

Original Research Article

The Experience of Participating in Improv Comedy for Autistic Adults

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Abstract

In improv comedy, individuals spontaneously create scenes or songs. It has been identified that by participating in improv, individuals experience numerous benefits such as improvement in their communication skills. In this research, I investigated how autistic adults experience an online 4-week improv comedy course, and whether participants who joined the classes believed there had been any benefits from participating in the sessions. Seventeen participants from around the world were invited to discuss their experiences and the benefits of participating in the course in focus groups. The data was analysed using Qualitative Content Analysis identifying five themes: (1) 'Quality of Life and Mental Health benefits'; (2) 'Being accepted as and with other autistic people'; (3) 'Autistic valued skills'; (4) 'Provides a way into or inspire an activity I want'; and (5) 'Not every autistic person will perceive or gain benefits'. While most participants stated benefits from participating in improv and that it was an enabling activity, not all autistic individuals perceived or gained value from it. In particular, it was helpful to have an autistic space where autistic identity may thrive.

Keywords

improv, comedy, theatre, autism, experience, benefits

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Introduction

Autistic creativity and humour may manifest differently in autistic individuals compared to neurotypical (NT) people (Roth, 2020). As expected, there is a wide range of humour within the autistic community similar to that of non-autistic individuals (see May, 2013, 2017; McCreary, 2019). There are autistic performers, and some feel uneasy being seen as a source of inspiration for non-autistic audiences due to the common tragedy narrative in society about autistic people (Brady, 2022). However, they find it encouraging that fellow autistic individuals can relate to their work and may be inspired to engage in similar forms of self-advocacy through autistic visibility in the arts (Brady, 2022). Considering the presence of autistic comedians and storytellers, it might be that autistic cognition provides a perspective that makes comedy and storytelling easier to construct (Sperk, 2024). Nonetheless, humour and laughter are primarily social processes (Bergson, 1900/2022; Davila Ross et al., 2009; Hanks & Egbert, 2022), which would suggest factors such as sarcasm can be missed (Kalandadze et al., 2018) potentially resulting in social discomfort for autistic people.

Autistic people worldwide participate in improv comedy (henceforth improv) (Keates & Beadle-Brown, 2023). Improv is a small subset of theatrical improvisation in

which people create scenes or songs through spontaneously formed or premeditated games or story/song structures, live in front of an audience or rehearsal/workshop setting (Keates & Beadle-Brown, 2022). Autistic people's monotropic mind (Murray et al., 2005) or the single attention tunnel results in needing to focus on a certain amount of information including social and sensory processing. This theory suggests reasons for the need for routines and focused interests. In improv, Spolin's (1999) pedagogy uses simple, focused exercises and games to help students learn how they improvise, as such this fits this model of processing using single attention. Inevitably, people discover how they improvise and they may engage in specific styles of improv that would limit processing.

The differences between participating in improv and the wider theatrical arts are clear. For example, improv is

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considered a social art (Engelberts, 2004) and improvisers must show effective meta-communication through 'group mind' (Dennis et al., 2023). These provide a reason for the distinction from other forms of theatre due to the live communication and emphasis on group thinking necessitated by performing improv. While some of the benefits of improv may overlap with those of broader theatre and performance, there are still unique aspects to consider.

The benefits of improv include improved social and communication skills, enhanced creativity, and a sense of community (Keates & Beadle-Brown, 2022), which seem consistent with autistic individuals (Keates Beadle-Brown, 2023). The original outcomes were distilled from past literature and confirmed through a global survey. Autistic adults who have participated in improv reported feeling accepted, improving cognitive flexibility, and managing mental distress. In Keates and Beadle-Brown (2023), autistic participants also reported feeling comfortable being themselves in improv and gaining a better understanding of neurotypicals (NTs). None of these participants in the study stated learning or performing with other neurodivergent people. The participants stated that beginning improv was for fun which seems to align with hedonistic wellbeing (Keates & Beadle-Brown, 2023); yet this is not what they found upon continuing improv, discovering many other benefits leading to more eudaimonic wellbeing. These benefits were found to be present across all participants in the study, regardless of neurotype, 1 although some differences were identified. For instance, autistic participants mentioned turn-taking, while NTs mentioned cognitive empathy concerning the development of their social and communication skills. Certain benefits were more aligned with specific neurotypes; for instance, findings about mental distress were specific to neurodivergent individuals. Given the higher prevalence of anxiety in autistic people (Lai et al., 2019), activities that support their mental wellbeing are of great interest. One approach to addressing mental distress is through mindfulness. It is unclear whether all improvisers experience mindfulness or if only those who engage with mindfulness before beginning improv experience this (Keates & Beadle-Brown, 2022); mindfulness has been associated with improv (Goodman, 2008; Lepovic, 2021). Therefore, there is a possibility that some autistic people could gain from this aspect, but it is not clear. What is evident is the experience of 'flow' in both improv and autistic individuals and their engagement in activities that induce a state of hyperfocus (McDonnell & Milton, 2014). A flow state can occur in broader theatre, as an immersive experience for actors and audience members (Gruzelier, 2018; Meeks et al., 2018) and other activities (Ishimura & Kodama, 2009; Patrick Kelly, 2019).

Regarding the outcomes experienced, this study moves away from the trend of focusing on remediating qualities (e.g., Corbett et al., 2017; Lerner et al., 2011), and instead explores liberation through the arts for autistic individuals

(Fein, 2015; Feinstein, 2016; Mendez-Martinez & Fernandez-Rio, 2019). This is due to the ramifications of not implementing such a frame for the study, that is, propagating autistic people as other or less. The Double Empathy Problem positions this well in relation to the radical othering and dispositional disparity of autistic people (Milton et al., 2023).

The context of autistic individuals' lives influences the benefits they can gain. The usual discourse around autistic people can be dehumanising and stigmatising (Cage et al., 2019). It is important to recognise the value of outcomes for autistic individuals and to understand that autistic socialisation and communication are not deficits, but a difference in implementation. Training programmes using non-autistic communication may lead to masking or hiding one's autistic nature, and harm from self-presentation management (see Keates et al., 2022). Comprehending the autistic experience only enhances how the study findings can be understood, considering the Double Empathy Problem (Milton, 2012), which may help understand how to achieve autistic flourishing with various activities (Pellicano & Heyworth, 2023).

