting with community partners. These checks

enabled us to incorporate diverse perspectives and prevented personal or disciplinary biases of any researcher or site (Kvale and Brinkmann, 2009).

Resulting themes

Despite the varying demographics of the three districts, the findings were remarkably similar across sites and participant groups. Three primary themes were identified through the coding and analysis process: (1) tension occurring among participant groups (teachers and paraprofessionals, staff and administration, teachers and parents, special education and general education), (2) a need for ASD-specific training for school personnel, and (3) a desire for a school culture of accepting differences. The initial theme of “tension” is overarching, to which subsequent themes are connected through the multiple layers inherent within the educational system.

Tension among the “layers”

Although there was general appreciation for efforts of those serving students with ASD, interactions among parents, paraprofessionals, teachers, and administrators were sometimes rife with tension. Particular schools at each site described significant strengths in the relationships among these individuals, but reporting of strengths was relatively uncommon.

Teachers’ tension toward administration—Teachers expressed frustration with school-specific administration and more so with lack of district support for resources. A Los Angeles teacher noted:

But, it’s like I can’t go to the administrators here, ’cause I’m not really gonna get any help. And, I don’t want to contact the people at the district, because then they’re gonna be lookin’ at me like I can’t handle it ...

Concerns were also raised about having enough autism team members to meet students’ needs, both from the perspective of teachers and the autism team members themselves. School administrators also had large caseloads. One school assistant principal oversaw the special education programs at three different elementary schools, representing approximately 200–300 students.

Concerns about the district’s handling of students with ASD included frustration with bureaucratic obstacles, particularly regarding placement decisions (in Rochester) and lack of administrator understanding about ASD (in Los Angeles).

In Philadelphia, budgetary constraints affected the district’s ability to provide relevant special education supports. One teacher wanted to pilot an integrated, co-teaching classroom, but indicated that “You’d need to hire a teacher though. Only because ... the school district ... unfortunately doesn’t have the funding.” A Philadelphia principal added, “The money dried up, and a lot of weird stuff is happening in the district.” It should be noted that relatively few administrators participated in the focus groups; thus, the administrator perspective is limited in the results. However, one Philadelphia principal acknowledged the need for a dedicated team, as it applied to obtaining appropriate services:

I think that especially children on the spectrum can't have a one size fits all. You have to have a really committed team who's gonna come to the table and really think about what is best for that child, and what things need to be in place for that to happen.

Parent–school tension—The tension experienced by parents with schools was summarized by one Los Angeles parent: “I feel like the parents and teachers don't feel like they are supported by the administration. I feel like ... the administration is like a hurdle sometimes for them.” Although school personnel generally reported being supportive of parents and recognizing the challenges they faced, many parents were skeptical of those who did not recognize their students' individual needs or failed to make decisions based on what was best for the student. One Rochester mother expressed frustration with the lack of advance planning for her son's educational supports and one-to-one aide. Parents were appreciative, however, of those teachers who involved them in their children's education, as noted by this Rochester parent: “The teachers would call me. I can call them. It was never a problem ... We had like a bond so I didn't have to go in. If I couldn't make a parent-teachers meeting they came to the house.” From the teacher perspective, there was frustration with lack of parent follow through on services that were offered. For example, a Los Angeles teacher described the low attendance for parent programs, even when the cost of those services was completely covered by the schools.

Teacher–assistant tension—The teacher–assistant relationship itself has many layers: teachers supervise paraprofessionals, teachers are typically better educated and better paid, paraprofessionals often come from racial or ethnic backgrounds that are similar to the students', and thus may be more understanding of the students and their family culture (see Table 3). Teachers were often dismayed by para-professionals' lack of training and ineffectiveness in working with the students, which they viewed as detrimental to the students' progress in some situations.

Paraprofessionals referenced the classroom power differentials. One Rochester paraprofessional reported wanting to be more a part of the “educational equation,” but found obstacles within teachers who exerted their power in the classroom. Similar teacher privilege was reported by some Los Angeles paraprofessionals who believed that their authority with students was weakened by a lack of respect from the teacher. Another teacher assistant noted, “It's a respect issue, of course, but they don't want to listen to what I have to say.” The power differential was not the sole cause of the tension, however. Paraprofessionals and teaching assistants reported wanting more information and support from teachers:

[T]hey assume we know, but sometimes you know, we do know, but other times we're unfamiliar with and they won't take the time to explain it ... why we're doing it this way. (Los Angeles teaching assistant)

At the same time, paraprofessionals often felt that they knew the students better than the teachers, particularly because they reported having the most direct contact with the students.

