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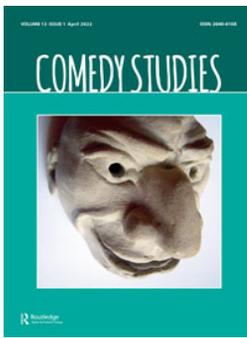
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# The benefits of participating in improvisational comedy: a global confirmatory survey study

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# The benefits of participating in improvisational comedy: a global confirmatory survey study

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## ABSTRACT

Improv comedy is a small subset of improvisation, which has been under-researched. This study aims to investigate if the benefits agents experience match previous research. Literature discusses positivity, community, social and communication skills, and relaxation. The survey gained 128 global respondents answering a series of questions related to their improv experiences (as per stated literature topics), including in-depth demographic information. Improv has added value to most people's lives, provided improvements to their socialization, and improved their communication. The respondents felt that they enjoyed the company of others, and they wanted the same. Most people trust their scene partner more often than not and felt that they were relaxed in their own group and as a guest. Variations within the global population are examined. The survey functions both reliably and validly, finding that past research fits the global population of those engaged in improv. Most respondents agree to the domains presented and trust their scene partner. Performing improv breeds trust and trust can lead to increased benefits in the domains. Nonetheless, there are no differences in represented groups of respondents on their experience of the benefits of improv.

## KEYWORDS

Improvisation; comedy; theatre; survey; benefits; experience

## Introduction

Improv comedy is a small subset of theatrical improvisation that has groups of people perform live scenes and songs, which often are through premeditated or spontaneously created games, and may focus on story-creation or producing comedic sketches. Previous research has shown benefits of improvisation and (at times, more specifically) improv in four key areas that are common in past research and may be able to be found: positive regard, community, social and communication skills, and relaxation and mindfulness. Although there is availability for other themes to be noted, these appear to be the most discussed.

Positivity may come from unconditional positive regard (Bermant 2013), which creates opportunity for improv to add value to the improvisers' lives (those engaged in participating in improv). Studies indicate when engaging in improv, people are being accepted, they must suspend their judgement (DeMichele 2015), work well together (DeBettignies and Goldstein 2020; Frost and Yarrow 2007, 4) and they form friendships (Morse et al.

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2018; Yamamoto 2020) that lead to a sense of belonging to a community (Morse et al. 2018; Quinn 2007). This can be broadened to being non-judgmental to achieve improv onstage, improvisers accept themselves and others through positive affect and their creativity comes out of collaboration (or accepting each other's ideas) with one and another (Bega et al. 2017; Sawyer 2015; Yamamoto 2020).

On-stage, or in a class or rehearsal, improvisers must discover, in-the-moment (Fortier 2010, 50), what will happen; Sawyer (1999) terms this as 'emergence'. Furthermore, retrospective meaning making (Sawyer and DeZutter 2009) occurs within emergence, as the performers gradually configure the reality (i.e., the scene) and the understanding of what has taken place after it occurs. Improv can help build social and communication skills (Bernstein 2014; Boesen et al. 2009; Engelberts 2004; Krueger, Murphy, and Bink 2019; Morse et al. 2018) aiding people to become more attentive and actively listen (Steitzer 2011).

The skills of social and communication can offer people the ability to notice more and be mindful to the moment (Bermant 2013). Improv is about reactions and having awareness of the present (Drinko 2013, 25-28; Keates 2017, 7), and of what has been, and consequently will lead to what will be (Johnstone 1989, 47), which are all aspects of mindfulness (Gethin 2011; Nilsson and Kazemi 2016).

Previous research conducted into improvisation has spanned decades. Yet, the value of participating in theatre-based improvisation is still mostly unknown. Practices of theatrical improvisation, or improv comedy, have been used in many fields, including education (Lobman 2005), neuroscience (Beaty 2015), businesses and organizations (Vera and Crossan 2004). However, there remain gaps in research on improv. It could be suggested that 'organizational improvisation' (a field of practice and research that applies improv techniques to corporate or organizational settings) has dominated improvisation studies (Gao, Song, and Jianing 2015; Hadida, Tarvainen, and Rose 2015). Therefore, research needs to expand to studies investigating people engaged in its performance instead of its applied practice.

