Avoiding the "brick wall of awkward": Perspectives of youth with autism spectrum disorder on social-focused intervention practices

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Abstract

Many youth with autism spectrum disorder participate in school-based, peer-mediated intervention programs designed to improve their social experiences. However, there is little research discerning how these youth view intervention practices currently represented in the literature, information which could improve the social validity of intervention programming. In this mixed-methods study, we interviewed 33 youth with autism spectrum disorder about seven social-focused, peer-mediated intervention components. We asked participants to rate the favorability of each component to determine their degree of liking. Subsequently, we asked participants to give a rationale for their rating, in order to explore influencing factors. Chi-square tests indicated that high ratings were most prevalent for *recruiting peers* and *family involvement* and medium ratings were most prevalent for *meeting with peers*. Analyses of variance also indicated that preferences in the specific format intervention components were delivered. Several themes emerged from our qualitative analysis of open-ended responses, including the ramifications of adults in adolescent social life, the advantages of learning through shared activities with peers, and the effects of disclosing disability status. Our findings will offer guidance for researchers and practitioners interested in individualizing interventions to reflect student preferences. Furthermore, we document areas of concern for youth with autism spectrum disorder as they access school-based interventions.

Keywords

autism spectrum disorder, high schools, peer-mediated interventions, social validation

Introduction

In secondary schools, peer interactions are the primary nexus of social life. Important social processes play out within day-to-day exchanges; social norms are negotiated, peer groups are formed, and potentially life-long friendships are forged (Rubin et al., 2009). Autism spectrum disorder (ASD) involves impairments in social communication and behavior that can make peer interactions difficult (American Psychiatric Association, 2013). These challenges are exacerbated in adolescence when students encounter a more complex social landscape, and the role of adults changes dramatically (Cridland et al., 2014; Humphrey and Lewis, 2008; Kasari et al., 2011). Indeed, many adolescents with ASD infrequently participate in social activities and rarely see friends outside of school (Wagner et al., 2004).

To mitigate this reality, social-focused interventions have been designed to improve social competence and support peer interactions (Carter et al., 2012). These interventions involve providing social skill instruction (Laugeson et al., 2014; Stichter et al., 2010), connecting peers with common interests (Koegel et al., 2012), equipping peers to provide academic and social support (Carter

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et al., 2011), and organizing adult-facilitated peer groups (Hochman et al., in press). Although studies suggest that these approaches may enhance social interactions and knowledge of social rules (Wong et al., 2014), additional research and refinement is needed to ensure the development of satisfying peer relationships and more widespread adoption in schools.

In addition to documenting the effectiveness of school-based supports, it is essential to determine their social validity. One long-standing concern is the persistent gap between interventions recommended in the literature and actual practice in schools (Carnine, 1997; Snell, 2003). Soliciting the views of key stakeholders on the acceptability and feasibility of intervention procedures has been suggested as one pathway for promoting implementation of evidence-based practices (Elsabbagh et al., 2014; Foster and Mash, 1999). While modest efforts have been made to elicit perspectives from educators, paraprofessionals, and peers without disabilities (Carter and Pesko, 2008; Copeland et al., 2004), the views of youth with ASD have been surprisingly absent from the literature. Although adults with ASD identify services and supports as a research priority (Pellicano et al., 2014), no published studies have offered in-depth explorations of how youth with ASD view key components of school-based, social-focused interventions.

Current secondary students and recent graduates with ASD have a unique vantage point from which to provide insights into the acceptability and potential impact of social-focused interventions. The degree to which they support intervention strategies may influence their willingness to participate and the extent to which valued social outcomes materialize. Moreover, their input into how intervention approaches are configured could assist educators and researchers in tailoring practices to meet individualized needs and preferences. For example, qualitative studies involving younger students with physical and intellectual disabilities have highlighted concerns about the mixed impact of relying heavily on adults to support social inclusion (Mortier et al., 2011; Skar and Tamm, 2001). Amidst an emerging literature that values the input of young people with ASD on service provision (Hay and Winn, 2005; Humphrey and Lewis, 2008; Pellicano et al., 2014; Preece and Jordan, 2009), adolescent perspectives on the design and delivery of social-focused interventions remain sorely needed.

