Part 2: Teaching improv to autistic adults

4. Chapter Six – Methodology

Introduction

This chapter will report on the methods used in Part 2 of the thesis. Part 2 focuses on an empirical study exploring the experiences and outcomes of a course in improv for a group of autistic people new to the artform. As such, this chapter will describe both the improv course and how it was developed (Part 1) and the methods used to explore participants' experiences and the impact of participating (Part 2). The impact will be explored through several measures: (i) reduction in anxiety (State-Trait Anxiety Inventory (STAI)), (ii) reduction in social anxiety (Leibowitz Social Anxiety Scale), and (iii) reduction in uncertainty (Tolerance of Uncertainty). In addition, data from focus groups and log-forms will be collected for each class and course (as detailed below).

Section one: development of the improv course

The improv course was developed over several months (June 2019 – October 2020). The basis of the classes was an existing book on how to teach improv to university or college students (Keates, 2017). The book divides the suggested lessons into three blocks of 10 weeks for each term, with the latter term offering more flexibility owing to varying student timetables. The book is full of games and exercises to ensure timely use of students' learning of improv. Essentially, university or college students have limited time during their academic year, so the course is designed to teach at a quicker rate than a fuller teaching and learning scheme of work for the general population. Chiefly, the book is designed to specifically enable students to be able to quickly play an improv format called,

‘Harold’ (and thereafter explore various styles and formats in improv, and theatrical improvisation).

In order to respond to the different needs of autistic improvisers from different countries, it was necessary to adapt the original book into a specific manual for the research. This was achieved through implementing an informal practice review, piloting content (in formal research and informally), and adapting the course for online implementation (due to COVID-19). Thereafter, a study using action research was used to explore autistic needs and adapt the manual as best as possible to better meet these requirements. The section that follows outlines the process used to adapt the original materials.

An initial consideration was the length of the course and how much of the content to use. After conducting searches of academic, grey, and practitioners’ literature about lengths of courses, a wide variety was found, and ten sessions were chosen based on the usual practice of improv courses being between six and twelve weeks long. As the course required being slowed down (see below description of the adaptations), the number of sessions used and adapted was halved and written into ten weeks using half the material as a slower process. Ten weeks seemed like the best option to ensure a thorough use of the original book without ending the course at an unusual point (i.e., learning goal for the course). The manual used in the current study can be found in Appendix E.

Practice Review

The first adaptation of the session plans was through an informal practice review. This was completed via emailing improv teachers working with autistic

people. Some people opted to email their responses and one person offered an online meeting to be interviewed regarding their practice. The main modifications of the sessions included using less of the sessions' contents to slow down the learning progression, and the addition of games that have worked well for autistic people in the past (these were not only improv-based such as 'failure now'[1] and 'new choice,' but mindfulness practice or reflection at the end of each workshop).

Pilot

The second adaptation of the session plans was through piloting formally (and additional sessions were conducted informally). Participants (n=5) were not required to provide demographic information due to the purpose of the pilot study. A questionnaire was provided in print to every participant of the 'formal' classes. The content of the pilot classes differed per each time they were run, both formally and informally. The make-up of improv classes for piloting was focused on checking how autistic people interpret or engage with certain games and exercises. However, the contents of the classes still had to make sense holistically as a class for the participants. Importantly, participants did not have to consent to participating in the research in order to attend a class.

Favourable ethical approval for the formal pilot class was gained in August 2019 from the Tizard Ethics Committee. Each class lasted 75 minutes. Recruitment of participants was sampled from an autistic conference held in 2019. The formal class took place on two separate occasions during the

[1] 'Failure Now' is a bowing exercise that promotes accepting failure as a positive. Participants pretend that one person failed and applaud or flappause whilst they take a bow.

conference as an optional activity for conference attendees. Participants consented to completing a questionnaire and participants were provided a postal address and email address to send their answers to at a later date. Only one participant opted to post their questionnaires, everyone else completed them immediately.

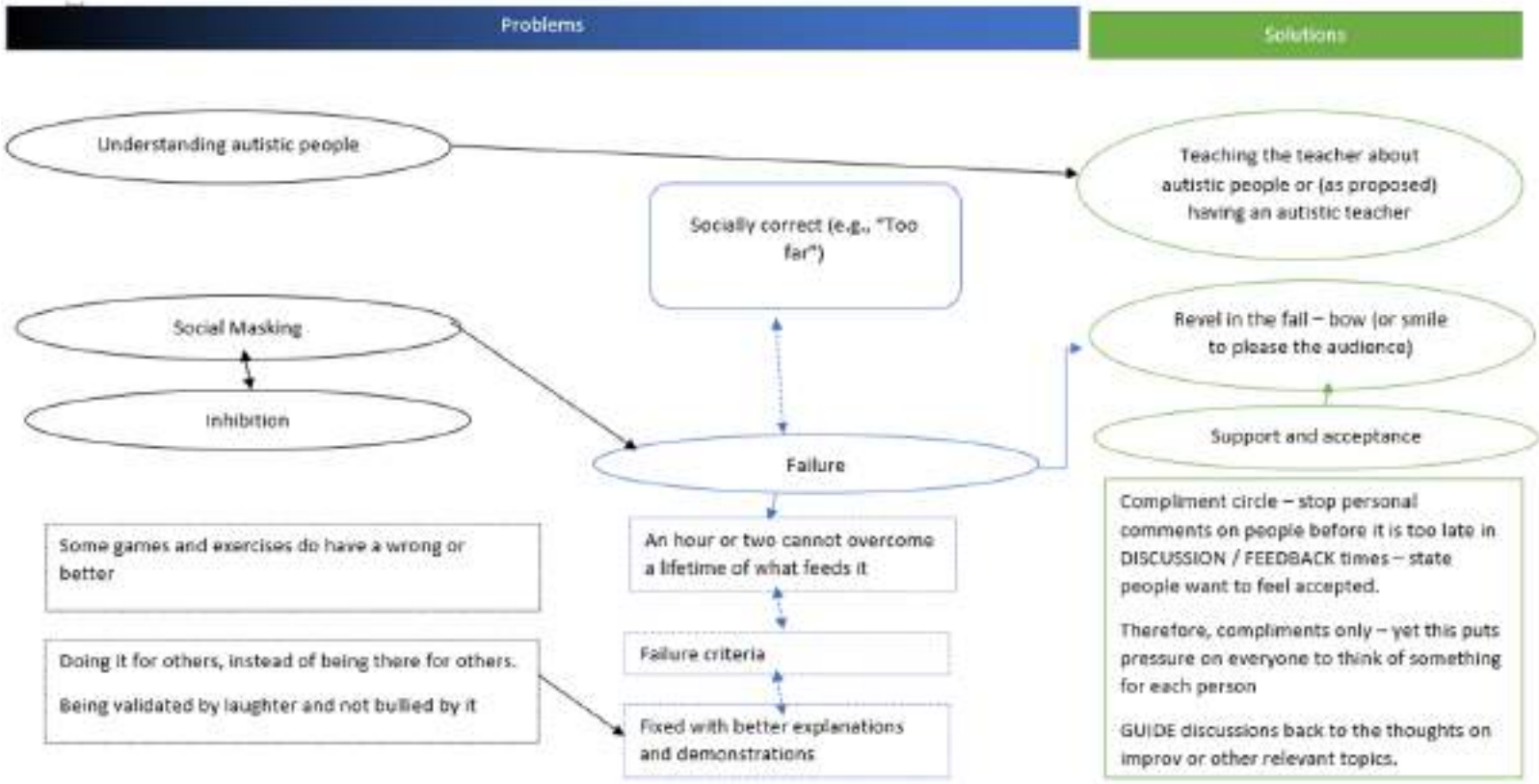
Data analysis of the questionnaires focused on acknowledging every comment provided by participants and using all feedback to adapt the improv course. As can be seen in figure 6, there was a range of feedback. Participants wanted autistic people centrally involved in the course, with one person being adamant that only an autistic teacher can lead the classes. Some participants also mentioned how some autistic people may not be “socially correct” or they “go too far”. In addition, it was mentioned that autistic people find failure difficult to manage, as the impact is felt greater. This suggests a need for clear explanations so they know when they have done something correctly. Some participants had a diversity of needs; this included the contradiction between the noise level and not wanting to be put on-the-spot (meaning they could only work all at once, but this added noise in the room). Lastly, pacing and clarity was stated as meaning that participants need to know the purpose of the exercise or game and how they may feel during it. It should be noted that the solutions (and some problems) were achieved via teacher reflection. Any problems discovered were based on the participants answers, but further elaborated upon through reflection. For instance, it was noted that autistic people’s needs for clarity of communication removed the possibility of experiencing what it less productive to do in improv in order to create a scene. This meaning, when teaching improv, it is common when teaching the main principle of improv to let learners experience the opposite of ‘yes and’

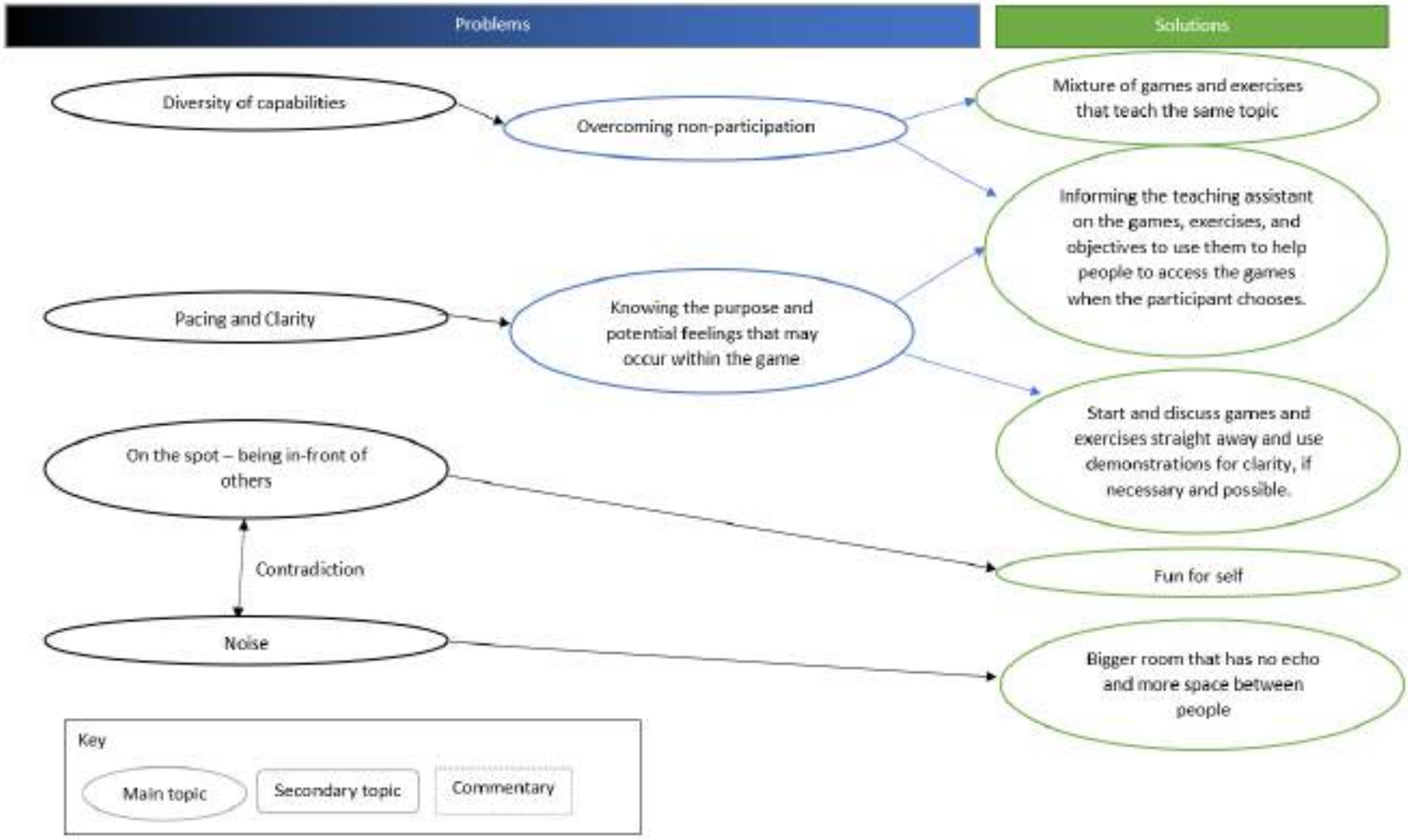
and why it is less effective in improv scenes. The usual opposing versions of ‘yes and’ are ‘yes but’ and ‘no and’. These exercises use these phrases to begin what every improviser would say as their line of dialogue. Sometimes teachers use ‘yes!’ to indicate inaction. Teaching these opposing versions of ‘yes and’ does not seem to work because it adds confusion about the expectations of the autistic learners.

The manual developed further via constructing logic and concept diagrams to inform fidelity testing (that was not used due to the pandemic and needing to alter the study design), which in turn guided the construction of the course.

Fig. 6.

Diagram of participants thoughts about the improv class.




Problems
Solutions
Diversity of capabilities
Overcoming non-participation
Mixture of games and exercises that teach the same topic
Informing the teaching assistant on the games, exercises, and objectives to use them to help people to access the games when the participant chooses.
Pacing and Clarity
Knowing the purpose and potential feelings that may occur within the game
Start and discuss games and exercises straight away and use demonstrations for clarity, if necessary and possible.
On the spot – being in-front of others
Contradiction
Fun for self
Noise
Bigger room that has no echo and more space between people
Key
Main topic
Secondary topic
Commentary

COVID-19

The global pandemic of COVID-19 started in January 2020 and impacted the UK in March 2020. Importantly, much of the development of the manual occurred before the outbreak, including a pilot study that informed the original draft through substantiating some needs of autistic people. Therefore, the first draft of the improv course's manual occurred before alterations to the study design were ultimately used. The outbreak led to the study being altered to include action research.

Due to the COVID-19 outbreak, there was a need to transfer the course online. This meant reconfiguring what of the plan could remain with and had the same function (or additional uses) online. In the end, by removing some content and readjusting the plan, i.e., the study focused on implementing an improv class that would no longer be focused on a complete course, but one that tests aspects of a course without missing the sense of completion for the participants. Unfortunately, there was a need to remove certain elements of the previously planned exercise, for example, mindfulness. This was mainly due to the time constraints of being online. Fosslien & Duffy (2020), Bailenson (2021) and Peper et al., (2020) suggest that being in online 'meetings' can lead to 'Zoom fatigue' (and they provide ways to combat it). Nonetheless, these changes were not all subjectively bad. The outbreak of COVID-19 forced a new design of the study to incorporate elements that might have been otherwise overlooked, such as action research. This became a highly valuable aspect of the study because it collected views of participants to enable supporting better engagement from them. In any case, the plan was to hold three segments to the research: first starting online;

then in-person but socially distant; and finally, in-person (in real life) without social distancing. The procedure would require the participants to *re-consent* to each part of the research (i.e., once completing the online weeks, they could consent once more to continue in-person).

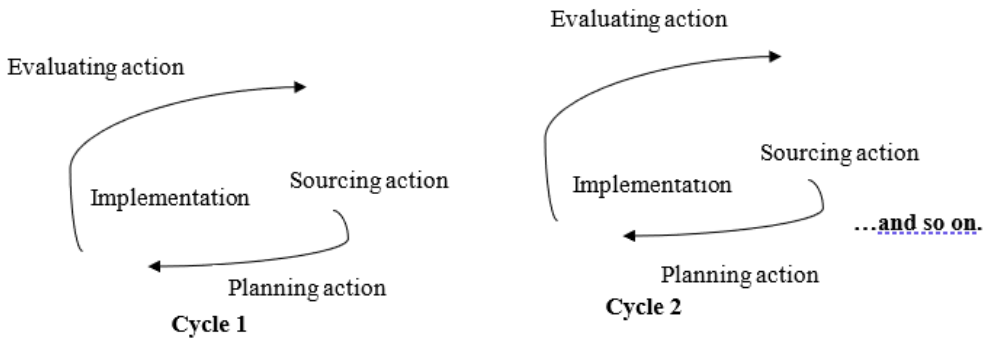
Action Research

Action research solves 'real world problems,' connecting social theory to solution-driven action (Denscombe, 2010). Simply put, the method involves planning, acting, observing, and reflecting (Lewin, 1947). Denscombe's action research model executes cycles of (i) professional practice, (ii) critical reflection or identifying the problem, (iii) research (systematic enquiry), and then (iv) action, which returns to the professional practice, which then leads into further cycles (Denscombe, 2010).

Within this thesis, the action research cycles were weekly (see fig. 7) and findings from earlier cycles were used to adapt subsequent deliveries of the course, with the aim of improving the experiences over time both within the earlier groups and for groups that started later. These changes resulted from feedback regarding the class's delivery or how well content had worked, with the teacher reflecting on what could be changed based on these clear comments. The researcher ensured the necessary changes were explicit in data collection each week.

Fig. 7.

Diagram of action research on the manual development (adapted from MacPherson & Nunes, 2002).



Course content and manual development

Week 1 with Group 1 (based in the UK) used the contents adapted as above. During this week, the group experienced the warm-up games[2] including 'Popcorn' (the teacher's adaptation for online was used), 'People Who' (which was amended for online use through a random name selector), and 'Yes Recall', and 'Red Ball' about supporting one another. Before any games, the learners were reminded about three core ideas to keep in mind while playing: participants attend the sessions 'for the fun of the exercises'; no one must do anything, participants only do things if they want to; and 'we accept our own and other people's needs and support one another. The main aim of the session was enabling learners to understand and practise the principles behind 'Yes And…'. As may be noted in the title of the 'Yes And…' exercise, learners are asked to say these words and continue without hesitation. They are guided to understand that the purpose of using this phrase is effective acceptance of self and others in the moment. The session ended with a discussion allowing learners to express any thoughts and pose questions to the teacher. The teacher supported the learners by stating that

[2] These exercises are common theatre and improv games. For further information regarding the games, please see Appendix E.

there is no obligation to speak, but what they are thinking or wanting to ask may be what others are thinking and could be of benefit to the whole group.

Week 2 with Group 1 consisted of reusing games to warm-up ('Popcorn' and 'What are you doing?', for information about the games, please see appendix E). Following the warm-up, the teacher spoke about the only two points of development any improv class can deliver, which are reaction and awareness (Keates, 2017). In practice, learners were prompted to internalise 'Yes And' from Week 1 and allow themselves to continue the scene. To better support autistic learners, it was clearly stated that, "We 'Yes and' everything." This meant that whether someone literally stated 'yes and' or not was not important, which reduced pressure on the autistic learners. In Week 2, there were two core topics for learning; these were 'failing well' and using one-word-at-a-time exercises. The concept of failing well is from Keith Johnstone's pedagogy and has been implemented in classes for autistic children through the 'failure bow'. In addition, the learners experienced failing well through an entertaining performance game called, 'Questions Only'. Its contents may be as expected, with improvisers performing short scenes with the restriction of being only able to ask questions. This is often played as a 'die' game whereby the audience shouts 'Die!' when someone makes a mistake; however, as discovered during piloting, it became clear that some autistic people do not like this. For this reason, the teacher offered each group the alternative of expressing 'Oh no!' instead. Each week ended with a discussion of feedback from learners as per Week 1.

In Week 3 for Group 1, the teacher began with recapping the group's knowledge and experience by indirect questioning. This is a tactic to understand

what learners have retained without putting anyone on the spot. Two warm-up games were used, the first being a name-based game and the second being ‘I Am a Tree’. The main section of the lesson focused on gibberish exercises (using made-up language for creating emotional narratives) and ‘heightening’ (an improv term for escalating the situation or comedy of the scene). As always, the class ended with a group discussion and opportunity to ask questions. In this session, there was twice as much content as could be absorbed by the learners and the gibberish exercises were inappropriate for autistic people due to the potential for being triggered by the exercises (for more information, see Chapter 7). Subsequently, the session was halved by removing these games for groups Two (the Australian group) through to Four (two mixed time zone groups). In addition, the poor experience of using these games led to using an autistic teaching assistant from Week 3 for all three of the remaining groups.

The last class (Week 4) for Group 1 consisted of familiar warm-up games including the indirect questioning (albeit that the questions were different). In addition to the warm-up games of Week 3, the learners experienced a week-specific warm-up called ‘Open Gift’. This game asked learners to gradually express more of a given emotion for each mimed present they received from a partner. The autistic participants were told they were to be given three presents each and had to open the imaginary gift and state the pretend contents. The main section of this class was focused on ‘emotional heightening’ and open scene work. The learners were offered an opportunity to perform for the others in the class, which was followed by directed questions to the performers from the teacher and positive feedback from the audience (as per Wunder, 2007). Importantly, it was always the performers who started speaking about their

experience as opposed to the audience, who then followed (as per Wunder, 2007). To end the week, learners could play a game of revelations, which has two aspects they required to keep in mind: i) discover where you are eating together in co-creating the reality, and ii) play with the second person being the one defining what is a revelation by their reaction. All groups managed to discuss their experience after this game too.

Section two: research methods

Methods

In part 2, there are three chapters (7 – 9) that are based on one study using various methods to collect data on a variety of topics. In Chapter 7, the focus will be on action research and the development of the course to ensure the improv course's accessibility for autistic adults. In Chapter 8, the focus will be on the benefits gained or perceived as available from participating in an improv course. In the last chapter from this study (Chapter 9), the findings and subsequent discussion will be focused on anxiety.

This study implemented both quantitative and qualitative methods. The participants' quantitative data required the removal of two participants due to their missing some sessions or being unable to participate within the group (and instead caught up on the sessions with the teacher and an autistic improviser who was able to join).

Mixed Methods

Understanding phenomena needs to be holistic. This means that researchers may (and perhaps should) investigate to gain a more complete perspective of the whole phenomenon, as this is better than the sum of its parts (Barbour, 1999). This 'third paradigm' is a pragmatic approach to research (Johnson & Onwuegbuzie, 2004) and has "…multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important and to be valued and cherished" (Greene, 2007, p. 20). In some ways, this suggests further than Curry and Nunez-Smith (2015) with their belief that research questions by their nature need to be answered via mixed methods. It could be stated that certain phenomena are not properly studied without using mixed methods. The purpose of using mixed methods for this study was to integrate the different aspects of the study relating to anxiety into one (as per Halcomb et al., 2009).

The mixed methods typology applied was dominant, sequential (Johnson & Onwuegbuzie, 2007). The typology also matches a convergent parallel design (Creswell & Clarke, 2010). The data was collected independently, with dominance on the quantitative (with qualitative research used to corroborate and validate the findings); the method was sequentially completed, and the mixing of data occurred during the interpretation stage. The key purpose of this methodology was to implement a 'pick-me-up' (Todd et al., 2004), which meant that the weaknesses of the quantitative data were picked up by the strengths of the qualitative findings and vice versa.