Research on improv is limited. Therefore, this study aims to empirically investigate what the benefits agents (improvisers) experience and if these match previous research; this study is the first to analyse improvisational theatre and comedy (henceforth, improv will be used) and its benefits dis/confirming prior research of the four main 'domains' (from past broader improvisation studies) and for the global population of improvisers. It seeks to explore the perceptions and experiences of those who are using improv in practice and to compare these to the improvisational practice described in the existing literature. There is currently no existing tool for exploring these issues and so, in addition, this study will also develop and test a tool for measuring perceptions and experiences related to improv.

Specifically, it will investigate:

1. The reliability and validity of the specially designed measure.
2. Differences in perceptions and experiences by demographic characteristics such as gender, disability (e.g., autism, ADHD, long term health conditions, etc.), ethnicity and geographic location.
3. The benefits of improv and whether the findings are consistent with the past research for a global population of improvisers (improv) (dis/confirming past research).

## Materials and methods

### Participants

A total of 195 respondents were recruited online through social media from around the world; 45% of respondents lived in North America, 35% in Europe and the rest in Oceania (7%; otherwise referred to as the continent of Australia), Asia (6%), and South America (6%). 128 respondents were able to complete the survey; five people did not meet the inclusion criteria, and sixty-two people did not complete the survey, potentially because of a language barrier. The respondents' mean age was 41.52 years (range: 18-74; SD = 12.11). The binary gender split was close to equal, with 52% males and 45% females. 2% of the respondents identified as non-binary. Most of the respondents were non-disabled (87%) with 9% self-identifying as disabled. Most people were Caucasian (80%), and the rest of the respondents were Hispanic or Latino (7%), Black or African American (3%), Asian (6%) and 'other' (3%). Over half of the respondents had at least a bachelor's degree, with 40% having completed a master's degree and 7% a doctorate. The respondents had been improvising for an average of 9.36 years (range: 1-47; Q1: 1-3, Q2: 4-5, Q3: 6-14, Q4: 14 and over).

### Measures

The Keates Improv Comedy Survey, KICS was constructed based on research literature on improvisation. Through piloting the questions with 12 participants, the survey gained face validity. Content validity was gained by asking three academic experts with knowledge of the field to assess the survey. The conclusion was that the survey functioned as designed and was relevant and accurate to the constructs being questioned.

The survey asked 31 questions of which 26 questions were about the four possible domains of interest. Further to this, there was a question measuring trustworthiness of others to help provide clarity about how often the respondents felt trust in their scene partner and its context (e.g., being a member of a cast or being a guest in a performance). Respondents rated themselves using 7-point or 10-point scale (dependent on the designed purpose of the question), for example, from 1 ('Strongly Disagree') to 7 ('Strongly Agree'). The survey contained other qualitative components presented in Keates & Beadle-Brown (under review).

An exploratory factor analysis and confirmatory factor analysis were conducted on the data to determine the fit of the questions to their proposed domains. This resulted in nine questions remaining, which included one for positivity (improv added value to my life), one question per social and communication skills, two questions on community, and two questions on relaxation. This removed all questions on mindfulness within improv. All four domains showed high internal consistency scores in the sample (N = 128) (Cronbach's alpha: added value to my life (positivity): .91; social and communication skills: .90; community: .82; relaxation: .87).

### Procedure

After gaining ethical approval from the Tizard Centre's Ethics Committee (19th March 2019), an online survey was fielded over a 5-months period in the summer of 2019

using Qualtrics. After being notified about the survey through online social media platforms, participants reviewed the survey's information and consent page and consented via opting-in to complete the survey. Participants answered a series of 31 open or closed questions related to their improv experiences (positivity, community, social and communication skills, and relaxation), including in-depth demographic information (e.g., gender, place of residence, and years engaging in improv).