Aims of this study

This research is part of a multi-year project designed to develop and subsequently evaluate a comprehensive intervention for secondary students with ASD. One element of the proposed package will address social competence and peer connections (for a description, see Odom et al., 2014). The aim of this study is to elicit user perspectives in the

Table 1. Participant demographics.

Variables	M	Range	n	%
Age, years	17.8	14–24		
Female			11	33
Male			22	67
Race				
White/Caucasian			22	67
Black/African American			5	15
Asian			1	3
Multiracial			2	6
Not reported			3	9
Ethnicity				
Hispanic/Latino			2	6
Non-Hispanic/Latino			25	76
Not reported			6	18
School level				
Middle school			3	9
High school			19	58
College			3	9
Not in school			7	21
Other			1	3
Employment status				
Working			8	24
Not working			25	76
Diagnosis[a]				
Autistic disorder			4	12
AS			26	79
PDD-NOS			4	12

PDD-NOS: pervasive developmental disorder–not otherwise specified; AS: Asperger syndrome.
[a]Diagnoses based on *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; DSM-IV) criteria. One participant identified PDD-NOS and AS.

design phase of the intervention to increase the likelihood that the proposed intervention would be viewed favorably by the individuals for whom it is intended to benefit. Specifically, we want to know how youth with ASD view the individual components of a proposed school-based, social-focused intervention package.

Methods

Participants

Following approval from our institution's review board, we distributed study invitations through approximately 140 individuals and organizations located in the southern United States. Participation was restricted to individuals with ASD—either self- or parent-identified—between the ages of 14 and 25 years. Recent graduates were asked to reflect on their school experiences. In total, 33 participants met the criteria and participated. We secured parental consent as well as youth assent or consent. Table 1 provides participant's demographic information.

Table 2. Descriptions of intervention components and variations.

Intervention component	Variations
Identifying socialization goals: social goals are selected to work on with student, teacher, and parent input	Not applicable
Recruiting peers: peers are selected to get to know the student and help with social goals	Choose peers who: 1. Like some of the same things 2. Already hang out together 3. Are in some of the same activities 4. The teacher thinks would be great to get to know
Hold an orientation meeting: peers meet with a teacher to learn about students with ASD and how to help support the student	Not applicable
Meet with peers: student has regular interactions with peers in the group	1. Informally hang out at different times of the day, usually without school staff 2. Have peers help out with academics and socially in class 3. Meet with peers during a regular meeting time, with some adult present 4. Have peers teach important social skills
Adult support: school staff provides support with peer interactions	1. An adult would help arrange meeting times 2. An adult would be part of the group to help conversations go well
Social skills training: student learns skills to help social success	1. Learn the skills from a teacher (individually or as part of a social skills group) 2. Learn the skills from peers (individually or as part of a small group) 3. While doing activities with peers
Family involvement: family members assist with peer connections outside of school	Not applicable

ASD: autism spectrum disorder.

Interview procedures

We asked participants to select one of six interview formats: in-person (completed by 36%), video chat (6%), phone (3%), mail (27%), email (21%), and instant messaging (6%). Offering electronic options in lieu of in-person interviews provides a more comfortable medium to elicit perspectives of individuals with ASD on complex topics (Benford and Standen, 2011). We conducted two pilot interviews with high school students with autistic disorder (13 and 20 years of age, male) prior to the main interviews, anticipating we would encounter the most challenges interviewing individuals more significantly affected by ASD. Interviews consisted of rapport-building questions, followed by descriptions of intervention components and follow-up questions to elicit participants' views on each component. A reduced description of components and variations is provided in Table 2. We derived component descriptions from our own intervention work with secondary schools and a review of relevant literature (e.g. Carter et al., 2011, 2012; Koegel et al., 2012; Stichter et al., 2010). The interview consisted of rating and open-ended questions (see Appendix 1 for protocols). Rating questions were given to determine the extent to which participants favored components and variations, and open-ended questions were given to explore factors that influenced their rating.