There is a paucity of research on improv and autistic people. Therefore, I sought to extend upon the findings from Keates and Beadle-Brown (2023) by exploring the role and benefits of improv for autistic adults who were new to participating in improv classes. Autistic individuals experience the world in a unique way, so we can guery whether the benefits mentioned in past literature align with the experience of autistic individuals learning improv for the first time, and how similar the benefits experienced are by those new to practising improv to those outlined by the autistic and non-autistic improvisers in Keates and Beadle-Brown (2023). Specifically, I wished to question how autistic adults experience an online 4-week improv comedy course including the contextual understanding of the autistic experience of the classes, and whether the participants believe there had been any benefits from the sessions.

Methods

Participants and Procedure

The Tizard Ethics Committee (University of Kent) provided a favourable ethical opinion in October 2020. Participants volunteered for the study by responding to advertisements, using newsletters, social media, and word of mouth. I only recruited autistic people for the study through purposive, snowball sampling. Participants were allocated to a group based on their time zone, where possible. Before the course, all participants read the information sheet and consented to participate. Participants attended the online classes each week, with a focus group afterwards as a reflective methodological tool to understand their experiences and the

Table I. Demographic Characteristics of the Participants.

Demographic characteristic	n	%
Diagnosis		
Formally diagnosed	10	59
Self-identified as autistic	7	41
Gender		
Male	8	47
Female	5	29
Non-binary	4	24
Ethnicity		
White	13	76
Mixed ethnicities	3	18
Hispanic	I	6
Country of residence		
The United States	7	41
The United Kingdom	5	29
Australia	3	18
Puerto Rico	I	6
France (but from Russia)	I	6

Note. Participants were on average 32.56 years old (SD = 10.98), ranging from 25 to 56 years.

perceived benefits. Participants supported adapting the classes, along with the previously mentioned study components. Additionally, consent to be recorded was obtained each week before digital recording via Zoom and uploaded to Microsoft (MS) Streams.

Of the 17 participants, most were formally diagnosed and White (see Table 1). A large percentage identified as male (47%), but nearly a quarter of participants identified as non-binary (24%). They resided in various countries. No one had participated in improv before, except one person in improvised dance that both they (after the course) and the teacher deemed markedly different.

Materials

All materials and resources of the study were checked by 21 autistic people who were invited to comment on the research; they responded to social media and university-specific

adverts. Communication about the study and potential issues was discussed via email. All thoughts were implemented to ensure adherence to the autistic voice, as per Waldock and Keates (2022). Yet, this study was not fully participatory following the definition by Arnstein (1969).

Improv Classes. The four online classes were run for an hour and 15 minutes with a short break before administrating the focus groups. The course consisted of the basic pedagogy of improv, to teach fundamental improv skills as an 'introduction to improv comedy' to autistic people. The course aimed to enable all participants to improvise an open scene by the end of the short course.

I designed the classes specifically for autistic adults based on Keates (2017) and adapted them through practice review, piloting and adapting the manual according to all feedback. The course consisted of games, exercises and discussions (see Supplemental material). One example of an online adaptation was the game 'Popcorn' which transformed into an online name game, where participants turned on their cameras and playfully stated their names. This study was part of a wider project, so the manual adaptation coincided with this data collection (see Keates, 2024). The initial piloting was implemented at an autistic-specific conference with five autistic people contributing to the formal study. Everyone's feedback was employed in adapting the course, where possible. One participant discussed how some autistic individuals may struggle with social norms or boundaries indicating a need for clarity within the course design. It was mentioned that autistic people often have difficulty coping with failure, so clear feedback and explanations are essential for them to understand when they have done something correctly. Three participants had various needs, including a preference for working all at once without being put on the spot, which created noise in the room. Lastly, it was highlighted that clear explanations and pacing are crucial for participants to understand the purpose of activities and how they may feel during them. Participants emphasised the importance of autistic individuals taking a central role in the classes. One person stressed the necessity of having an autistic teacher leading the classes.

A key principle in improv is 'Yes and...', meaning to agree with the co-created fiction and reality and build on it and what happens. The classes focused on practising the mindset. Participants experienced engaging in play and supporting one another (session 1); creating shared stories and scenes, practising failing and focusing on the other actor (session 2); practising heightening as making worse, making important, and generally making more of the situation and circumstance (session 3); and in session 4, participants focused on demonstrating emotional integrity in the scene and stating what was interesting or enjoyable about other people's performances.

I organised the weekly classes at a convenient time for each group. By design, groups contained four autistic

participants and the teacher. In the third and fourth weeks, an autistic teaching assistant with some improv experience joined to support participants. The role of the experienced, professional teacher was to facilitate an enjoyable and effective teaching and learning experience. This was made possible due to the development of the course for autistic people (see Keates, 2024) and the experienced teacher of over a decade of teaching practice. The autistic teaching assistant joined for pastoral support, with a shared understanding of being autistic. They would also participate in the games and exercises, where helpful (see further information about the course in the supplementary information).

Focus Groups. I implemented focus groups using common procedures based on Morgan and Krueger (1998). The schedule included weekly inquiries about the class benefits, with different questions in the final session. For example, in weeks 1–3, I asked, 'What were the benefits of today's session?' and in week 4, 'What skills have been taken from these classes?'

Each focus group took between 30 and 45 minutes, except for the fourth week, which took approximately 60 minutes to discuss the course after its completion. All data were transcribed verbatim for analysis.

Data Analysis. I used NVIVO version 12 and Microsoft Excel to analyse the data. I de-identified and pseudonymised participants' information as needed. I employed Qualitative Content Analysis, categorising data, identifying patterns and clarifying themes (Bengtsson, 2016). The data analysis process involves (1) decontextualising the raw data, (2) recontextualising it in relation to the research question, (3) categorising the data into homogeneous groups and (4) compiling and analysing the categories to identify patterns and relationships. In this final step, I clarified the themes, forming realistic conclusions about the data. This approach has been deemed a conventional approach to Qualitative Content Analysis (Hsieh & Shannon, 2005).