The main objective of this approach was to increase understanding about the participants' anxiety levels. The use of triangulation and validity (Bryman, 2006) was implemented to clarify whether the quantitative data explained the autistic participants reality (i.e., the completeness of data or findings according to Bryman, 2006) and whether qualitative data supported the statistical findings (i.e., confirm and discover according to Bryman, 2006). Furthermore, it was acknowledged that the study would not be able to gain adequate statistical power, and as such this would not be pursued (i.e., gain enhancement from use of mixed methods compensating for lack of statistical power). Although, the fundamental question would be whether with the statistical power such as design would be adequate, i.e., mixed methods may be more likely to gain a better insight than only using a research design with statistical analyses. The data from this method will be reported in Chapter 8.

Participants

Participants (n=17) were between 25 and 56 years of age (M_{age}(SD)= 32.56(10.98)). There was a mix of gender identities (47% male, 29% female, and 24% non-binary). Participants resided in a range of countries globally: 18% in Australia, 29% in the UK, 41% in the USA, 6% in Puerto Rico and 6% in France (but originally from Russia). Most participants identified as Caucasian (76%), 18% mixed ethnicity and one participant identifying as Hispanic. 59% of the participants had a formal diagnosis and 41% self-identified as being autistic.

Materials

Sample demographics

The demographic characteristics of the participants were collected using a short, six-item survey, completed by participants before starting the improv course. The questions asked about gender identity, age, ethnicity, diagnostic status[3], and prior improv experience (exclusion was required if they had prior experience). No one that completed these forms had prior experience of improv (one participant[4] had learned improvisational dance, but this was deemed by the researcher to be significantly different enough to discount).

Improv Comedy Classes

As per described above, the course was developed based on Keates (2017) and adapted accordingly. The improv course was run by a teacher with over 15 years of experience in teaching improv comedy and theatre. There were four classes held online via Zoom each week for a month. The classes consisted of games and exercises, discussions and a 15-minute break before the focus group about the class. Participants were advised to arrive earlier if they are not used to the technology; that technological issues were likely (and would be overcome together); and the sessions were about 'the fun of the exercises'. This latter point was intended to help participants overcome the burden of trying to be funny and allow them to remain 'in the moment'. Additionally, this statement was designed to help participants with the feeling of trying to do everything 'right'. Each class

[3] The participants were told on the form that diagnosis was not a requirement of the class, as self-identifying was adequate.

[4] After the course, this participant stated that it was a very different experience to improvisational dance.

trialled a different segment of improv training ranging from the initial principle of improv and the teacher's pedagogical reduction; failing and sharing the stage; heightening; and performing an open scene with emotional integrity for an audience.

In part 2, the teacher and researcher are the same person. This was an alteration for practical purposes due to COVID-19. The original plan was to use an experienced improv teacher and an experienced autistic improviser as a teaching assistant. Nonetheless, the strength of using the researcher as the teacher enabled a deeper understanding of autistic needs in the moment, which at times better supported the learners. In addition, using the researcher as teacher provided opportunity to report the teacher's reflection that helped to consider the course development more centrally. Conversely, it is possible that the participants were less able to speak freely about the teacher regarding negative comments. Nonetheless, both positive and negative comments were provided in the focus groups and participants did use the opportunity to write anything negative in the log-forms. Therefore, it is assumed that even if limited, the participants felt free enough to discuss the teacher.

Focus Groups

The focus group design was based on Krueger's practice (1998). The schedule was designed to form a narrative to each session and to ensure that all data available was collected (e.g., rehash questions, and ending summaries). Furthermore, facilitation in the focus group was well-rehearsed and designed in order to provide coherent transcripts. For example, in piloting, when facilitating the group, the coordinator used their name to ensure that it was clear who was

speaking in the transcript, and pausing so no one felt rushed (and more would be stated).

The focus groups explored how participants had experienced each class and used a semi-structured format to allow the scope to discuss what the participants wished. In general, the focus group questions were similar to that used by Mendez-Martinez & Fernandez-Rio (2019) with a young autistic population and theatrical improvisation classes. Focus groups were held on the video conferencing software Zoom, which has been found to be comparable to in-person focus groups regarding diversity of themes generated (Richard et al., 2021).

In general, the focus group required participants to describe and elucidate upon their experience, including how the workshop met their needs, their anxiety levels while participating, and the perceived benefits of improv. The schedule for the focus group (Weeks 1–3) posed questions regarding benefits, learning and their needs, ways to improv the teaching, anxiety, and favourite moments so far. This slightly differed from Week 4 as additional topics were added.

Log-forms

Log-forms (diaries) provide both synchronic and diachronic reflections both about specific moments (Plummer, 2001) and over time (e.g., weekly entries) (Schmitz & Wiese, 2006). The log-form's design was constructed to answer the research questions. Furthermore, the design adopts a momentary study design that occurs for the duration of the course (four weeks) (Janssens et al., 2018). Log-forms are better at being congruent with researcher's observations

than various other methods (Coolican, 2004, p. 130). As such, log-forms afford participants an opportunity to say what they want in reflection without an external listener or watcher potentially affecting their response. Due of the more personal account, (bearing in mind that Jones (2000) makes the distinction between being at the researcher's request and an intimate diary) they also potentially provide a better understanding of the participant's experiences. These log-forms were based on Mendez-Martinez & Fernandez-Rio (2019) study with young autistic people during a series of theatrical improvisation classes in Spain.

The log-form questions or prompts (Weeks 1 – 3) required participants to describe and elucidate upon their experiences, including: any difficulty; level of felt emotions; level of anxiety; laughter experienced; and learning gained from improv. Questions were designed to capture what might be missed in focus groups such as any negative self-reflection or comments. This approach slightly differed in week 4. Questions were added regarding what games or exercises participants did not want to participant in (and the reasons behind this); any laughter and anxiety beyond the improv; and moments that helped them to better engage with the improv.

Tolerance of uncertainty (ToU) (Freeston et al., 1994)

The ToU questionnaire is a 27-item self-reporting measurement tool which assesses how much a participant is able to deal with unpredictable events. The scale assesses tolerance of uncertainty by respondents rating statements related to their own cognitive, emotional, and behavioural responses to uncertainty. The ToU has been found to have acceptable internal consistency and convergent validity (Rodgers et al., 2018; Hwang et al., 2019, with autistic

adults). As such, Hwang et al., (2019) establishes internal reliability for their autistic adult sample was strong (Cronbach's α = 0.88–0.92). Example statements participants rated are 'Unforeseen events upset me greatly', 'When it is time to act, uncertainty paralyses me', of which they scored on a 5-point Likert scale ranging from 1 ('Not at all characteristic of me') to 5 ('Entirely characteristic of me').

Liebowitz Social Anxiety Scale, self-report (LSAS-SR)

LSAS is a scale that evaluates a wide range of social situations that may be described as difficult for individuals with social anxiety. The measurement instrument is a 24-item questionnaire with 13 questions relating to performance anxiety, and 11 about social interaction anxiety, with each item being rated separately for fear (0–3; none, mild, moderate, or severe), and avoidance behaviours (0–3; never, occasionally, often, or usually). Higher scores are suggestive of higher levels of fear and avoidance; a total score of 60 or higher are indicative of generalised social anxiety (Liebowitz, 1987; Mennin et al., 2002). The version of the measurement instrument employed was the self-report tool; LSAS is usually a clinician-led tool. Nonetheless, the self-report version is psychometrically sound (Boulton & Guastella, 2021) with excellent reliability (Cronbach's α of 0.90, 0.90, and 0.95 for fear, avoidance, and total scores, respectively) and internal consistency (Cronbach's α of 0.94, 0.92 and 0.96 for the fear, avoidance, and total scores, respectively) (Kanai et al., 2011; Spain et al., 2016) with autistic people (including adults).

State Trait Anxiety Inventory (STAI)

STAI is a self-report questionnaire that measures both state and trait anxiety in the respondent. It consists of 20-items in both forms (Y-1 in regard to state and Y-2 pertaining to trait anxiety). State anxiety responses are rated from 1 (not at all) to 4 (very much so), and trait anxiety is rated from 1 (almost never) to 4 (almost always). Total scores can range from 20 to 80. Although the psychometric properties have not been validated within an autistic population, the measurement instrument has been used in Kuroda et al. (2013) and Richey et al. (2014).

Procedure

Overview

This study received approval from the Tizard Ethics Committee in October 2020. The information sheet was made readily available online and via email exchange. Recruitment was through snowball sampling through multiple streams of recruitment. The chance to participate in the study was advertised via local, national and international autism organisations, support and social groups, relevant autism mailing lists and social media. Potential participants accessed information via these streams, i.e., the information sheet and consent forms. To further support autistic people comprehending improv before the course and what activities the sessions contained, trial sessions were arranged. This included corresponding with colleges for autistic students to arrange opportunities.

The research contained 4 phases, detailed in the protocol diagram (see fig. 8 below). Phase 1 was the collection of baseline and demographic data. In this

phase, participants (regardless of their location) completed surveys before their group began classes. All surveys were completed by a week before each group's course beginning. The groups were formed of four autistic people.

In phase 2, participants were grouped by their location (or time zone) as best as possible to enable fitting their daily lives. However, for two groups, it was required that participants be living in various time zones in order to complete the group formation in a timely manner. During this phase, focus groups and log-forms were implemented each week after the class. The focus group was conducted directly after the class, and after a 15-minute break. Log-forms were requested to be completed within the week between the classes (this was not always possible due to the anxiety of completing them in time and time management issues). Some autistic people preferred to complete the form straight away (although, this seemingly caused anxiety for participants), and others needed time to process their experience (as per the results around preferring the log-form to the focus group for participation). The course ran for four weeks, with 90 minutes for the class each session, plus between 30 and 60 minutes for each focus group. The methods used in the sessions include improv games, discussion and simulation and followed an established, yet adapted manualised programme (and inductively changed with the action research) as detailed above.

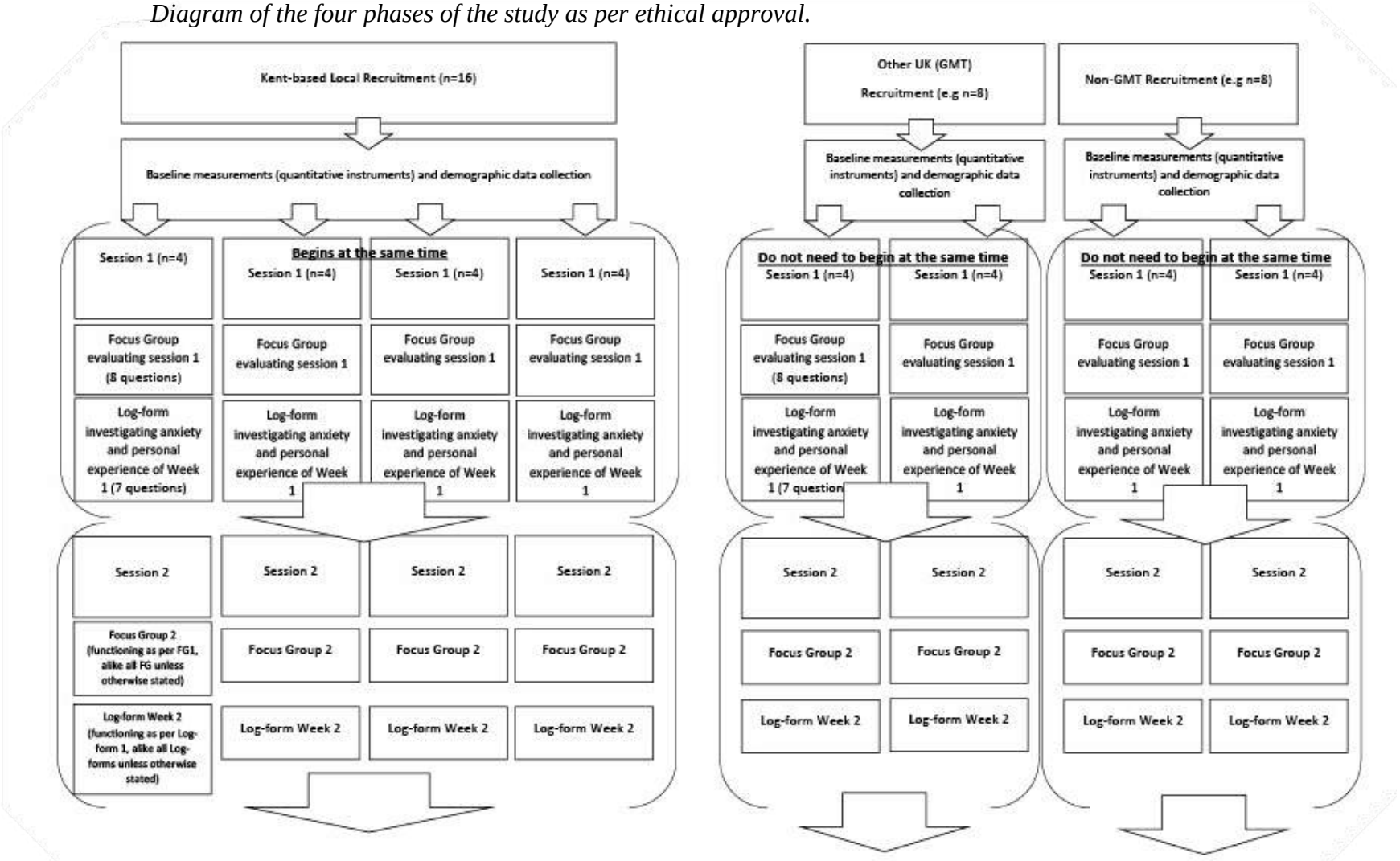
Phase 3 was the completion of all elements of phase 2 for the different groups, e.g., classes, focus groups and log-forms each week. The fourth week used a slightly different schedule for the focus group and the log forms (see details in 'Focus groups' and 'Log-forms' below). Only the first group did not have the teaching assistant because this arose as a need from the group (albeit that

the original plan before the COVID-19 pandemic was to have an autistic teaching assistant, it was not deemed necessary online until this group stating so).

Phase 4 implemented the post-course quantitative measurement instruments to accomplish the statistical comparison to the baseline measures in phase one. These were used in conjunction to all qualitative data for triangulation and not seeking adequate power for inferential statistical analysis (due to sampling needs).

Fig. 8.

Diagram of the four phases of the study as per ethical approval.



Log-from Week 4
Focus Group 4
Session 4
Log-from Week 3
Focus Group 3
Session 3

Action Research

The general overview and manual development as depicted above elicits the evolution (Costello, 2003) of the course over the weeks and groups. The method employed identifies themes. In view of this, the action research will be reported as Clark et al.'s (2020) suggestion of an overview of changes through theme-based analysis.

Each week, learners' expressed needs were addressed through teacher reflection and manual alterations. Data was collected as expressed in materials using the focus group procedures below. All needs were clarified by the teacher with the learners in order to address changes at the end of every focus group. This will be presented in Chapter 7.

Focus groups

The focus groups were conducted by the researcher over Zoom. They were organised to occur at a mutually convenient time, accounting for participants residing across the world in various time zones. Attention paid to the group's formation considered their time zone, where possible.

The focus group schedule was piloted with autistic people (see schedule of the focus group in appendix C). The draft focus group schedule was initially reviewed by the 21 autistic people in the project consultation group via email. The final version was then piloted with five people to ensure clarity of instructions and ease of completion.

The participants consented to be recorded each week and were digitally recorded via Zoom and uploaded to MS Streams (transferred afterwards to the university's secure SharePoint storage using MS Office 365 Streaming tool). Focus groups were held each week after the class and a short break. The focus group took between 30 and 45 minutes, and about 60 minutes for the fourth week (for an in-depth exploration of their thoughts about the course after its completion). The schedule of questions was the same for each week, except the fourth class in the course (as per the extended planned duration). This supported the autistic participants needs for predictability and allowed them to feel increasingly comfortable about answering the questions as the course progressed. The main questions were provided to participants before the course began, changes to the schedule (in Week 4) were provided a week before the class (e.g., after Week 3's class). Therefore, participants were informed of all changes a week in advance, e.g., at the end of the third session. This data was relevant across Chapters 7–9.

Log forms

The log-forms were completed after each class at the participants' leisure before the following week's class began (for the most part, as aforementioned). Participants were guided by the questions, meaning that they were not obliged to complete all the questions – rather they were to consider them as prompts to answer and reflect. These were completed online via Qualtrics surveys. Alternative options were provided, such as via a word document or voice recording of their reflection using the questions provided. These latter two

options required the data to be emailed to the researcher. However, no participant opted to use the alternative options.

Piloting of the log form schedule occurred with twenty-one autistic people in the project consultation group reviewing the questions via text-based applications (i.e., emails). The final versions were piloted with five people.

The schedule of questions was the same for each week, except for the fourth class in the course. Accordingly, as aforementioned, a longer log-form was completed to explore their experience in more depth after the course's completion. This data will be presented in Chapter 8.

Data analysis

Statistical Analysis (Quantitative Methods)

All statistical analyses were performed using Statistical Package for the Social Sciences (SPSS), version 25 (missing values were imputed). Firstly, descriptive analyses were conducted. Secondly, related t-tests were performed where data met parametric assumptions, otherwise a Wilcoxon test was applied. These analyses assessed the significant differences between pre- and post-test of the three measurement tools implemented (LSAS-SR for social anxiety, ToU for uncertainty, and STAI for an overview of anxiety). Effect sizes were estimated using Cohen's *d* related groups pre-post-test design (Cohen, 1988).

Qualitative Methods

The focus groups were recorded verbatim through Zoom and transferred to Microsoft Stream (the university secure, online system).

The data for Chapters 7 and 9 were analysed using Qualitative Content Analysis (QCA; Bengtsson, 2016). This supported gaining understanding about the specific needs of the participants and the perceived benefits from participating in improv. For Chapter 8, the data was analysed using inductive Thematic Analysis (TA; Braun & Clarke, 2005). There was a six-step procedure followed, (i) familiarisation of the data, (ii) initial coding, (iii) generating the themes that emerge from the data, (iv) reviewing the themes, (v) defining and naming the themes, (vi) interpretation and reporting. In accordance with Braun & Clarke (2022), the research is experiential (i.e., exploring participants' context-dependent experiences, perspectives, and behaviours) and inductive, using predominantly semantic coding (with some latent coding for contextualisation of the data).

All qualitative data were analysed using NVIVO, version 12 to support the coding process. In addition, Microsoft® Excel® (for Microsoft 365 MSO (Version 2111 Build 16.0.14701.20240) 32-bit) was used in forming themes. Participant identifying information has been either redacted, anonymised or pseudonymised. This was to ensure anonymity of the participants.

Inter-rater reliability was performed by two impartial researchers (from different fields of interest). The purpose of using inter-rater reliability was to achieve consensus about the data in order to be robust in the interpretation, i.e., if another research team were to conduct the same study, they would identify

similar themes (transferability, Lincoln & Guba, 1985). In the studies, all inter-raters implemented their analysis through different fields of interest and perspectives. It is believed that this is integral to all qualitative research. For this reason, they coded 20% of the data independent of one another before everyone met through Zoom to discuss their themes. The researchers established complete agreement about the themes. What is more, reflexivity was implemented as per Chapter 5. For instance, as per Berger (2015, p. 220), qualitative researcher must "…carefully self-monitor the impact of their biases, beliefs, and personal experiences on their research; and maintain the balance between the personal and the universal." With this in mind, the research process was aligned to Lincoln & Guba (1985).

The next chapter will report on how to improve the teaching and content of improv classes for autistic learners. As identified above, the classes have been adapted into a four-week, online introduction to an improv comedy course; therefore, the following chapter explores the development of this course.

5. Chapter Seven – Developing improv classes that meet the needs of autistic learners – lessons from action research

Introduction

The last chapter reported the research methods implemented across the next three chapters. The first step in answering my research questions 'what benefits autistic people can gain from improv comedy?' and 'does it reduce anxiety?' was to understand what pre-existing perceptions were held (e.g., around the world) and identify the benefits (i.e., through the survey and interviews); in order to ascertain whether anxiety reduction can occur from improv as per identified as possible within the interviews, classes must be designed to meet autistic learners.

This chapter will present and discuss the lessons learnt in terms of how to improve the teaching and contents of the improv class for the students to learn and succeed (i.e., best practice to implement the pedagogy, and how to maximise the accessibility of improv for autistic adults). Accordingly, an action research study will be presented that sought to understand autistic learning needs in an improv context. This will include reporting all aspects of autistic students' learning and teaching needs.

This chapter explores the development of the course (first four weeks, as an online introduction to improv comedy). The study seeks to verify the fit of the games and exercises used within the intervention or course. Specifically, it will explore:

1. The functionality and validity of the specific exercises and games, and the potential for alterations

2. Whether implementation of the intervention needs to be improved

3. The factors that contribute to accessibility of improv as a course of classes.

Results

Six themes were discovered in the data. These were: i) ‘Allowing participants to be autistic’; ii) ‘Gradual and informative teaching addressing autistic needs including discussions’; iii) ‘Desired and unwanted content’; iv) ‘Online versus in-person’; v) ‘Group size demur’; and vi) ‘Teaching assistant desideratum’. As an action research study, many of the needs were developed through the first two groups; therefore, many references to participants are within the first two groups.

Table 10.

The themes

Theme titles	Sub-theme titles	
1. Allowing participants to be autistic	Being with other autistic people makes a lot of difference	Meet my needs

2. Gradual and informative teaching addressing autistic needs including discussions	Implementing teaching: gradual and informative teaching strategy	Teaching autistic learners requires structural, communication and processing strategies	Need for teacher feedback and peer discussion	Enabling playful state
3. Desired and unwanted content	Desired content	Triggering content		
4. Online versus in-person	Pros and Cons of In-person classes	Pros and Cons of Zoom classes		
5. Group size demur	4 is too small	4 is perfect		
6. Teaching assistant desideratum				

Theme one: Allowing participants to be autistic

The participants highlighted the importance of meeting autistic needs and the mode in which to do so. One of these was allowing people to be themselves. Thus, the group being autistic was essential. Learners felt it was good to have the absence of the usual icebreaker introductions that involve saying something about

yourself or remembering other people's information. There was no societal pressure for small talk. They felt they could learn more easily within the autistic group, and having a supportive, friendly environment makes it easier to deal with unpleasant, or accidentally triggering moments. In addition, the learners appreciated being treated like adults.

> Can I add that the fact that I know that, you know, the group’s autistic makes such a big difference, because …I know, it doesn't matter to me, because I- we’re all [autistic] - it doesn’t matter (Madelene, *Week 2*).