We provided questions in advance to participants who chose live formats, and we encouraged participants to discuss questions with others if desired. We anticipated some participants might have difficulty understanding open-ended questions and used several strategies to maximize input. First, interviewers rephrased questions to be more concrete if comprehension was a concern (e.g. asking the participant to think of specific situations related to more general questions). This circumvented leading participants to a particular answer while still easing comprehension of abstract concepts (Kvale and Brinkmann, 2009). Second, we provided visual, written, and graphic representations of intervention components. Third, to indicate preference or dislike, we provided a visual number line with numbers corresponding to happy/sad expression graphics.

Four team members administered interviews. One held a PhD and three were Master's candidates in Special Education. Each interviewer had prior experience working with students with ASD. Before conducting interviews independently, interviewers attended pilot sessions conducted by the first author (K.B.) or listened to recorded sessions. Live interviews took an average of 34 min (range, 17–50 min).

Data analysis

Quantitative analysis. To analyze ratings, we categorized responses as follows: 0–3 = low, 4–7 = medium, and 8–10 = high. We used this data reduction process because

Table 3. Evaluation of intervention components and variations.

Intervention component	Preference level (%)			
	Low	Medium	High	*n*
Identifying socialization goals	13	53	33	30
Recruiting peers*	8	33	58	24
Similar interests	17	4	79	24
Existing peer group	44	22	33	18
Involved in similar activities	25	13	63	16
Teacher chooses	61	17	22	18
Hold an orientation meeting	20	27	53	30
Meet with peers**	10	52	38	21
Informally, without adult	10	15	75	20
In class for academic help	33	13	53	15
At scheduled times with adult	53	6	41	17
To learn social skills	29	24	47	17
Adult support	22	43	35	23
Logistical support	26	21	53	19
Conversational support	43	14	43	21
Social skills training	26	30	43	23
Adult directed	64	14	21	14
Peer directed	64	7	29	14
Activity based	14	9	77	22
Family involvement*	13	34	53	32

Asterisks indicate significant differences in the distribution of low, medium, and high ratings. *$p < 0.05$, **$p < 0.01$.

some participants chose not to use the number line but instead characterized their degree of liking as "low," "medium," or "high." Ratings were analyzed in two ways. First, we conducted chi-square tests to examine differences in the distribution of high, medium, and low ratings for each major component. Second, we conducted within-subject analyses of variance (ANOVAs) for components with variations to determine whether there were differences across variations. Since our outcome was ordinal and not continuous, we used the Huynh–Feldt correction when generating *p* values, an appropriate adjustment for repeated ordinal outcomes (Stiger et al., 1998). Significant ANOVAs were followed with post hoc pairwise comparisons to determine which variations were preferred over others.

Qualitative analysis. We audio-recorded and transcribed in-person, video chat, and phone interviews. Open-ended responses were analyzed using conventional content analysis (Hsieh and Shannon, 2005). We used NVivo 10 qualitative software (QSR International Pty Ltd, 2012) to assist in identifying themes, creating codes, and applying codes to transcripts. Our analytic goal was to capture the full range of perspectives held by participants. We conducted several rounds of inductive coding, which allows for generating categories from collected data as opposed to imposing pre-selected categories. We began with descriptive codes (i.e. a cursory grouping of participant responses, such as "negative evaluations" and "positive evaluations") and ended with interpretive codes (i.e. codes that reflected the deeper meaning of the response, such as

"stigmatization") until no additional codes could be identified (Miles and Huberman, 1994). To begin this process, the first and second authors (K.B. and T.M., respectively) independently reviewed a subset of interviews and identified an initial set of descriptive codes. We chose among descriptive codes through a consensus process and applied this initial set to each interview, meeting frequently to compare codes and resolve discrepancies. Following this initial pass, the first three authors (K.B., T.M., and M.H.) independently developed a set of interpretive codes to further categorize responses. Again, we used a subset of interviews and selected from among the pooled list of codes through a consensus process. Three coders completed two additional rounds of coding to apply interpretive codes and develop new categories as needed.