Through using this 'small q' analytic approach (Braun & Clarke, 2022), I seek to reflect the participants' voices, seeking to reduce the possibility of the researcher's biases (Elo et al., 2014; Polit & Beck, 2012). As such, I did not wish for a high degree of abstraction and interpretation as this challenges the trustworthiness of the research (Graneheim et al., 2017). In addition, to support this, I sought inter-rater reliability by having two impartial researchers from different fields (disability and theatre studies) independently code 20% of the randomly selected data. All researchers came to a complete agreement with the themes. I employed practices to ensure trustworthiness based on Lincoln and Guba (1985), such as prolonged engagement for credibility and dependability and inter-rater coding for transferability and confirmability.

Results

I identified five themes in the data. These were: (1) 'Quality of Life and Mental Health benefits'; (2) 'Being accepted as and with other autistic people'; (3) 'Autistic valued skills'; (4) 'Provides a way into or inspire an activity I want'; and (5) 'Not every autistic person will perceive or gain benefits'.

Theme 1: Quality of Life and Mental Health Benefits

This theme explores the gains participants suggested related to quality of life and mental health, including wellbeing. For example, engaging in improv as an autotelic activity seems to enable a sense of optimal experience and flow. In addition, participants suggested that the classes helped their mood, as expressed by Kamila, 'it brought more colour... to these weeks. More colour, more fun, more interest in that creativity and imagination like bubbles into the rest of your day'. Moreover, participants suggested improv supported transcending their boundaries and achieving greater personal development. Just as improv offered improvements to the participants' quality of life, it seemed to build self-assurance by knowing nothing bad would happen. Therefore, improv appeared to improve their mental health.

As discussed in the overview of the theme, there were several comments related to quality of life, which were used to indicate their value for autistic participants. Some participants felt gains seemed to be related to their personal development, emotional wellbeing, and improved self-determination.

...was also good for flexibility, because ...I would have an expectation which I would pretty much immediately just throw out the window, if it didn't go that direction. But [what] I started trying to do is just not even have an expectation and I was just trying to, like, be flexible with just, like, throwing whatever out there. (Logan)

The participants suggested gains in emotional wellbeing, that is, contentment, self-concept and lack of stress. They discussed feeling great as they returned to their daily lives and felt refreshed. The experiences they gained in class underpinned the rest of the day:

Carleton: And I feel in a much better mood now than I did before the session.

Glenn: ... Me too. (Carleton and Glenn)

As stated by a participant, autistic people may not usually feel heard or listened to which relates to self-determination. The participants noted how the practice of improv can only be an environment in which autistic people are heard. This is because improv teaches active listening. This suggests that it is possible that this would be a benefit.

Autistic people could obtain self-determination by building confidence in their values and voicing opinions and perspectives.

...if someone with autism doesn't feel like they're being heard or could contribute, maybe improv could help someone ...feel that [they are heard]...this might be the thing that actually feel like they can be themselves, and they're treated as an equal. (Crystal)

Next, mental health benefits were generally discussed in three of the groups. In these groups, conversations identified that improv may impact anxiety or general comments about it being good for their mental health. One aspect of mental health improvement stated was regarding resilience, which can be seen in Kasey's quote:

I definitely think it's helped my mental health...I feel after one of these sessions afterwards... the resilience and the connectedness with my family and stuff, and my capacity to cope with madness is a lot better.

Another benefit stated related to hedonistic well-being. This was achieved by having fun and laughing. From the first week, there were comments about appreciating being able to engage in playfulness quickly. The participants reported benefitting from finding a form of happiness within classes. Logan indicates how improv was a different state of being that they enjoyed, which was removed from the tensions in their life.

Had so much fun (giggle). Um, yeah, I think that like, it was also just a great way to, yeah, like break the tension, like, you were saying earlier, Kamila, of, like, just being able to move into that state of like playing and laughter and that kind of thing... (Logan)

As can be seen, improv seems to provide autistic people with experiences that relate to improvements in quality of life, mental health, and wellbeing. These benefits were suggested as deriving from the distinction between day-to-day life and the alternative state of being experienced during improv classes. The aim of the course and the participants could be seen as components that made it beneficial for the participants.

Theme 2: Being Accepted as and with Other Autistic People

As expressed by the participants, this theme encompasses being accepted as autistic and being surrounded by other autistic people. The importance of being with autistic people in the online learning environment was expressed numerous times, recurring throughout the data. Participants stated that they felt supported through improved due to the groups themselves and being surrounded by autistic people. They could interact and be in an autistic group, performing joint and fun activities and not have it be a support or social group. This was termed to be, 'inclusive by being exclusive' (Hayes, week 4). Furthermore, it has been suggested by one participant that the autistic world is more fun, and NTs should join autistic people. For example, '...the things I laugh at, and my world is amazing, except we've gotta go into your [NT] world ... [my] world will be so much, much better place' (Madelene).

Participants reported that improv can help them feel accepted and supported by their workshop peers. The participants found a contrasting experience comparable to their everyday, local communities in the classes with all other participants being autistic. This distinct contrast between their day-to-day lives to the workshop social environment was remarked upon as being felt differently. This is exemplified by Carleton's response to Glenn:

I agree just with Glenn and yeah about the... community thing that it's like good because they feel like most of ...the autistic community. It's more about like support groups and stuff, and not like learning skills and doing fun activities and stuff. So yeah, good to have a different context to interact with other autistic people.

In short, being with neurodivergent individuals made the experience easier. The quote below demonstrates that not only autistic people but also otherwise neurodivergent individuals, would have similar experiences. This is further supported by Hayes and Cassidy's brief conversation, indicating that sharing the social identity of being autistic leads to less need for masking, less worry and more social freedom.

With other neurodiverse (*sic*) people as well, that's something that's come up every week but like... It can't be overstated how important these kinds of spaces are, where you can just unmask if you're able or like. And just not worry about making those mistakes.

Cassidy mentioned this earlier in the course, explaining that NTs are unclear and worrisome. The instantaneousness of relief mentioned by participants from being in the autistic group was beneficial within classes. Cassidy further speaks about performing neurotypicality (or passing): '...autistic people trying to perform neurotypical-ality to impress NTs who aren't there ...Once everyone realises what's going on, it's fine'. Thus, once they know everyone present is neurodivergent, they can be more themselves. This experience can be further identified through Logan's remark on the shared experience of being autistic and validation from other autistic individuals, and Hayes' discussion of NTs as 'hostile' and 'judgmental'.