Engaging in action research meant that the teaching had an extra component of promising to deliver and then doing so, which in turn built a stronger, positive relationship with the participants. Thus, the action research itself created a positive effect for learners, as they appreciated the feedback from previous weeks being taken onboard (see ‘Gradual and informative teaching addressing autistic needs including discussions’). For example, having needed a fourth person for various games, one group wanted the teacher to play to enable everyone to be actively involved. The teacher joining in to make up numbers so everyone could play was helpful (albeit with a disadvantage discussed in Chapters 8 and 9). In addition, learners noticed the teacher was able to provide a framework for games or exercises quickly upon the need arising (known because it was previously requested). It was concluded that the teacher knew how to help autistic learners (i.e., the teacher supported people, forming a safe environment).

> So like, it's nice that we've been able to sort of build that with you involved as well, rather than it sort of being in spite of you (laughs) (Hayes, *Week 4*).

Learners commented that the teacher and group were accepting and non-judgmental when one person was not able to participate in Week 3 and found it reassuring that the group was supportive in case they themselves had bad experiences. Madelene stated that it was because how the group was run, their guard was down, and they were not overthinking.

> I would say that because of how, how well this group has run, I know I have let my guard down, so where normally I would look at someone and go, “why are they you know, touching their arm or why they looking like that?” But I see, I've noticed too, especially this week, that I'm not doing that … because how comfortable it was made (Madelene, *Week 4*).

> Yes, I really. I really liked that you listen to our wor- wh-, our individual questions and individual needs. …sometimes they are run by someone who just assumes what everyone’s needs are, because they met one autistic person…. Yeah, personalise the sessions and make them enjoyable further (Julia, *Week 4*).

An interesting point was made that the taught humour must work for the autistic participants. Some learners were less able to be ‘mean’ to the characters or found the humour of an unfortunate situation occurring not funny. For this reason, they would need to learn via their comedic sensibilities (or have the learning be only for the purpose of learning about what others find funny).

> It's not necessary. The essence of humour is wrong…. It's just like, if that's not really how humour works for us, then that's not gonna really… work, particularly as a sort of beginner exercise (Cassidy, *Week 3*).

Theme two: Gradual and informative teaching addressing autistic needs including discussions

The participants discussed the gradual and informative teaching style (i.e., learning progression from one week to the next). The stepped, additive complexity of the learning tasks gradually led to the development of their skills. Learners felt that the constant progression made the classes non-repetitive and supported their advancement. Therefore, their needs included a low threshold for entry and incremental teaching using technology. In Week 1, Cassidy stated, “…it never felt, like you know, overwhelming 'cause it was just a little one extra thing each time.” Furthermore, the discussions allowed for learner reflection and enquiry to better understand current learning.

> I felt more flow this week, so I definitely felt the foundation of last week. And then the progression to this week helped build… (Kamila, *Week 2*).

Participants identified a variety of ways for the teacher to meet the autistic learners’ needs that should be prioritised. These included addressing communication, clear boundaries (in a variety of ways), and using a plethora of ways for information processing.

Participants raised several key needs, including structure, boundaries and parameters, and communication. Overall, a recurring important factor was: to know the parameters of the course and how it is run; the games and the aims of them; and providing clear boundaries (of games and its content). This meant that the teacher must provide adequate instructions through visual and audio methods, and via examples and demonstrations. Using clear, effective communications for

autistic learners supported less confusion, surprises, and consequent upset. The clarity of instruction through audio and visual strategies was mentioned (to ensure all exercises have the written instructions, as it was confusing without this clarity). Instructions and explanations did need improving on a few occasions (e.g., better explanations were possible, such as being more in-depth, to the extent of an A4 page on each exercise). Understanding terminology was crucial in explanations of games and exercises, so concepts could be described in multiple ways to avoid confusion.

> I think we commented on, better ways to show the instructions in the beginning. Maybe do more visuals, to [use] more examples, and. Yeah, like-like most- Logan and Kamila had discussed (Duncan, *Week 1*).

At times, games and exercises were more nuanced, and so the direction of the game was less clear. This caused some concern for learners. Consequently, it was stated that having a clear introduction, knowing the goal, and having a demonstration would help. At one point, a learner stated the instructions were more like “baby bird out the nest, you'll be fine” (Kamila). If one participant had known the goal of the gibberish exercises was to access the meaning of what is said without words, they may have had a better experience of the series of games. Nonetheless, in the UK group, Hayes stated how trigger warnings are necessary for games that may cause the learner to dissociate (a mental process whereby one disconnects from one's thoughts, feelings, memories, or sense of identity) (Putnam, 1989). Unfortunately, Hayes expressed that they experienced this from the series of games.

The participants mentioned communication regarding emails. Learners wanted clear, concise emails providing a bullet pointed outline of what they needed to know (including reminders), highlighting important aspects (e.g., emboldened text) that states the class aims and other useful information. For one group, clearer communication about the group size beforehand was needed. That aside, an appreciated communicative success was warning the learners about changes.

> A pre-session like um, sort of, what we’ll be covering this session: major bullet points print out, like before the session, might be really useful. Just so that we can like have a little look at it, copy down the bits that we need to have next to especially (Cassidy, *Week 2*).

There were successful strategies that were in response to the feedback received. For example, it was stated the broadcast message feature in Zoom worked well for learners (to say when the game was to stop or continue with a new partner). Another success was using visual (or recap) strategy for memory (in one of the games), as this supported learners to feel less pressured.

> The text warning that popped up, that worked well. It wasn't really too in your face, but-. So you could keep going, but you knew, “Oh, this is going to cut off in a bit” (Kasey, *Week 2*).

Learners remarked on the teacher having built a safe space that helps more difficult learning to be attempted. Specifically for improv, this was helpful as being forced to try it anyway (when little instruction was given) led to further improvising beyond the instructions given.

> For improv, I guess where it's like OK, so-. As Logan said I have, I don't feel like I'm building up, but I'm using what I know to like actually come up with things quicker or have less prompts than before, so I have to-, …I'm forced to make it work, if that makes sense. At least that's how I felt, I felt more… it was more uncomfortable. But I feel like it it's good practice, for improv (Duncan, *Week 3*).

The participants had a variety of needs in addition to appropriate communication that supports their learning. One group stated their need for 'neutral moments'. After exiting the breakout rooms, participants were quickly led back into the rooms for a further exercise; however, the issue was explained using metaphor as being a car needing to change gears, you must go through the neutral gear first. It may be only 15 to 30 seconds, but it can help.

> Hayes: …you put like a little gap in just so you've got time to sort of reset and go into the next, next thing, rather than just having to, um, I don't know, change lane.
>
> Cassidy: Neutral moments (Hayes and Cassidy, *Week 1*).

The teacher provided linking moments between content, so this supported learners regardless of whether on-purpose or accidental. A learner advocated to make the connections for them or with them (i.e., facilitation of learning, Socratic method). Similarly, another learner stated the style of teaching wanted was to emphasise the prior learning to preface building on previous classes, adding new skills.

> I think just adding the preface that, we should, like, build on the previous classes, in the, like before an exercise. So, just to help emphasise like the building aspect of it… (Glenn, *Week 3*).

It was remarked that keeping learners active would help them feel engaged. This would support them to not ruminate about their 'standard' (i.e., being good enough) by getting them involved as much as possible. They would not be watching other learners improvise (in Week 1).

> Just the waiting a few minutes for your turn. And then you listen [to] other people and thinking, “Oh well.” You know. …Like, you know am I up to the standard or whatever... (Crystal, *Week 1*).

Feedback from the teacher was requested, as in Week 3 (which was seemingly the more difficult week for most groups), the participants of one group wanted more teacher attention, e.g., entering the breakout rooms for teacher observation, and offering ‘challenges’ and feedback. The learners desired the use of positive feedback, and to be observed from Week 3 in the breakout rooms.

Learners requested more opportunity to voice questions. Nonetheless, the discussions implemented were validating. The discussions helped to homogenise the group and develop shared learning.

> And like feedback you gave to Logan about [zero] point five and five really helped me realise that I'm doing that. That I'm like going to from waking up to like flying a rocket ship and in like two seconds. And I don't know if maybe, this could somehow work in a group, like the pair stays

> with the camera on, and the rest people with the camera off, but we're still there. …You kind of feedback, more off each other (Duncan, *Week 3*).

In general, the teacher enabled a playful state. Learners stated they quickly got into a playful state on the sterile Zoom platform because of the teacher (Week 1). Thus, the teacher created opportunities to be playful.

> …we could all play together and improvise together, and work together (Lennox, *Week 4*).

Theme three: Desired and unwanted content

The 'desired and unwanted content' section of this paper identifies content that was successful, and the participants' needs for additional activities or teaching. Frequently, the participants desired a better understanding of quality markers, such as how to perform a game or exercise. In the first few weeks of the first two groups, initiating the scenes could be more difficult, so more support was requested. For instance, Hayes stated that "It might be beneficial to have like a- like a couple of ideas for potential start points that could be like use a jumping off point… once they [the scenes] got going, it was- it was good. But it- just starting, I found them… quite difficult." (Hayes, *Week 1*), to which Cassidy replied, "Even just like a single word like-like Mountain or something just to start us off." Just as there was a need for support in starting improvised scenes, there was a need for greater time to practice, review their learning, and re-engage in practice at the end of the classes.

Having considered some general and fundamental needs, one group will now be considered. This group contained learners who struggled more with the fundamental aspects of improvising (e.g., ‘yes and’). Some members of this group needed more content between games to slow down learning and help reach the ability to start scenes themselves.

> Yeah, yeah, I think echo that just uh just to handle that [game]. Just-just kick off from this [provided idea]. Yeah, 'cause you say it's not so much where you start from, it's where you keep going (Gabriel, *Week 1*).

For desired, requested content, it was suggested that there was a need to be taught about ending the scenes (or conversations in life), to provide a way to start improvised scenes, use realistic scenes closer to their life, and to learn about comedy (as a potential option). Many learners acknowledged the scope for applying learning to life specifically, e.g., as an applied improv course. This would mean using specific, targeted learning. For example, this entailed being able to cope early in life with negative experiences, fear of failure, and managing rejection (romantic); further discussion of these targets is reported in Chapter 9.

Learners suggested that some concepts delivered could have been broken into smaller segments. There could have been more steps to some of the concepts and needs to be able to do improv (i.e., start with a mundane topic that builds towards the silliness to support people with issues with being weird; have ‘middle step’ exercises on topics that may be difficult without further steps, for example, creating mean characters within one of the games).

> Think things even language, like, I put escalating in brackets next to heightening 'cause they did… I got what you meant from the Fawlty Towers example. But I think the word heightening is a bit vague, in what's called but like, but thinking of it is like escalation to the point of, whatever, like… I think is easy to understand (Hayes, *Week 3*).

There was need to remove triggering content. There was potential for one exercise to be triggering for those who have been conditioned and taught to suppress their ‘strangeness’. Following one participant reporting that they experienced negative dissociation from an activity that encouraged them to be ‘weird’, this exercise was removed as a precaution. For others, the content was an issue due to there being too much content for a single session (the session’s content was halved for all other groups).

> I feel like this was a session where I feel like it could have been two sessions worth of material, maybe? Like, I think, I think more practice on every single one would have been helpful, because at this point, it's getting quite difficult, and I'm feeling like I'm sort of making-. Yeah, I feel like I need more practice with these (Cassidy, *Week 3*).

The major issue in the course was the series of games that were triggering for a participant. The undesired content was not only with this participant but with others stating difficulties. Although there was noted value in the games, the timing was bad and the teaching mode inappropriate for its delivery (in-person would have been better). On contrary, one participant (Julie) gained from the exercises and enjoyed the series of games.

> Like, put it, put [written down in a notebook] fear of being hurt by my flatmates. Fear of being ridiculed. Even though the point is to evoke laughter, that fear of being laughed at and stuff and like. …I found very, very difficult and I put things like being being socially punished for this kind of behaviour before. For being silly or transgressing socially and like (Hayes, *Week 3*).

Theme four: Online versus in-person

Learners expressed contrary experience of the teaching mode with some participants wanting the classes to be held in-person. It would have been beneficial for certain exercises to not be at home with their flatmates potentially able to overhear. The fear of abuse from others they lived with was huge. Therefore, the need to not conduct exercises online that could have been heard by flatmates and perceived as ‘weird’ or not ‘socially appropriate’ must be completed in private (or as learners suggested in a community hall). In addition, the technological issues with Zoom were magnified by autistic needs (i.e., sensory needs). This included audio processing, whereby understanding what someone said was more difficult due to poorer sound quality.

> I see the thing I really struggled with, with the same audio processing 'cause you know everyone’s mic, mic quality is a bit shaky and unclear (Cassidy, *Week 1*).

In contrast, the participants noticed benefits of being online using Zoom. This was further clarified with participants having remarked it is easier on Zoom if they are feeling more sceptical or scared about attending. Notably, because of

the physical framing within Zoom, participants could control what people heard and saw of them and when.

> …if I ever feel overwhelmed or anything I can mute the audio or the video like whereas if I was physically in a hall, would have been more. Going to the toilet 50 million times if I'm feeling overwhelmed (Kasey, *Week 4*).

> I think Zoom worked well. I don't know if I would bother, have bothered to leave the house for this (Crystal, *Week 1*).

> I don't know what, where, in and out the other instance would. I have access to this. Improv from the comfort of my own home… (Duncan, *Week 4*).

Theme five: Group size demur

An additional query that arose from learners was about the group size. One group immediately had a member drop out, and this meant a quarter of their group were not going to attend. Consequently, the query was about whether a buffer for dropout would be advisable (as this may be common for autistic people).

> Four is right on the edge, 'cause the fact if one drops out, it's gonna get standard through, so I don't know if you had six, but- for the optimum, optimal and six could-could give you that kind of, that if someone doesn't turn up, you still gotta about better quorum (Gabriel, *Week 1*).

Conversely, another group stated that four was the perfect number. They queried whether the growth in numbers would hinder their learning.

> …this is the kind of group size I like. I can- I struggle to function in groups larger than this, so be interesting to see if I could apply this in a larger group. To some extent, that might just be over stimulated in bigger groups. …Like I say, the DnD [Dungeons and Dragons] party [Dungeon Master] and four players is good- a good number of people. But when you start getting bigger groups. …It starts getting more confusing knowing who's turn it is to speak or what's expected of you (Hayes, *Week 4*).

Theme six: Teaching assistant desideratum

Although the plan had been for in-person classes to have an autistic teaching assistant from the first week, the online classes were a small group and did not have any teaching assistant. This was not a problem for the first two weeks. It was an issue when a participant experienced an evolving triggered state of being. In the focus group, they expressed their need for someone to be able to take them into a breakout room. Fortunately, the content was removed and no one else needed a teaching assistant. The precaution was taken to hire an experienced autistic teaching assistant with improv training (from Week 3 for all other groups). This made sure there was the availability for emotional support in the class (from Week 3), which may have been useful for all groups’ sessions in the event of a potential issue.

> …so when I was studying, when I last did [participate in] a study, and I was lucky enough to have someone support me as an add- another adult.

> …And then you just- so even if it was on Zoom, if there was someone else to accompany, who could always go to a breakout room with that one person just to have that moment of 'Oh my gosh, I can't believe I felt that.' And then you go back into it a lot easier (Madelene, *Week 3*).

Discussion

This study sought to explore the experiences of autistic adults participating in improv classes for the first time, addressing their needs each week and improving their experience of the classes through action research. The key findings were that autistic learners need adaptation and their needs to be met, these include being allowed to be autistic, having a space to rest or recuperate with an accompanying person if triggered, appropriate group size and mode of study, and use of gradual, incremental teaching (Research Questions 1 – 3). There was heterogeneity of needs regarding teaching mode and class size (Research Question 3).

Context of the autistic learner

There is scope for learners' safety or lack of from being at home. Victimisation is common for autistic people, for example mate crime (Forster & Pearson, 2020; Pearson et al., 2022a). Therefore, the feeling that flatmates may inflict injury or ridicule seems legitimised. This sense of not being safe at home contrasts the safety experienced from being in an autistic group. However, those without such concerns experienced the home setting and lack of travel as an accessibility success.

Consideration for the heterogeneity of opinions is necessary. Accordingly, there is no singular solution in meeting autistic needs. For adult education, accounting for the variety of needs to enable autistic learners will improve accessibility. It is probable that there will be reluctance from autistic learners to attend the (first) class (see Chapter 9), so programme providers should offer an online introductory class on the subject and transition to in-person classes. This supports both learners that need in-person classes (knowing they will access through this mode of study) and the reluctant learner. Obviously, content would need to be adjusted for these modes of study. In any case, this is no different to the inquiry regarding group size, as course providers can offer small and large group sessions. The debate around this issue is about not pressurising the learner to participate too frequently. This is similar to offering choice and control (akin to Mansell & Beadle-Brown, 2012). In a small group, there is no choice if no one opts to answer, ask, or begin an exercise. In a large group, the anxiety may be around wanting to participate, not knowing if they can or should (i.e., a judgment on their frequency of participation). In addition, there are general anxieties about knowing when it is their turn to communicate (found in this study), e.g., with many people vying for their time to verbally participate. Although this is based on the practical learning and discussions, this may translate into the teacher attention that would be otherwise required for different subjects.

Autistic learners need to be able to say thoughts freely or have someone voice their beliefs or queries on their behalf, i.e., when struggling to phrase questions or statements or due to heightened compliance (Chandler et al., 2019; Pearson et al., 2022a). In accomplishing this, it helps to avoid rumination and provide validation through knowing with certainty that you are correctly engaging

in the work; that you express concerns; and others are experiencing the learning similarly (validation from other autistic people; Pearson et al., 2022b). As per Rossetti et al. (2008), autistic people need the opportunity to express in a way that will work, possibly due to the fluctuating communication needs or goals. For some participants, the focus group was immensely helpful as a form of discussion. In a natural setting, improvisers may gather in a pub for community interactions (as in Quinn, 2007). Such post-class discussions may occur in these settings, as (anecdotally) improv classes may end with students and teacher entering a pub to socialise. This could meet the autistic need of freely speaking their mind and releasing such ruminative tension (albeit that the focus groups were semi-structured, and the same most weeks, whereas a 'social' post-class would not be, nor necessarily in a suitable environment).

Autistic learners need adaptations, but could these be helpful for all other learners? Anyone could improvise content that is unwelcome (as within all forms of creativity, appropriateness is defined by the social group, Sawyer, 2011), especially for a new improviser (who would be more susceptible to being scared). Thus, the need for boundaries about content could benefit everyone. Parameters about the course and each session is promoted in education research (e.g., providing the aims and objectives of a class; Petty, 1998). Similarly, clarity of communication from being concise, and clearly stating what is important may assist all students in their course or programme. In addition, building a perceived safe space is known to help learners, such as with appropriate physical space, social trust, respect, suspension of judgment and censorship, a disposition for sharing, and high-quality active listening (Kisfalvi & Oliver, 2015). A perceived

safe space may be more achievable when devoid of instituted control and oppression (Stengel, 2010), proffering the best opportunity to engage in learning. Addressing minority oppression (even if not the minority within the group) and power dynamics might be termed ‘civility’ (Barrett, 2010). ‘Civility’ can be defined as being citizens of a group, acting in a positive manner that is of benefit to the individuals and the group as a whole (Marini, 2009). It could be further proposed that civility of the group must acknowledge what pertains to incivility; Feldmann (2001) suggests this is any action that impedes a harmonious and collaborative learning environment. In this regard, the perceived non-autistic teacher must remove the availability for conflict or incivility but maintain a *contested space* (room for coalition and to collectively contest the dominant discourse present, whether deriving from the teacher or students) with an ability to shift their own expectations about the proceedings (as per Ludlow, 2004). The position of the teacher is one of innate power, and as such classroom ‘civility’ is a necessity. As a result, for autistic learners, having the autistic space was equalising. Not only did this aid development but having experienced learning partners supported them too (e.g., working with the teacher or autistic teaching assistant). Vygotsky (1978) discusses how social learning is furthered with teacher guidance, or “more capable peers” (p. 86). It can be seen that these are pedagogical concerns in addition to being important context about the autistic learners.

Pedagogy

There are many adaptations that can support autistic learners. Even so, there is context that underlies the programme. The pedagogy of the subject

depicts how teaching and learning is likely to occur (i.e., signature pedagogies; Shulman, 2005). For instance, improv classes may utilise simulation learning over substantial teacher talk. Therefore, knowing how a game works before a personal exploration of the exercise may be contrary to learning improv on a pedagogical level. Then again, improv does entail a variety of pedagogical practices (e.g., Johnstone, 1989; Halpern et al., 1994). In attending a class with Keith Johnstone, you would expect mostly lecture-based learning with practical demonstrations from peers within the class (Dudeck, 2013). The differing objectives between schools of thought in improv would change matters further, for example, a Johnstonian approach (the 'Impro System', coined by Dudeck, 2013) leads to narrative improvisation, whereas the Upright Citizens Brigade's (UCB's) "comedy improv" is about creating ready-made sketches spontaneously (Besser et al., 2013). This implicates the learners' desire to be correct, i.e., the learners can more frequently be wrong (denotable in Dudeck, 2013; Arros-Steen, 2022).

There was a pedagogical dilemma through this duality of knowing how to correctly complete a game and improvising. Nonetheless, in some improv pedagogy this may be stressed less. Removing the need to be right is supportive, but the absolutes of some pedagogy might better suit some autistic learners. However, the goal may be to improvise without consideration to how it will be implemented (e.g., for constructing narratives or sketches). It is noteworthy that the aforementioned examples (of the Impro System and UCB) are similar; they both require the improviser to 'write on their feet', either a story or a sketch. Scruggs & Gellman's (2007) book on improv focuses on the process, which is

stylistically opposed to the writerly improvisation from UCB or the Impro System. In any case, improv may offer a level of certainty within uncertainty, but to what extent that is may depend on the specific curriculum.

Noticeably, there are transferable tools and strategies from the study’s pedagogical approach that supported or could better meet autistic learners’ needs. It is believed that these should be executed across all pedagogical practices. For example, disabling the availability for self-judgement and intra-group comparisons, and using improv as a *justification* for exploration (that may better enable learners safely to go beyond their boundaries). Clear, concise communication (e.g., written emails) for autistic learners is another system of control that helps them to feel secure in how they are executing tasks and knowing what they are doing. It is recommended to enable this strategy, regardless of whether at the crux of this need is a difference between PNT and autistic system of interpretation, or a more black and white thinking style (Cooper et al., 2018).

Implications for practice

There are three levels of implications. These are (i) teaching improv, (ii) teaching drama and theatre, generally, and (iii) establishing good practice in adult education more broadly.