### *Data analysis*

The statistical analyses were performed in the Statistical Package for the Social Sciences (SPSS) software, version 25. Descriptive statistics (Frequencies and Crosstabs) was used to identify whether participants confirmed the benefits of participating in improv or not (research question 3). Non-parametric statistics evaluated effects of demographic data and other comparisons of the domains of interest (and other exploratory tests; research question 2). The Mann-Whitney-U (used for two independent variables) or Kruskal-Wallis test statistic (used for more than two independent variables) examined perceived developments or changes by the participants due to improv with Mann-Whitney post-hoc tests where required. Due to some tests performing multiple comparisons, the use of a Holm's corrections was applied, as this was deemed to gain power over the Bonferroni method (Haynes 2013).

## **Results**

### *Context of improv for the respondents*

#### *Characteristics of their improv*

The spread of years in improv is predominantly towards the lower end (as presented by 76% of respondents having participated for under 14 years) (31% of improvisers had been engaging in improv for up to three years based on quartiles of all respondents, 20% between three and five years, 25% between five and fourteen years, and 24% over fourteen years). Only seven respondents did not provide this information.

Most respondents engage in improv twice a week (31%). Only a few of the people would participate in improv more than four times a week (collectively 12%). Most people rehearse improv (31%) and perform (29%). Teaching classes (21%) and taking classes (15%) were smaller percentages of respondents' main method of engaging in improv. Only a few respondents mostly produced improv events (5%).

When asked about the level of trust the respondent had in their scene partner, most respondents (77%) stated they trusted their partner most of the time based on the qualities they themselves provided (see Keates and Beadle-Brown, under review). Conversely, only 7 respondents stated never or sometimes trusting their scene partner.

#### *Impact of participation in improv*

Improv has added value to most people's lives (98%, see Table 1). Furthermore, most people felt that improv provided improvements to their socialization (76%). Likewise, most people agreed that it improved their communication (86%). Similarly, there appears to be a sense of community and kinship in improv, as most respondents felt

they enjoyed the company of others (91%), and they wanted the same thing (77%). For the last proposed domain, the median score of relaxation when being a member of the group was 8. Therefore, most people (53%) felt that they were relaxed in their own group 80% of the time or more. The remaining respondents (47%) said that they were relaxed in their own group 70% of the time or less. For not being a member of the group, most people felt relaxed 70% of the time or more (median score 7) (56%), and the remaining 44% felt relaxed 60% of the time or less. Most people felt relaxed more often than not (60% of the time and above; 83% and 67% for in their own group and being a non-member, respectively). However, it is important to note that the questions about mindfulness did not correlate and has not been analysed any further.

### *Relationships and associations between demographic characteristics and domains*

#### *Gender, ethnicity, and continents*

Table 2 below presents the median ratings (with the minimum and maximum ratings) for each domain for the perceived impact of improv and for trustworthiness by gender, ethnicity, and geographic location (continent). For gender, there were only 3 people who had identified as non-binary and so statistical analysis compared only male and female respondents. There was no statistically significant result for gender, ethnicity, or any differences between the three geographic locations on any of the impact domains or the trustworthiness rating.

#### *Characteristic of their improv*

Table 3 presents median scores (with the minimum and maximum ratings) for each domain for the perceived impact of improv and for trustworthiness, according to how the respondents mainly participated in improv (activity). Trustworthiness was the only statistically significant result. Those that performed had a higher mean rank score (31.39 and 34.53, respectively) than those that took classes and taught (21.03 and 28.40, respectively). Using a Mann-Whitney U post-hoc test, the results found were statistically significant and the difference between the activities was a small effect ( $r = -.44$  and  $-.26$ , respectively). A Holm's Correction suggests only the result for performing compared to taking classes ( $p = 0.01$ ) was still a significant result.

**Table 1.** Percentages of impact of improv domains.

Domain	Percent		
	Agreed	Neither agreed nor disagreed	Disagreed
Improv added value to my life	98	1	2
Socialisation	76	16	7
Communication	86	9	5
Enjoy the company of other improvisers	91	3	6
Wanting the same as others	77	17	6

**Table 2.** Median scores on perceived impact of improv and trustworthiness of improv partner by participant characteristics – gender, ethnicity, and geographic location.