Yeah, it is one of those things where I find it absolutely fine to do with other autistic people, but neurotypical people... seem to find it like confusing and stressful... (Cassidy)

As can be ascertained from the participants, one of the key benefits experienced from the course was having this regular meetup with the clear goal of collective learning that was with people like themselves.

Theme 3: Autistic Valued Skills

Based on the participants' data, it is important to clarify the use of skills. It was suggested that participants gain additional skills for social, communication skills, and spontaneity, as well as provisions for further coping mechanisms. They discussed the widespread application of improv, flow and mindfulness that could benefit autistic people.

Improv allowed for the development of social skills, but the participants stated that skills or strategies must be valued by autistic people. For example, NT social skills training was not desired, which was directly stated in two of the focus groups. The alternative, concluded by the participants, was developing social strategies or skills (where applicable) as one part of their 'social toolkit' in which they can choose appropriate skills or strategies to fit their needs within a given moment. This was clearly stated by Cassidy:

Yeah, it's...adding an additional skill rather than replacing an earlier one that you make. You may start using less, but I think it's...having it being very, very value neutral on skills; I think this is really valuable because it just means that you know if someone comes out of this and just doesn't really get [how to apply improv], then they're continuing scripting and that's fine. And that works for them.

It was stated that autistic individuals may benefit from understanding how other people perceive them, which may be another skill that has value to autistic people. For example, Madelene stated how she has been seen as serious when the humour used is deadpan or dry. Likewise, an autistic person may not understand non-autistic banter, as comments might be perceived without the intended joviality. Illustrative of this from the participants is regarding comedy and, specifically, sarcasm. The social bond of comedy in a group can be twofold, jovial social 'bits' like winding each other up, and collectively releasing tension in the group or shared moments of sarcasm or comedy. Understanding these phenomena was stated as helpful for autistic individuals.

I'd say, it's also helped me be more aware of sarcasm. 'cause I just don't get sarcasm. And it just, if anything, it really frustrates me and so now I've learned that it's-it's just a tool that people use to have a laugh at something, or in my case they

use it to wind me up 'cause it's quite funny when I'm wound up apparently. So, it's using that. (Madelene)

Some participants felt that everything in the improv course was beneficial. They could see the applications of the course, suggesting that running an applied improv course, 'Like specific targeting would be good...So if I know like, how I could apply it' (Hayes). It was suggested that there may be potential for these methods to be employed for young autistic children to help them cope early with negative experiences. One aspect frequently enjoyed was failing with a smile, as it helped with the fear of failure. This is highlighted in Kamila's quote:

Again, I think that there's like real-world applications here ... the 'not having a fear of failure' because I think a lot of us have a fear of failure. And then sort of turning that on its head, like; no failure, we bow. Like, you bow after a great performance and people are applauding, so it's kind of like the exercise we did last week...

Participants noted the further application of improv to their lives. For example, going with the flow was deemed a valued skill experienced and developed through improv classes. Going with the flow seemed to mean being able to integrate oneself into the circumstances of the moment. As stated, practising improvisation provided an approach for going with the flow in conversations, which could improve the experience of the interaction. Various participants highlighted how this could help them in the obligatory conversations that they have at work or in their personal lives. Kasey characterises the learning about the spontaneity of conversations, and how they wish to begin applying improv to life:

...being a bit more going with the flow, like they said something I didn't expect, but 'Oh well, fuck it.' I'm gonna say this 'yes and' type of thing... I might start to apply improv tools...

Similarly, mindfulness was stated as another valuable skill. To be able to 'go with the flow', the participants perceived a connection to being present as per mindfulness. Improv can lead to being more mindful and letting go of control requiring participants to be in the moment and present with whom they are interacting. Julia identified how this helped her to focus on the present moment and not the past, and how this can be applied to life.

I think improv has definitely helped me in focusing what I say, how I say it ... focusing just on how I'm feeling at this specific moment and not really focusing too much on how I've behaved in the past.

The participants saw value in improv, but it was clear this needed to hold value for autistic people. They thought beyond themselves, and the discussion included considering if other autistic people were to participate in improv.

Theme 4: Provides a Way into or Inspire an Activity I Want

Participants reported feeling inspired by the course to pursue other activities because they enjoyed the course and wanted to continue. They felt more comfortable taking risks and interacting with others, both during and outside of improv activities. However, two participants realised that improv was not for them. Nonetheless, they had other realisations, such as one participant returning to Toastmasters who teach public speaking and leadership skills worldwide through their clubs.

...doing this that kind of reinforced to me that I needed to go back to Toastmasters. So, I've- I went to two Toastmasters meetings in the last week. (Crystal)

Clearly, adults are creative and playful...so I'm going to attempt to get adults to play a little bit... (Kamila)

Many participants mentioned they would like to continue improv, or if not this form, then another activity that used improvisational skills. Duncan emphasised that he would now feel comfortable pursuing local classes with the understanding gained from joining this short online course.

...when everything goes back to normal, whatever that means, I will feel more comfortable or more encouraged to go to ...an in-person, improv class, which is something I never would have said before.

There was a collective sense across groups that improve could be something they wished to develop as an activity or a similar hobby, seeking a greater sense of playfulness.

Theme 5: Not Every Autistic Person will Perceive or Gain Benefits

A couple of participants stated that improv might not have benefits for all autistic people. Similar to any form of 'intervention' or activity, it cannot meet everyone's needs. Those who did not enjoy improv did not understand the reason for engaging in it or found the initial games and exercises too difficult. For instance, one participant did not enjoy acting out scenes and found creating fiction meaningless. Another participant interested in improv, found the fundamental aspects of improvising (e.g., 'yes and') difficult, needing to preconceive what would be said before hearing

their scene partner's response. Conversely, those who enjoyed the classes experienced several benefits. As stated by Kasey, it could be more about people's personality than their neurotype for those who may enjoy and engage in improv (and hence benefit).

Crystal: I don't think it will suit everyone who's autistic, but there is- [it might] suit half the people.

Kasey: Yeah, I agree, I don't think it's necessarily a 'every autistic person do this and you'll get these benefits,' but I definitely think there's sort of like a Venn diagram of autistic and certain other personality traits where I think it's a really good fit. (Crystal and Kasey)

The caveat to understanding these benefits comes from this theme, and it is associated with theme 4. Not all autistic people, much like non-autistic people, will enjoy improv or perhaps even fiction and play. This would influence whether they want to engage in improv.