Those teaching improv can learn from this study to form good practice within the variety of pedagogical practices around the world. Autistic learners do attend improv classes (as per Chapter 5). Therefore, there is a need to use an informed practice. Theatre training has proved to be difficult for some autistic

learners (see Chapter 5). Thus, there is a strong requirement to improve theatre training more widely. The findings from within this chapter can guide theatre pedagogy to be inclusive and understand autistic learners' needs. Lastly, adult education can be informed by these findings. Many of the results reported are not specific to improv (e.g., communicating boundaries and how to inform learners about learning objectives and any upcoming changes). To create a better learning environment for autistic people, it is advised to listen to their needs and provide adequate adjustments (or be transparent and explain why it is not possible).

Teacher Reflection

The classes had various difficulties (as above). The main issue that occurred was between the needs of the autistic learners and the fundamental perceived incongruency of these needs with the improv pedagogy. In other words, the autistic learners seemed to want to know what was going to happen in detail before it would occur. This was overcome by adapting the sessions as much as deemed viable. The teacher eventually implemented concise, clear emails; explained the games as best as possible using various methods (oral and written) and alternative wording; and set clear boundaries and goals for the classes, the content of everyone's improv, and the games themselves. This was intended to successfully meet the need to know what will happen next. In general, by the last group there was less comment regarding this (e.g., there were no necessary actions or adaptations required from their Week 1 class). The teacher's perception of the autistic participants and the learners' comments stated they were more of a trait-anxious group, which means that it is possible that the course may have overcome issues of teaching and learning improv well (or that they were too

anxious to pose anything, but not all the group were overly worried). Similarly, there was a need to know how to play the games. At its core, this is the same inquiry. One learner in the third group desired more understanding regarding how to play the games, which was impossible to provide. Teaching improv should be improvised (Keates, 2017). This means there are no wrong ways to play a game, but opportunities to learn and discover. Organic development is key in teaching improv, along with the fact that the teacher must accommodate the learners’ needs. In view of this, the learner must offer the teacher their interpretation of a game; if it is not the intended game being played, the teacher learns and may have found a valuable variation for future use (i.e., as per improvisation, they co-created the games and exercises based on the teacher’s proposition of an exercise, the outcome upon which can be built). Improv finds value in everything (Keates, 2017). Sawyer (2004a, 2004b) talks about the experienced teacher being adaptable and improvisational, but the novice teacher cannot be due to their inexperience. It is proposed that the result of what Sawyer discusses is much like what has been described here.

Learners had issues with the third week. Group 1 (and as a reminder no other group experienced these games) had a member dissociate regarding the segment on gibberish. Other learners struggled with the games yet managed to engage. Only one member valued the exercises as presented albeit through some struggle. It was stated that the series of exercises would be useful if they were better understood. Consequently, the teacher proposal for where these exercises must fall is beyond these four weeks of the ‘Introduction to improv comedy’ course. Interestingly, the conception of these exercises derived from a pre-levelled series of classes – this means that before improv students entered the

levelled courses, they would experience these games at ‘level 0’. The impact of the lived experience of autistic people (i.e., bullied, and interpersonal victimisation; Cappadocia, 2012; Humphrey & Hebron, 2015; Forster & Pearson, 2020; Pearson et al., 2022a, 2022b) can lead to an unexpected reaction to the games. Therefore, there seems to be a mismatch between the prospective neurotypes’ needs learning improv (yet this can only be stated as a potential difference because disclosure of any or no diagnosis was not required for the classes from which the exercises were born). The designed shift from Week 2 to 3 was felt by many improvisers. Obviously, the adaptation of the sessions’ design meant they were split into two from Keates (2017) (see Chapter 6 regarding the development of the manual); this sensed change in difficulty would have been between the first and second class for the original students from which the session plans derive. The main accommodation for this was to reassure the learners and have an autistic teaching assistant present. In practice, the learners were required to use the tools provided in the moment to experience improvising based on not fully knowing. For other (possibly non-autistic) students, they may not have felt this difference in complexity the same; the games added a skill on past learning, but sometimes the autistic learners needed reminding about how lessons built upon one another. Nevertheless, in order for the learners to improvise, they had to *need* to improvise. Even after removing half the contents from Week 3, numerous learners found the week challenging. They were reminded by the teacher that they are learning, and they should not know the answers straight away. One student had the revelation of what stops them from improvising is letting themselves be burdened (e.g., with additional thoughts instead of being present and in the moment with others) and not just sustaining and progressing the scene. The

teacher would jokingly say that if improv is not easy, it is the teacher that would have failed and will go home crying.

Conclusion

This study has implemented one pedagogy of improv and found some key necessary changes to enhance the learning experience for autistic adults. Additional pedagogies regarding improv should adapt the findings to create ‘civility’ or a safe space for autistic learners in their classes and courses. Furthermore, it is believed that many of these findings are non-specific to improv and should be implemented in adult education for autistic adults.

Of interest is understanding what benefits, including anxiety, may be possible with this pedagogy. The next chapter examines the benefits experienced by these participants.

6. Chapter Eight – New to improv: the benefits of participating in improv comedy for autistic adults

Introduction

The previous chapter demonstrated the need to develop a more optimal learning experience. Therefore, key necessary adaptations were identified that better support autistic (adult) learners in an improv context. Following this, of interest are the benefits experienced by the improv classes situated within this environment.

As reported in Chapter 3, the benefits of improv depicted in the literature were also found in an international survey of improvisers conducted as part of this research. These benefits included: opportunities in or through using improv; acceptance of the moment, themselves, and others; interpersonal relations and connection; social and communication skills development; and cognitive flexibility. As reported in Chapter 5, across neurotypes, improvisers gained both personally and professionally, and experienced QoL gains; neurodivergent improvisers (including autistic improvisers) gained mental health benefits, and autistic people spoke about being freer in their self-presentation and better understanding predominant neurotype (PNTs). However, before the study reported in this chapter, the gains from classes that were optimally suited for autistic learners have been unknown. For this reason, it was integral to identify what benefits autistic participants gained from improv when designed for them.

This chapter will report on the examination of the benefits autistic participants experienced followed by a discussion of the contextualised

implications of these perceived gains. This will be crucial in establishing an initial exploration of the benefits of improv for autistic people. The research question underpinning this study was to ask whether the participants believed there had been any benefits from participating in the sessions.

Results

Five themes were identified in the data. These were: i) ‘Being accepted as and with other autistic people’; ii) ‘Autistic valued skills, and allotted time to practice’; iii) ‘Quality of Life (QoL) and mental health benefits’; iv) ‘Provides a way into or inspire an activity I want’; and v) ‘Not every autistic person will perceive or gain benefits’.

Table 11.

The identified themes

Theme title	Sub-theme titles			
1. Being accepted as and with other autistic people				
2. Autistic valued skills, and allotted time to practice	Creativity skills	Reactive solutions for PNT social behaviours	“Fail with a smile is super useful”	Going with the flow, letting go, and mindfulness
3. Quality of Life and mental health benefits	QoL: Personal development, emotional well-being, and self-determination	Mental health	Hedonistic well-being	
4. Provides a way into or inspire an activity I want	Feeling able to continue improv	Inspired to do another activity	Feeling able to risk	Able to engage with others in play (outside improv)
5. Not every autistic person will perceive or gain benefits				

Theme one: Being accepted as and with other autistic people

For these participants, being accepted as autistic and having other autistic people seemed to be recurring. Participants felt supported through improv because of the groups themselves and being surrounded by autistic people. They were able to interact and be in an autistic group performing joint and fun activities and not a support or social group. This was termed to be, “inclusive by being exclusive” (Hayes, *Week 4*). Furthermore, it has been suggested that the autistic world is more fun, and neurotypicals [NTs] should join autistic people. For example, “...the things I laugh at, and my world is amazing, except we've gotta go into your [PNT] world … [my] world will be so much, much better place.” (Madelene, *Week 4*).

Improv can help autistic people feel acceptance and support within their workshop community. With the same social identity of being autistic, the participants found a new experience in comparison to their everyday, local communities.

> Everybody's like, yes, you know, just like just pounding in that positivity and acceptance and support is really powerful. And, I also agree with what Logan was saying about the- well, I have this expectation and then I'm also worried about their expectations and and little by little because humour is used. And this playfulness is used in these exercises, and were learning to support each other and learning to feel supported, which isn't that common…

> unfortunately, in life. Like you don't always feel supported by a community, so this is a great opportunity to experience that in a playful way. So I'm excited to see how that evolves (Kamila).

> Yes, I-I think that- that autistic, surrounding, in such a group. It's very important. It's very important because I-I'm not sure, but I think that I, learn much more from this, this surroundings… than I usually learn when I… when I… go to some courses… (Jamie).

> I agree with Glenn and yeah about the, the- about and- about the community thing, that it’s, like, good because they feel like most of the community things for encounter for 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 (Carleton).

In short, being with neurodivergent individuals made the experience easier. This is further noted in Hayes and Cassidy’s brief conversation that the same social identity of being autistic leads to less masking, worry, and social freedom.

> Hayes: With other neurodiverse people as well, that's something that's come up every week, but like. It can't be overstated how important these kind of spaces are, where you can just unmask if you're able or like. And just not worry about making those mistakes and not worry about sort of being s- being caught out,

> being s- spotted for the person that you are, which is sometimes. I don’t know it can be worrying, especially in groups you're not certain of…
>
> Cassidy: Creating a safe space for people to actually just exist in.
>
> Hayes: Yeah (Hayes and Cassidy).

Cassidy spoke to this earlier in the course, explaining that PNTs are confusing and stressful. Therefore, the instantaneousness of relief from being in the autistic group was beneficial within classes. Cassidy further speaks to Hayes’ point about the first meeting of neurodivergent people before knowing their shared identity, in relation to performing the predominant neurotypicality (or passing): “…autistic people trying to perform neurotypicality to impress neurotypicals who aren’t there …once everyone realises what's going on, it's fine.” This can be further identified through Logan remarking upon the shared experience of being autistic and validation from other autistic people, and Hayes discussing PNTs using words such 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).

Theme two: Autistic valued skills, and allotted time to practice

Based on the participants’ data, it is important to clarify the use of skills and the obvious need to practice anything new. It was suggested that participants gain from additional skills for social, communication, and spontaneity as well as

provisions for further coping mechanisms. The participants discussed flow, mindfulness, and the widespread application of improv 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, PNT social skills training was not desired (see discussion in this chapter below regarding PNT social skills, and the inherent ableism of interventions adopting training programmes focused on neuro-normative social presentations or abilities rather than an autistic system of interpretation[5] and autonomy), as directly stated in two groups in the data. The alternative concluded by the participants was developing social strategies (or skills[6] 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.

> Yeah, it's it's. 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 I think 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

[5] System of interpretation (discussed by Garcia-Landa, 1993, but adopted as per the explanation given) can be stated as communication style. To offer a quote, “…communication involves messages, and messages are always socially meaningful only within some contextually and historically created system of intersubjectively shared understandings” (Delia & Grossberg, 1977). In this context, this means autistic people seem to have a system of interpretation that is usually not taught to autistic people; therefore, training programmes using anything other than autistic communication is likely to lead to passing (as PNT) and the harm deriving from this (see Keates et al., 2022).

[6] For the purpose of clarity within the thesis, the distinction being used between skills and strategies is that skills are a natural part of one’s repertoire (learnt or otherwise attained) and strategies are approaches to manage certain situations in the moment. For the issues with the distinction between these terms and its history, see Afflerbach et al., (2008).

> doesn't really get that [meaning understanding how to apply improv], then they're continuing scripting and that's fine. And that works for them (Cassidy).

> …without saying we have fucked up social skills and we need to be taught social skills but there are components of being autistic where we're hyper aware of ourselves or because of the world we live in. And I like the idea of in improv you sort of learn strategies… (Kasey).

> It's just another tool to add to the toolbox (Hayes).

> I think it's like definitely adding to the skill set, so (Glenn).

> I can, use that skill at the right time and place (Julia).

Understanding how people perceive the autistic individual may be another skill that has value to autistic people, such as Madelene being seen as serious when the humour used was 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 in regard to 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 that was 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, because you know 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… (Kamila).

Going with the flow was deemed a valued skill that was experienced and developed through improv classes. Going with the flow seemed to mean being able to integrate oneself into the circumstances of the moment. Practising improvisation provided an approach for going with the flow in conversations, which could improve the experience of the interaction.

> …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 and I like the idea of. Transferring that across to life and potentially.

> Conversations that don't necessarily need to be uncomfortable, but I might overthink them. I might start to apply, improv tools to them (Kasey).

Mindfulness was another valuable skill. Improv can lead to being more mindful and letting go of control. This was possible because improv required participants to be in the moment and present with whom they are interacting.

> I think 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 (Julia).

Theme three: Quality of Life and mental health benefits

This theme explores the gains participants suggested related to QoL and mental health, including well-being. For example, engaging in improv as an autotelic activity seems to enable a sense of optimal experience and flow. In addition, the participants suggested that the classes helped their mood and made it a good day, “it brought more colour to my- to these weeks. More colour, more fun, more interest in that creativity and imagination like bubbles into the rest of your day.” (Kamila). Moreover, it supported participants in transcending their boundaries and achieving greater personal development. Just as improv offered improvements to the participants’ QoL, it seemed to build self-assurance by knowing that nothing bad would happen. With this in mind, improv seemed to improve their mental health.

As discussed in the overview of the theme, there were several comments related to QoL. These were used to indicate their value for autistic participants.

Some participants felt gains that seemed to be related to their personal development, emotional well-being, and improved self-determination.

> …was also good for flexibility because I did find that happening with myself that I would be. 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 gained emotional well-being (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 t- me too (Carleton and Glenn).

Autistic people may not usually feel heard or listened to in relation to self-determination. Improv teaches active listening, so it is possible that this would be a benefit to be obtained by building confidence in one’s own value and voicing opinions and perspectives.

> I-I was gonna add to that that if someone with autism doesn't feel like they’re being heard or could contribute maybe improv could help someone with that that they feel that. They [are] heard and listened to, and

> a part of something. Yeah. …isolated, no one really listens to them and they can't get a job or whatever. Yeah, this might be the thing that actually feels 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. One aspect of mental health improvement is resilience, which can be seen in Kasey's quote below.

> I definitely think it's helped my mental health. Definitely like each week when I look at the clock and I'm like, 'oh shit it's improv.' I'm always kind of like I'm tired and sort of the knee jerk, 'I don't wanna.' But I am more-. I'm just trying to think about the words. More resilient, more engaged. It really- 'cause I've started, through COVID. I started doing yoga and meditation via Zoom and it feels really not exactly the same but really similar to how I feel after one of these sessions afterwards. Not quite as off with the fairies vibe but yeah, the resilience and the connectedness with my family and stuff and my capacity to cope with madness is a lot better (Kasey).

> And also, like, maybe, maybe it could be something to, like, like, especially with, like, anxiety and all that it might be something to help in that those cases (Derren).

It is now necessary to identify that hedonistic well-being was experienced. This was achieved by gaining fun and laughing. They benefitted from finding a form of happiness within classes.

> 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).

Theme four: Provides a way into or inspire an activity I want

The participants were inspired by participating in the course to go forward with other activities. Many autistic participants enjoyed the course so much that they wished to continue improv. If improv was not for them (it was clear for one or two participants), they had other realisations (for example, they returned to Toastmasters, who teach public speaking and leadership skills worldwide through their clubs). Similarly, they gained the sense of being able to risk and engage with others in play (outside improv).

> I-I am always the person at a dinner party who is finding the nearest kid and having a conversation with them because I would much prefer to talk to a child about their favourite dinosaur than people talking about administration stuff… Clearly adults are creative and playful…so I'm going to attempt to get adults to play a little bit… (Kamila).

> I feel that if I if I. I mean when everything goes back to normal, whatever that means, I will feel more comfortable or more encouraged to go to an act to an in-person, improv class, which is something I never would have said before, or it would take me with taking a lot of me to like actually. Think about going to one. Now I'm like, ‘OK, so it’s just what we did

here.’ But in-person and a lot more people. So it's like it. It kind of move, move us forward or move me forward so. That's great (Duncan).

…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. Toastmasters is like a public speaking and leadership (Crystal).

Theme five: Not every autistic person will perceive or gain benefits

The participants stated that improv might not be for everyone. This implies that, even if it could be taught to meet everyone’s individual needs, it might not suit all autistic people. Similar to any form of ‘intervention’ or activity, it cannot meet the needs of everyone. Those who did not particularly like improv did not understand the reason for engaging in it or found the initial games and exercises too difficult. Conversely, for those who enjoyed the classes, several benefits were experienced. 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- 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).

Discussion

This study sought to explore the experiences of improvisers new to improv (during a four-week introductory course conducted online). The key findings were: gains as an autistic person through acceptance and being autistic (i.e., not needing to mask or pass); valued skills development (including for coping in life); QoL, and mental health benefits. Improv was an enabling activity for most of the participants. However, not all autistic people saw value in improv.

Power and autistic space

Participants desired an autistic space in classes (people, beliefs, and voice regarding self-determination and skills). When acknowledging being autistic as a blemished identity (frequently leading to masking), it is possible to understand that autistic people occupy PNT space (as discussed across themes, including ‘Being accepted as and with other autistic people’ and ‘Autistic valued skills, and allotted time to practice’). This is as per the term spatial imaginaries (see introduction and Lipsitz 2007, 2011). Autistic people exist within this PNT space in everyday life, and that their existence is within the world dominated by PNT norms and socio-political constructs, which meaning they are subservient to the needs of the empowered typicality. Thus, passing or masking occurs to hide autistic traits or fit into a normed society (for example, Cook et al. 2021). Moreover, although autistic people are no longer institutionalised for being autistic (as per before the deinstitutionalisation movement[7], D’Astous et al., 2016; Waltz, 2013), the residual, powerful imaginary space of the predominant

[7] This is not always true, or at least only true for other falsely diagnosed ‘disorders’ for sectioning (Rosen et al., 2018).

neurotypicality is present; it causes known harm (e.g., neo-eugenics or the propagation of devaluing autistic life, such as curing or ‘normalising’ autistic people). In particular, Tyler (2020) discusses stigma as positioned within the socio-political structure (fitting autistic lives well). Consequently, the interactional nature of the stigma is cultivated in a wider social world. Therefore, in improv classes with only autistic people (or neurodivergent identities that seem acceptable), valued skills can be attained by the comforting presence of the rest of the group. Similar to autistic festivals, the improv classes seem to offer an “alternative imaginary of social hierarchy” (Belek, 2022), affording the participants to make visible the previously invisible (e.g., unmasking through other non-literal ‘masks’). Furthermore, it seemed to provide a ‘shared flow’ and communitas (the latter coined by Turner, 1987) within the structures of the class and improv (Belek, 2022). Flow is a common experience (Drinko, 2013; Goodman, 2008; Lobman, 2005) and communitas has been previously noticed in improv (Fortier, 2010). Moreover, the desire for skills that may be the same as non-autistic people, may well be in fact techniques and strategies to manage the PNT world and the consequential spatial matters. The skills found beneficial can be both for overcoming social burdens and for coping in and with life. Being empowered with coping strategies (e.g., for shopping, similarly found in Chapter 5), such as being present in the moment (akin to Buddhism and mindfulness techniques) is a valued skill.

The autistic identity is important in a variety of ways; however, to experience the benefits outlined, the autistic participants spoke about not needing to mask, the relaxing nature of being with other autistic people, and instantly

understanding one another’s sensibilities (including humour) (as depicted in ‘Being accepted as and with other autistic people’). Much can be asserted about being a member of the autistic community, such as reclaiming identity from a biomedical diagnosis (Parsloe et al., 2015). However, an autistic space is vulnerable, such as in Bertilsdotter-Rosqvist et al. (2020, p. 170), “the presence of non-autistic researchers may transform the autistic space into NT space, as the autistic space is fragile to the neurotypical gaze.” Therefore, neuro-shared spaces require negotiation (Bertilsdotter-Rosqvist et al., 2013). This could include navigating the complexities of negative discourse (e.g. stigma, remaining internalised ableism, demonstrable attitudinal change from present PNTs or their implicit and explicit biases), yet the likely remains of autistic spatial imaginaries could be a sustained limitation causing an issue; thus, gaining a relaxed space with civility (i.e. harmonious and collaborative learning environment, yet maintaining a contested space (Barrett, 2010; Feldmann, 2001; Ludlow, 2004; Marini, 2009), and reduced anxiety when PNTs are present may be a persistent problem. A neuro-separate space consisting of only the autistic community seems to lead to connectedness, which includes *belonging* to other autistic people, *social connectedness* as in forming friendships, and *political connectedness* as having similar political or social equality goals (Botha et al., 2022). Moreover, these communities can build an invisible social and even material infrastructure (i.e., offering food and shelter; Idriss, 2020). The autistic community appears to help autistic individuals gain mental well-being benefits (Maitland et al., 2021). Through an autistic social identity, it is possible for autistic people to improve mental health. As the reported findings suggest, the participants valued learning with other neurodivergent people. Various participants harnessed the group’s

autistic identity when speaking to the benefits of improv by offering clarification about skills and the gain and huge ease provided by this shared identity in classes.

Skills.

Some skills seem to bridge the gap between autistic space and QoL (e.g., the sub-theme ‘Going with the flow, letting go, and mindfulness’). For example, interpersonal skills development is attuned to appended skills that could be more about coping (with the PNT communication style and PNT social needs) than social skills training; as such, the autistic system of interpretation should be enabled by autistic interlocutors instantaneously being more at ease in communicating with other autistic people (Chen et al., 2021; Crompton et al., 2020a, 2020b). In other words, autistic participants seem to value strategies and skills that were additive. This means that there should not be one *right* system of interpretation dictated, which seems to result in consistent devaluation of autistic socialisation[8]. For example, Umagami et al. (2022) state that social skills training reduces loneliness, but conforming to non-autistic peers increases loneliness (through camouflaging). The skills and strategies developed through improv were deemed valuable as long as they were additional and did not replace natural

[8] This can be identified in the usual practices of normative social skills within the interventions and training being promoted (e.g., Alkinj et al., 2022; Barbaro et al., 2022; Frolli et al., 2022; Ke et al., 2022; Tripathi et al., 2022; Vincent et al., 2022). These practices are ableist (as defined by Wolbring, 2008, see Chapter 1). Keates (2022), Beechey (2022), and Keates et al. (2022) provide good, key discussions regarding the issues with social skills training for autistic people (e.g., relationality of socialisation and communication; power and the empowered typicality, and harm). As is known, autistic people asked to adopt normative socialisation is the same as requiring them to pass as non-autistic (e.g., Ai et al., 2022; Beardon, 2021a; Cook et al., 2021a; Lawson, 2020; Perry et al., 2022). These demands on autistic people reduce their mental health and well-being (Cook et al, 2021b).

autistic repertoires (i.e., skills). Nonetheless, the range of skills and strategies that can be considered valuable can be regarded as heterogeneous.