Findings

Percentages of participants who gave each rating category are provided in Table 3. As indicated, some participants were unable to provide ratings because they had not experienced the component or variation and could not offer speculation. Chi-square tests indicated that high ratings were more prevalent than medium or low ratings for *recruiting peers*, $\chi^2 (2, N = 24) = 9.00$, $p = 0.01$ and *family involvement*, $\chi^2 (2, N = 32) = 7.99$, $p = 0.02$. Medium ratings were more prevalent than high or low ratings for *meeting with peers*, $\chi^2 (2, N = 32) = 12.16$, $p = 0.002$. There were no significant differences across rating categories for the remaining components.

Table 4. Results from within-subject ANOVAs comparing sub-components.

Sub-component	M	SD
Recruiting peers		
Similar interests[a]	1.63	0.80
Existing peer group[b,c]	0.89	0.90
Involved in similar activities[a,b]	1.38	0.86
Teacher chooses[c]	0.61	0.85
Meeting with peers		
Informally, without adult[a]	1.65	0.67
In class, academic help[a,b]	1.20	0.94
Regular meeting, with adult[b]	0.83	0.99
Teach social skills[a,b]	1.18	0.88
Social skills training		
Adult directed[a]	0.57	0.85
Peer directed[a]	0.64	0.93
Activity based[b]	1.64	0.73

ANOVAs: analyses of variance; SD: standard deviation.
Ratings coded on 0–2 scale, where 0 = low, 1 = medium, and 2 = high.
Different superscript letters indicate differences in mean rating at $p = 0.05$ level.

Within-subject ANOVAs indicated differences in variation ratings for *recruiting peers, $F(3, 46) = 6.99$, $p = 0.002$, meeting with peers, $F(3, 40) = 5.52$, $p = 0.007$*, and *social skills training, $F(2, 14) = 9.76$, $p = 0.003$*. We used Tukey's honest significant difference (HSD) procedure to determine which variation ratings were significantly different. These results are indicated in Table 4.

We next discuss prevalent themes that arose in examination of open-ended responses. Quotes are embedded throughout the discussion (along with the age, gender, and disability of the participant), and additional representative quotes are presented in Table 5.

Component 1: identifying social goals for students

Favorable assessments of this component focused on benefits of achieving goals, such as making new friends, community engagement, learning to manage stress during social interactions, and participating in social activities. The necessity of goals for students with ASD was also mentioned: goals "are good because they are measurable for someone who may not have the best sense of what normal social ability is" (22 M, AS) and could also "help my Asperger syndrome" (21 M, AS).

In contrast, others indicated they personally did not need social-related goals or that their current social situation was adequate and would not be improved by setting goals. Some thought setting social goals would not work, either because they had not previously benefited from this process or because they found social goals too difficult to attain or anxiety-provoking. Stigma attached to trying to achieve social-related goals was viewed as problematic:

It has the potential to be a very obvious and plain attempt at exactly what it is. It will draw bad attention to the selected students and cause bickering and unrest among the other students. Most students will deem something of the sort "childish" and complain the entire time. (16 M, AS)

Moreover, some questioned the legitimacy of involving a teacher in identifying social goals, indicating adult involvement was an intrusion into students' private lives or teachers were not easy to talk to.

Component 2: recruiting peers to be involved in the intervention

Participants who viewed this component favorably noted it might widen their social circle or increase their ability to socialize. Many participants expressed strong views about the variations for this component and preferred inviting peers with common interests. This modality was considered easier and more likely to result in successful social interactions. Common interests were viewed as an accessible platform for engaging with others, gaining acceptance, and initiating friendships.

