



Hull, L., Rane, S., LEE, S. H., & Sedgewick, F. (2024). "Just ask what support we need": Autistic adults' feedback on social skills training. *Autism in Adulthood*. Advance online publication. <https://doi.org/10.1089/aut.2023.0136>

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“Just ask what support we need”: Autistic adults’ feedback on social skills training

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Abstract

Background: Social skills training (SST) is an intervention intended to support the development of social communication and interaction for autistic people, often through role play, modelling, peer mediation, or group activities. While often targeted at autistic children, adults may also be offered SST following diagnosis. Evaluations of SST generally focus on social and behavioural outcomes, with little consideration for participants’ experience of the intervention. This study was the first to seek the perspectives of autistic adults regarding their previous experiences of SST in childhood or adulthood.

Methods: A total of 11 autistic adults (5 male, 5 female, 1 agender) from the UK were interviewed online. Interviews were semi-structured, and focused on participants’ previous experiences of SST and how they felt it could be improved. Data were analysed using reflexive thematic analysis.

Results: Autistic adults wanted support around social communication and life skills, which they felt was not always provided through SST. Participants suggested SST should be personalized, and accessible as and when needed. Support through autistic peers and trained neurotypicals was particularly valued. Some emphasized the need for non-autistic people to receive training on how to socialize with autistic people. Some participants also reported negative experiences of SST or felt it was not necessary.

Conclusion: Current SST provision in the UK does not always meet the needs of autistic adults. Services providing SST should consider personalizing their support options, and ensure that autistic adults are involved in the design and delivery of SST. Some autistic people may not want or need SST and it should be integrated to a broader range of support options.

Community Brief

Why is this an important issue?

Social skills training is a broad term for support offered to help people with social communication and interaction. Many autistic people are offered social skills training after they are diagnosed, but we don't know much about whether they think it is useful.

What was the purpose of this study?

To learn about autistic adults' experiences of social skills training.

What did the researchers do?

We interviewed 11 autistic adults and asked about their previous experiences of social skills training. We asked about what they wanted from social skills training, what had been useful, and what they think needs to be improved.

What were the results of the study?

Participants felt that social skills training was most useful when it was interactive and personalized to their specific needs. They wanted social skills training as part of a broader package of support for mental health, learning about autism, and meeting other autistic people. Participants felt that social skills training helped them learn more about their autism, but sometimes they were being told to hide parts of themselves. Participants also suggested that everyone would benefit from social skills training, whether or not they are autistic.

What do these findings add to what was already known?

Most research evaluating social skills training has focused on children's behaviour or social skills as evaluated by non-autistic adults. We now know that some autistic people also feel like they can benefit from social skills training, but the way that it is currently run might not be always helpful. Our participants had lots of suggestions for ways to improve social skills training.

What are potential weaknesses in the study?

We only interviewed autistic adults in the UK, so their experiences may not be the same as people using social skills training in other parts of the world. Also, our participants were mostly diagnosed as teenagers or adults, so the training they took part in might be different to that offered to younger children.

How will these findings help autistic adults now or in the future?

We can use the suggestions given by these participants to improve the way social skills training is delivered, so that it is more useful for autistic people in the future. The findings also suggest

that social skills training should be offered to everyone, rather than just to autistic people, which might help reduce stigma experienced by autistic people.

Introduction

Social communication differences are a core diagnostic criteria for autism ¹. Therefore, it has been common to enroll autistic people, usually children and adolescents, in Social Skills Training (SST) to try to develop these skills and support more effective communication with others ². There is no standard definition of SST and many different programs are available; however, a common aim of SST is to increase individuals' understanding of social behaviour and encourage more successful interactions with peers and others ³. This can be achieved through a variety of methods including role play, modelling, group activities and peer-mediated activities ⁴. Some SST aims to explicitly teach social rules or skills, while others provide opportunities for interaction (such as social groups with neurotypical peers), to change behaviour more implicitly. ⁵. The majority of SST is delivered in group format ⁶, and tends to be delivered by trained professionals. However in recent years technology-assisted SST programs have been developed, although there is limited evidence for their fidelity or efficacy ².

Most SST, and therefore most research into SST, is targeted at younger children and adolescents ⁷; however, autistic adults are also offered SST. This may be ongoing support offered throughout childhood and beyond; or, for those diagnosed in adulthood, SST may be offered soon after diagnosis for a limited time. With an increasing proportion of autism diagnoses occurring in adulthood ⁸, it is likely that more and more autistic adults will be offered SST in the future. Therefore, it is important to consider the impact that SST may have for autistic adults.