Another form of coping could include humour (e.g., through the practice of failing with a smile, which many groups noted as being strongly valuable). This may combat rejection sensitivity dysphoria (RSD) in part because autistic people can consciously change their perspectives with practice. Commonly, autistic people are viewed as not being cognitively flexible (as per executive functioning theory; Damasio & Maurer, 1978; Pellicano, 2012). Not only does ‘fail with a smile’ support thinking afresh, but improvisation was also found to support being more cognitively flexible (perhaps due to the constant practice of spontaneity). Moreover, being able to fail was increasingly supported by other aspects of experience, such as going with the flow, letting go, and mindfulness. Although the latter tenet of improv is questionable (as a fundamental component, Keates & Beadle-Brown, 2022; Schwenke et al., 2021), these facets link well to autistic needs (as expressed above). Being able to let go, be in the moment, and fail without concern are all relevant to a better QoL.

Quality of Life and well-being

The concept of QoL is broad and individualising QoL domains to each person could make them relevant. The findings reported in this chapter appear to illustrate that Schalock et al.’s (2002) domains are relevant, at least in terms of the benefits of engaging in improv (as participants describe the benefits in the theme, ‘Quality of Life and mental health benefits’). The relevant QoL domains (Schalock et al., 2002) were personal development, emotional well-being, and improved self-determination.

Autistic people can gain personal growth and development such as cognitive flexibility. This is reflected with people with disabilities in the qualitative data of Hainselin et al. (2019). Beyond this cognitive competence, there was a sense of refreshment. In Morse et al. (2018), participants experienced mood changes and social and personal development through improv. Similarly, positive effect existed during an improv intervention for dementia patients, which implies a QoL improvement (even if only momentarily, and not sustained afterwards) (Zeisel et al., 2018). Acceptance in an autistic life seems rare, but has been found to help when present (Pearson et al., 2022b). However, within improv, the fundamental principle of acceptance fits the modern movement of autism acceptance (over awareness). Schwenke et al. (2021) found that acceptance of others and self-acceptance occur from improv, which leads to better psychological well-being (through self-esteem and self-efficacy). This links well to self-determination, because it can be enhanced by acceptance (Kim, 2019; Webster & Garvis, 2020). According to Gordon et al. (2018), it is possible to indicate that QoL improvements may be through the liminality[9] of improv that may proffer agency to the marginalised group (i.e., the empowerment and self-determination gained, or cathartic self-expression and exploration in accordance with dramatherapy practices). Therefore, some participants experienced confidence to be outspoken and voice themselves through an accepting learning

[9] This meaning the transitional process of improvising "imposes upon reality, the freedom of liminality, the boundlessness of imagination, the containment of the potential space, and the flexibility of paradox… [ultimately, it] may offer a voice to those who find themselves in marginalized positions" (Gordon et al., 2018).

environment, humour, or play, and potentially not feeling their autistic social identity was devalued.

Positive identity has been clearly identified in these data, which links to the past consideration of *autistic* QoL discussed by McConachie et al. (2020) (positive autistic identity, reducing misunderstanding of autistic people, addressing sensory needs and problems, and autistic people’s participation in society). Milton & Sims (2016) found that well-being could emerge from feeling connected and gaining recognition from other people, positive, accepting relationships, and within autistic-led spaces. Although the course was run by a perceived PNT teacher, this had little impact on autistic participants who were able to succeed and flourish together. Furthermore, it is believed that this qualitative depiction of felt benefits meets the call for an autistic voice (Waldock, 2019) by interpreting their experience and aligning the data with known QoL constructs.

Mental health benefits were indicated in the qualitative findings (as per the theme ‘Quality of Life and mental health benefits’). These findings seem to indicate links to positive psychology, therapeutic practices, and hedonistic well-being. Generally, mental health was discussed by a few participants who identified key positive psychological concepts, such as resilience (e.g., regaining energy to cope and re-engage with their hectic life) and flow (Peterson & Seligman, 2004). As noted in the findings, resilience and connectedness to family were experienced, which was further linked to general mindful awareness. Flow was expressed in line with that of experienced improvisers. This was less about all seven aspects of an optimal experience and more in regard to attentiveness to

the moment and being present (i.e., complete immersion in the present moment; Csikszentmihalyi, 1990).

Dramatherapy[10], which uses many improvisation games, has been found to have therapeutic benefits in terms of providing opportunity for clients to explore their internal state, externalise traumatic experiences with distancing so to not re-traumatise, and develop relationships and personal goals (Lory et al., 2012; López-González et al., 2021; Sesar et al., 2022). Although these classes were not therapy, there seems an availability for therapeutic value in regard to exploring inner states and developing relationships. These include developing a fuller presence with others (bringing the totality of oneself through characters and play), self-validation (similar to self-determination), and increased enthusiasm and playfulness (Romanelli et al., 2019). Hence, improv seems to theoretically link to therapeutic practices.

In any case, hedonistic well-being was present at the beginning of the participants' improv journey. The experience of being allowed to play, have fun, and seek pleasure for its own sake was beneficial. There seems to be a double standard present in general activities for neurodivergent people, as PNTs can engage without it being to help them in some way (Therapist Neurodiversity Collective, 2022). However, not all autistic people may value hedonism. Therefore, because of either this or another aspect of the merit of improv being

[10] Needless to say, drama therapy, specifically psychodrama, sprang from theatrical improvisation by Jacob Levy Moreno (1947). With such modern practice as Prof Daniel Wiener's *Rehearsals for Growth* (1994) and Dr Adam and Dr Allee Blatner's *Art by Play* (1988) both focused on improvisation.

unwanted or diminished, not all autistic people will experience benefits. Although the aim was not to identify what improv could not be achieved, it was stated that it might not be beneficial for all autistic people. Therefore, for *some* autistic people, improv may be a “personalised, strength-based intervention” (as called for by Schuck et al., 2021) or activity in which they can engage.

Conclusion

Improv appears to be beneficial for autistic adults. These benefits include acceptance, learning-valued skills, and improvements to quality of life (QoL). Importantly, improv was an enabling activity for most of the participants. In contrast, not all autistic people will gain or perceive value in or from improv. Nonetheless, having an autistic space where autistic identity may thrive seemed helpful (e.g., reducing power imbalance).

The following chapter examines participants’ anxiety (state, trait, social, and uncertainty). Furthermore, the participants’ anxieties will also be investigated qualitatively to understand the context of the autistic adults’ lives.

9. Chapter Nine – Anxiety, Improv and Autistic Adults

Introduction

Chapter 8 reported findings about benefits perceived possible or gained from improv. In the last chapter, it was argued that autistic identity matters, group formation or dynamic could have impact upon anxiety. As a result of improv being an enabling activity for *some* participants, it is assumed anxiety will be experienced variedly. In the last chapter, the benefits were reported that included mental health gains.

In this chapter, the examination of participants' anxiety (state, trait, social, and uncertainty) will be reported. Multiple anxieties will be presented because various forms of anxiety have increasingly been identified within this population. Autistic people can often experience anxiety (Uljarević et al. 2016; state-trait: Kim et al., 2021) of which can include uncertainty (Hodgson et al., 2017) and social anxiety (social anxiety disorder: Bejerot et al., 2014). There may be a variety of causes for these including theories positing causation of autism is from anxiety (autonomic dysregulation; Benevides & Lane, 2015) to the more sociological (i.e., the reasonable reaction to a disordered society; Farahar & Bishopp-Ford, 2020). Understanding anxiety and its relation to autism provides some insight into the impact on autistic people.

There are many different reasons why autistic people may be more anxious than those who are not autistic. One possible relevant concept is of uncertainty and its potential wider impact. For instance, anxiety may well be due to uncertainty. Hwang et al. (2018) found uncertainty mediated between sensory

needs and generalised anxiety disorder symptomology, and similarly mediating between the need for sameness and generalised anxiety disorder symptomology. It is logical to conclude that specifically uncertainty and more widely other anxieties could be because of predictive processing. This possible explanation could include monotropic thinking (e.g., the extremes of tight-focus, emotions, judgements, or rigid thinking; Murray et al., 2005). There may be a relationship between the variations of anxiety (i.e., social and uncertainty): it could be explained by this detail, monotropic information processing (thinking) style because of its relation to predictive processing errors (Bervoets et al., 2021). Predictive processing errors are where different expectations (priors) contrast with real-time circumstance causing prediction errors (den Ouden et al., 2012) (see Chapter 1 for more information). Additionally, autistic people are depicted as having a preference (or strength) for local (detail-focused) processing (Happé & Frith, 2006). Chown (2016) discusses how non-autistic people are neither field dependent nor independent, which further frames autistic field independence (or the equivalence for local processing in central coherence) as an ability greater than their counterparts. Autistic people have individual, subjective experience through the contextualisation of any given moment, e.g., situation or goal (Bervoets et al., 2021). Therefore, the subjective, individualistic prediction errors are variedly substantiated by detailed changes in the situation or goal, and experiencing these through the attentional extremes. However, this model is yet to be tested in research.

Even generally, definitive, accurate conclusions are elusive because of the contrary findings regarding anxiety (and mental health broadly). For instance, it is possible that there is no relationship between social anxiety and sensory needs

(Black et al., 2017), countering results from Hwang et al. (2018). Furthermore, Bruggink et al. (2015) found that autistic people did not use less cognitive emotional regulation strategies (i.e., for meeting sensory needs) than the PNT group (using self-report measurement instruments), contrary to their hypothesis. Thus, this result indicates that the difference between neurotypes' anxiety may not be at consequence to how autistic people cope or manage their mental health. Anxiety is associated with negative life events (Bruggink et al., 2015). In these situations, autistic people would not employ positive reappraisal (referring to positively reframing an event for personal growth), which correlates with depression (Bruggink et al., 2015). Moreover, they would be subject to 'other-blame' (i.e., more externalisation, which is known to reduce well-being, Klonowicz, 2001; Kopp & Ruzicka, 1993; Myers, 2014; Noor, 1995; Singh & Chouhdri, 2014) that correlates with anxiety (Bruggink et al., 2015). Nevertheless, social anxiety has been found to predict uncertainty for both autistic and PNTs (as well as alexithymia, maladaptive emotional regulation, and sensory hypersensitivity; Pickard et al., 2020). If autistic people are aware of the variety of details present, their anxiety could be based on information their non-autistic peers would not be accessing. Sasson (2021) reinterpreted his research team's findings from Pelphrey et al. (2002) in a conference presentation in which he suggested that autistic people gain adequate social information without focusing on the eyes for as long as non-autistic people. Once more, this leads to considering the basis of anxiety as predictive processing errors.

Irrespective of the reason for anxiety in any given situation or people, there is merit in exploring, how best to support autistic people to experience

reduced levels of anxiety (and thus improve their day-to-day experiences of living), if it is debilitating or hinders completion of necessary tasks. Therefore, general trait/state anxiety, social anxiety, and uncertainty will be reported. This is crucial in understanding the impact of improv on anxiety for autistic adults (as a reactive solution).

Specifically, this chapter explores:

1. Whether the participants anxiety and tolerance of uncertainty alters post-intervention;

2. What aspects of the improv course and the context within which it is run (the autistic adults’ lives) impacts participants’ anxiety and uncertainty.

Results

Participants

Of the sample described in Chapter 6, 14 participants completed the quantitative measures. This was due to only these participants completing enough of the course within the group for quantitative analyses. As a result, the details of this portion of the sample must be reported. They were between 20 and 56 years of age (M_{age}(SD)= 33.38(11.93)). There was a greater representation of gender identities beyond the binary (male, 43%, female 36%, and non-binary 21%). Participants identified as Caucasian (86%), mixed ethnicities (14%), and one participant identified as Hispanic. Participants lived around the world, 29% in USA, 38% in UK, 21% in Australia, and 7% in Puerto Rica and 7% in France.

64% of the participants had a formal diagnosis and 36% self-identified as being autistic.

Statistical measurement of anxiety

All but two measures met parametric assumptions and a related measures T-test was conducted. A Wilcoxon signed ranks test was used for State-Trait Anxiety Inventory's (STAI) Trait Anxiety, and Tolerance of Uncertainty (ToU) (Factor 1). As can be seen from Table 12, there were significant differences between pre- and post- time points for seven measures. On the Tolerance of Uncertainty measure there were significant decreases on all three measures – both factors and the unifactorial measure, with small to medium effect sizes using the criteria set out by Cohen (1988). This indicates that participants experienced more tolerance of uncertainty about ambiguous situations and the future after the classes. Likewise, on the Liebowitz Social Anxiety Scale (LSAS), there were significant decreases on total fear and all anxiety subdomains (global, social and performance) with small effect sizes. This indicates that only anxiety reduced but avoidance of social and performance interactions (or situations) did not reduce after participating in a short improv course. Neither state- nor trait-anxiety changed significantly; however, the non-significant increase in trait anxiety suggests that some other aspect of the participants lives and experiences must be considered, especially based on other forms of anxiety decreasing (see the thematic exploration below).

Table 12.

Results of Pre- and Post-Improv comparison

	Means (SD)		Statistical results	Effect size (Cohen’s *d*)
	Pre- Improv	Post-Improv		
ToU Unifactorial	87.23 (22.03)	75.62 (18.95)	t = 4.78 p<0.001 (n=13)	0.57
ToU Factor 1	44.15 (15.38)	38.15 (11.71)	z=2.73 p<0.01 (n=13)	0.44
ToU Factor 2	43.08 (9.40)	37.46 (9.23)	z=3.80 p<0.01 (n=13)	0.60
LSAS Social Fear (Total)	128.91 (29.16)	118.55 (28.72)	t = 2.56 p<.05 (n=12)	0.36
LSAS Global Anxiety	68.83 (15.94)	61.33 (17.33)	t = 3.48 p<.01 (n=12)	0.45
LSAS Global Avoidance	59.09 (14.13)	55.64 (13.82)	t = 1.45 p=.18 (n=11)	0.25
LSAS Performance Anxiety	35.83 (8.26)	31.67 (9.18)	t = 3.39 p<.01 (n=12)	0.48
LSAS Social Anxiety	32.21 (7.52)	29.29 (7.96)	t = 2.89 p<.05 (n=14)	0.38
LSAS Performance Avoidance	29.38 (6.89)	26.85 (7.26)	t = 1.65 p=.13 (n=13)	0.36
LSAS Social Avoidance	29.46 (7.24)	27.73 (7.81)	t = 1.73 p=.23 (n=11)	0.23
STAI State	48.43 (3.50)	46.78 (6.18)	t = 1.20 p=.25 (n=14)	0.33

STAI Trait	44.86 (5.26)	46.29 (5.08)	z=1.26 p=.25 (n=14)	0.36

Thematic exploration of anxiety.

Seven themes were identified from the data to better understand what influences participants' anxiety (i.e., increases and decreases) (see table 13). These were: i) 'Heterogenous experiences of teacher participation in activities'; ii) 'Frequently low, but may decrease after the class if high'; iii) 'Group dynamics'; iv) 'The course mal/functions'; v) 'What I bring to the table'; vi) 'The familiar and the unknown'; and vii) 'The research, not the improv'.

Table 13.

The themes

Theme titles	Sub-theme titles	
1. Heterogenous experiences of teacher participation in activities	Decrease: The greater the experience, the more at ease I am	Increase: Harder to read a PNT improv partner
2. Frequently low but may decrease after the class if high	No, low or decreased anxiety	Anxiety could drop after improv, even if high during it
3. Group dynamics	Decrease: Autistic, supportive group dynamics (laughing and not knowing together)	Increase: Anxious about working with one participant specifically
4. The course mal/functions	Decrease: Course provisions Decrease: Eventually it is "Been there, done that"	Increase: Course malfunctions Increase: Not knowing how to improvise

5. What I bring to the table	Decrease: My personal attitude (positive and in the moment), Decrease: Using past coping strategies (stimming)	Increase: The autistic life (including past learnt experiences, and the impossible), Increase: Life anxieties Increase: Anxiety caused issues in improv, so anxiety remained
6. The familiar and the unknown	Decrease: "I know how the movie ends": Familiarity with people and games	Increase: The unknown
7. The research, not the improv (INCREASE)		

Theme one: Heterogenous experiences of teacher participation in activities

The teacher had influence that both increased and decreased participants’ anxiety. They had to participate in the games and exercises on a few occasions during the course for some groups. This did lead to contrary opinions regarding how anxiety provoking or helpful this was for the learning in the moment. The teacher was not due to join in with any games within the course, as such this insight helps identify the contrary impact the teacher has as a (temporary) participant. One participant found the teacher encouraging and would enable them to go further and be less self-conscious. The teacher joined in by request to equalise numbers within the group (see Chapter 7). On one occasion, this was because the group lost a member that was unavailable for the duration of the course. However, not all the group found the teacher a viable improv partner.

> Whereas with Nathan [the teacher], I have least anxiety and I feel like that is because he’s better at improv, he gives me something to work with, encourages me to just jump in and not be self-conscious (Kasey).

> Yeah, that was really hard to come- guess your emotion and then relate… 'cause you, you [the teacher] expressed a lot more emotion and you were quite physical when you, when you did it, whereas the others were like just descriptive stories, yeah (Crystal).

Other participants (not within the above group) found the perceived PNT identity or way of being (in the improvised scene) to cause stress and anxiety. In this case, the exercise was poorly experienced by the group and the teacher needed to step in for one person that was triggered by the series of games.

> I was definitely more anxious during this session than the other ones, particularly with the gibberish game …I was doing it with you (Nathan), which is just slightly more stressful, partly because it's unfamiliar, partly because you're not autistic and it's harder to read what's going on with you (Cassidy).

Theme two: Frequently low but may decrease after the class if high

Many participants experienced less anxiety during improv classes. There were times when anxiety rose; however, most of the time in most groups, their anxiety levels were low (as noted in their log-forms and hand gestures in focus groups). For example, Duncan states, “I didn’t feel anxious outside of the research program.”

Nevertheless, the participants could become anxious on various occasions within the classes. For some, this was related to the challenging nature of certain classes (Week 3). Some participants experienced spikes of anxiety upon

perceiving difficult exercises or misunderstanding instructions, which may have led to feelings of anxiety before the following week’s class. Nevertheless, their anxiety decreased after the class (except for anxiety about life external to improv, see ‘What I bring to the table’ below).

> During the class: I was mildly to moderately anxious. After the class: no anxiety, but I’m sure it will bubble up again right before the next class (Kamila).

Theme three: Group dynamics

One influential factor that contributed to feelings of anxiety or vice versa was the group itself. It was stated that being with other autistic people is helpful when participating in the improv course. There was lower anxiety because the participants felt no judgement from one another. For example, lower anxiety was achieved after getting to meet each other and knowing that no one would react negatively to a misstep. This was known to have occurred in some participants because of their neurodivergent identities. As a result, the participants stated that they were anxious before their first session of the course but relaxed when quickly acclimatised to the group of other autistic people.

> There's a tiny bit [of anxiety], maybe yeah. I felt more chill with this group than I thought I would to be honest (Glenn).

> For me, it's lower than it was before. And-. Yeah, I enjoy being here and-. this is… a rare opportunity for me to- to be in a class where I feel… comfortable and understand… others, like body language. It's not confusing me. Yeah (Jamie).

> Can I add that the fact that I know that you know the groups autistic makes such a big difference. … they [a hypothetical non-autistic course peer] know [you] had autism and they're- likely they didn't, I'd be really anxious about actually going into a room with just them …because it would just be a completely different environment (Madelene).

> One neurotypical in the group of you. That anxiety level would be spiking just in case it was them you got in that [breakout] room (laughs) (Hayes).

On the contrary, if one or two people in the small groups did not manage to relax into improvising, this could potentially cause anxiety. This has the additional feature of making the individual feel bad about not being supportive and feeling tired after improvising with participants that could not establish themselves in improv.

> Not anxious much before, only anxious about if I get paired with Gabriel because he's struggling a bit with improv and I find it hard to have fun when paired with him, I am consciously being patient and supportive and that is tiring (Kasey).

Theme four: The course mal/functions

The course itself influenced participants' anxiety when it was working well and when it failed (once in a major way). Accordingly, many participants talked about how the course worked for them, yet some discussed weaknesses. There were segments of learning that were more difficult (i.e., Week three was

harder for most groups)[11]. However, how the course was organised and run (including the research itself) helped learners process the course and meet their needs, for instance, classes being well-structured helped lower anxiety. This observation was further cemented by observing that when becoming anxious, some participants would apply the previous weeks’ improv learning (i.e., ‘failing with a smile’[12]).

Participants stated that the teacher understood and listened to their needs. Importantly, the teacher did not infantilise the participants and treated them as adults, which is a common past experience of some participants. Additionally, in correspondence with participants, the teacher was able to ensure that the participants were at ease.

> Maybe Nathan was too amazing. I do feel that I should be adding here. I should find replying to emails and joining the first Zoom should, and would normally, cause me anxiety. Due to Nathan’s "way" I didn't have this (Madelene).

Further positive experiences came from the possible inevitable progression that participants would eventually develop some skills (whether

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[11] Week 3 contained exercises that were triggering for one participant (in the first group). After removing this content, other groups still found the content challenging, one group described it as expanding upon their learning not building upon it (see Chapter 7). This is to be expected when learning, such as threshold concepts (Meyer & Land, 2006). Threshold concepts is the core knowledge learnt that could be a pivotal moment in understanding. For full details about Week 3, please see Chapter 6.

[12]To ‘fail with a smile’ means that people do not become frustrated with mistakes and turn inward, but instead enjoy sharing their failure with others, turning outward. This derives from Keith Johnstone’s pedagogy in the ‘Impro System’ whereby the audience would lose out on the entertainment value of watching performers fail onstage if they were not happy to fail.

perceived to be minimal or not). Many participants described in the last week of the course that they felt able to improvise.

> I feel like, it's the last day of school of kindergarten and everybody is sad that we're going. But we all had fun, so that's what that is. I mean, this one was the most relaxing 'cause we [were] kind of like, “We got this” (Duncan).

> I think there's two aspects because there's also, there's that “been there, done that.” Like, so it's not as scary, but also there's the. Also, learning that being- it's a supported improv group, so it's not like there's three other people here who are just waiting to go, “Oh my God, you're a fucking idiot.” So that adds to it as well (Kasey).

In the third week of the course, various participants expressed greater difficulty with feeling successful. This meant that they may question the past learning and competencies upon experiencing these supernumerary challenges (Vygotsky, 1978), as per how Julia explains her experience of Week three of the course:

> But now I think I struggled towards- with this session, like. I I (unclear) but it was just I. I know I feel like I'm questioning more, my skills in communication and just improv and now I'm like wait can I actually use this for, what am I doing? I don't know. It's just, a bit of, like it's kind of like everything that happened so far, right, did I actually go there then was i-in the last session so I know so it's kind of like questioning (Julia).

Participants discussed that anxiety could rise when beginning games, as there could often be uncertainty left from the provided instructions. Some participants would be self-reflective of how they were improvising and question whether what they did was enough.