Many participants expressed skepticism about teachers leading a peer selection process. There were concerns that the "wrong" students could be picked, which could lead to personality clashes. Some felt the success of an arranged social group was contingent on voluntary membership. Several participants described the difficulty of gaining initial entry into an existing peer group. In describing experiences with peers, some could not envision interacting successfully with many of their current classmates if selected for a peer group. This component evoked descriptions of experiences in arranged interactions that did not work as planned. For example, "I have used this idea successfully once, but only under special circumstances (i.e. I was already friends with one member of the group). More often, it's just been a brick wall of awkward" (23 M, AS).

Component 3: hold an orientation meeting to explain the intervention to peers

Participants expressed positive, negative, and ambivalent feelings about the prospect of sharing information about their ASD diagnosis with other students within an orientation meeting. Beneficial aspects included educating others about ASD, increases in opportunities for positive interactions, social success, and acceptance. "I like the idea of being understood by my peers" (19 M, autistic disorder) and "it's a great way to educate the other peer 'til they learn more about what the people with autism feel" (19 M, AS).

However, potential stigma and lack of understanding from typical peers that could result from others knowing details about their diagnosis were viewed as caveats. As one student noted,

Table 5. Example evaluation quotes for each intervention component.

Component	Example quotes
Identifying socialization goals	I like meeting new people and going to social events. (19 M, autistic disorder)
	Well, I find that goals never really work for me long term. (17 M, AS)
Recruiting peers	I love meeting new people and making new friends. (19 M, AS)
	I could potentially have trouble getting along with them. (16 M, AS)
Hold an orientation meeting	The more you know about something, the easier it may be to accept it. Also, it might let others know exactly what it is that you have difficulties with. (15 M, AS)
	I think it would be a little strange if all my friends were talking to some of my older friends about the other people that have other types of other disabilities in public. (15 M, PDD-NOS)
Meet with peers	I already have peers who help at school, they help me meet others. (17 M, autistic disorder)
	Social interaction requires a lot of emotional energy I don't always have. (20 F, AS)
Adult support	It does help if adults take part in a conversation to keep it on a steady path instead of someone talking about what kind of skateboard they have, or where they get their clothes. Most students my age drift from conversation to conversation to conversation without much appeal to the current situation. (15 M, AS)
	The friends have to learn to do be able to do it on their own because they're not always going to have help. (16 F, PDD-NOS)
Social skills training	I enjoy learning new things. (19 F, autistic disorder)
	At times I literally have like three people trying to tell me something at once. (17 M, AS)
Family involvement	If the family helps them out then they might be able to interact with their friends more. (18 F, AS)
	[Be]cause my family, they think they know what's best for me but they won't just let this birdie spread my wings and just fly away. I mean, I'm ready to be on my own they just don't see that yet. (16 M, AS)

PDD-NOS: pervasive developmental disorder–not otherwise specified; AS: Asperger syndrome.

This would cause more trouble than it's worth. Think about it. You're putting a child with social issues who has trouble with his peers in a spotlight in front of his peers telling them how he/she is special. First off this will embarrass that student heavily. It makes me uneasy in meetings when I have to discuss while everyone stares holes into my skull. Second off the kids couldn't care less what the teacher has to say about autism. They don't care. 1–2 might instantly beg reprieve of that student but … Most importantly it will draw extreme aggression towards the subjected child. The peers will not react kindly to having to go to a lecture because of the one student. They will feel that the child said something against them. And here come the mentally retarded jokes. Uh-uh. This might work with adults, but I repeat. DO. NOT. USE. THIS. WITH. HIGH SCHOOL STUDENTS!!!!!!!!!!!!!!! (16 M, AS)

Component 4: meet regularly with peers

Some participants indicated having support to meet with peers would promote interactions, either through building social skills or by widening their social circle. The predictability of regularly scheduled meetings was considered a benefit: "I like that it sets up a regular schedule of hanging out with peers, which is good at removing uncertainty" (22 M, AS). Alternatively, other participants thought peer group arrangements were too stressful, awkward, or unlikely to result in a positive experience. A potential lack of authenticity of arranged interactions was also a prevalent concern: "… as long as they feel like a friend just helping you and not like a tutor" (16 F, PDD-NOS).