Several systematic reviews have evaluated SST in recent years. This paper does not have the space to provide a comprehensive discussion of evaluations; however, we will summarise some observations. Most evaluations of SST have focused on behavioural change and/or knowledge as the key outcome of interventions ⁵: in other words, do autistic people who take part in SST have greater knowledge about socializing, and do they demonstrate more neurotypical social behaviours? A meta-analysis by Gates and colleagues (2017)⁵ found overall a medium effect of SST on social competence, as measured by self-report, reports from parents, teachers, and observers, and by performance on social skill tasks. Similar

findings are often reported in other evaluations, where small-to-moderate increases in social knowledge or behaviour are generally found ⁹. Some studies also consider the impact of the intervention on wellbeing or mood, and show higher quality of life following SST; although it is not always clear whether this is reported directly by participants themselves, or by parents ⁷. However, it is also noted that there is likely to be publication bias, such that negative or null results from interventions are not published, and that replication of evaluation studies is urgently needed ⁵.

The current evidence base therefore appears to suggest that SST is generally effective, i.e. it produces changes in the targeted outcomes ¹⁰. However, there has recently been a growing movement, driven partly by autistic people themselves, to challenge the assumptions underlying intervention studies and critically evaluate their impact on autistic people. One recent meta-analysis found that intervention studies have several significant limitations ¹¹. For instance, interventions for autistic young people tend not to be evaluated in real-world settings, limiting their practical impact; evaluations also tend to focus specifically on the behaviours targeted in the intervention, without considering how the intervention might affect an individual's general wellbeing. More worryingly, very few intervention studies measure or even discuss any potentially harmful consequences of the intervention ¹¹. Considering SST interventions specifically, it has been observed that most current SST programmes are not based on up-to-date understanding of social interaction, and that SST may increase stigma experienced by autistic people by reinforcing rigid social rules ⁴.

To our knowledge, current evaluations of SST have generally focused on outcomes related to social knowledge and behaviour change, with minimal consideration of the participants' own experiences of SST. Few interventions have included input from autistic people at the development stage ¹². Where feedback from SST participants has been obtained, this has generally been from children ⁷. As such, there is a lack of knowledge regarding autistic adults' perspectives on SST, which is essential for future design and delivery of post-diagnostic support for adults. This study aims to address this by interviewing autistic adults about their experience of SST in the past, and determining how they feel support can be improved in the future.

Methods

Participants

In total, eleven autistic adults (5 male, 5 female and 1 agender) aged between 20 and 58 years (Mean = 37.5, SD = 13.90) were recruited for the study; see Table 1 for participant characteristics. Through purposive sampling based in the UK, participants with various experiences of SST were recruited via advertisements on social media, local autism support services, and snowball sampling. The eligibility criteria were: the participant is over eighteen years of age, had experience of SST in any country within past 10 years (either one-to-one or in group settings), has had a clinical diagnosis of autism (self-reported), and is willing/able to complete an interview on Zoom.

Materials and Procedure

Interview schedule

Participants completed semi-structured interviews, which lasted on average 30.80 minutes (SD = 6.78). The interview covered their previous experiences of SST; what was involved in the training; how SST impacted their understanding of themselves; and what they felt should be included in SST in the future. The interview topic guide is included in the Supplementary Material. Interview questions were developed by FS and LH based on reviews of the literature, and were reviewed and amended by two autistic consultants (described below).

Procedure

Interested individuals were sent an information sheet, followed by a consent form if they wanted to take part in the study. They were also asked for preferred date/time and format for interview (video call, audio only [cameras off], typed in chat box). Participants were asked for their preferred language around autism: use of the term 'autistic person', 'person with autism' or something else, during the interview, in order to respect individual preferences¹³. They were asked to identify any topics they did not want to be asked about in the interview and were given the opportunity to ask questions about the study before taking part.

The participants were sent reminder emails a week before their scheduled interviews and a copy of the interview schedule. The interviews were all conducted by the third author, and were carried out online using Zoom platform. All the interviews were recorded and transcribed verbatim. Participants were compensated for their time with £25 vouchers.

Data Analysis

The interview transcripts were analysed using Reflexive Thematic Analysis following Braun and Clarke¹⁴. Reflexive thematic analysis was chosen as it allows for identification of important themes and patterns without restriction within a specific theoretical framework. An inductive approach was used to analyse the themes generating from the data set. This part was completed by the second author, with review by the other authors, and involved the following steps: (1) Familiarisation (transcribing the interview transcripts and reading), (2) Coding (surface level semantic coding), (3) Generating and reviewing themes (patterns are observed in the codes and reviewed), (4) Naming the themes (themes are named and defined without losing the actual meaning). In total, eleven interview transcripts were transcribed verbatim and re-read followed by semantic coding and generating themes from the data. The process of naming and defining themes was carried out after the codes were reviewed by other research team members.

Community Involvement and Positionality Statements

All the researchers involved in this project are non-autistic, with backgrounds in Public Health, Psychology and Education. The first and last authors have established careers working with autistic people and carrying out co-produced autism research. Autistic consultants (N = 2; 1 male, 1 female, identified through the authors' institution and collaborations) reviewed the research plans and interview schedules, but this project was not fully co-produced.