Special education/general education tension—Special education teachers reported a significant divide between themselves and the general education system. An autism support

teacher in Philadelphia noted, “I think a lot of our regular ed teachers as wonderful as they are—they think special education looks different, and it always will.” This disparity was partially explained by frustration with general education teachers and their lack of understanding and knowledge of students with ASD. Accordingly, one general education teacher in Los Angeles expressed insecurities toward teaching students with ASD, highlighting a lack of communication about the expectations for his performance.

In Rochester, the district’s federally mandated efforts to place students in inclusive environments contributed to the tension between special and general education teachers. The district had received an explicit recommendation to give students with ASD more intensive, individualized supports in the early grades so that inclusion would be more successful later. One Rochester teacher suggested:

I think it’s a problem in the district ... we try them out in inclusion ... I would like it to be reversed, the critical support of a 12-1-1 [12 students, 1 teacher, and 1 assistant] ... then hopefully ... we can wean it away.

Similarly, Los Angeles district mandates increased the time students with disabilities spend in the general education setting. One principal spoke of the benefits and challenges of inclusion:

I think the policy of mainstreaming the students spending, you know, as much time as possible in general education I think it’s a real great thing ... I can see that sometimes it can be frustrating for the teachers, but at the same time I could really see these children succeeding ...

Improved training for school personnel

The lack of resources and training for teachers and para-professionals in the area of ASD was an issue for parents participating in this study, specifically around how teacher behaviors affected students’ learning and well-being. Some of the concern was generally described as a lack of knowledge around behavioral training and supports. However, most participants discussed more specific areas in need of additional training. For example, parents, para-professionals, and teachers all expressed the need for more knowledge of teaching of social skills for students with ASD, and many considered such skills to be more important than academic skills:

Most of the time it’s the social skills that are an issue and that’s what, you know, if I ever look back and see if my son made progress or not in the past year, I usually look back on social skills and not on academics and how well he can count.
(Philadelphia parent)

In addition to training for educators, concerns were raised regarding district-level support for social skills:

If you’ve got an administrator on campus who doesn’t have a clue ... what the deficits of autism are, and then, so it’s the social engagement, I believe, comes from both parties. It comes from the student ... but then it also comes from the population of the staff, and peers who don’t have ... I guess just the education or the experience, you know? (Los Angeles administrator)

Several educators highlighted their own need for specific training as a primary barrier to being effective in the classroom, and expressed a desire for more targeted professional development. Teachers also spoke to the training needs of others about ASD, especially for paraprofessionals.

Several teachers asserted that the lack of training caused non-special education teachers and staff to escalate problem student behaviors. A Rochester educator noted, "... the administrators have to allow us to get the training, so I think that's the key." A Los Angeles teacher described difficulty in receiving appropriate training in behavioral management:

And, then the other thing, too, is like behavior training ... we keep getting promised behavior training. ... But what happens is, we try to sign up, "Okay, well you can go, but you can't go ... Well, that doesn't make any sense. Or ... we've been waitlisted for five years.

Administrators expressed a desire to provide specialized training, both in ASD and its accompanying challenges. One Los Angeles principal discussed the need to improve current training practices in his district:

There should be an improvement in the training of teachers of autistic students. And I don't think that's something that happens online ... I think it's something where ideally there would be trainers pushing in to school campuses, building a relationship with the teachers and uh, providing the latest instructional and behavioral and emotional strategies to meet these students' needs. ... And I really, I don't think it works when an expert comes in and leaves some strategies.

In Philadelphia, a principal connected a lack of specialized training and services with financial limitations, despite expressing a desire to provide those resources.

Accepting difference—a cultural change

In all three districts, educators and parents felt a need for a cultural shift in schools in order to increase the acceptance and inclusion of students with ASD. From the perspective of parents and special education teachers, the lack of training of general education teachers, administrators, and non-instructional personnel fueled a culture of exclusion. Parents and teachers felt that principals were instrumental in the development of an accepting, inclusive environment; and at some sites, this trend significantly affected the culture of acceptance in the school. "The teachers were fine, but if you don't have a strong principal in your school, I'm sorry, it makes a really big difference. And I think that's why this school is so successful" (Philadelphia parent). Settings with supportive administration were described as more successful, and one Philadelphia teacher believed that administrative support fostered school-wide acceptance for children with ASD.