Several participants had strong views about how peer meetings should be carried out, with most preferring that adults play a minimal role in ongoing social interactions. Reasons such as privacy and liberty to discuss topics considered off-limits by adults were cited. Adult presence was often viewed as intrusive and potentially detrimental to interactions. Several participants explained that adult presence would cause discomfort, create dependency on adults, or stifle the discussion topics of interest to adolescents. For example, one student noted,

> I don't like that one because I feel like if you're being supervised, you have to be careful what you can and can't say because there's adults there. So you're not as honest with each other, and you can't really have as close a friendship with adults there, I feel, because you have a limit of what you can share with them, what you can do with them. Because like you can't tell about you know, someone's condom slipping out of someone's bag because the adult's there or something like that. (16 F, PDD-NOS)

Component 5: adult support within social-focused intervention

Although the previously mentioned components involved adults, we also asked specifically for perspectives on how adults might provide support, either behind-the-scenes or as an active part of an intervention. Participants who found this component helpful described how conversations with

peers might be difficult to initiate or might become stilted without help. They identified practical ways adults could facilitate (e.g. finding time for the group to meet, arranging transportation) and felt some adult support would aid in meeting people and forming friendships. Counter to the concerns raised about the roles of adults in promoting interactions, many explained how an adult could potentially "grease the wheels" to get interaction going:

> Well, I mean it's hard to meet someone new at first 'cause you don't really know that much about them, and you kind of have to ask some questions, which probably isn't easy for the other person to answer. Uh, and like, this adult could may be help like start off a greeting or start asking a question once they, once the two students start to talk. Then, it'll be easier for them to converse. (19 M, AS)

Participants who expressed dissatisfaction reiterated descriptions of adults being intrusive to interactions and causing participants to feel odd or hampered in the topics they discussed with peers. They questioned the legitimacy of school staff in providing social support, describing adults as unapproachable or "clueless" about adolescent interactions:

> Adults without an ASD are unlikely, even with training, to *not* mess it up. If it takes this much effort to assist someone with an ASD in interacting with "neurotypicals" then where does the assumption that a "neurotypical" can understand and interact with someone with an ASD so easily come from? (24 M, AS)

Component 6: social skills training to increase social competence

Similar to Component 1, positive responses to this component revolved around potential improvements to social life as a result of social skills training; "I like that this sort of instruction really helped me with basic skills" (23 M, AS). Most respondents preferred social skills training as part of a group activity with peers and showed a marked dislike for any direct instruction. Learning social skills while doing an activity was considered easier or more enjoyable because it could help maintain focus or provide something to talk about: "I wouldn't prefer to be just standing there talking or something, I just like to have something going on" (15 M, AS). Some described the presence of a peer group as a vital component to intervention, viewing group activities as a more legitimate and preferred framework for learning about social interactions.

Participants expressing skepticism about this component explained direct skill instruction was difficult, unpleasant, or caused a feeling of being pressured. A few participants felt they did not need instruction because their social skills were sufficient. The legitimacy of teachers or peers as instructors was also questioned, because they might not be socially competent themselves (peers), might not be

approachable (teachers), or might not understand students with ASD enough to provide adequate instruction.

Component 7: family involvement in expanding peer interactions

The last component addressed the potential role of family members in extending social connections beyond the school day. Participants said family members could positively contribute by helping students know what to do during social interactions, helping them meet new people, or providing transportation. Many participants saw family members as a uniquely qualified source of support, as they know their children better, are more invested in their children's lives, and are a greater source of comfort than other adults.