Discussion

I conducted a study on the experiences of new improvisers taking a 4-week online introductory course. The research revealed that autistic individuals found benefits in accepting each other and developing valuable coping skills (themes 2 and 3). Engaging in improvisation had a positive and potentially empowering impact on the quality of life and mental health of many participants (themes 1 and 4). However, some participants did not find value in it (theme 5), potentially due to the form of improv being fiction-based, or the speed of the course for the two participants, respectively.

Benefits

I have found similar benefits to previous research on improv among the global, general population (Keates & Beadle-Brown, 2022). These include positivity and unconditional positive regard (Bermant, 2013), acceptance of one another and working well together (DeBettignies & Goldstein, 2019; Frost & Yarrow, 2007), and enabling new friendships (Morse et al., 2018; Yamamoto, 2020). This process might result in a sense of belonging to a community (Morse et al., 2018; Quinn, 2007). Underpinning this experience could be that improv requires its agents to suspend their judgment (DeMichele, 2015), which relates well to this study, because, for the most part, the participants felt accepted by their peers and within the class. Therefore, participants highlight connection and community, which reflects the sense of community and belonging denoted in Keates and Beadle-Brown (2022) and Steitzer (2011). Consequently, autistic improvisers' social bond must be maintained through in-group membership, such

as clear cultural references that do not alienate or are counter-productive (Fortier, 2010).

The benefits of improv from this study seem to mirror those that were similar across different neurotypes in Keates and Beadle-Brown (2023). In the interviews from Keates and Beadle-Brown (2023), the benefits found were across the neurotypes of autistic, non-autistic yet otherwise neurodivergent, and non-autistic (and not neurodivergent). Autistic improvisers with more experience than those in this study indicated that they experienced acceptance and cognitive flexibility; interpersonal, social and communication skills; and gains in mental health, quality of life and well-being. In the study, the autistic participants suggested improv might be a space in which their monotropic mind (Murray et al., 2005) can thrive.

Participants discussed mental health and identified resilience as regaining energy to cope with their hectic lives. They also highlighted experiences of resilience and connectedness to family, linking to mindful awareness. Additionally, flow (Peterson & Seligman, 2004) was expressed in line with experienced improvisers regarding attentiveness to the moment and being present (Keates & Beadle-Brown, 2023). Hedonistic wellbeing was evident at the start of the participants' improv journey. This allowed them to play, have fun, and seek pleasure for their own sake, as in Keates and Beadle-Brown (2023) where participants stated how they experienced a greater extent of gains beyond their expectations before starting improv. However, this raises questions about a double standard in activities for neurodivergent people. NTs can engage without an activity being to help them in some way (Therapist Neurodiversity Collective, 2022).

Another similarity between the current study and past research is regarding the restrictions to the benefits experienced. For example, improv will not be experienced and valuable for all autistic people. The world is designed for individuals who are not autistic, impacting how improv is experienced and what is beneficial. There is a lack of acknowledgement of individuality in autistic people due to their medicalisation. As such, participants emphasised that the skills gained from improv should be an addition to their existing skillset. Therefore, these would be tools that autistic individuals could choose to use.

The Context of the Space

The participants in the study also highlight the importance of the context of the space. This is twofold, with one aspect being the social world and the place of autistic people within it, and the other being the classroom space itself.

Firstly, we can acknowledge that autistic individuals hold a minority or stigmatised identity (Goffman, 1963; Tyler, 2020) within the social world. As a result, they may engage in social masking and impression management (Cook et al., 2021). Elements of autistic people's existence

within the NT social world were discussed in both theme 2: 'Being accepted as and with other autistic people' and theme 3: 'Autistic valued skills'. As such, autistic individuals often find themselves in a world where neurotypical norms are the dominant force, leading to a situation where they are expected to conform to the needs of those who are considered 'typical' (Milton et al., 2023). Consequently, many autistic individuals feel the need to mask their true selves to either conceal their autistic traits or to align with the expectations of a society that adheres to set norms (Cook et al., 2021).

With this in mind, participants in this study characterised the classes of only autistic students as a comforting presence whereby they could more easily acquire the valued skills being discovered. This seems similar to how Belek (2023) discusses autistic festivals as having no social hierarchy. Based on this study, improv classes seem to offer the contrary to the usual imbalanced power dynamics of nonautistic and autistic interpersonal relations, allowing the participants potentially to make visible the previously invisible. Acting and performing can be seen as a form of unmasking through self-exploration and meaningful use of metaphorical 'masks' by autistic individuals for theatrical expression. Consequently, autistic individuals benefit from being themselves and not having to mask (Belek, 2023), being in the company of other autistic people who understand their sensibilities, including humour (as shown in theme 2: 'Being accepted as and with other autistic people'). In the same way, by embracing an autistic social identity, autistic people may improve their mental health, similar to the autistic community providing mental wellbeing benefits in Cage et al. (2022) and Maitland et al. (2021). Therefore, the participants in the study valued learning with other neurodivergent individuals. Several participants highlighted the advantages of improv that were further enhanced by the shared identity in the classes.

Skills

As a consequence of the context of autistic lives, we must understand that the skills developed need to be additive and not to replace other capabilities pre-existent. Autistic interpersonal relations have been suggested to be easier with the same neurotype (Chen et al., 2021; Crompton et al., 2020a, 2020b), which in turn supports being present in the moment or going with the flow. For example, if two autistic individuals are engaged in a passionate discussion on a particular topic, this may come across as natural for them but could be misinterpreted as aggression if instead with a non-autistic interlocutor. Nonetheless, the relationships that autistic individuals build with each other could be attributed to other reasons: (1) discovering mutual understanding based on shared experiences of feeling different from the neurotypical mainstream, and (2) a high degree of adaptability or low requirement for coordination

(Heasman & Gillespie, 2019; Idriss, 2020). To bring to the fore once more that autistic people have individuality the same as non-autistic people, we should understand that people implement skills and strategies for a purpose and within their given context. Consequently, it seems counterintuitive to seek to develop replacement skills and strategies. Thus, interpersonal skills development attuned to gaining additional skills could be more about coping with the NT communication style and NT social needs than social skills training.