In the same way that administrative advocacy cultivated acceptance, a lack of high-level support was related to negative school culture around special education. As one Los Angeles paraprofessional commented:

... they don't call us for assemblies, they don't call us for this, or ... even for field trips it's like that. ... [W]e're second grade and they're going here. Oh, they are? Well how come they didn't tell us?

Paraprofessionals also had specific recommendations for boosting the school community's acceptance of the students with ASD:

[T]here should be a meeting in the beginning of the year ... that way they are aware of what we have in the community ... so the kids can understand too, about what's going on, why these kids behave the way they do. (Los Angeles)

This sentiment was echoed by a Philadelphia autism support teacher:

The teachers here, we talk to each other, and they talk to the kids before our kids come. And they make the culture, like, conducive. So they understand differences ... they are taught to accept differences here. And that's great for any child.

Discussion

The large increase in the number of students with an autism educational classification (Pinborough-Zimmerman et al., 2012), coupled with budgetary concerns in urban school districts, poses a quandary to educators, administrators, and parents. Participants helped elucidate the multiple and varied challenges to providing best practices for ASD treatment in public schools, some of which are consistent with previous research (Kasari and Smith, 2013; Lindstrom, 2013). The findings from this study suggest that those challenges are, at best, being met inconsistently. To be sure, many positives were identified regarding the remarkable dedication of school personnel and school-specific cultures that fostered acceptance and lent support in the form of materials and staffing. However, they also described persistent concerns.

The primary theme of tension among stakeholders is perhaps the most difficult challenge to address because it is so multi-faceted (Auerbach, 2011). As is highlighted in participant quotes, the layers of tension can be attributed partially to issues of power, privilege, knowledge, economics, and lived experiences that seem to be especially evident in urban educational settings with limited resources (Brandon, et al., 2010; Cooper, 2009; Ong-Dean, 2009). Because the current study focused on the microsystem issues of intervention and services delivered within each school, we did not examine the ways in which larger issues of institutional racism and ableism, and social class, may have affected participants' experiences (Blanchett, 2009; O'Connor, 2009). It may also be the case, however, that issues related more immediately to ASD and the special education system take precedence, at least for this study's participants. Future research should systematically examine differences related to race, ethnicity, and economic status in the context of issues specific to special education.

The theme of interpersonal tension in our study confirms previous findings that parents of children with ASD are often dissatisfied with the special education and related services their children receive (Bitterman et al., 2008). The lack of resources and training for ASD educators was particularly salient for parents (Hetherington, 2012; Palmer et al., 2005). This

dissatisfaction is relevant to child outcomes because the nature of parent involvement is widely considered a cornerstone to optimizing the educational experiences for students with ASD (Stoner et al., 2005).

Similar to parent concerns, educators experienced frustration with leadership in their own school districts and sometimes in their schools. Teachers often blamed administrators for the lack of resources (both in terms of materials and training) and for poor development of district-level autism teams. In Rochester especially, the autism team was regarded as too small to provide consistent, high-quality consultation to schools, diluting the support that educators needed to serve students successfully. With new inclusion mandates, the increasing numbers of students with ASD may exacerbate this tension over time.

Tension between teachers and paraprofessionals/teacher assistants appeared to be, at times, a considerable barrier to effective instruction. Paraprofessionals frequently did not feel respected by teachers and believed that their authority was undermined by the behavior of teachers toward them. On the other hand, teachers felt that paraprofessionals did not consistently listen to or follow the teachers' lead. Some of these challenges could be addressed at the administrative level, such as through formal mechanisms for teacher-staff communication or joint professional development activities. Teachers and paraprofessionals should also be encouraged to collaboratively identify student and classroom goals, to increase their motivation to work in synchrony.

The paucity of training for teachers and paraprofessionals was central to this tension, leading to poor communication and lack of teachers' supervisory skills. The lack of knowledge resulting from inadequate training is well documented (Barnhill et al., 2011; Feldman and Matos, 2013; Morrier et al., 2011) and accords with research on the causes of parents' perceptions of their experiences (Bitterman et al., 2008; Stoner and Angell, 2006) as well as educator frustration (Humphrey and Symes, 2013; Segall and Campbell, 2012; Symes and Humphrey, 2011). Both inadequate teacher preparation programs and scant professional development opportunities (across all levels of school personnel) contribute to the dearth of experienced educators.

Teachers, paraprofessionals, and administrators all expressed a strong desire to implement and participate in ASD-specific training activities. Given the rapid increase in numbers of students with ASD in public schools, however, the lack of training cannot be fully addressed in large urban districts by a single "autism specialist team." Partnerships with local schools, medical centers, and agencies that specialize in ASD could help overcome this issue, especially given the fact that proximity to ASD expertise is a potential advantage of being in an urban setting. School districts may also benefit from incorporating specialists such as Board Certified Behavior Analysts (BCBAs), who can provide a wide variety of behavioral assistance in addition to trainings for special education teachers.