In contrast, participants articulated concern about receiving support from family, noting that some parents might not understand their child well or could have a tendency to be overly involved in their child's lives. Parents could potentially thwart desires for independence and negatively impact socialization attempts by either interfering directly with interactions or causing stigmatization when other students saw parents providing help:

> Unfortunately, students are too often willing to use terms such as "Momma's boy" to describe those who rely on their families to help them with insecurities or difficulties that they cannot handle themselves. The pressure to solve problems, especially *social* problems, without adult intervention is significant during this time period in an individual's life. I'm not sure adding such a component, if it is noticed by other students, would always be helpful. (24 M, AS)

Discussion

We examined perspectives of 33 youth with ASD on social-focused intervention components. *Recruiting peers* and *family involvement* received more high than low or medium ratings, and *meeting peers* received more medium than high or low ratings. The remaining four components received ratings roughly evenly distributed across categories. Regarding variations, participants preferred recruiting peers with similar interests or who engaged in similar activities over recruiting existing peer groups or teachers selecting peers. Meeting without an adult was preferred to adult presence, and shared activities were preferred over direct instruction as a context for learning social skills. We now discuss themes that arose across components and describe implications for intervention.

Adult involvement

Concerns about the role of adults in supporting social success are increasingly discussed in the literature (Carter et al., 2012; Giangreco, 2010) and were prevalent in responses to six of the seven components. While adults are

regularly cited as offering necessary supports (Hay and Winn, 2005; Muller et al., 2008), they can inadvertently become a source of stigma (Humphrey and Lewis, 2008). For example, prior research indicates parents of children with ASD believe they provide critical assistance to their children in forming and maintaining friendships. These parents reported taking steps to improve their child's access to peers, such as inviting students to their home or initiating introductions, even when their children found these interactions difficult (Calder et al., 2012). Similarly, participants tended to rate *family involvement* highly, but expressed concerns about stigma that accompanies parent involvement in their social life. Furthermore, interactions arranged by adults were viewed by some participants as not only stigmatizing but also uncomfortable. This concern is interesting, given that ASD involves deficits in perceiving and interpreting social cues that signal awkwardness (Chevallier et al., 2013). These sentiments reflect sophisticated social knowledge regarding peer group entry, which involves complex negotiations between peers (without an adult intermediary). While some participants expressed difficulty entering peer groups on their own, they were not convinced a teacher directly managing this process was a viable alternative. Additionally, teachers and parents alike were cast as potentially inhibiting sought-after independence. As adolescence involves the construction of a peer culture distinct from adults, seeking independence from adult control matches what would be expected of neurotypical youth (Rubin et al., 2009).

Adult-driven strategies deemed too intrusive can undermine students' efforts to enter peer groups and improve social competence. Thus, practitioners should discern student preferences in regard to adult involvement. For many of our participants, an indirect approach was favored. This could include logistical support such as finding space, gathering materials, initiating interactions, and then fading support to allow interactions to unfold naturally (Hochman et al., in press). Involving peers who are outgoing and socially savvy may aid in efforts to fade adult supports to behind-the-scenes status. Service providers can also help parents channel their desire to provide assistance into more socially acceptable strategies.

Preference for natural interactions with peers

Activity-based learning with peers was preferred over direct instruction, whether delivered by an adult or peer. This preference warrants consideration, given that the extent to which direct instruction of social skills enhances social experience (as opposed to allowing one to "pass" as socially competent) is tenuous. The superiority of activity-based learning with socially competent peers over direct skills instruction is supported by recent research (Kasari et al., 2012). Likewise, peer selection procedures that focus on similar interests and activities were preferred

over other variations. Mutually enjoyed activities with peers can be a particularly salient way for individuals with ASD to connect with others, as it gives structure to interactions and provides a concrete focal point, while allowing interactions to unfold naturally (Carter et al., 2011; Muller et al., 2008).

Participants who questioned the legitimacy of adults teaching social skills reflected an understanding that peer group norms are not always codified into explicit and stable rules that would warrant a direct instruction approach. For example, peer group entry involves setting aside the politeness rules commonly taught in social skills curricula and instead engaging in activities such as "conflict talk" to strengthen peer cultural ties (Kyratzis, 2004). If adults are unaware of the social behaviors endorsed by the adolescent peer group (as many participants suggested), they may guide students toward less relevant "adult" norms, inadvertently increasing a student's outsider status.