In this study, autistic participants seem to value strategies and skills that are additional to their previously acquired skillsets. In this sense, valuing the skills means offering a positive or neutral addition to their lives, for instance, it would be neutral if an autistic person learnt to think afresh but does not apply it externally to improv due to no desire for it. Concerning the previous example regarding social skills, there should not be a negative consequence of the learning, such as one right system of interpretation dictated. I propose that suggesting otherwise would consistently devalue autistic socialisation (Keates, 2022; Keates et al., 2022) by favouring a normed ability of socialisation, which is also referred to as ableist (Wolbring, 2007). I have identified with this study that the skills and strategies developed through improv were deemed valued by the participants as long as they were additional and did not replace natural autistic repertoires.

The participants in the study stated how it is possible to use humour as a form of coping. For example, through the practice of failing with a smile, which many groups noted as being strongly valuable. This practice may combat rejection sensitivity in part because autistic people can consciously change their perspectives with practice. Rejection sensitivity is unendurable discomfort resulting from either perceived or actual rejection, criticism or teasing, which excessive. counter-productive rumination (Downey & Feldman, 1996; Müller et al., 2024; Pearson et al., 2011). The practice of embracing failure with a positive attitude not only encourages fresh thinking but also cultivates cognitive flexibility, a skill that autistic individuals are often assumed to struggle with (as per executive functioning theory; Damasio & Maurer, 1978; Pellicano, 2012). Maybe this feeling could result from constantly practising spontaneity. Additionally, becoming comfortable with failure was encouraged by other experiences in the classes, like being flexible, letting go and practising mindfulness. Even though the importance of mindfulness in improv is debateable (Keates & Beadle-Brown, 2022; Schwenke et al., 2020), these aspects align well with the needs of autistic individuals, as mentioned before.

Limitations and Future Directions for Research

The study was conducted as part of a larger project focused on developing an optimal pedagogy for a course. The study has limitations including the researcher also being the teacher, potential influence on course evaluation. However, for some readers, this will in fact be a strength of the research, that is, this is usual practice in arts research. This study was aided by the knowledge and skill of the researcher in both improv and capacity to understand autistic people. Nonetheless, potentially the teacher-researcher could have influenced the evaluation of the course through social desirability. In addition, there may be a difference between wanting to further develop one's own interpersonal skills for self-growth, and wanting to develop them because they allow you specifically to move more smoothly through NT spaces. The latter is a form of impression management the nuance being mostly driven by the underpinning sense of agency, and whether the person is still being their authentic selves whilst using their new skills. It is currently not possible to decipher how impression management interacts with the process of learning improv. Nevertheless, there is scope for masking in theatre to be a positive experience due to theatre offering a possible safe, self-controlled and not societally 'necessary' way of masking; autistic people get to play through non-literal masks whereby it is not impression management in any way. Lastly, two other limitations are the impact of online conduct and English language proficiency.

Future research could explore the impact of mixed neurotypes in classes and investigate how personality factors and individual differences affect participants' experiences with improv. Additionally, studies could compare different forms of improvisation, such as dance-based, Playback Theatre, and Theatre of the Oppressed, to better understand their effects. It would also be beneficial to examine the role of shared activities in generating acceptance among autistic individuals and to explore the potential value of improv in this context. Further research could delve into masking and impression management in theatre, as well as investigate the relationship between participants' expectations and the actual benefits they experience from engaging in improv.

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Supplemental Material

Supplemental material for this article is available online.

Note

 Neurotype is a term used to categorise people based on how their brains process information, leading to relatively similar processing patterns within each category.

References

- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216–224. https://doi.org/10.1080/01944366908977225
- Belek, B. (2023). 'A smaller mask': Freedom and authenticity in autistic space. *Culture, Medicine, and Psychiatry*, 47, 626–646. https://doi.org/10.1007/s11013-022-09794-1
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8–14. https://doi.org/10.1016/j.npls.2016.01.001
- Bergson, H. (1900/2022). Laughter. SAGA Egmont.
- Bermant, G. (2013). Working with(out) a net: Improvisational theater and enhanced well-being. *Frontiers in Psychology*, *4*, 929. https://www.frontiersin.org/article/10.3389/fpsyg.2013.00929
- Brady, M. (2022). Onstage and behind the scenes: Autistic performance and advocacy. *Studies in Social Justice*, 16(2), 429–446. https://doi.org/10.26522/ssj.v16i2.2666
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3. https://doi.org/10.1037/qup0000196
- Cage, E., Cranney, R., & Botha, M. (2022). Brief report: Does autistic community connectedness moderate the relationship between masking and wellbeing? *Autism in Adulthood*, 4(3), 247–253. https://doi.org/10.1089/aut.2021.0096
- Cage, E., Di Monaco, J., & Newell, V. (2019). Understanding, attitudes and dehumanisation towards autistic people. *Autism*, 23(6), 1373–1383. https://doi.org/10.1177/1362361318811290
- Chen, Y. L., Senande, L. L., Thorsen, M., & Patten, K. (2021).
 Peer preferences and characteristics of same-group and cross-group social interactions among autistic and non-autistic adolescents. *Autism*, 25(7), 1885–1900. https://doi.org/10.1177/13623613211005918
- Cook, J., Hull, L., Crane, L., & Mandy, W. (2021). Camouflaging in autism: A systematic review. *Clinical Psychology Review*, 89, 102080. https://doi.org/10.1016/j.cpr.2021.102080
- Corbett, B., Blain, S., Ioannou, S., & Balser, M. (2017). Changes in anxiety following a randomized control trial of a theatrebased intervention for youth with autism spectrum disorder. *Autism*, 21(3), 333–343. https://doi.org/10.1177/136236131 6643623
- Crompton, C. J., Hallett, S., Ropar, D., Flynn, E., & Fletcher-Watson, S. (2020a). 'I never realised everybody felt as happy as I do when I am around autistic people': A thematic analysis of autistic adults' relationships with autistic and neurotypical friends and family. *Autism*, 24(6), 1438–1448. https://doi.org/10.1177/1362361320908976