> At the beginning of each improv game I felt quite anxious and unsure how to start. I felt anxious whenever a response didn't come into my head easily. And sometimes I'd get anxious after giving a response if I was worried that it didn't work well or made it hard for the other person. Once I got into it, it got easier. In the group games I felt less anxious and more excited because I felt less under pressure (Carleton).

Theme five: What I bring to the table

What participants bring into the class is important and can lead to greater or less anxiety experienced. This can help and hinder learning, and possibly the experiences of others. For instance, some participants adopted a conducive personal attitude through remembering that they signed up for fun and could get out of their comfort zone. For example, one of these participants stated that, “I felt excited during the session, especially when it was my turn to improvise during the numbers game… I felt a bit anxious, but also ready to be creative.” (Julia).

Conversely, anxiety was present between participants logging in and waiting for the class to start, or challenges felt from the pressure they put upon themselves. The following addresses what decreased participants’ anxiety and what increased their anxiety.

Participants spoke about themselves and their impact on their anxiety level. For example, someone who was positive and able to be in the moment could enable their learning, ensuring no anxiety. “I had- I had zero anxiety the whole time. …I just wanna go with the flow” (Lennox).

In addition, participants would use past coping strategies (i.e., stimming) to manage their anxiety. Stimming was described as being used in two ways: one at the start of the first class (aggressive, coping stimming), and another after the class (expressive and fiddling).

Hayes: I've been stimming throughout, but.

Julia: Yeah, me too. I've got this crayon (everyone shows their stim object).

Hayes: But it's more comfort stimming now rather than the sort of aggressive sort of, “Oh no. What's going to happen?” that there was at the beginning. Like…/

Madelene: /…Mm-hmm (nods in agreement) (Hayes, Julia, and Madelene; Cassidy showed their stim toy).

Sometimes, participants’ past lived experiences could have a huge impact on what they thought, were able to do, and what they read into circumstances (because they must do so at all times usually). Ruminating about requests led to anxiety.

> For me I am not able to say “no” to someone. This is a complicated autistic trait. …I became anxious when I was asked if I wanted to lead a demonstration. …In Nathan asking I became confused, why [I] would be asked if I wanted to take part, if I didn’t want to take part overall I would [not] be here, I would let him know. Maybe he thinks I am the good at this... “Oh, he didn’t laugh at what I said,” he now thinks I am not good at this, etc., if Nathan had just said, “I choose Madelene to lead this one,” I wouldn’t have thought too much about it. He needed one person to demonstrate and that is why I was chosen (Madelene).

Importantly, in Week 4, Madelene commented on an outcome of the course (for further benefits, refer back to Chapter 8):

> I know I have let my guard down so where normally I would look at someone and go, “Why are they you know, touching their arm or why they looking like that? Or why haven't they said this? And does that mean that,” and overthink things that don't need to be done because it was so comfortable and relaxed and that has been really good to experience. But I see I've notice to especially this week that I'm not doing that (Madelene).

Furthermore, past experiences were not necessarily impacting upon everyone. There were changes in participants as a result of the course, such as being able to engage in self-reflection. This could assist them in becoming more positive or evaluating how they were in their everyday lives. For example, Kamila noticed an application of improv in their life and wanted to observe themselves in relation to the revelation they experienced in class.

> Obviously, that has real world application, so that will be something I'm going to observe in my day-to-day life (Kamila).

> I usually go also negative or also to extremes where… it's real life, but by hunting the importance of something else and maybe bring it to more positive light, I mean. I feel like that's really helping (Duncan).

Participants' current lives impacted their anxiety levels. For example, work and life tasks that remain to be completed increased anxiety. Furthermore, anxiety caused issues in accomplishing the improv exercises, so their anxiety remained. Glenn expressed how he was thinking about other classes so his anxiety had increased afterwards in comparison to during the class.

> After: My anxiety was near a four or three, as I had concerns relating to other classes on my mind but overall ended the class as a positive experience (Glenn).

> I felt like I became more able as each game went on, but overall I feel that anxiety is my main barrier to being able to improvise and that hasn't changed (Duncan).

Theme six: The familiar and the unknown

> Even for people that may not ever wish to improvise in the future, they could understand what was being asked of them and to some extent implement the learning (as exemplified below). Thus, improv could quickly become a known and familiar that was not anxiety inducing.

> Why we’re, why we're less anxious about it now it is over? 'cause we know what to expect now in the future I guess (Crystal).

> Because it went OK, like I know how the movie ends. You know, we all lived (laughs). We all had fun. Nobody got hurt. Then- and I didn't feel judged. There was laughing and I learned something about myself and I met people… (Kamila).

Some participants struggled to get to the class on time or remember to attend, which led to one participant being brought into the group halfway through a course after being taught by themselves (with the teacher and autistic teaching assistant) for two weeks. This was not identified by most other participants as a problem. Nonetheless, it did elicit worry for one participant. Therefore, the unknown can still be anxiety provoking outside of the known of participating in improv.

> Since there was a new participant, I noted that there was more anxiety with him—I was used to those from the beginning (Jamie).

Theme seven: The research, not the improv

Some participants that had a stated on-going anxiety issue found the improv less of a problem than participating in the focus groups. Even with expressed preferences about the improv (suggesting group exercises are easier than paired games in the breakout rooms), the requirement to discuss their experience in the research segment of their weekly session produced more anxiety.

Carleton: Um. Oh mine, it would, like, it probably be, like, (gesturing the level), but the anx- my anxiety… level is higher now than it would have been if I wasn't currently doing a focus group, so it's, like, immediately after the class would have been like there (at the very bottom). But it's actually here (quarter up from the bottom). Yeah.

Jamie: Yeah, I can agree with Carleton (Carleton and Jamie).

Discussion

This study sought to explore the experiences of autistic adults participating in improv classes for the first time, assessing the level of anxiety in three ways (social anxiety, state and trait anxiety, and uncertainty), and to understand the experience inline with participants' ongoing anxieties over the course.

The key finding was that improv classes seem to impact on anxiety levels (Research Question 1). Findings indicated that autistic participants were more tolerant of uncertainty about ambiguous situations and the future, and only anxiety rather than avoidance of social and performance interactions or situations decreased. There were no significant results regarding state and trait anxiety; potential reasons for this will be discussed below. Nonetheless, with the heterogeneity of the autistic participants' experience of the class, it seems unlikely to be able to ensure no anxiety will occur during courses. Notwithstanding, participants' anxiety was frequently low, yet there were reasons for it to increase, such as their contrary experiences with the teacher that led to either lesser or greater anxiety (Research Question 2); however, it is possible that

anxiety can decrease after a class. Reasons for anxiety to increase or decrease were group dynamics, and the course provoking or preventing anxiety (Research Question 2). A key finding was that autistic people have variety of pre-existing reasons for anxiety, but delivery of the course can make the unknown (being improv) more familiar. For some participants, the research and not the improv was more anxiety inducing.

Improv seems to reduce anxiety

There were numerous reasons why anxiety would increase or decrease. This suggests that improv addresses anxieties via providing reactive tools. Autistic people need effective tools and strategies that are suitable and functional for *them* in and or against the PNT social world (i.e., *autistic* skills) (as discussed in Keates, 2022). For example, with a conducive learning environment (see Chapter 7), autistic people may develop perceived helpful ways to reframe life moments through positive reappraisal or develop cognitive flexibility to be open to the multiple outcomes of any given event (addressing anxiety and uncertainty). Similarly, the coming together for a common purpose may lead to reduction in anxiety (Perkis et al., 2016). Participants gained familiarity with both improv and the people in their group, which could lead to these potentially effective, valued skills resulting in reduced anxiety (as with the preliminary findings on social anxiety and uncertainty reported in this chapter). For instance, the ‘self-presentation theory of social anxiety’ (Schlenker & Leary, 1982) proposes its occurrence is when someone is uncertain that they will achieve a desired impression on their interactants (Leary & Kowalski, 1995). This means that a

ND, or specifically autistic group, requires less impression management which therefore reduces social anxiety.

This study has identified that improv could be an additional strategy for autistic people (see Chapter 8). The potential trait difference between autistic and non-autistic people regarding anxiety (Lever & Geurts, 2016) and uncertainty (Chamberlain et al., 2013) may identify a need for practiced strategies (e.g., scripting). Uncertainty is not an emotional dysregulation, but a processing difference (Bervoets et al., 2021). With this in mind, proactive strategies for this phenomenon are limited in how helpful they can be for autistic people because the felt uncertainty would be subjected to prediction errors (Bolis et al., 2017; Cannon et al., 2021; Palmer et al., 2017; Pellicano & Burr, 2012; Perrykkad & Hohwy, 2020; Lanillos et al., 2020; Van de Cruys et al., 2014). The participants' discussion suggested that they increase their familiarity with improv, knowing what improv is, and their development of improv abilities. This seems to result in a strategy that may both increase certainty about their ability (coping within uncertainty) and increase 'tolerance' of uncertainty (demonstrable skill within uncertain events) (e.g., strategies for coping with change reduces anxiety, Perkis et al., 2016). This cyclical model could better support autistic people and decrease uncertainty anxiety.

Similarly, this may ameliorate the predictive processing error by proffering opportunities (or otherwise) stated as reframing the moment. Unlike cognitive behavioural therapy, reframing in this context means experientially becoming aware of the multiple options (i.e., cognitive flexibility) (although, some participants did suggest they could choose to see the positive in life within

this study, which is a solution for anxiety, Perkis et al., 2016). In saying, the reduction of uncertainty could be based on learning to proceed using the new reality. An example of improv being used for uncertainty is from Lazarus et al. (2022), they used improv for medical students’ uncertainty tolerance development, reporting the need for pedagogical approaches to directly address uncertainty, where necessary.

As for social anxiety, within improvised scenes, all interactions are contingent (i.e., unscripted and contingent on other people within an interaction; Leary & Kowalski, 1995). This means that the interpersonal load is high, yet the rules and structures help to reduce it. Similarly, improv providing valued skills and strategies may support self-presentational efficacy. This is believed to be because of combatting both interpersonal load and adequate skills to manage or cope. First, interpersonal load can potentially be overcome by strategies in dealing with unknown social situations and playing out scenarios through improv. The latter aspect is overcome by developing valued skills and strategies that improve participants’ self-image of social skills and strategies. In doing so, addressing efficacy combats one aspect of social anxiety. The other aspect is motivation (i.e., self-presentation oblivion; see Chapter 1); for instance, accessing flow through being other-focused. Situational determinants (influential factors within a situation) such as failure are abolished in improv by teaching to celebrate failure. This removes the situational determinant, which usually requires an individual to recuperate their image in the eyes of the evaluator (Leary & Kowalski, 1995). Furthermore, this need to raise one's positive evaluation after failure would be a contradiction because the goal of entertainment from failure is successful. Thus, the failure would be when one does not fail well, or when

failure is goal-oriented by the individual's standards, for example, in a class, when the teacher does not laugh.

In essence, improv may provide more positive life experiences rather than adverse ones, which supports autistic people as an ongoing activity for release and pleasure. Past research has found that improv can increase uncertainty tolerance for a non-clinical sample comparatively to a control group (Felsman et al., 2020). Dr Peter Felsman and colleagues (2022) replicated this in a large sample study alongside social anxiety measures, finding significant reductions in social anxiety and uncertainty. Furthermore, improv skills need constant practice (Hough, 2011; Libera, 2004; Dudeck & McClure, 2018), which would coincide with the proposition for it being an ongoing activity. Likewise, social anxiety has decreased for participants of improv classes that screened for social phobia (Felsman et al., 2019), although social anxiety symptomology did not significantly decrease for all the Detroit students. Interestingly, for people with disabilities, state anxiety did decrease including at a 10-month follow-up from 12 hours of improv (Hainselin et al., 2019). This chapter's study of a four-week 'introduction to improv comedy' course adds to the growing evidence base for using improv for anxiety (limited by this study's small sample size). Nonetheless, for autistic people with co-occurring anxiety issues, improv may well significantly help.

Life is more anxiety provoking than improv

Participants experienced anxiety through having impending deadlines from their college studies, personal reactions to 'over-analysing' the moment, and

anxiety begetting continued anxiety from a natural state of this experience in their day-to-day life. This indicates much the same as Bervoets et al. (2021) regarding uncertainty; that autistic people’s prediction processing can maintain a level of anxiety (it is unknown how this qualitatively or phenomenologically differs across autistic people as well as between non-autistic and autistic people).

Many papers indicate social anxiety should be less prominent for autistic people due to not wanting social contact (van Steensel et al., 2011). However, this is not true that autistic people desire less socialisation (e.g., Ee et al., 2019; Müller et al., 2008). Therefore, within the confines of improv, autistic people seem to or can accept their ontological status or system of interpretation (i.e., communication style) which would suggest social anxiety reduces in class yet continued reduction may be more related to developed coping strategies (e.g., tools to manage PNTs; gained self-worth or compassion, see Chapter 8).

There is a bi-directional relationship with social anxiety and social ‘difficulties’ (White et al., 2013). This may result in compensation through ‘over-analysing’ situations; not all autistic people would develop this need, but perhaps this is the case for the 17% (van Steensel et al., 2011) to 50% with social anxiety (Maddox & White, 2015). This magnified awareness of social ‘difficulties’ (Maddox & White, 2015) and not accurately assessing the situation leads to less desire for social situations (White et al., 2015). Madelene’s comment about over-analysing when being asked to volunteer could be perceived as her seeking to understand the moment leading to compliance behaviours and related social ruminations (regarding Madelene’s past lived experience) (Chandler et al., 2019), which changed within the course. Social anxiety perpetuates social withdrawal

(McVey et al., 2016). However, withdrawal experience may not be the case within the classes (if they were feeling socially anxious beforehand) because of the mutual social identity (autistic) and familiarity (after the first class).

Moreover, literature blames 'autism' for social awkwardness, stating that less insight by the autistic individual about their social 'incompetence' is a protective factor (Bejerot et al., 2014). Nonetheless, as would be expected, the DEP (the bi-directional, relational difficulties experienced between cross-neurotype interlocutors; Milton, 2012) better explains this through identifying the intersubjectivity and relationality of any given interaction. Crompton et al. (2020) identify autistic sociality, explaining differences between PNTs and autistic people leads to ease in the 'separated' (as per acculturation, meaning within an autistic group) compared to PNT group[13]. Bellini et al. (2004) states that autistic people's empathy correlates with social anxiety (i.e., low empathy equates to low social anxiety, but as empathy rises so does social anxiety up until a certain point). Conversely, Spain et al. (2016) establish no relationship between social cognition and social anxiety, which queries what empathy was measured in Bellini et al.'s paper. Milton et al. (2022) describe why empathy is based on dispositional diversity, meaning that the situatedness of sociality including empathy is dependent on an individuals' disposition (or rather its reciprocal,

[13] Examples of the reasons for the ease include correctly identifying intentions of autistic people better than non-autistic people (Heasman & Gillespie, 2018; Sheppard et al., 2016); fewer autistic 'traits' expressed with an autistic compared with non-autistic group (Gernsbacher et al., 2017); and autistic adults are less dissuaded by negative initial impressions when contemplating to socialise with other autistic adults later (DeBrabander et al., 2019). Furthermore, Heasman & Gillespie (2019) demonstrate that autistic interactions use a distinct pattern of intersubjectivity that is effective for mutual understanding, yet uncommon by non-autistic standards.

mutual failure); this renders mono-directional conceptualisation of social competence moot.

Within an example group of non-autistic population (transgender people), Nobili et al. (2018) states that social acceptance relates to social anxiety. Umagami et al. (2019) found a lack of acceptance to be one aspect of loneliness for autistic people in their systematic review. Less peer acceptance has led to loneliness in other populations, for example people with learning disabilities (Valås, 1999; Yu et al., 2005) and middle school pupils (Parker & Asher, 1993), albeit that more up-to-date literature suggests the perceived not actual peer acceptance mediates between self-esteem and loneliness (for Dutch adolescents; Vanhalst et al., 2013). Seemingly, the bi-directional nature of social communication becomes ever more prominent through felt ostracisation. For example, Schroeder et al. (2014) claim that peer victimisation bullying leads to more social anxiety. Likewise, loneliness is related to social anxiety (Schiltz et al., 2020), which would be a further cyclical issue (with loneliness feeding into social anxiety, and vice versa).

As autistic people are stigmatised by society (Han et al., 2021), the self-blame leads to self-stigmatising identities for autistic individuals (Botha et al., 2020; Moore et al., 2022). Acceptance has been known to help, as has not needing to mask (Bernardin et al., 2021; Bradley et al., 2021; Cage et al., 2018; Cage & Troxell-Whitman, 2019; Cook et al., 2021; Loo et al., 2021) (masking has been found to lead to social anxiety; Cook et al., 2021; Dell’Osso et al., 2021). Complementary to this, self-compassion correlates with anxiety and depression, and specifically social anxiety relates to lower self-compassion (in the

general population; van Dam et al., 2011; Zessin et al., 2015). Cai & Brown (2021) call for more research in using self-compassion outcomes in research with autistic adults. Autistic people suffer testimonial injustice from living in a neuro-normative social world (Chapman & Carel, 2022). Hence, with cognitive mediation (through self-empowerment and understanding one's legitimacy) and testimonial *justice*, it is proposed that these would mediate social anxiety by leading to self-compassion.

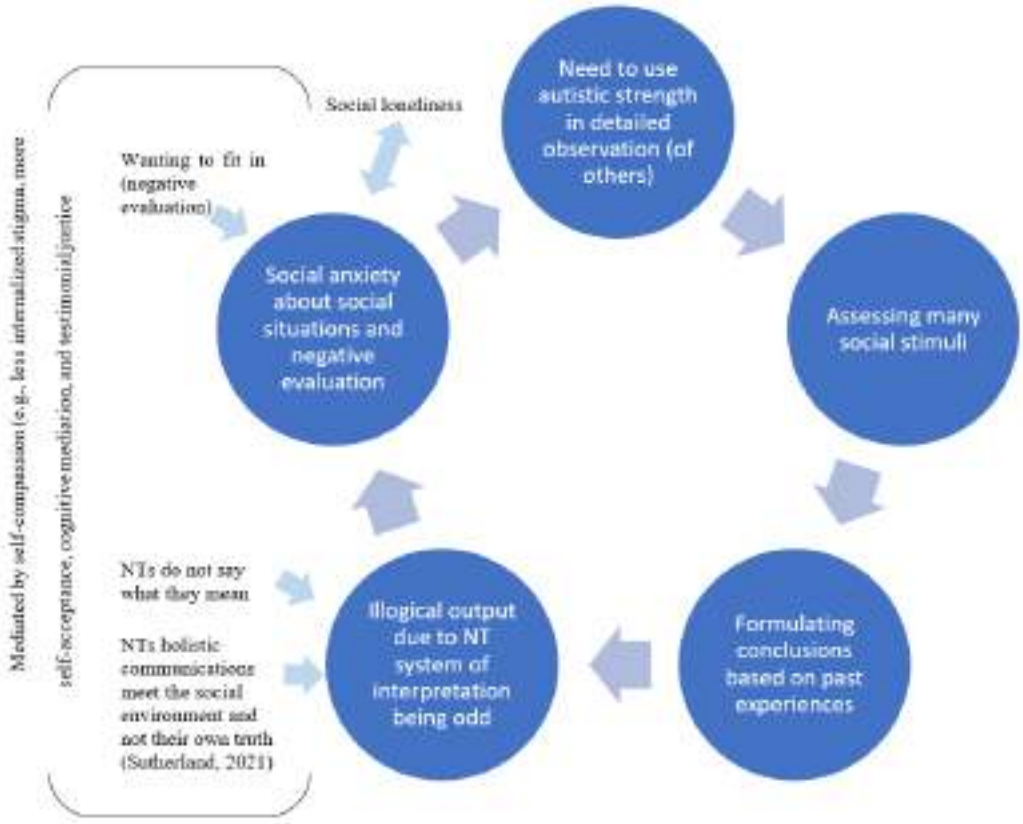
Nonetheless, sensory sensitivity seems key to anxiety (Verhulst et al., 2022). Pickard et al. (2020) discovered an association between social anxiety, and alexithymia and hypersensitivity after controlling for sex. Similarly, sensory sensitivities along with having negative social experiences was found to correspond with social anxiety in a qualitative study by Spain et al. (2020). Nevertheless, it could be possible that all anxiety could derive from uncertainty and hypersensitivity (Halim et al., 2018) (both of which have been explained in relation to predictive processing). Halim et al. (2018) claim that more severe consequences may occur from uncertainty, for example forgetting to do *everything*. This resembles inertia more than forgetting, but nonetheless, their point stands that the impact of uncertainty and anxiety may be great and debilitating.

Clearly life external to improv impacts anxiety in a variety of ways (as indicated by the data in this chapter). These may be a multi-faceted constellation of impingement of social anxiety, which may further include such broader non-autistic components, e.g., likeminded group members (or belongingness, Baumeister & Leary, 1995; Baumeister & Tice, 1990, Vang & Nishina, 2022) and

personality (Kaplan et al., 2015; Norton et al., 1997) (and it even may be true with autistic people in regard to like-mindedness, Waldock, n.p.). Based on the literature, a theoretical diagram about the prospective cycle of social anxiety is shown in figure 9. In doing so, data reported in this chapter and extensive literature reviewed provide insight into the *possibility* of how anxiety manifests and is perpetuated.

Fig. 9.

Theoretical diagram of the prospective cycle of social anxiety for autistic people.



Unambiguously, the impact of life upon autistic people would emerge regardless of improv training. Even so, based on this conceptual cycle of social anxiety, it is logical that the strategies learnt, and benefits gained from improv may reduce social anxiety (for benefits perceived from four weeks of training, see Chapter 8).