	Gender		Ethnicity				Geographic location			
	Male	Female	Z-Score	Caucasian	Other ethnicity	Z-Score	Europe	North America	Rest of the world	Kruskal-Wallis H
	N	N		N	N		N	N	N	
Median ratings (min-max) on Impact of Improv	66	57		101	25		44	56	25	
Added value to their life	3.00	3.00	-1.54	3.00	3.00	-0.58	3.00	3.00	3.00	1.16
Socialization	3.00	3.00	-1.59	3.00	3.00	-0.88	3.00	3.00	3.00	0.90
Communication	3.00	3.00	-1.56	3.00	3.00	-1.17	3.00	3.00	3.00	0.36
Enjoying others	3.00	3.00	-0.67	3.00	3.00	-1.18	3.00	3.00	3.00	4.97
Wanting the same	3.00	3.00	-0.22	3.00	3.00	-1.56	3.00	3.00	3.00	5.33
Relaxation (company member)	2.00	2.00	-0.85	2.00	2.00	-0.02	2.00	2.00	2.00	0.36
Relaxation (guest)	2.00	2.00	-1.08	2.00	2.00	-0.10	2.00	2.00	2.00	1.92
Median score (min-max) on trustworthiness	3.00	3.00	-0.37	3.00	3.00	-1.40	3.00	3.00	3.00	2.03

\* = p < 0.05 \*\* = p < 0.01 \*\*\* = p < 0.001

**Table 3.** Median scores on perceived impact of improv and trustworthiness of scene partner by participant characteristics – improv involvement.

	Primary Type of improv involvement					
	Attends classes	Teaches	Performs	Rehearses with improv group	Produces improv events	Kruskal-Wallis H
	N	N	N	N	N	
Median score (min-max) on Impact of Improv	19	27	35	39	6	
Added value to their life	3.00	3.00	3.00	3.00	3.00	6.98
Socialization	3.00	3.00	3.00	3.00	3.00	3.80
Communication						1.65
Enjoying other	3.00	3.00	3.00	3.00	3.00	5.86
Wanting the same	3.00	3.00	3.00	3.00	3.00	4.28
Relaxation (company member)	2.00	2.00	2.00	2.00	2.00	3.48
Relaxation (guest)	2.00	2.00	2.00	2.00	2.00	4.64
Median score (min-max) on trustworthiness	3.00	3.00	3.00	3.00	3.00	10.76*

\* = p < 0.05 \*\* = p < 0.01 \*\*\* = p < 0.001

### Relaxations compared to ratings of scene partners' trustworthiness (and vice versa)

Table 4 illustrates trust as a significant result for socialization, communication, community (both enjoying others and wanting the same) and relaxation (both within a company and as a guest). After a Holm's Correction, enjoying others ( $p=.03$ ) was still a significant result (most of the time or always mean rank= 61.71, half of the time mean rank= 49.86). Likewise, a Holm's correction of comparing most of the time or always with sometimes or never trusting your scene partner suggests that socialization ('most' mean rank= 53.50, 'sometimes' mean rank = 31.43,  $p=0.03$ ), enjoying others ('most' mean rank= 52.83, 'sometimes' mean rank= 40.64,  $p=0.03$ ), wanting the same ('most' mean rank= 54.01, 'sometimes' mean rank= 24.50,  $p=0.00$ ) and relaxing as a company member ('most' mean rank= 53.56, 'sometimes' mean rank= 30.57,  $p=0.01$ ) are still significant. All effect sizes were small. Lastly, there was no significant differences between those that rated sometimes and those responding with half of the time they trusted their scene partner.

It is possible that trust leads to increased relaxation, as well as relaxation invoking trust within the improvisers. The respondents appear to have increased levels of trust when they are more relaxed both in a company and as a guest. The Mann-Whitney U-value was found to be statistically significant  $Z=-2.58$ ,  $p<0.05$ , and the difference between the being relaxed 50% of the time or less versus 60% of the time or more was small ( $r=-.23$ ) for being a guest. Likewise, respondents within a company were statistically significant  $Z=-2.20$ ,  $p<0.05$ , and the difference was small ( $r=-.20$ ).