Ethics

The Faculty of Health Sciences Research Ethics Committee of the University of Bristol granted ethical approval for this research (reference 10308). The participants recruited for the study gave written and informed consent before participating in this study. Participants were able to withdraw until two weeks after their interviews, but none chose to do so.

Results

Participants are referred to using pseudonyms throughout the results. Three participants (Abi, Daniel, and Michael) reported being diagnosed with autism in childhood or adolescence, and receiving SST while at school. The other eight participants were all diagnosed in adulthood and took part in social skills training as adults. However, all participants were asked to reflect on what is needed for SST as both children and adults (see Supplementary Material).

From the interviews conducted, five themes and twelve subthemes have been generated. The themes and subthemes are summarized in Figure 1.

INSERT FIGURE 1 ABOUT HERE

Interactive and Relevant

Participants repeatedly mentioned the importance of an interactive SST session for autistic individuals. They reported that sessions should be delivered in a *fun and engaging* way, to increase enjoyment and learning. Roleplay and video techniques are fun and help to capture real-life experiences, explained some participants:

'Sometimes it leads to insight, but that kind of structured, very you know, very purposeful in a way reflection, I found overall very useful and I think you know, and also the laughs we had in the sessions, with the roleplays you know it kind of gave me more confidence because it was such a supportive atmosphere.' (Sally)

'You could record videos or something of like real people's experiences... like you could have an autistic adult who is like recorded a little bit about... how they did things before and how they do things now and like whether that has had like a noticeable impact.' (Emily)

'I'd say some of it isn't delivered brilliantly. Like, like sometimes I'd be learning social skills from a PowerPoint and that's not the level it should be at, so I just remembered that was useless.' (Michael)

By creating an interactive environment, participants felt they could engage more with the material and thereby develop their skills. Learning around *practical activities*, which could be delivered through real-life training or social stories, were particularly valued aspects of SST:

'Oh well, I mean social stories work, sometimes, so you know you write out - you go to the pub, you know the beer will be three pounds, you know you do all that kind of stuff...' (Ethan)

'What I would find useful is to be able to learn how to like to not be anxious to go into a shop, to not get overwhelmed to speak to the cashier or that kind of thing. We didn't talk about things that are applicable to real life.' (Abi)

These examples of everyday activities demonstrate that breaking down tasks into manageable steps gave participants both the knowledge and skills to engage in social interactions.

However, some participants also acknowledged that SST could not solve all their issues, and that even after engaging with SST they still felt that wanted more support:

*'You're taught to increase your social skill ability, which I have, but it's not... it's not perfect...It's almost like increased it by 20-30%, you know, but it's not 100%'.
(Raymond)*

Participants reported successful SST was *dependent on the facilitator*, and that this individual's charisma and creativity was what determined enjoyment of the training session:

'I thought they were done very well. I think it, a lot of that depended on, on the actual person who was facilitating them, and she was superb umm and you know, and she was a real people person and non-judgmental and very creative lady. So, you know she did it really well and she was you know the facilitator and the glue' (Sally)

Ethan, as a peer supporter in a social skills group, felt that authenticity from facilitators was particularly important, whether or not they had personal experience of autism:

'We've learned this with training - across the board, that you involve people, you involve experts, experts by experience. But it's about making sure that you have a good grouping of people who are believable.' (Ethan)

However when facilitators were perceived as judgmental or uninterested, this made SST unenjoyable and discouraged engagement:

'My mentor which I had when I was twelve... towards the end of our sessions, she made me feel very bad about myself. When I had a problem she would make me feel worse about myself.' (Daniel)

'The trainers weren't listening – weren't interested in what I had to say, it was really frustrating.' (Katherine)

Personalisation

Participants reported a lack of personalisation in the support being provided through SST, without much consideration of variation in social ability or preference. They mentioned that *not all autistic people are the same*, and therefore different people had different needs for support:

*'I think autistic people, because each person is so different I think it's according to context, so if someone is really struggling on the concept of socializing, sure. But what it needs to be is something that adapts to them and builds with and works with them'
(Ethan)*

'I remember we did this one lesson on like personal space. And I kind of understood what personal space was, I don't really need that, but you had people that didn't. They were teaching it like being A4 piece of paper distance away so you kind of just walked round holding a piece of paper, making sure you didn't get that close and to me that just seemed really weird to do that as an exercise, when I kind of understood what personal space was.' (Michael)

Participants who were diagnosed in adulthood expressed a strong need for personalisation especially for the type of support given through SST. Support provided to autistic adults can be personalised according to their needs by inquiring or plainly by asking them:

'They say that we just don't understand autistic adults, well, just ask us. You know, all we need to do is talk, we're quite capable of talking! That's how you find out. Just ask what support we need, ask what services there can be, we can have, without being denied' (Katherine)