Complexities and issues with uncertainty

Through a critical autism lens, it is important to assess the power structures and barriers facing minority identities in the study (i.e., the autistic participants). In view of this, questioning and deciphering uncertainty and autistic people has value to theoretically explore in relation to the data. The measurement instrument could be called into question, much like various measurement

instruments that may not be relevant to autistic people (Jones, 2021). Bervoets et al. (2021)[14] published a commentary regarding the mismatch of salience between autistic and non-autistic people in relation to the implementation and framing of uncertainty. Much of the literature regarding uncertainty can be denoted as pathologizing autistic people (e.g., studies that use deficit-based terminology and/or the medical model of disability; Cai et al., 2018; Joyce et al., 2017; Vasa et al., 2018). Thus, Bervoets et al. (2021), seem to rightly reject the notion that uncertainty is an emotion regulation problem (but instead a processing difference). Of interest is that their argument centres on one overall point that uncertainty is a real, subjective experience and not an objective neurological issue (Bervoets, personal communication, 1st August 2022), with which cannot be disagreed. Nonetheless, the position taken within this chapter is based on the literature discussing the generality of uncertainty experience across the general population; Bervoets (4th August 2022, personal communication) clarified that the commentary formed two main arguments, the first agrees with the position taken within this chapter: predictive processing is a general theory of perception and cognition as such there is not a dissimilarity between neurotypes. The second

[14] The construct of uncertainty was based upon worry in the global population (Freeston et al., 1994). The measure does not pathologise bodies of people, but indicates a level of uncertainty being felt or experienced; it is researchers’ implementation and pathologisation with which Bervoets et al. (2021) disagree, inclusive of the use of the measurement instrument. The authors suggest that uncertainty derives from the differing priors and expectations leading to prediction errors (a predictive processing account of autism). Thus, this explains the occurrence or increased likelihood of uncertainty. In personal communication with Dr Jo Bervoets (on 1st and 4th August 2022), it was suggested that the mismatch exists due to the social world norms being suited to the typical person’s interval of predictions being manageable, whereas autistic people’s conflict with societal expectations leads to increased social anxiety and uncertainty. Bervoets et al. (2021) identify the possibility that autistic people may be more sensitive to prediction errors. Furthermore, it is assumed that the PNTs do manage their felt uncertainty. Therefore, the authors do not hold the notion in their commentary that uncertainty is a bad fit, but rather treating predictive processing and uncertainty as deficits is inappropriate.

main argument (as per Bervoets, 4th August 2022, personal communication) is that autistic people are different, and the framing of uncertainty as a deficit is an issue as according to the DEP. Indeed, attending to uncertainty as if autistic people are non-autistic is inappropriate. It is believed that autistic people can gain from being less uncertain or being able to operate or perform any necessary life task through maintaining this ability (even if momentary and without alternative, negative impact); preliminary findings conveying such have been identified in this research.

In this chapter, there has been reason for uncertainty to be considered for autistic people. Fundamental needs could be left unmet or postponed without tools to enable autistic people to live with their uncertainty. It has been found that when the tool is provided, the extent or level of uncertainty seems to be less prominent. Therefore, as Bervoets et al. (2021) suggest, autistic people can be overly anxious and uncertain, but it is not an essential consequence of their identity (or disability). Furthermore, Cole (2021) states that across all human experience uncertainty occurs. Autistic people can find certainty within object-oriented asocial or counter-social means. Consequently, there is an available argument to not teach improv to reduce prediction errors, i.e., that the innate nature of prediction errors is not sociological but bio-psychological, e.g., their attention to detail would suggest a training scheme set to ameliorate uncertainty would provoke no change, yet it seemingly does. An alternative answer to why this might be is due to masking or passing (a common need autistic people have is to pass as ‘normal’) and as such covering their uncertainty; however, this is deemed too simplistic based on other discussion already provided (this needs

further, direct exploration as knowledge develops regarding the autistic experience of prediction errors, attention, monotropism and the consequent anxieties, including uncertainty).

The increase in trait anxiety

Trait anxiety may have increased due to the COVID-19 pandemic. Contrarily, social anxiety and uncertainty may have ameliorated due to fewer COVID-19 cases in participants’ local or national area, yet *only* these seemed to have reduced post-course. Alternatively, being in an autistic group once a week may have been the important feature over improv, and reduced their social anxiety and uncertainty. This could be a differing experience to their daily lives (albeit that some were autistic parents with autistic children). This means that replication and comparison studies would be required to better understand why and whether trait anxiety will always increase.

Conclusion

Improv did impact anxiety even during the COVID-19 pandemic, but not all forms of anxiety reduced. Autistic participants noted reasons for anxiety to increase in class and provided their day-to-day life as another reason anxiety increased outside of classes. For some participants, the research itself was more anxiety provoking than improv; this suggests that improv can become a known activity, but the research study and many aspects of life remained an unknown. Crucially, these findings allude to the complexities over the idea that improv simply functions as an activity that reduces autistic people’s anxiety. Nonetheless,

this study provides preliminary findings demonstrating that improv may reduce some forms of anxiety.

The following chapter synthesises the findings from all studies and offers a theoretical and practical discussion of the collective implications. In addition, comments are provided regarding the limitations of the research reported (including the impact of COVID-19), future work, and theatre and education practice.

10. Chapter Ten – Discussion

Introduction

This chapter will outline and synthesise the findings from all studies reported. Thereafter, the theoretical and practical implications for future work, theatre and education practice, and strengths and weaknesses of the thesis (including the impact of COVID-19) will be stated.

This thesis has explored the experiences of improvisers (beginners and experienced) across neurotypes. Building from past literature, the exploration of the topic through all reported studies addressed various aspects that were missing.

Before initiating this doctoral research, there was generally a lack of research in theatrical improvisation with autistic people. Most of the published texts that specifically focused on theatrical improvisation were primarily opinion pieces or descriptive in nature (e.g., Alana & Ansaldo, 2018). Of the papers that included an evaluative element, they tended to include improv as one element of a wider intervention (e.g., Socio-Dramatic Affective-Relational Intervention; Lerner & Levine, 2007). Studies that evaluated a program that incorporated an element of theatrical improvisation had methodological limitations, impinging on how the findings can be interpreted. There were small sample sizes, some of which were by design. Similarly, there was a lack of detail provided about participants, gender bias (i.e., a lack of female and non-binary autistic people), and participants were predominantly children, which constrains understanding of theatrical improvisation for autistic people (because this cannot be generalised to an adult population). The literature available identifying changes from theatrical

improvisation itself was limited due to only three papers including comparison groups. Previous literature was deemed to suggest that some form of improvisation (whether embedded in an intervention or not) resulted in autistic personal development and gains in relevant skills for autistic people.

The aim of this thesis was to understand the benefits of improv for autistic adults, in particular its impact on anxiety. In doing so, it was vital to develop an increased understanding of autistic people in relation to improv (as a readily available activity, profession, or hobby that engages agents in spontaneous and extemporaneous performance). In other words, it was necessary to understand autistic people’s experience of improv within the context of their wider lives and being autistic. The chapters have elucidated upon autistic lives and improv in numerous ways using published research, and knowledge garnered from the data collected within the reported studies. Furthermore, the contextualisation through embedding experiences of improv within autistic (and non-autistic) lives has enabled a deeper understanding of the function of improv for improvisers, and specifically autistic adults. The research questions re-stated below were divided into several more specific research questions in each of the studies within the thesis.

The two main research questions that underlined this research were:

- What benefits can autistic people gain from improv?
- In particular, does improv reduce anxiety for autistic adults?

Benefits of improv

To account for the literature on broader theatrical improvisation and assess whether the experiences and gains discussed fit a sample of the global population of improvisers, a survey (KICS) was constructed and implemented (Cronbach's alpha: added value to my life (positivity): .91; social and communication skills: .90; community: .82; relaxation: .87). The survey (see Chapter 3) identified that agents benefitted: nearly all respondents agreed improv added value to their life, over three quarters responded that they developed social skills, nearly 90% developed communication skills, over 90% enjoyed the company of other improvisers, and nearly 80% felt they wanted the same as others in their improv. 83% of respondents felt relaxed more often than not in their own group and 67% of respondents were relaxed being a non-member or guest in a group. 77% of respondents trusted their scene partner more often than not. However, it is important to consider that nearly a quarter of the respondents were new to improv (under three years), with people usually engaging in improv one or two times a week. A key finding was that there is no difference of respondents' perceived impact of improv on the stated domains or trust between binary genders. Nor were there any differences between ethnicities or continent of residence. Nonetheless, the sample was not large enough for these to be definitive (e.g., three non-binary respondents).

In addition, it has been identified within the qualitative findings of the KICS what makes improvisers trustworthy, what there is a lack of and an abundance of in improv (see Chapter 4). For an improviser to be deemed trustworthy, agents must be focused on the others in their company or cast through accepting the moment; themselves and others; feeling like they are heard

and respected (for who they are); having integrity with honesty, openness and being vulnerable yet playful, being reliable, skilful and committed; and supportive through mutual following. There was a lack of improv being a profession and being treated as an industry (albeit that these would be both constructed differently, and function differently across the world); diversity and inclusion (with all voices to be heard); the opportunities to grow (improv being affordable and available); variety of styles, skills and content; and people that let go of control. As for what there was an abundance of in improv, respondents identified humour and comedy; styles and formats; specific qualities of its agents; and psychological and emotional release; connectivity; and opportunities (as benefits of improv). However, contradictions exist between what there is an abundance of and a lack. Some respondents found a lack of opportunities to perform due to time restraints and their area, which suggests less opportunities to develop (as found in abundance). There was a lack of variety in styles and skills, which is opposed to the abundance of content in improv. Additionally, some respondents noted a lack of freedom, flow and non-judgmental attitudes in improv, which is diametrically opposed to the abundance of the acceptance and no judgement and going beyond their boundaries from the theme ‘People in Improv’ (see Chapter 4).

This has been replicated and further developed by the remaining studies in this thesis. Participants across studies gained similarly, so the perceptions of participants new to improv resembled those of experienced improvisers with a wide range of experiences (the minimum being more than the short four-week course). Of interest is that there is a lack of difference between the classes that were optimally suited to autistic learners (the benefits experienced in Chapter 8)

and the gains from classes not necessarily constructed for autistic people (as per Chapter 5). It has been found that acceptance, cognitive flexibility and rolling with it (a theme in Chapter 5) were experienced in the classes (see Chapter 8, across a theme 'Being accepted as and with other autistic people' and a sub-theme 'Going with the flow, letting go, and mindfulness'). This might suggest (as per Chapter 5) that autistic people can go "full autistic" in improv, being accepted for who they are and the way they are as a person. Additionally, further similarities were found with skills or strategies that autistic people value, and gains in mental health, and quality of life being common benefits for both experienced and new improvisers (regardless of their neurotype). Therefore, it is likely that these benefits can be experienced no matter the person's neurotype or the pedagogy (however, further research regarding this is discussed below, see 'Future direction for research'). It is possible that due to COVID-19, participants in Part 2 were unable to implement improv in other areas of life unlike participants in Chapter 5 (i.e., the theme 'Creativity and Opportunities: The arts and the workplace').

Specific skills and strategies have been discussed in past chapters. For example, earlier and specific learning regarding fear of failure could be helpful, e.g., romantic rejections. It is clear that in some way, improv could assist autistic adults in developing further coping strategies. In both Chapters 5 and 8, it has been stated that improv helps with shopping, e.g., when needing to ask a staff member where the bread is (Chapter 8), and one participant classified this as tricking themselves by treating the moment as an improv scene with the staff member (Chapter 5). Hence, it was stated that it helped with asking for

clarification. The more generalised point is that improv has helped engage in spontaneous moments to gain the most from it. With this in mind, improv may improve some autistic lives through increased coping strategies. This could be about coping with failure, bridging the needs of the moment with the ability to action in that moment, or developing an increased understanding of themselves (i.e., identity).

Autistic-valued social and communication skills are an important topic, as discussed in Chapter 8. Social and communication skills were identified as experienced in improv within the survey (see Chapter 3). From the interview and classes study, having spoken directly to autistic people, it can be identified what social and communication skills improve and are within the autistic sociality (or at least are valued). For instance, social scripting is not negative, but being able to sustain a conversation beyond the script or when it goes in a new direction could be beneficial. This does not detract or devalue the autistic communication style, but is an addition or a provision that may be useful.

Interpersonal relations are a key part of life, which includes for autistic people (Müller et al., 2008). Autistic improvisers discussed feeling accepted and mentioning the social relations that occur. In particular, community was found to be possible from improv (based on enjoying others in improv and wanting the same), which, as a formation of a social identity, is reflected well in the other reported studies (i.e., Chapters 5, 7, 8 and 9). How someone acts socially is related to their perceptions on the social relations (Kenny, 1994; Kenny & Voie, 1984). In improv, albeit not specifically known for autistic people, there is a cyclical relationship between trust and feeling relaxed (Chapter 3). Thus, this

social factor would benefit from further developed understanding. Similarly, another social factor is with improvisers seeming to feel heard and respected; this would be a valuable asset to autistic lives, which would equally gain from fostering further insight than what is reported in Chapter 5.

The value of self-determination and proffering a voice to the marginalised group is another important gain that has been experienced from improv (Chapters 5 and 8). The prospect of which indicates the possibility in improv for autistic improvisers to go "full autistic". As stated in the introduction, historically, improv has helped with coping via deconstructing and challenging the status quo or activating against the issues (i.e., empowerment) (DePasquale & Lewis, 2012). As previously discussed, this fits quality of life and more generally well-being constructs. Improv can be helpful for autistic adults, as it has rules and structures, and improvisers are honest, open, and playful (Chapter 4). Within an environment that provides these requirements for autistic improvisers, it is of no surprise that the results seem to be increased self-determination.

The autistic experience of improv (see Chapters 5 and 8) included the acknowledgement that the PNT world is problematic and the impact of it can be noticeable. Thus, improv can only help to a certain degree. For instance, masking was a longer process for some autistic people (see Chapter 5), so improv had no perceived effect upon this phenomenon. Similarly, for all neurotypes in Chapter 5, there were facets of their life other than improv that offered positive change in their lives.

Improv is not a panacea

Regardless of the positive comments from improvisers about improv, improv cannot work for everyone, irrespective of their neurotype. Within the survey study, a small amount had quit improv (five respondents). No vastly negative experiences were identified (i.e., they did not quit improv because of it). However, some people are not ready for improv in the moment (reported in Chapter 5). In part two, it was noticeable in teaching (through personal reflection) that the issues experienced were more about not enjoying acting out scenes, wanting to be funny, or struggling to let go of control (i.e., participants not able to listen sufficiently because they were planning their reply). In Chapter 5, it was identified that some non-autistic people that have anxiety may attend classes before being ready. It is possible that this is about finding the correct method for the individual for them at that given moment. Perhaps it is possible later in life that they would be more able to access the benefits of improv (if at all).

There seems to be other factors that support autistic people, which include like-mindedness or personality. Improvisers are not a homogeneous group that will accommodate all other improvisers and meet each others’ personal needs (as a human being). For example, as found in Chapter 4, there are contradictions in what can be experienced from improv. Therefore, the other factors found in Chapter 5 (e.g., maturation, being likeminded, etc.) are an important consideration. In Chapter 4, it was discovered that there has been a call for more diversity in improv, and that some improvisers were less accepting and felt to be judgemental. Further to this, Chapter 5 reports on finding the right people.

Personality was a consideration stated by participants (see Chapter 8). The study of personality is an interesting field. Its application to various aspects of life

have led to questions regarding the functionality of personality domains (Schmitt, 2004). For example, a common dichotomy of introvert and extrovert can be identified by laypersons. The issue with this binary is that it is reductive; it is unlikely that anyone is solely one or the other. A performer is extroverted in order to be onstage, but to suggest all performers must be to some extent an extrovert would be far-fetched (e.g., 'the introverted improviser', Roznowski et al., 2020). One role in life people may be happy to perform (as per Goffman, 1963) could be related to extroversion, but this may not be throughout all roles one may have in life. Within improv, the plethora of potential personality traits that might be expected were reported in Chapter 4. These were: being accepting of oneself and others; able to be present to the moment and those around them; being an active listener; non-judgemental; good-natured; supportive; loving; playful and mischievous; willing to fail and be vulnerable; and have openness and empathy. Aligned to Peterson & Seligman's (2004) twenty-four character strengths and virtues, many of these findings from Chapter 4 on personality traits fit within their themed strength (or domain) of 'humanity'; within this conceptualisation of character strengths, Peterson & Seligman identify six 'themed' strengths. Other strengths include bravery and integrity, which may fit due to performing onstage with no script potentially being perceived as an act of bravery. Yet, this was not found in the study from Chapter 4. Based on improv being an art, it could be expected to have some relation to 'Wisdom and Knowledge' through 'Creativity' (i.e., originality and ingenuity) from the twenty-four character strengths and virtues; even so, these are not clearly stated for improvisers in Chapter 4, although elements of openness are within this character strength. Peterson & Seligman include a strength on humour with playfulness as an aspect (which was

stated by improvisers). Aligned to the Myers-Briggs Type Inventory (MBTI) (Briggs-Myers & Briggs, 1985), the measure has only two relevant domains, feeling and perceiving. In any case, this instrument can be suggested as flawed within its Jungian psychology foundation, and the issue with empirical evidence for ‘true’ dichotomies (Boyle, 1995). Lastly, from the ‘Big Five’ (Fiske, 1949; Norman, 1963, 1966; Smith, 1967; Goldberg, 1981; McCrae & Costa, 1987), only agreeableness and openness match the reported data from Chapter 4; however, it would be irresponsible to even tentatively suggest these are accurate (e.g., it lacks a comprehensive measure of personality, and predicting criterion variables, Feher & Vernon, 2021). Moreover, as an exercise in understanding the value of personality measures, it could be suggested that measures must suit their use in order to reduce a person to four or more types of people. Across these measures, it could be suggested that improvisers are more focused on humanity, including openness, agreeableness, emotions and being non-judgemental. Nonetheless, this is a subjective account of the links between the data reported and these measurement instruments.

Another reason improv is not a panacea is that the teacher can make mistakes, which would cause issues. To illustrate, in Study 5, participants discussed the issues with improv schools or specific teachers. As was found in the study of Part 2, some games and exercises can be inaccessible (first group, Week 3). This week was experienced as more difficult by three groups. The content one person found triggering was removed but gave insight that it seems useful for later learning. This means that the curriculum structure is an important consideration for teachers and course providers. With this as an example, what

may be helpful for non-autistic adult learners beginning a course may not work for autistic people.

Anxiety reduction: improv with autistic adults

From the mixed methods component that investigated anxiety (see Chapter 9), improv classes seem to impact anxiety levels (Research Question 2). Only anxiety and not avoidance of social and performance interactions or situations significantly decreased for the autistic participants, and they seem to manage more with uncertainty about ambiguous situations and the future. There were no significant results regarding state and trait anxiety (the potential reasons for this were reported in Chapter 9). Albeit that participants' anxiety was frequently low, there were reasons for it to increase, such as their contrary experiences with the teacher that led to either lesser or greater anxiety. Nonetheless, it was possible that anxiety decreased after the class, if participants' felt anxious within the session. Reasons for anxiety to increase or decrease were group dynamics and the course provoking or preventing anxiety. A key finding was that autistic people have variety of pre-existing reasons for anxiety, but delivery of the course can make the unknown (improv) more familiar. For some participants, the research and not the improv was more anxiety inducing.

Improv classes do not exist external to the individuals' lives or lived experience in the social world. Accordingly, such related phenomena to autistic lives become important, such as camouflaging, stigma, spatial matters and many more components of which are increasingly being studied within neurodivergent-affirming discourse).

Additional findings

To ‘comedy’, or not to ‘comedy’, that is the question

As reported in Chapter 3, the continents that use comedy-based terms are North America and Europe (in relation to possibly not seeing comedy as a genre of theatre). South America uses more theatre-based terms than other continents. No respondent in North America used the term impro. This relates to respondents across all continents mostly using the term ‘improv,’ which is possibly perceived as more neutral in its meaning. These data may not be representative of the population, as it is anecdotally known that terms used in North America include the word ‘impro’. However, conclusions about the meaning or interpretation of terms by their orator were not a main aspect of the investigation; therefore, understanding the interpretation of the terms were limited by words provided. Although of interest whether agents of improv perceive their work or hobby as comedy akin stand-up or as comedic theatre (if there is a difference between these descriptors), the neutrality of the predominant term used resulted in not being able to fully understand this aspect of improvisers’ experiences and thoughts. Nonetheless, the data indicates that the culture or mindset about improv in their respective continents might be different.

Complexity of trust and feeling relaxed

In the survey (Chapter 4), performing improv increased participants perception of their scene partners trustworthiness over predominantly taking classes or teaching. Respondents enjoyed playing with others more when they trusted their scene partner ‘most of the time or always’, rather than ‘half of the

time' (rating 'sometimes' or 'never' was not significant). Socialisation, enjoying playing improv with others, wanting the same as others, and feeling relaxed within a company had increased ratings when the respondents trusted their scene partner 'most of the time or always' and not 'sometimes' or 'never' (there was no significance to trusting others 'half of the time'). Relaxation both within a company and as a guest led to more trust in their scene partner. This links well to Part 2 of the thesis, in that anxiety is a heightened affective state which would relate to relaxing with scene partners in the class. Those not able to trust their scene partner fully would not be able to relax. Similarly, participants that could feel relaxed may have been more trusting of their scene partner.

Developing improv for the autistic way

From the study on the course, the key findings from the action research component (see Chapter 7) were that autistic learners need adaptation and their needs to be met. These include being allowed to be autistic; having a space to rest or recuperate with an accompanying person if triggered; an appropriate group size and mode of study; and use of gradual, incremental teaching. To reiterate, there was heterogeneity of needs regarding teaching mode and class size.

Strengths and Weaknesses

The main strength to the studies within the thesis were that they were all novel and unique to the field. The exploratory nature supported the preliminary findings across all studies, with each study establishing findings that led to the next step. Chiefly, they each and collectively have helped to gain a fuller understanding of improv with autistic adults.

There are several weaknesses (or limitations) across the thesis. As a researcher, the development of skills and knowledge regarding practices and best approaches to reach goals were progressive. Consequently, some limitations could have meant reaching alternative findings and others are minor issues. In the interview study, the research methods employed could have used more creative means or other sources of insight that may have been helpful to spur on participants’ thinking. It might have been better to implement a larger project where the thinking is not a snapshot of their thoughts. Furthermore, the researcher identified who was neurodivergent (excluding autistic participants) according to diagnosis, over the participant knowing they were and being recruited as such. In Part 2 of the thesis, the use of multiple studies within one delivered online course is a clear limitation. There seems to be a need for multiple courses: firstly, addressing the action research, then discussing benefits during a second course, and lastly re-running classes to measure anxiety and using mixed methods. Furthermore, when investigating anxiety using mixed methods, there could have been better qualitative methods to match the focus of the quantitative measures. The need was to comprehend whether participants felt less anxious in life after the improv. Instead, the questions asked whether they were anxious in class or just after. Greater reflection on their life and whether improv reduced anxiety would have led to more integrated results. Moreover, it may have been helpful to question whether the measures were reflecting the experience of the class and reducing anxiety, either for a short time each week or continuously between the weeks. Although, the presence of COVID-19 would have made it difficult to know with certainty whether improv had this impact.

There are some minor limitations include the dominance of English language across studies. This seemed to have the most impact on the survey study. Clearly, the development of the measurement instruments for this study needs further validity and reliability testing, both due to the formation of the measure for the study and for autistic people (if to be used with this population).