Adjusting the format of trainings and the treatments themselves may result in interventions that are more effectively disseminated. For teachers who are already burdened with professional development activities, web-based or video instruction (Robinson, 2011) may help them access ASD-specific training more easily. Regarding interventions, modular

approaches (described by Kasari and Smith, 2013) and school-wide programs (e.g. Positive Behavioral Interventions and Supports (Horner et al., 2009)) are individualized and evidence-based. These interventions take a broader approach than some of the specialized techniques (such as discrete trial training) used for students with ASD, and they therefore may be easier to integrate into existing professional development activities.

School-wide training may also advance the culture of each school toward one of acceptance of difference. For example, lack of knowledge can lead to socially sanctioned fear (Erevelles and Minear, 2010); this in turn perpetuates an environment in which differences are treated as deficits and hard-to-understand behaviors lead to exclusion. Educator and parent participants in this study held administration responsible for shifting the cultural tone toward acceptance, which is consistent with research validating the role of the principal in developing school culture (Horrocks et al., 2008; Myers et al., 2011). As such, it is possible that the relationship among administrators, teachers, and parents could be improved through administrative commitment to educator and student needs (such as through organization of professional development activities).

In combination, limited training for all educators and the need to accepting differences in schools led to multilayer tensions. This study did not focus on the causes of this tension. In future studies, it will be important to examine the contribution of economics, high stakes testing, and educational equity. A key to understanding the results is to remember that the sites in this study were urban districts and that there are intersecting challenges related to poverty, race, and disability that differentially affect interactions (Blanchett, 2009). Possible solutions for the interpersonal tensions and insufficient training include the introduction of systems to promote effective communication (Sheridan and Kratochwill, 2007) and development of partnerships between researchers and educators to design interventions that are well suited for use in school environments (Kasari and Smith, 2013).

Although we examined common themes across the groups, important site-specific issues emerged, including the budget crisis in Philadelphia and inclusion mandates in Los Angeles and Rochester. These challenges likely influenced participant responses, particularly for those working within the education system.

All three cities had positive examples of schools and educators who excelled in working with children with ASD. Identifying more closely what is “right” in those situations will be helpful in facilitating positive growth throughout urban districts. An environment of caring and acceptance was clearly identified as a strength in some schools. Identifying ways to recognize and capitalize on existing skills could be highly beneficial.

A substantial limitation of our findings is that they are based on one-time contributions from participants. It is possible that participants would have provided different information if they had attended additional meetings or if the meeting structure was different. This cross-sectional approach also did not account for potential changes in parent and teacher perspectives that often occur throughout children’s development, and as their needs change. Future research should compare the effects of student age on perceived service needs and accessibility.

Because participants were nominated by our community partners or collaborating schools, they may not have represented all stakeholders at the three sites. Some individuals who were nominated did not participate; indeed, one scheduled parent group in Los Angeles did not take place because no one attended. As a result, we may have excluded valuable perspectives from stakeholders of varying cultures and personal perspectives.

Although our investigation was intentionally limited to urban school districts to evaluate the specific perceptions of and challenges to ASD services in this population, it is worth noting that the results may not necessarily generalize to suburban or rural settings. Despite these limitations, it is encouraging that results across our different sites, stakeholder groups, meeting formats, and participants with diverse backgrounds were broadly similar. This convergence suggests that our findings may be valid and generalizable to diverse school contexts. If so, the data indicate a pressing need to develop trainings that can be delivered on a large scale to a broad range of school personnel in every school, that focus on practical interventions to improve individualized supports, and that enhance communication of school personnel with one another and with families.

Acknowledgments

We appreciate the dedication of all our participants and of our community partners; Carolyn Gelfand and Debbie Moss at LAUSD; Dawn Bird, Pam DiPaola, April Dixon, Shirley Green, Kimberly Harris-Pappin, Linda Johnson, Lawana Jones, Melissa Parrish, David Passero, Christopher Suriano, Wendy Verstringhe, and Lorna Washington in Rochester; and James Connell and Jane Cordero at Philadelphia. Thank you to Ya-Chih Chang, Belinda Williams, and Marcella Mattos in Los Angeles for facilitating the focus groups. We also thank Kim Gomez for comments on an earlier version of the article. The Autism Intervention Research Network for Behavioral Health team includes Connie Kasari, Nancy Huynh, Mark Kretzmann, Michelle Dean, and Sheryl Kataoka at University of California, Los Angeles (UCLA); David S Mandell, Jill Locke, and Erica Reisinger at University of Pennsylvania; Tristram Smith, Christopher Clinton, José Pérez-Ramos, Kelly Conn, Sara Heinert, Susan A Hetherington, and Suzannah Iadarola at the University of Rochester; Robin Harwood at the US Health Resources & Services Administration, Maternal and Child Health Bureau; and the Partnership of Stakeholders in the Los Angeles Unified School District, Rochester City School District, and School District of Philadelphia.