- Crompton, C. J., Ropar, D., Evans-Williams, C., Flynn, E. G., & Fletcher-Watson, S. (2020b). Autistic peer-to-peer information transfer is highly effective. *Autism*, 24(7), 1704–1712. https://doi.org/10.1177/1362361320919286
- Damasio, A. R., & Maurer, R. G. (1978). A neurological model for childhood autism. *Archives of Neurology*, *35*(12), 777–786. https://doi.org/10.1001/archneur.1978.00500360001001
- Davila Ross, M., Owren, M. J., & Zimmermann, E. (2009). Reconstructing the evolution of laughter in great apes and humans. *Current Biology*, 19(13), 1106–1111. https://doi.org/10.1016/j.cub.2009.05.028
- DeBettignies, B. H., & Goldstein, T. (2019). Improvisational theater classes improve self-concept. *Psychology of Aesthetics, Creativity, and the Arts*, *14*(4), 451–461. https://doi.org/10.1037/aca0000260
- DeMichele, M. (2015). Improv and ink: Increasing individual writing fluency with collaborative improv. *International Journal of Education & the Arts*, 16(10), 1–25. http://www.ijea.org/v16n10/
- Dennis, R., Baron, P., & Hanna, C. (2023). Performance improvisation: No former performer has performed this performance before and the aesthetics of play. *Australasian Drama Studies* (82), 13–47. https://search.informit.org/doi/10.3316/informit. 133493885311186
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality* and Social Psychology, 70(6), 1327–1343. https://doi.org/10. 1037/0022-3514.70.6.1327
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE Open*, 4(1), 2158244014522633. https://doi.org/10.1177/2158244014522633
- Engelberts, M. (2004). 'Alive and present': Theatersports and contemporary live performance. *Theater Research International*, 29(2), 155–173. https://doi.org/10.1017/S0307883304000306
- Fein, E. (2015). Making meaningful worlds: Role-playing subcultures and the autism spectrum. *Culture, Medicine, and Psychiatry*, 39(2), 299–321. https://doi.org/10.1007/s11013-015-9443-x
- Feinstein, A. (2016). We don't want to fit in: A reflection on the revolutionary inclusive theater practices of the miracle project and actionplay for adolescents on the autism spectrum. In P. Smagorinsky & T. Hughes (Eds.), Creativity and community among autism-spectrum youth: Creating positive social updrafts through play and performance (pp. 129–151). Palgrave Macmillan.
- Fortier, B. (2010). Long-form improvisation: Collaboration, comedy and communion. LAP LAMBERT Academic Publishing.
- Frost, A., & Yarrow, R. (2007). *Improvisation in drama*. Palgrave Macmillan.
- Goffman, I. (1963). Stigma. Simon & Shuster.
- Goodman, K. (2008). *Improvisation for the spirit: Live a more creative, spontaneous, and courageous life using the tools of improv comedy.* Sourcebooks, Inc.
- Graneheim, U. H., Lindgren, B. M., & Lundman, B. (2017).Methodological challenges in qualitative content analysis: A

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discussion paper. *Nurse Education Today*, *56*, 29–34. https://doi.org/10.1016/j.nedt.2017.06.002

- Gruzelier, J. H. (2018). Enhancing creativity with neurofeedback in the performing arts: Actors, musicians, dancers. In S. Burgoyne (Ed.), Creativity in theatre: Theory and action in theatre/drama education (pp. 223–245). Springer.
- Hanks, E., & Egbert, J. (2022). The interplay of laughter and communicative purpose in conversational discourse: A corpusbased study of British English. *Corpus Pragmatics*, 6, 261–290. https://doi.org/10.1007/s41701-022-00128-5
- Heasman, B., & Gillespie, A. (2019). Neurodivergent intersubjectivity: Distinctive features of how autistic people create shared understanding. *Autism*, 23(4), 910–921. https://doi.org/10. 1177/1362361318785172
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. https://doi.org/10.1177/1049732305276687
- Idriss, C. R. (2020). Invisible autistic infrastructure: Ethnographic reflections on an autistic community. *Medical Anthropology*, 40(2), 129–140. https://doi.org/10.1080/01459740.2020.1849185
- Ishimura, I., & Kodama, M. (2009). Flow experiences in everyday activities of Japanese college students: Autotelic people and time management. *Japanese Psychological Research*, *51*(1), 47–54. https://doi.org/10.1111/j.1468-5884.2009.00387.x
- Kalandadze, T., Norbury, C., Naerland, T., & Naess, K. B. (2018).
 Figurative language comprehension in individuals with autism spectrum disorder: A meta-analytic review. *Autism*, 22(2), 99–117. https://doi.org/10.1177/1362361316668652
- Keates, N. (2017). University improv comedy society manual. Amazon.
- Keates, N. (2022). A letter to the editor regarding Bambara et al. (2021), "Using peer supports to encourage adolescents with autism spectrum disorder to show interest in their conversation partners". *Journal of Speech, Language, and Hearing Research*, 65(4), 1600–1603. https://doi.org/10.1044/2022_JSLHR-22-00028
- Keates, N. (2024). Developing an online improv comedy course: An action research study. *International Journal of Lifelong Education*, 43(2–3), 277–294. https://doi.org/10.1080/02601370.2024.2344588
- Keates, N., & Beadle-Brown, J. (2022). The benefits of participating in improvisational comedy: A global confirmatory survey study. *Comedy Studies*, 13(2), 161–174. https://doi.org/10.1080/2040610X.2022.2091719
- Keates, N., & Beadle-Brown, J. (2023). Improvisers' experiences across neurotypes of participating in improv comedy. Advances in Autism, 9(3), 253–265. https://doi.org/10.1108/AIA-09-2022-0047
- Keates, N., Waldock, K. E., & Dewar, E. (2022). Tensions between autistic sociality, communication, and social skills research: A response to Bambara (2022) and Camarata (2022). *Journal of Speech, Language, and Hearing Research*, 65(11), 4346– 4350. https://doi.org/10.1044/2022 JSLHR-22-00331
- Lai, M. C., Kassee, C., Besney, R., Bonato, S., Hull, L., & Mandy, W., Szatmari, P., & S. H. Ameis (2019). Prevalence of co-