## Discussion

### Key findings

This study sought to find improvisers' perceptions and experiences from around the world and map these to the practice described in the existing literature. Previous research has indicated that improv should add value to people's lives, provide a sense of community or belonging, develop their social and communication skills, and help

**Table 4.** Median scores on perceived impact of Improv by trustworthiness of their scene partner.

		Trustworthiness of scene partner			Kruskall-Wallis H
		Never or just sometimes	Half the time	Most or all of the time	
N		7	22	95	
Median score (min-max) on Impact of Improv	Added value to their life	3.00	3.00	3.00	5.35
	Socialization	2.00	3.00	3.00	6.82*
	Communication	3.00	3.00	3.00	3.63
	Enjoying others	3.00	3.00	3.00	9.15*
	Wanting the same	2.00	3.00	3.00	14.47**
	Relaxation (company members)	1.00	2.00	2.00	9.69**
	Relaxation (guest)	1.00	1.50	2.00	6.63*

\* =  $p<0.05$  \*\* =  $p<0.01$  \*\*\* =  $p<0.001$

with feeling relaxed (Bega et al. 2017; Bermant 2013; Engelberts 2004; Lobman 2005; Steitzer 2011). There are a few key findings to this study. Nearly all respondents agreed that 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 (research question 3). 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 trust their scene partner more often than not. As per research question 1, it is important to note that the survey functions both reliably and validly in its final form after testing.

Notable considerations when discussing these results are that over a quarter of the respondents were new to improv (under 3 years), with people usually engaging in improv one or two times a week. A key finding is that there is no difference of respondents' perceived impact of improv on the stated domains or trust between binary genders (research question 2, as with the following findings). Nor are there any differences between ethnicities or continent of residence.

Respondents' practice has been found to be of significance. These correlational findings may help people better gain, such as understanding that performing improv increases the trustworthiness of their scene partners over predominantly taking classes or teaching. Respondents enjoy others more when they trusted their scene partner, which encourages establishing a dominating sense of trust (over half of the time). Additionally, trust helps with socialisation, enjoying others, wanting the same as other, and feeling relaxed within a company (comparatively to a lack of a sense of trust). Interestingly, gaining a sense of relaxation both within a company and as a guest leads to more trust in their scene partner.

### *The benefits of improv*

Improv provided added value to people's lives. Respondents had a positive regard for improv, which suggests that those still engaged in improv remained doing so because they liked or found pleasure in participating.

Improv provides unconditional positive regard (Bermant 2013), which could derive from the 'Yes, and' mentality (accept and build upon the moment, oneself, and each other's ideas; Krueger, Murphy, and Bink 2019). This leads to positive affect between people (Bega et al. 2017), which provides a good environment with the foundation of acceptance of oneself and others. Hafford-Letchfield (2013) found improv formed a positive climate, and it enables people to have positive experiences (Boesen et al. 2009). For example, improv had a beneficial influence for social change (accepting older people; Yamamoto 2020). This could be due to it lessening defensiveness, as people in agreement (accepting with an unconditional positive regard) in turn leads to less self-conscious playing (Drinko 2013, 35-63). Being in a co-creative, open environment can lead to added value from mutual support. This built ability to work well together and spontaneously express oneself (i.e., social functioning) theoretically help people be successful (DeBettignies and Goldstein 2020). Therefore, it could be positivity and added value from improv originates from building self-concept (DeBettignies

and Goldstein 2020; Schwenke et al. 2021), having a positive affect, and viewing and perceiving others with unconditional regard. It is common to hear improvisers suggest that 'if everyone had a day of improv, especially our politicians, we would be a better world' (Mills 2019).

A sense of community can be obtained from participating in improv activities. Spolin's work was designed to build community (Steitzer 2011). Improv is meant to not only teach people to build community, but to form a social-communicative bond: group mind. This bond may solidify kinship and the enjoyment of each other's company through the mutual, shared experiences. An improv group is of one mind and are a collection of individuals, which form a collective that is better than the sum of its parts (Quinn 2007).