Funding

This work was supported by grant UA3 MC 11055 AIR-B from the Maternal and Child Health Research Program, Maternal and Child Health Bureau (Combating Autism Act Initiative), Health Resources and Services Administration, Department of Health and Human Services.

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Table 1

Participant characteristics.

	Los Angeles	Philadelphia	Rochester
<i>Parents</i>	<i>n</i> = 14	<i>n</i> = 8	<i>n</i> = 13
Gender			
Female	13	6	11
Male	1	2	2
Age (years), M (SD)	35.4 (4.9)	45 (2.8)	42.6 (5.9)
Age (years), range	28–45	32–72	36–45
Ethnicity			
African-American	0	1	9
Hispanic	14	0	1
Asian	0	0	0
Caucasian	0	7	3
Other	0	0	0
Education			
High school	7	3	1
Some college	2	1	1
College diploma	1	2	7
Graduate/professional school	1	2	4
Not reported	3	0	0
Family income			
<US\$25,000	8	0	5
US\$25,000–US\$45,000	2	3	3
US\$45,000–US\$60,000	1	0	1
>US\$60,000	1	3	4
Not reported	2	2	0
Child placement			
Special education	13	5	9
General education	1	3	4
<i>Educators</i>	<i>n</i> = 54	<i>n</i> = 11	<i>n</i> = 24
Gender			
Female	48	10	20
Male	6	1	4
Age (years), M (SD)	40.7 (10.1)	51.9 (9.8)	45.7 (11.2)
Age (years), range	26–61	34–64	32–65
Ethnicity			
African-American	2	1	8
Hispanic	24	0	1
Asian	1	0	0
Caucasian	18	7	12
Other	9	3	3

	Los Angeles	Philadelphia	Rochester
Role			
Paraprofessional	17	1	11
Classroom teacher	25	7	12
Related service provider	5	0	0
Administrator	7	3	1

SD: standard deviation.

Table 2

Discussion guide for focus groups, key informant interviews, and town halls with approximate times devoted to each item.

1	Opening remarks and procedure (5 min)
2	Consent and rules (5 min)
3	Participant introductions (5 min)
4	Description of programs and services for students with ASD (25 min) <ul style="list-style-type: none"> a. Educators asked to describe services they provide; parents asked to describe services received by their child with ASD b. What do you think are the strengths of the current services for students with ASD? c. What are the strengths your community offers that may be different than other communities? d. What do you think are the challenges of the current services for students with ASD? e. What are the challenges in your community that may be different than other communities?
5	Specific challenges (25 min) <ul style="list-style-type: none"> a. What are your challenges specifically related to academic engagement? <ul style="list-style-type: none"> i. Description of daily schedule ii. Supports used to support engagement in instruction b. What are your challenges specifically related to daily routines? <ul style="list-style-type: none"> i. Description of child's/student's daily routine ii. Strategies used to promote successful classroom-wide and individual transitions c. What are your challenges specifically related to social engagement? <ul style="list-style-type: none"> i. What do you think would generally improve children's social experiences with peers at your school? ii. What are the challenges specifically related to social functioning in the classroom? In the cafeteria/lunchroom? On the playground? iii. In general, what is staff responsible for in the classroom? In the cafeteria/lunchroom? On the playground?
6	Ideas to improve current practice (25 min)

ASD: autism spectrum disorder.

Table 3

Site-by-site breakdown of teacher and paraprofessional ethnicity and race.

	Los Angeles			Philadelphia			Rochester		
	n = 25			n = 7			n = 12		
	Teachers	Paraprofessionals		Teachers	Paraprofessionals		Teachers	Paraprofessionals	
African-American	1		1	1		0	0		7
Hispanic	6		12	0		0	0		1
Asian	1		0	0		0	0		0
Caucasian	11		0	4		1	12		0
Other	6		4	0		0	0		0
Not reported	0		0	2		0	0		3