However, some noted that their healthcare or support services required them to take part in SST, whether or not they wanted to, and felt they had limited agency over their engagement with SST:

'I didn't really have much choice in the matter... I was one of the first to come onto such a social training group, for patients being discharged out of hospital.' (Raymond)

Along with the type of support, participants also mentioned the freedom to choose SST *when you need it* as particularly important. Participants noted that services often provided SST within a specific time frame after diagnosis, without considering that specific support needs might be identified after the autism diagnosis has been processed:

'If there was an offer so to be kind of like... you'll be open to the service for like the next twelve months or something like, if in that time you think that it would be helpful to have some kind of input around like particular situations you find difficult ... so, that it's not all like immediately straight away when you're still trying to figure out what a diagnosis means for you' (Emily)

Participants emphasised that different types of support are required by autistic adults compared to children, and noted that the SST targeted at children may not be relevant to autistic adults:

'I'd say that the toughest thing I found is like transitioning from being like a kid to then being an adult. Where you go out and you have like drinks and you go to bars and stuff like that and it's completely different to what they were teaching us and what I learned as a way of socializing. So I can have a conversation it's not a problem but like when I go out drinking and stuff like that just I can't do any of it.' (Michael)

Holistic and inclusive support

Participants shared that the experience of being diagnosed with autism in adulthood could be overwhelming, and that time to process and information about autism itself were needed before considering support for social skills in particular. SST was placed within a *broader context* of diagnosis and need by many participants:

'I think straight away you're, so like you're telling me, I have this thing that affects my whole life, but I've not known about it until now ... that's a lot to process.' (Emily)

'Like little crash courses in autism would be useful, you know, like this is what autism [is], this is how it can apply to you, this is how you can explain it to others.'

(Abi)

One participant noted that SST should be integrated with mental and physical health support, which are often also required by newly diagnosed autistic people:

'The training should include links to other support needs. It's not only about social skills it's also about mental health and physical health, they all tie in.' (Leo)

This reflects the earlier comments from participants regarding the need for support later on after diagnosis; individuals may need time to learn about their autism and themselves, as well as address other physical or mental health needs, before considering any support needs they might have around social communication.

Participants particularly valued the social nature of SST groups, which, when inclusive, allowed them to develop self-awareness through *communication with other autistic people*:

'I think that was useful to hear about in a group setting because I, like other people would talk about their experiences of it, and so I felt like it was something that I could do, I would consider' (Abi)

'I think you know, doing it in a group, you know where you get a lot of people's contributions and you get that greater interaction and you get that greater discussion, that was great.' (Sally)

However, one participant felt excluded from the social aspects of SST due to living further away than other group members, emphasizing the need for service providers to make particular efforts to include everyone:

'And also everybody, everybody was um living locally, I was the furthest away. So I couldn't um, socialise with any of them. So I'm a bit left out.' (Katherine).

Participants reported that SST resulted in feelings of inclusiveness when it was *facilitated by other autistic people* at least partly, compared to being designed and delivered by non-autistic people:

'There should be a cohort whereby it's an autistic person delivering the social skills training, perhaps, from their own perspective of what's been useful for them and what's helped' (Barbie)

'The other thing that I think is important whoever's delivering it should be either on the spectrum themselves or be fully understanding about autism.' (Leo)

Impacts on autistic identity

Participants reported that SST had both negative and positive consequences for their identity and sense of self. For some participants, the communication skills and social environment provided by SST enabled them to *interact with others*:

'I'd say the little bits that I did pick up were useful like little tips on dealing with people and also on managing your autism, accepting it.' (Abi)

'It's been really good to have social skills training in the way that I did because, I want to connect with people... and these classes are a way to firstly meet people but also have an environment where you're interacting.' (Fion)

'I've learned about like how my communication is different and how it comes across and how to like change that. Some of that has made me feel like better about myself.' (Emily)

These participants felt that techniques learned during SST sessions helped them feel more positive about their interactions as an autistic person, thereby promoting a positive sense of autistic identity.

In contrast, other participants felt like SST *increased stigma* associated with autism, thereby creating negative associations with being autistic:

'If there's a specific training on socialising just for autistic people, to me it says autistic people aren't good at socializing... So having it specifically as a training that autistic people have, it just feeds that and makes the stigma stronger.' (Barbie)

Some participants argued their experiences of SST encouraged them to hide their autistic characteristics, or act more neurotypically:

'I would say, social skills training is kind of any input that kind of is trying to support either social, social understanding or... efficient and effective kind of communication which feels slightly like a way to make people more like neurotypical.' (Emily)

'I feel like the training can be harmful because, like, it can make autistic people feel like they have to like hide their autistic traits and that kind of changed their autistic traits.... It can feel a bit like it's conversion therapy, like it's trying to change who you are.' (Daniel)

Some participants argued that SST should not be seen as necessary for all autistic people:

'But I don't think it's something that's necessary, I think we should be, you know, we should embrace that people are different in the means of this different social skill sets.' (Barbie)

Not just for autistic people

Several participants did not feel the need to learn neurotypical methods of communication through SST (such as maintaining eye contact), and instead felt *neurotypicals should be more accepting* of autistic individuals as they are:

'And I think that sometimes it would be better if the general public or sort of neurotypical people were just more accepting of, of autism or anybody who looks different or who stims [uses self-stimulating behaviour] or who you know, has a leg

missing or who is rocking back and forth and clapping or has any kind of visible difference that you can pick up on if that makes sense' (Fion)

'[We can support autistic children by] teaching them like okay, you are different ... people may prefer socializing in this way, whereas you may prefer socializing in this way... that's okay, you don't have to be forced to do it like this'. (Daniel)

Some participants noted that *non-autistic people can also struggle socially*, and that clearer instruction of social norms and skills would benefit everyone regardless of their neurotype. This could also take place through less formal teaching and instead through engagement with comedy or acting:

'I think it should just be something that's for everyone, but maybe in that kind of broad definition of social skills for everyone.' (Barbie)

'Comedy is a language everyone speaks whether you're autistic or not... it feels like a sand pit environment where you can test different interactions and see how they go.' (Fion)

Participants explained how it could be easy for neurotypicals to alter their social behaviours in order to meet autistic people in the middle of any social communication gaps. They made the point that non-autistic people may already have skills that make it easier to adapt their social communication, compared to autistic people:

'And I do think it's about meeting people halfway. We shouldn't expect other people like autistic people who are already struggling with communication to learn a whole new repertoire of skills. When it's easier for the person who is not autistic to just alter theirs slightly' (Leo)

One participant argued that, rather than learning new social skills, autistic people would benefit most from support and confidence in their socialization, and that this could be achieved through greater acceptance by non-autistic people:

'I think what I take from that is that it's not - autistic people don't have a social problem. They have a social confidence issue and they have an issue if they're not around people like them, who are willing to give them a chance and socialize in the way they want to.' (Ethan)

Discussion

This research sought to elicit the perspectives of autistic adults on social skills training (SST) that was provided to them after a diagnosis of autism. The aim of this was to understand what autistic adults think of SST that is currently available to them and identify priorities for the development of future post-diagnostic support.

Participants reported a wide range of experiences of SST, from 1:1 mentoring, to group classes, to peer-led social opportunities. In some cases SST was offered through more formal settings such as schools or inpatient wards; other participants attended SST in more casual environments such as pubs or drama classes. All participants chose – or were required to attend – SST following their autism diagnosis, and all but two had been diagnosed in adulthood.

Participants had several recommendations for what makes SST effective and enjoyable; these are summarized with examples in Table 2 below. Notably, participants felt that when SST was interactive, for example through role play, it was perceived as more engaging than simply delivering information in a lecture style. The relevance of activities to their daily lives was also important, with some participants praising the ability to practice everyday tasks in a ‘safe’ environment. However, participants also noted a discrepancy between what they were taught, and actual changes in their social behaviour, reflecting meta-analytic findings that SST may impact social knowledge but not social performance ⁵. Enjoyment of the SST was also dependent on the facilitator, in most cases a non-autistic adult, although a recommendation from many participants was that SST should be both delivered and designed by autistic people. Some interventions are available that have been co-developed by cross-neurotype participatory groups or collaborations, although evidence for these is still limited ¹².

Personalisation was another key feature appreciated by participants; in particular, the autonomy to determine areas in which they wanted support, and when they would like access to this support. Participants reported examples of SST that were inappropriate to their needs, while recognizing that other autistic people might benefit from training in those areas. While many SST interventions promote a person-centred approach ¹⁵, participants’ experiences suggest that this is not always delivered in real-world settings. Offering different types of support at different stages of life, rather than assuming that skills taught in a child or adolescent setting can be directly applied to adult social situations, would seem to make more of a meaningful impact for autistic adults. This is echoed by one participant’s request for SST be available at the time it is needed, rather than within a prescribed post-diagnostic timeframe.

The clinical context in which SST takes place is not always considered in intervention evaluations ⁷; the majority of participants in this study took part in SST at the same time as they were learning about their autism, processing a new diagnosis in adulthood ¹⁶, and dealing with co-occurring mental and physical health problems. As levels of both mental and physical health issues are disproportionately high in autistic people ^{17,18}, clinicians could consider integrating SST as part of a broader package of support offered post-diagnosis. Many current interventions combine psychoeducation around autism and social skills training, although the evidence for these is limited, particularly concerning autistic adults with higher levels of support needs ^{9,19}. Many of the positive features identified by participants in this study are not necessarily unique to SST; indeed, previous research has argued that positive benefits of SST may be partially due to common features of therapeutic group settings more generally ²⁰. This reflects observations from participants that they particularly enjoyed the opportunity to connect and communicate with other autistic people, and emphasizes the need for social opportunities for autistic people across the lifespan ²¹. As noted by one participant, increasing confidence and self-advocacy may enable more autistic people to engage in social interactions without requiring direct support, and could be achieved through peer mentoring in supportive settings.