- occurring mental health diagnoses in the autism population: A systematic review and meta-analysis. *The Lancet Psychiatry*, 6(10), 819–829. https://doi.org/10.1016/S2215-0366(19)30289-5
- Lepovic, E. (2021). The relationship of improv training, and improviser motivations to psychosocial functioning in a sample of improvisers [Doctoral dissertation]. Palo Alto University.
- Lerner, M. D., Mikami, A. Y., & Levine, K. (2011). Socio-dramatic affective-relational intervention for adolescents with Asperger syndrome & high functioning autism: Pilot study. *Autism*, *15*(1), 21–42. https://doi.org/10.1177/1362361309353613
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Sage Publications.
- Maitland, C. A., Rhodes, S., O'Hare, A., & Stewart, M. E. (2021). Social identities and mental well-being in autistic adults. *Autism*, 25(6), 1771–1783. https://doi.org/10.1177/136236132 11004328
- May, S. (2013). Comedy on the spectrum: An interview with Asperger's are us. *Comedy Studies*, 4(1), 103–110. https://doi.org/10.1386/cost.4.1.103_7
- May, S. (2017). Autism and comedy: Using theatre workshops to explore humour with adolescents on the spectrum. Research in Drama Education: The Journal of Applied Theatre and Performance, 22(3), 436–445. https://doi.org/10.1080/13569 783.2017.1329651
- McCreary, M. (2019). Funny, you don't look autistic: A comedian's guide to life on the spectrum. Annick Press.
- McDonnell, A., & Milton, D. (2014). Going with the flow: Reconsidering 'repetitive behaviour' through the concept of 'flow states'. In G. Jones & E. Hurley (Eds.), Good autism practice: Autism, happiness and wellbeing (pp. 38–47). BILD.
- Meeks, S., Shryock, S. K., & Vandenbroucke, R. J. (2018). Theatre involvement and well-being, age differences, and lessons from long-time subscribers. *The Gerontologist*, 58(2), 278–289. https://doi.org/10.1093/geront/gnx029
- Mendez-Martinez, E., & Fernandez-Rio, J. (2019). Mermaids, dogs and chameleons: Theatrical improvisation in adolescents with Asperger's syndrome. *International Journal of Inclusive Education*, 25(4), 482–498. https://doi.org/10.1080/13603116.2018.1561960
- Milton, D. E. (2012). On the ontological status of autism: The 'double empathy problem'. *Disability & Society*, 27(6), 883–887. https://doi.org/10.1080/09687599.2012.710008
- Milton, D. E., Waldock, K. E., & Keates, N. (2023). Autism and the 'double empathy problem'. In F. Mezzenzana & D. Peluso (Eds.), Conversations on empathy: Interdisciplinary perspectives on empathy, imagination and othering (pp. 78–97). Routledge.
- Morgan, D. L., & Krueger, R. A. (1998). The focus group guidebook. Sage Publications.
- Morse, L. A., Xiong, L., Ramirez-Zohfeld, V., Anne, S., Barish, B., & Lindquist, L. A. (2018). Humor doesn't retire: Improvisation as a health-promoting intervention for older adults. *Archives of Gerontology and Geriatrics*, 75, 1–5. https://doi.org/10.1016/j.archger.2017.10.013

Müller, V., Mellor, D., & Pikó, B. F. (2024). Associations between ADHD symptoms and rejection sensitivity in college students: Exploring a path model with indicators of mental well-being. *Learning Disabilities Research & Practice*, 39(4), 223–236. https://doi.org/10.1177/09388982241271511

- Murray, D., Lesser, M., & Lawson, W. (2005). Attention, monotropism and the diagnostic criteria for autism. *Autism*, 9(2), 139–156. https://doi.org/10.1177/1362361305051398
- Patrick Kelly, P. S. J. (2019). Flow, sport, and spiritual traditions. In J. Parry & N. Watson (Eds.), *Sport and christianity: Practices for the twenty-first century* (pp. 47–58). T&T Clark.
- Pearson, K. A., Watkins, E. R., & Mullan, E. G. (2011). Rejection sensitivity prospectively predicts increased rumination. *Behaviour Research and Therapy*, 49(10), 597–605. https://doi.org/10.1016/j.brat.2011.06.004
- Pellicano, E., & Heyworth, M. (2023). The foundations of autistic flourishing. *Current Psychiatry Reports*, 25(9), 419–427. https://doi.org/10.1007/s11920-023-01441-9
- Peterson, C., & Seligman, M. E. (2004). Character strengths and virtues: A handbook and classification. Oxford University Press.
- Polit, D. F., & Beck, C. T. (2012). Nursing research: Principles and methods. Lippincott Williams & Wilkins.
- Quinn, J. S. (2007). Improvising our way through tragedy: How an improv comedy community heals itself through improvisation. American Communication Journal, 9(1), 4–21. http://ac-journal.org/journal/2007/Spring/articles/tragedy.html
- Roth, I. (2020). Autism, creativity and aesthetics. *Qualitative Research in Psychology*, 17(4), 498–508. https://doi.org/10.1080/14780887.2018.1442763
- Schwenke, D., Dshemuchadse, M., Rasehorn, L., Klarhölter, D., & Scherbaum, S. (2020). Improv to improve: The impact of

- improvisational theater on creativity, acceptance, and psychological well-being. *Journal of Creativity in Mental Health*, *16*(1), 31–48. https://doi.org/10.1080/15401383. 2020.175 4987.
- Sperk, V. (2024). 'There is beauty in the way that I think.' Exploring autistic life narrative in cultural texts of Hannah Gadsby. *Australian Feminist Studies*, 1–17. https://doi.org/10.1080/08164649.2024.2335645
- Spolin, V. (1999). Improvisation for the theater: A handbook of teaching and directing techniques. Northwestern University Press.
- Steitzer, C. (2011). The brilliant genius: Using improv comedy in social work groups. Social work with groups. *A Journal of Community and Clinical Practice*, 34(3-4), 270–282. https://doi.org/10.1080/01609513.2011.558830
- Therapist Neurodiversity Collective. (2022). Social skills training https://therapistndc.org/therapy/social-skills-training/
- Tyler, I. (2020). Stigma: The machinery of inequality. Zed Books Ltd.
- Waldock, K. E., & Keates, N. (2022). Autistic voices in autistic research: Towards active citizenship in autism research. In D. Milton & S. Ryan (Eds.), *The Routledge international handbook of critical autism studies* (pp. 288–302). Routledge.
- Wolbring, G. (2007). New and emerging sciences and technologies, ableism, transhumanism and religion, faith, theology and churches. *Madang*, 7, 79–112.
- Yamamoto, R. H. (2020). Improv as creative aging: The perceived influences of theatrical improvisation on older adults. *Activities, Adaptation and Aging*, 1–17. https://doi.org/10. 1080/01924788.2020.1763075