The Impact of COVID-19

In Chapter 6, the *changes to the research design* due to the pandemic have been fully asserted. It is now necessary to discuss the impact of COVID-19 on the research. As is known, the pandemic began in the UK in March 2020. This was before the final study was due to be executed. The study had been nearly three-years in design. The difference in implementing improv online, and participants learning improv during COVID-19 would have had some effect (albeit to an unknown extent). The impact of COVID-19 does not solely impact the research, but the researcher too. Both personally and professionally, with strain across various aspects of life, the researcher experienced increasing struggle. This strain did not wane with societal perception at the time that the risk of COVID-19 was less than it was later proven to actually be. Expectations from work impinged on the personal life of the researcher, decreasing and problematising their well-being and capacity to engage not only in the work, but with revitalising personal aspects of life. The extent of the impact of COVID-19 cannot be reduced to simply *directly* hindering the research. The multi-faceted nature of its impact brings further toils, both directly and indirectly to the work.

Nonetheless, the research was successfully completed, and the strengths of this novel research project outweigh the weaknesses. It is believed that the preliminary nature of the studies provides adequate contribution and addition to knowledge that the flaws can be perceived as minimal.

Before and After: knowledge development on improv and autistic adults

There are similarities to what has been found in the thesis to what is written in past published literature. Autistic adults, much the same as has been stated about autistic children in past texts, can acquire personal development and skills. This includes social and communication skills. This key finding was a common experience for all improvisers, both new to improvising and those with past experience. Even so, these must be skills or strategies valued by autistic people. Past literature was suggestive of developing coping strategies. This could be interpreted from the studies in the thesis as strategies to deal with PNTs. Nonetheless, in both past literature and the current, reported studies identify quality of life and mental health gains from theatrical improvisation.

Theoretical and Practical Implications

These chapters combine to identify a variety of theoretical and practical implications. The following section will discuss differences and similarities (of neurotypes); the autistic social world and community; identity (specifically addressing identities in relation to social inequity, and social and role identity); and well-being.

Differences and similarities

As Punit et al. (2021) have been discussing in recent years, the focus of relevant fields of research is frequently about the differences of population or the amelioration of the problems these people have. Yet, there are similarities between populations too. Autistic people are a prime example, as the narrative in the literature is often about the deficits and the difficulties for autistic people or their families. Nonetheless, the studies in this thesis have shown that the benefits gained from improv are similar.

Autistic social world

Across the chapters, the importance of the social world has been embedded. In Chapter 5, the impact of the neuro-normative social world is noticeable. Furthermore, one participant speaks to the complications of working alongside PNTs within workplace contexts, i.e., the arts. In Part 2, participants described the issues of working with PNTs (i.e., being judgmental, creating stressful situations, ridicule or bullying). Autistic participants across studies identified the value of identity-focused ontological status. Furthermore, the complexities have been alluded to include that being autistic does not mean that the social engagement will be successful, but other factors (i.e., other than improv) will be vital aspects (as discussed below).

The social world needs to be recognised in-line with how Lipsitz (2007, 2011) discussed racial spatial matters. The world does not exist without the neurotype segregative othering experienced by autistic people on a daily basis (Anderson-Chavarria, 2021; Michael, 2021), as discussed in Chapters 5, 8 and 9.

As such, being in a neuro-normative social world can lead to hermeneutic injustice (not having the words to describe one’s own experiences; Dinishak, 2021)[15]. For example, not knowing the bi-directional nature of communication, so they blame themselves; or not knowing that they are better nonverbally. When an autistic person does not know that their inertia (or even time management as with executive functioning) is not laziness, this can lead to self-stigmatisation.

Needless to say, the issues experienced in everyday life will impact improv. As reported in Chapter 4, there is a variety of improv, networking, and stage time; however, accessing a variety of improv may be dependent on the requirements of each form—i.e., are these accessible to autistic improvisers? Furthermore, networking can be a problem for autistic performers more generally (see Chapter 5, and in the wider literature, see Buckley et al., 2021). Accessing stage time will have gatekeepers, and it could be queried if these gatekeepers are PNT what would the outcome be (i.e., considering thin slice judgements, DeBrabander et al., 2019; Morrison et al., 2018; Sasson et al., 2017; Sasson & Morrison, 2019)? Networking and being friends could be a barrier to stage time for autistic improvisers, if friendship is implemented differently to PNTs (see Bertilsdotter-Rosqvist, 2019; Heasman & Gillespie, 2019). It has been noted in Chapter 4 that sexism and racism exist in improv, so it is likely that ableism may

[15] There are numerous terms that are based around the same area of consideration. These terms include, but are not limited to: hermeneutic injustice; epistemic oppression, injustice, dis/affordances; testimonial injustice; and contributory injustice. These all relate to autistic people's knowledge of themselves (being autistic) and their provisions to be a knowledge holder of their own identity and/or disability. These have been important contextualisation of the data within the relevant chapters, and crucial to developing understanding of autistic people. In relation to improv, participants seemed to gain within this area or relatedly profited (i.e., self-determination). See Catala et al. (2021); Chapman & Carel (2021); Dinishak (2021); MacKenzie (2018); and Mladenov & Dimitrova (2022).

occur too. In Chapter 5, there were not many issues stated within improv, but more so in the wider theatre community and profession.

Within the studies, it was suggestive that autistic community connectedness may be an important consideration. Cage et al. (2022) found that autistic community connectedness improves well-being, but does not reduce masking. They explain the possible reason for this lack of inter-relation in the mediation analysis is possibly due to the knowledge of the need to pass as 'normal'. This corresponds to the interview study, as reducing or removing masking is a longer process.

Social inequity and identities

Regardless of how academics and professionals identify disability in relation to autistic people, the reality in which autistic people live requires understanding. Therefore, the social oppression, social inequity and ableism underpin how participants have expressed themselves.

The relative dissonance between the needs of the majority (PNTs) and the neurodivergent minority frequently overbears that of the autistic person (the minority) (Botha & Frost, 2020). This occurs in a number of ways expressed by autistic adults in the studies, including othering, stigma, and double demotivation. Autistic participants can be perceived as 'othered' (e.g., Anderson-Chavarria, 2021; Michael, 2021; Stevenson, 2010). They can internalise the stigma and negative discourse about them (their being autistic) to embody what they should be according to medical, pathologising descriptions (i.e., as per labelling theory, Scheff, 1974). The internalisation of stigma may lead to double demotivation. In

Chapter 5, one participant from the USA discussed being excluded from ‘community theater’; (i.e., as structural influence on identity, Cinoğlu & Arıkan, 2012); it can be seen that this experience mirrors double demotivation. He felt unwanted and lessened efforts to participate, and others were rewarded by his lesser involvement. The theatre community would lessen their efforts to include him (and feel superior), and he lessens efforts to be included. This can be only determined as potentially what happened (as this theory cannot be specifically identified within the data beyond the provided interpretation).

It should be understood that relevant alleviation from these issues seems to be from the identities of autistic people. This stigmatisation of their identity can be combatted (as discussed in Chapters 5 and 8) by seemingly being with others of the same identity group. This suggests that identity groupings can facilitate breaking othering (in the short-term). Two of the three ways in which minority status group form within a majority context are unhelpful (according to Carr, 2003): first, assimilation, which is joining the majority, passing or changing oneself to accommodate the majority’s needs; second, ‘anti-conformity is alike advocacy’ (Carr, 2003, states this alike declaring what they are not). The third way is better, which is about achieving differentiation and the minority group defining their identity in their own terms (similar to the proceedings around and from Malcolm X; Carr, 2003). Otherwise stated, Malcolm X promoted having autonomy and independence among African Americans in the 1960s and '70s

(Ritterman, 1970)[16], as an identity within itself (a strong group-conception of their identity).

It is apparent that identity is a crucial aspect of the data in the studies (from the survey in Chapters 3 and 4, the interviews in Chapter 5, and the study on the course in all chapters in Part 2). Whether this is the identity found in improvisers (reported in Chapter 4), social identity such as ADHD or identity relevant to being likeminded (as in Chapter 5), or the importance of social identity (detailed in Part 2).

Identity theory (roles) can be perceived as the micro and social identity theory being the macro[17]. This is due to the social identity theory being about groups (a macro view), such as autistic people (in the same social group). Roles in social identity are like the micro (identity theory), for example, leadership, which can further be explained by suggesting these are like descriptors ('Tomas has the quality of leadership'). Therefore, people can have roles within groups (Carr, 2003; Hewstone et al., 2008). Social identity theory is involved in the storming process of the formation of groups whereby there is intra-group

[16] This is not to devalue or depreciate the struggles of Malcolm X or any other black American of the era, nor before or after this era. Malcolm X was in fact struggling against both white and black people, especially towards the time of his murder (Hussain, 2020).

[17] This is not to overlook the complexities of the topic of identity; however, the discussion will focus on two out of the four components which are social and role identity: the other aspects are environmental factors and personal characteristics (Cinoğlu & Arıkan, 2012). Furthermore, the possibility to consider some roles more as personal characteristics is acknowledged.

comparison (Carr, 2003), and the roles can be defined through the process of this intra-group comparison (see Brewer, 1991; Carr, 2003; Hewstone et al., 2008).

Stets & Burke (2000) suggest that roles can be connected to social identities (the roles that we play can be prominent when in-group). However, the function of an identity might not be salient with their social identity in a given moment or within that specific in-group (Stets & Burke, 2000). Furthermore, people have many roles, in which some may hold hierarchical power over others (i.e., salience hierarchy, Turner et al. 1987). For instance, identity theory and social identity theory can be employed to explain both ADHD and autism identities and their salience. In the interview study, participants may have a role identity in conflict with a macro identity (social identity), which could be their autistic identity (for further information, see Chapter 5). As identified by ADHDers in Chapter 5, the hierarchy of social identities may mean (depending on the situation or ‘fit’, and the ‘accessibility’ of the identity with the perceiver) the ADHD identity maybe more salient than their autistic identity, and the role identity that's associated with the perceiver would be being loud, boisterous or energetic (depending on the ‘commitment’ to the role identity, or need of its existence). This could be perceived as being overbearing for other people within the autistic community (or the social identity group). There are other ways in which one’s social identity could be or may not be salient. One of which is for those that disassociate with the autistic identity (diagnosed autistic and socially rejecting it); the social identity would be anything other than the diagnosed identity that would be a role identity in this circumstance (e.g., an adjective that is biologically true, and socially undesired). Therefore, the salience of this participant’s autistic identity is more so when the role (or person characteristic) is

activated, e.g., due to the goal of gaining support and meeting their needs, based on interacting with the social worker (i.e., Bill in Chapter 5). Seemingly, when relating this to improv, one's improviser social identity may equally become or stop being salient in a given moment.

Identity and well-being

It is social identity theory that implies an aspect of well-being (specifically maintenance and development of self-esteem) which increases by participation within a group (Crocker et al.,1994; Luhtanen & Crocker, 1992). The self-evaluation based on group participation suggests that one's self-worth maybe based on group superiority over the out-group (Ellison, 1993; Stets & Burke, 2000). It could be implied that participation within the autistic community would require this social identity potentially to hold a superior identity to its out-group (non-autistic people). Nevertheless, holding this social identity as an autistic person whereby their associations within being autistic are based on negative discourse would devalue participation within the group. As seen in the interview data, having an autistic identity when not seeking inclusion within the social identity group, the result could be that there is self-stigma or that the identity of being autistic is (i) lesser activated as a role and (ii) hidden through passing using learned behaviour that they can surpass, or by suppressing their autistic needs. Nonetheless, these are propositional reasons to how autistic people that are improvisers and do not identify within the autistic community (thus, do not hold this social identity) are impacted by, or manage within their life. For example, one autistic improviser who had creative outlets, and did not interact with other autistic people, did not need this social identity due to their needs

being met by their Dungeons and Dragons (DnD) group (social identity) and through their artwork (both role and social identity as a creative and artist). The people involved are like-minded for them and hold aspects of what it is to be an improviser to a great enough extent that the group’s non-improviser identity does not matter. We may assume the improviser identity only holds value if others in their life could not provide a good time or ultimately be the ‘right’ sort of person. For example, some non-autistic improvisers state that some improvisers are not like minded enough for them.

Conversely, Stets and Burke (2000) suggest that it is the persons’ self-esteem and self-efficacy that increase with self-verification (identity theory and roles; as verified in Burke & Stets, 1999) over improving their self-esteem through group participation. Simply stated, this suggests accomplishing their role is more important than the success of the group. Additionally, the positive evaluation or validation from others over a salient role could increase self-esteem (Franks & Marolla, 1976; Hoelter, 1986; Stryker, 1980). Performing well in a role was found to provide a sense of control in their environment (Franks & Marolla, 1976; Gecas & Schwalbe, 1983). It can be seen that an autistic or neurodivergent person performing a role (not theatrical) within a theatrical scene (e.g., ‘voice of reason’ or the actor using rational truth) could feel validated, having control of the environment (being the co-created scene); although, they would not have *control*, they would know what they were doing and feel the sense of such. Developing an understanding of this matter with a group of autistic learners (or whether this is true within an improv context) would lead to better comprehension of this phenomena. In Chapter 5, the sense of validation came from being successful at improvising and being accepted and of their personal physical

limitations (being validated by highlighting their affordances). In Part 2, these are reflected by the importance of acceptance and the feeling of being accepted as oneself; subsequently, the validation of oneself and one's desired world[18] has the potential to reduce anxiety (as per Fischer, 1970), albeit that only social anxiety and uncertainty significantly reduced (reflecting the 'self-presentation theory of social anxiety'; Schlenker & Leary, 1982) with a small sample of autistic adults.

It has been stated in seminal literature that self-worth development may derive from the acceptance of the individual to be a member of the group (Ellison, 1993). This relates to how one may be accepted as a figure of a community of practice (Wenger et al., 2002), e.g., local knowledge, information and skills pertinent to the group.

Improvisers may hold self-congruency within a formed group as a protective factor that reduces anxiety (Bovard, 1959) with understood roles and consistent self-identity. However, potential reasons why improvisers may not be wholly homogenised are that the style, pedagogy, national culture, non-improv community culture (e.g., autistic), or sub-community of practice (i.e., franchised format of improv) may be an out-group or deviant from the group enough that the participants experience a need for self-regulatory or self-consistency effects (Carr, 2003). For example, a sub-community of franchised short-form improv (that has global connections of improvisers performing within this style and

[18] The phrasing is aligned to Fischer's (1970) discussion of people's desired worlds, which includes coveted milieu, relations and milestones including through human nature and aspirations being fluid and shifting.

format or production) self-regulate around other improvisers (asserting their ‘dominant’ social identity); the latter is not dominance in terms of overpowering other improvisers, but demonstrating preference of way of being as an improviser (group-normed, self-consistent social identity).

Anxiety, and specifically social anxiety, are related to identity (Fischer, 1970). Perhaps it is possible that lesser self-congruency increases social anxiety (Mazalin & Moore, 2012). This is similar to the ‘self-presentation theory of social anxiety’ (Schlenker & Leary, 1982) through evaluative situations, in which one must believe in the success of their desired presentation of oneself by an interactant in order to reduce social anxiety. Leary & Kowalski (1995) discuss how one's self concept and self-esteem are important. At the time of their writing, there were no empirical evidence regarding the salience of one identity over another. However, they suggest it is important to consider. This means, it is possible to ask what identity is important in any given evaluative situation. There are various times when evaluative salience is prominent, and there is an implicit or explicit evaluation, e.g., job interview, or the teacher will be socially anxious on a first day of a new class. In addition, social stakes lead to higher probability of social anxiety. However, all forms of stakes from any interaction could lead to social anxiety. To illustrate with a hypothetical example, a person might opt to seek minimal staked engagements including work situations. Thus, keeping the probability for social anxiety low. Yet, this is not going to always be possible. Thus, the hypothetical person could experience a higher probability if they need to impression manage within a given circumstance, i.e., the desire for a better job may come with new self-presentation expectations. For autistic people, managing normative evaluative situations and understanding the evaluative overtones or

situational cues would be difficult. As has been stated in other chapters (see Chapters 1 and 9), improv could reduce social anxiety due to the self-presentation oblivion or through the other-focused nature of the engagement.

Nonetheless, these have not as yet been explored with autistic participants. With all these considerations discussed above, the multi-faceted constellation of impingement of social anxiety and the possible relevance of personality and like-mindedness (noticeable across Chapters 5, 8, and 9) may be mediators for well-being or QoL.

Autistic improvisers and well-being

Autistic people have reduced QoL and well-being in life, generally (Chiang & Wineman, 2014; Jennes-Coussens et al., 2006; Mason et al., 2018; Moss et al., 2017; Van Heijst & Geurts, 2015). Thus, discovering approaches that can support their lives is an essential reason to understand why improv may improve their lives, and what aspects of it does so. Within the studies of the thesis, it has been noted that the central improv principles, such as acceptance, and games and community (i.e., positive group dynamics) can help autistic people. When learning improv, the autistic or neurodivergent identity can better support their learning (environment) as it helps lower anxiety levels. As per the Yerkes-Dodson law and the Curvilinear Anxiety Model (Janis, 1958; Levitt, 1968), *moderate* anxiety leads to greater success that could be experienced by autistic people when strategies exist to lower anxiety to a manageable level. Next, on the topic of well-being, Hainselin et al. (2019) used the WHO-5 Well-being Index and discovered that discovered that people with disabilities can gain

improved well-being including at the 10-month follow-up compared to control from 12 hours of improv training. Schwenke et al. (2020) found that improv leads to better psychological well-being for a general population; however, much alike Chapter 3, they did not find a connection to mindfulness, nor enhanced acceptance (the latter is opposed to the reported qualitative findings in this thesis).

Improv can be situated within a multitude of QoL and well-being frameworks and can be found to be beneficial. Across the chapters, Schalock and colleagues’ (2002) QoL domains have been used. Seligman’s PERMA model (2018) is equally suitable[19]. In addition, the slightly broader constructions on hedonistic and eudaimonic well-being seem to fit well too (these have already been discussed in Chapter 5 and 8).

As more researchers engage in studying improv, more findings about the mental health benefits are published, e.g., breast cancer survivors (Asher et al., 2021), and dementia (Dunford et al., 2017; Hafford & Letchfield, 2012; Keisari et al., 2018; Keisari et al., 2020a, 2020b; Zeisel et al., 2018). There have even been practitioners engaging in publishing about improv and autistic children (Alana & Ansaldo, 2018; Hopf & Ansaldo, 2015; Kasthurrirathne et al., 2018; Kramer & Ploesch, 2021). In Chapter 7, participants detailed wanting applied improv, such

[19] PERMA is an acronym that stands for positive emotions, engagement, relationships, meaning and achievement. What it stands for will be detailed aligned to improv and autistic people, some of which is clearer in the data than others. ‘Positive emotion’ can be suggested to link to laughter and joint optimism. ‘Engagement’ is discussed by Seligman as flow, which is experienced in improv and by autistic people. ‘Positive relationships’ is the same as interpersonal relationships discussed in the chapters. ‘Meaning’ or more clearly stated as contributing to others, which happens in co-creating scenes together. Lastly, ‘accomplishments’ or ‘achievements’ can come from successfully, spontaneously creating in improv. For the description of the PERMA model, see Seligman (2018).

as exploring life situations and experiences; this would be therapy (i.e., externalising trauma). The question this suggests is whether those implementing improv with autistic people are seeking to provide therapy, in which case it is important to ask why do they want this (i.e., is it for externalising trauma, and therefore is more aligned to Moreno's psychodrama therapy), or an ongoing interest and hobby that has psychological and personal benefits?

Future direction for research

As per many theses, the findings lead to more questions than at the beginning. In discussing the studies, some key questions have already been stated. The six main areas for future directions regarding improv are (i) researching flow (of which improv is an autotelic activity), (ii) other research designs (iii) applications of improv (i.e., in interventions or therapies), (iv) improv pedagogy, (v) forms of theatrical improvisation, and (vi) different populations (e.g., using the same curriculum but in different countries) or identities (e.g., dementia, exploring the care sector, asking would some improv practices such as acceptance be beneficial for service users?). These areas can be explored with autistic people. For example, when in flow, autistic people may struggle to stop to the detriment of their health (McDougall & Milton, 2014). Another study may be investigating autistic people with dementia in relation to the above ideas.

The original plan for the last study in this thesis (Part 2) was to use control groups, eventually with hope that this would lead to a randomised control trial to help understand the impact of improv with autistic people. As a result of the COVID-19 pandemic, research using a control group is still required.

Regardless of the population under study, interventions with one component being improvisation (as for autistic children found in Chapter 2) should not result necessarily in similar outcomes; this is due to the interventions ostensibly not being embedded in the culture of improv or being a community of practice as improv specifically. Despite this, there are key similarities for autistic people experiencing improv between Chapter 2 and the data collected from autistic people within this thesis. In view of this, further research is needed.

Importantly, the pedagogy of improv may lead to worse learning opportunities for autistic learners, so further research exploring what pedagogies do not work (after ethical considerations, i.e., applying the findings from Chapter 7 to the different pedagogies). Similarly, different forms of theatrical improvisation (clown, theatre of the oppressed, playback theatre, etc.) can be explored. Teaching clown to autistic people would be of great interest, as a common pedagogy that assumedly would be harmful for autistic people (via negativa[20]) should be investigated ethically (i.e., interview autistic clowns that experienced this pedagogy). Thereafter, studies could follow the series of research in this thesis (not implementing via negativa). Keates & Waldock (2023) depicts gelotophobia as an under researched area that would be relevant for further work, and relates well to improv and the proposed clown studies.

For wider autism research, social identities and connections are of interest, based on the differing power and importance these hold in the moment. Social

[20] A common pedagogy of clown is ‘via negativa’, which implements teaching through failure, and sometimes mocking by the teacher (Coburn & Morrison, 2013; Evans & Kemp, 2016).

roles are usual in the general population, but self-identity for autistic people differs (e.g., anthropomorphism, Simmons, 2019; Sutherland, 2021). Autistic people have multiple self-identities because the connection to the different roles go beyond norms of the social world.

Conclusion

When embedded within the autistic lived experience, improv can only partly alleviate life stressors (including reducing anxiety experiences) with various additional benefits that may lead to better well-being (or quality of life) (Research Question 1). This is an important consideration that is transferrable across strategies, intervention and other similar implemented practices that are designed to improve autistic lives. That aside, it is important to note that the improv course led to social anxiety and uncertainty reduction within the pandemic and from a short four-week course (Research Question 2). Other neurodivergent (including autistic) improvisers discussed mental health gains, which indicates that improv could benefit this population in this regard. Notably, acceptance is a central improv principle that maintained prominence across all studies and has impact on identity and well-being. Yet, group dynamics and group formation fundamentally include exclusionary prospects, such as othering (as elementary to human psychology). Upon negative collective, social group encounters (even vicariously, e.g., vicarious helplessness) will impact post-dehumanisation (i.e., felt acceptance) through spatial matters. The social world is dominated by neuro-normative constructs and expectation upon those othered by the societal and structural systems. Therefore, how an individual's life impacts upon them will be determined by each life encounter and experience.

Nonetheless, improv has clear value that seems to translate well for autistic adults.

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