In terms of less positive outcomes, some participants argued that their experience of SST reinforced stigma that being autistic is ‘bad’ or ‘wrong’, whether implicitly or explicitly. Autistic advocates and proponents of the neurodiversity movement have long fought against intervention models which view autism (or any other neurodivergence) as inherently bad, contrasted against the neurotypical ‘right’ way of being ^{22,23}. Indeed, in recent years there has been some discussion of the role that SST may play in reinforcing ableist or stigmatizing views of autism. In a commentary by Bottema-Beutel, Park, and Kim (2018)⁴, the authors argue that SST aims to replace autistic social behaviours with neurotypical ones, without any regard for the impact that using these rigidly learned behaviours may have on the individual. They report that SST may lead to inauthenticity in autistic social interactions, a comment which was made by several participants in the present study. Some participants also suggested that using inauthentic social skills in this way could lead to masking or camouflaging of autistic characteristics, which has been associated with poor mental health outcomes ²⁴.

This argument is based on the Double Empathy Problem theory ^{25,26}, a sociological proposition that the needs and preferences of non-autistic people are prioritized over those of autistic

people. Milton argues that both autistic and non-autistic people need to adapt and compromise in order to achieve reciprocal interaction, but that in most cases the expectation is solely on the autistic person to change their ways of being. This sentiment was also echoed by participants in our study, some of whom suggested that neurotypical people would benefit from their own training to better understand how autistic people interact. Empirical research supporting the Double Empathy Problem theory has found that within-neurotype interactions (i.e. autistic-to-autistic or neurotypical-to-neurotypical) have similar levels of effective information sharing, whereas communication issues arise within mixed-neurotype interactions ²⁷. The implication for SST, as proposed by participants in this study, is that both autistic and non-autistic people may need support when interacting with someone with a different neurotype, but that autistic social communication is not inherently poorer than non-autistic social communication. Expanding upon this, one possibility could be to extend SST to those around an autistic person, training them how to better communicate with their autistic family member, friend, or colleague, as well as training the autistic individual on neurotypical social skills.

[INSERT TABLE 2 ABOUT HERE]

Strengths, Limitations, and Future Research

This was the first known study to ask autistic adults about their real-life experiences of social skills training, rather than receiving feedback within the context of a specific intervention. An important contribution is highlighting how much variation there is in SST provision in the UK. However, a limitation of this was that SST experience was self-reported by the participants, and so participants may have forgotten, chosen not to disclose, or misrepresented the SST they had been offered in the past, for instance describing experiences of mental health intervention rather than SST. Participants reported a wide variety of experiences with little consistency across location or age groups, suggesting that future research should systematically evaluate what types of SST are available for autistic adults in the UK.

Our findings only reflect the experiences of a small sample of autistic adults in the UK, and have limited generalizability beyond white people diagnosed in adulthood with relatively high levels of education and employment. All our participants used spoken language to communicate, reflecting a more general limitation in the SST literature where there is minimal provision consideration for those with higher support needs in adulthood ¹⁹. More detailed information about participants (such as more detailed information about their SST and diagnostic experiences) was not available due to concerns around identifiability, but would

have aided interpretation of the generalizability of our findings. Recruitment for this study was constrained by time and funding availability, and as such we acknowledge that this sample does not represent the full range of experiences of SST that autistic adults in the UK may have. We recommend that future research includes a broader range of participants and deliberately recruits individuals with specific experiences of SST across a variety of ages to better compare these characteristics.

Conclusions

This study explored autistic adults' experiences of social skills training in the UK, and found that autistic adults' needs are not always being met. Historically, the direct input of autistic people into the development of social skills training has been limited¹². Our results show that autistic adults can offer unique insights into the current state of SST and provide clear recommendations for ways to improve training in the future. However, participants in our study also emphasized that SST should not be considered necessary for autistic people only, but that people of all neurotypes may benefit from learning and support about how to interact with others.

Funding statement: This research project was funded by the Research England Policy Support Fund awarded to the Elizabeth Blackwell Institute at the University of Bristol. LH is supported by the Elizabeth Blackwell Institute, University of Bristol, and the Rosetrees Trust.

Authorship contributions: The project was conceived of by LH and FS, and funding was obtained by LH and FS. SHL conducted interviews with support from LH and FS, and SR transcribed the interviews. All authors contributed to analysis. LH and SR produced the first draft. All authors contributed to and approved the final, submitted draft.

Author disclosure statement: There are no conflicts of interest to disclose.