Disclosure

The mixed views regarding disclosure evidenced in this study are consistent with previous studies. Some adolescents experience positive peer reactions after revealing and explaining their disability status (Ochs et al., 2001). These adolescents view disclosure as an opportunity to instill "interactional expertise" in their neurotypical peers, which can bridge the empathy gap created by insufficient knowledge about the autistic experience (Milton, 2014). Others view disclosure as a potential source of ridicule (Humphrey and Lewis, 2008) or do not feel others will understand what it is like to have ASD even after information is given (Carrington and Graham, 2001). Some participants in our study expressed strong feelings about maintaining privacy and were concerned about further stigmatization if peers were aware of their disability. Thus, planning for how information is disseminated should be done in consultation with the student with ASD in order to discern and respect their preferences. Recruiting peers who have experience with students with ASD, or who are known to be supportive of difference, may calm fears about potential negative consequences of disclosure. School-wide measures to create a culture of inclusiveness may also be called for, apart from efforts to improve social competence of students with ASD.

Limitations

Several limitations should be considered when applying these findings. First, this study is limited to youth with ASD who were able to articulate their experiences and views. Self-selection was likely a factor in the over-representation of participants with less severe ASD as potential participants (or their parents) may have anticipated the linguistic demands of the interview. Furthermore, while we

made efforts to maximize the extent to which participants with lower language levels could access the interview, this group tended to provide less detailed responses to open-ended questions and sometimes provided responses that were not easily categorized into themes. This difficulty is reported in similar research with this population, suggesting more efforts are needed to design interview methods that elicit participation of all individuals with ASD (Preece and Jordan, 2009). Because of these factors, we were unable to link response patterns to degree of impairment. Second, we did not collect information on co-morbid diagnoses, which may have influenced responses. Finally, we restricted our interviews to participants with ASD. Future research should ascertain the views of other stakeholders, including school professionals, parents, and peers, to indicate where there are divergences in perspectives and priorities (e.g. Carter and Pesko, 2008).

Conclusion

This mixed-methods study investigated the views of adolescents with ASD on social-focused intervention components. Results indicate these young people have significant, yet diverse, preferences in regard to intervention design and delivery. The themes explored in this study provide empirical grounding on which to base future interview or survey research conducted on larger samples that would be generalizable to larger populations of adolescents with ASD.

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Appendix 1

Interview protocol and example component description

Rapport building questions

1. Where do you go to school? (if not in school, ask how they spend time during the day).
2. What do you do for fun?

(Provide follow-up probes to each of the above questions as appropriate.)

Intervention component questions

(Introduction) Here are some things we consider doing to help high school kids who might want support in hanging out with other kids their age.
(Display and read the component.)

1. What do you think about this idea?
2. Can you show me on the number line how much you like or don't like the idea? (refer to visual scale, probe as necessary to gauge degree of liking).
3. What are some things you like about this idea?
4. What are some things you don't like about this idea?

(Continue below for components with variations, referring to the text description of each variation.)

5. Can you tell me how much you like or don't like this way of working with students?

6. Which way do you like best?
7. Which way do you like least?

Example component description

Below is an example of the text description of one of the seven intervention components (the complete set of seven descriptions are available from the first author (K.B.) upon request). Each component was presented with large text on a laminated sheet, with a cartoon illustration of the component. The component below was accompanied by an illustration of a group of adolescents talking together. A full set of descriptions is available from K.B. upon request.

Finding peers to connect with

Peers will be picked who can get to know you and help you meet some of your social goals.
Different ways to do it are as follows:

1. Pick students who like some of the same things as you. For example, if you like music, peers would be picked because they also have an interest in music.
2. Pick kids who already hang out together in a group. A group of friends would be chosen to help you be part of the group.
3. Pick kids who are in some of the same activities as you, such as kids in the same class or club.
4. Pick kids who the teacher thinks would be great for you to get to know.