References

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders. (5th Ed.)*. American Psychiatric Association; 2013.
2. Soares EE, Bausback K, Beard CL, Higinbotham M, Bunge EL, Gengoux GW. Social Skills Training for Autism Spectrum Disorder: a Meta-analysis of In-person and Technological Interventions. *J technol behav sci*. 2021;6(1):166-180. doi:10.1007/s41347-020-00177-0
3. Rao PA, Beidel DC, Murray MJ. Social Skills Interventions for Children with Asperger's Syndrome or High-Functioning Autism: A Review and Recommendations. *J Autism Dev Disord*. 2008;38(2):353-361. doi:10.1007/s10803-007-0402-4
4. Bottema-Beutel K, Park H, Kim SY. Commentary on Social Skills Training Curricula for Individuals with ASD: Social Interaction, Authenticity, and Stigma. *J Autism Dev Disord*. 2018;48(3):953-964. doi:10.1007/s10803-017-3400-1
5. Gates JA, Kang E, Lerner MD. Efficacy of group social skills interventions for youth with autism spectrum disorder: A systematic review and meta-analysis. *Clinical Psychology Review*. 2017;52:164-181. doi:10.1016/j.cpr.2017.01.006
6. Williams White S, Keonig K, Scahill L. Social Skills Development in Children with Autism Spectrum Disorders: A Review of the Intervention Research. *J Autism Dev Disord*. 2007;37(10):1858-1868. doi:10.1007/s10803-006-0320-x
7. Hotton M, Coles S. The Effectiveness of Social Skills Training Groups for Individuals with Autism Spectrum Disorder. *Rev J Autism Dev Disord*. 2016;3(1):68-81. doi:10.1007/s40489-015-0066-5
8. Underwood JF, DelPozo-Banos M, Frizzati A, John A, Hall J. Evidence of increasing recorded diagnosis of autism spectrum disorders in Wales, UK: An e-cohort study. *Autism*. 2022;26(6):1499-1508. doi:10.1177/13623613211059674
9. Cappadocia MC, Weiss JA. Review of social skills training groups for youth with Asperger Syndrome and High Functioning Autism. *Research in Autism Spectrum Disorders*. 2011;5(1):70-78. doi:10.1016/j.rasd.2010.04.001
10. Steinbrenner JR, Hume K, Odom SL, et al. *Evidence-Based Practices for Children, Youth, and Young Adults with Autism*. The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, National Clearinghouse on Autism Evidence and Practice Review Team.; 2020.
11. Bottema-Beutel K, LaPoint SC, Kim SY, Mohiuddin S, Yu Q, McKinnon R. An evaluation of intervention research for transition-age autistic youth. *Autism*. Published online October 3, 2022;13623613221128761. doi:10.1177/13623613221128761
12. Monahan J, Freedman B, Pini K, Lloyd R. Autistic Input in Social Skills Interventions for Young Adults: a Systematic Review of the Literature. *Rev J Autism Dev Disord*. Published online July 13, 2021. doi:10.1007/s40489-021-00280-9

13. Kenny L, Hattersley C, Molins B, Buckley C, Povey C, Pellicano E. Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism*. 2016;20(4):442-462. doi:10.1177/1362361315588200
14. Braun V, Clarke V. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*. 2021;21(1):37-47. doi:10.1002/capr.12360
15. Tobin MC, Drager KDR, Richardson LF. A systematic review of social participation for adults with autism spectrum disorders: Support, social functioning, and quality of life. *Research in Autism Spectrum Disorders*. 2014;8(3):214-229. doi:10.1016/j.rasd.2013.12.002
16. Crane L, Hearst C, Ashworth M, Davies J, Hill EL. Supporting Newly Identified or Diagnosed Autistic Adults: An Initial Evaluation of an Autistic-Led Programme. *J Autism Dev Disord*. 2021;51(3):892-905. doi:10.1007/s10803-020-04486-4
17. Lai MC, Kasseh C, Besney R, et al. Prevalence of co-occurring mental health diagnoses in the autism population: a systematic review and meta-analysis. *The Lancet Psychiatry*. 2019;6(10):819-829. doi:10.1016/S2215-0366(19)30289-5
18. Tint A, Chung H, Lai MC, et al. Health conditions and service use of autistic women and men: A retrospective population-based case–control study. *Autism*. Published online January 1, 2023:13623613221144353. doi:10.1177/13623613221144353
19. Davis KS, Kennedy SA, Dallavecchia A, Skolasky RL, Gordon B. Psychoeducational Interventions for Adults With Level 3 Autism Spectrum Disorder: A 50-Year Systematic Review. *Cogn Behav Neurol*. 2019;32(3):139-163. doi:10.1097/WNN.0000000000000201
20. Dubreucq J, Haesebaert F, Plasse J, Dubreucq M, Franck N. A Systematic Review and Meta-analysis of Social Skills Training for Adults with Autism Spectrum Disorder. *J Autism Dev Disord*. 2022;52(4):1598-1609. doi:10.1007/s10803-021-05058-w
21. Stewart GR, Corbett A, Ballard C, et al. The Mental and Physical Health Profiles of Older Adults Who Endorse Elevated Autistic Traits. Isaacowitz DM, ed. *The Journals of Gerontology: Series B*. 2021;76(9):1726-1737. doi:10.1093/geronb/gbaa112
22. Kapp SK, Gillespie-Lynch K, Sherman LE, Hutman T. Deficit, difference, or both? Autism and neurodiversity. *Developmental Psychology*. 2013;49(1):59-71. doi:10.1037/a0028353
23. Leadbitter K, Buckle KL, Ellis C, Dekker M. Autistic Self-Advocacy and the Neurodiversity Movement: Implications for Autism Early Intervention Research and Practice. *Front Psychol*. 2021;12:635690. doi:10.3389/fpsyg.2021.635690
24. Hull L, Levy L, Lai MC, et al. Is social camouflaging associated with anxiety and depression in autistic adults? *Molecular Autism*. 2021;12(1):13. doi:10.1186/s13229-021-00421-1
25. Milton D, Gurbuz E, Lopez B. The ‘double empathy problem’: Ten years on. *Autism*. 2022;26(8):1901-1903. doi:10.1177/13623613221129123

26. Milton D. On the ontological status of autism: the 'double empathy problem.' *Disability & Society*. 2012;27(6):883-887. doi:10.1080/09687599.2012.710008
27. Crompton CJ, Ropar D, Evans-Williams CV, Flynn EG, Fletcher-Watson S. Autistic peer-to-peer information transfer is highly effective. *Autism*. 2020;24(7):1704-1712. doi:10.1177/1362361320919286

Tables

Table 1. Participant Demographics

Participant ^a	Age ^b	Gender	Race/ Ethnicity	Occupation	Experience of SST	Interview Format
Abi	20s	Female	Chose not to answer	Chose not to answer	<ol style="list-style-type: none"> 1. At school: ‘communication and relationship skills training’ provided 1:1 2. At school: social skills group for neurodivergent students 3. Within a hospital inpatient setting: social group for neurodivergent patients 	Video
Fion	Chose not to answer	Female	White British	Business Manager	<ol style="list-style-type: none"> 1. Comedy and theatre classes 	Video
Leo	51	Male	White British	Manager	<ol style="list-style-type: none"> 1. Through local autism support services: autism information group 	Audio

Barbie	25	Female	White British	Researcher	1. At work: formal and informal training on social cues and interacting with colleagues	Video
Sally	50	Female	White	Researcher	1. Within a hospital outpatient setting: social skills course	Audio
Raymond	51	Male	White British	Retired	1. Through local social care services: 1:1 sessions with a social worker	Video
Daniel	20	Male	White British	Student	1. At school: 1:1 sessions with teachers 2. At school: social group for 'shy students'	Audio
Emily	32	Female	White European	Researcher	1. Through local autism diagnostic service: post-diagnostic support sessions 1:1	Video
Katherine	58	Agender	Scottish	Unemployed	1. Through local autism diagnostic service: social skills group	Video

Ethan	38	Male	White British/American	Advisor	1. Through local autism support services: peer support group	Video
Michael	20s	Male	Scottish	Military	1. At school: group sessions for autistic students	Video

^a Participants are referred to by pseudonyms. ^b Some participants chose not to give their exact age.

Table 2. Recommendations for effective SST for autistic adults.

Recommendation	Example(s)
SST should be interactive	Using role-plays or encouraging people to share real-life examples.
Skills should relate to practical activities	Identifying social situations which cause anxiety or stress for each individual, and practicing how to get through these.
SST should be facilitated by autistic people	Autistic people could co-develop the SST programme and it could be delivered by autistic and non-autistic facilitators to give different perspectives on social interactions.
Skills should be personalised to the individual	At the start of SST, facilitators could work with each individual to identify what they want to achieve through SST and any particular skills they want to improve.
SST should be available when needed	If a short-term (e.g. 3-4 sessions) SST is available, the autistic individual could choose when they access this in the 18 months after they receive a diagnosis.
SST should be integrated with physical and mental health support	SST could be delivered alongside physical or mental health support, such as by supporting the individual to make and attend a doctor's appointment.
Autistic adults should be offered opportunities to interact with other autistic people	Structured peer support groups encourage socialisation in a supportive environment.
SST should not increase stigma associated with autism	Facilitators should carefully review materials to ensure they do not imply that autistic social mannerisms are inherently bad, but instead provide reflection and the option for autistic people to learn neurotypical social mannerisms as well.
Non-autistic people should also receive SST	When someone receives a diagnosis of autism, their family, friends, and colleagues could be offered training on how best to communicate with autistic people.

Figures

Figure 1. Themes and subthemes identified from interviews regarding Social Skills Training.