These groups mix and connect as various inter-related and merging communities, to which people can associate and belong. As Raj (2016) signifies, there are numerous ways to view community; improv is more associated with community as identity (improviser) or occupation (or hobby in this case; engaging in improv). Trester (2012) views belonging to an improv community as member socialization, which means being a member requires the correct social and illustrative knowledge (membership to the community is demonstrated by the existence of referential knowledge about improv, local practices, knowing other performers' work, and having valuable, shared skills). All of which can be viewed on a macro- and micro-level (global to town). Improv communities may be described as aligned to a community of practice, because of their shared belief of the everyday improv praxis (Zaunbrecher 2012). Communities of practice are groups of people who share a passion on a topic and deepen their knowledge through ongoing interactions (Wenger, McDermott, and Snyder 2002, 4). Therefore, a passion for engaging in discovery may inform daily living.

Nonetheless, wanting the same is more the shared and similar understanding, and joint sense of identity that may derive from the community of practice; therefore, they gain a sense of belonging through joining their in-group. It could be a provision from a local community (the locality including any distance willing to be travelled by the improvisers, e.g., in England, improvisers may travel from Nottingham to Birmingham as a local community of Midlands improvisers). Community could be globally and more specific; for example, Comedysportz has its own global improv community for those that play in this production, which in turn forms a bond, shared identity, and community of practice through similarities of those that understand what this production requires from the casts, and the approach to how they must improvise.

The development of communication skills can occur due to engaging in improv. The communication of improvisers demonstrates their skill at understanding human behaviour, culture, and relationships (Fortier 2010, 4). This implicit need is due to (dependent on style of improv) the need for absolute clarity. In improv, the need for communication between the characters and the improvisers leads to a 'social art' (original emphasis; Engelberts 2004). Performers in improv need good meta-communication through the aforementioned group mind to co-create with flow and cohesion. On-stage, improvisers are creating live with one and another and nothing is directly expressed about the theatrical construction being formed; therefore, they must play according to the meta-communication. This occurs in

everyday adult life (Sawyer 1993), but is challenged when put onstage. As Al Wunder (2007) suggests, the difference between life and stage is only the condensed space and time.

Nonetheless, communication is implemented in improvisers' lives. Quinn (2007) suggests improvisers attempt to live and communicate using principles of improv. As communication is naturally improvisational, improvisers should be more practiced and effective. Improv improves communication, such as active listening and non-verbal communication (Bega et al. 2017; Krueger, Murphy, and Bink 2019).

Social skills can develop due to engaging in improv. Engelberts (2004) sees improv as a social formative instrument more than general theatre, educating improvisers in social relations. However, Keith Johnstone believed that humans are herd animals, and the development of socialization reduces creativity, so people are more homogenized into their tribe (a theoretical discussion in Drinko 2013, 64-91). Sawyer's (2014) review of eight sources suggests similarly that emphasizing socialization over creative expression must be avoided because too much formal training produces conventionalization and rigidity in thinking (Sawyer 2011). Therefore, as improv is tribal or community-based, the homogenizing nature of the over-socialization should reduce creativity. Nevertheless, Spolin (1999, 73) theorized that pleasure and excitement drive the social growth of the group that is essential for improvising. Although these may seem contrary, one needs to feel unrestricted and able to be creative and open to a given moment (the creative self), which Spolin suggests through a focus on pleasure and excitement (the creative collective). Therefore, to work together, the group individually must be able to 'work' (be creative). The need for people to come together to improvise is a social requirement; in Morse et al. (2018), the older participants had issues in obtaining social contact, but during improv they had a form of socialization structured into their schedule. Hence, improv helps older people to widen their social circle (Yamamoto 2020). Thus, the social component of an improv group ('tribe') exists because they co-create through improvisation proffering shared experiences.

Although less certain than other benefits, improv can be relaxing. However, it is unclear if improv can provide a sense of mindfulness within the global population. It could be those more inclined to engage in a mindfulness practice discover similarities rather than those practicing improv feeling more mindful themselves.

Relaxation can be integral to improv. It creates a relaxed and humorous atmosphere (Hatcher et al. 2019), so when people are not trying to be funny, they are bonding well and being their funniest (Halpern, Close, and Johnson 1994, 13, my emphasis). Therefore, when people are connecting to the material and its references, they feel relaxed (Fortier 2010, 37). Improv ameliorates circumstances by enabling playfulness and increases relaxation (Lobman 2005). In addition, this comes from knowing there are no mistakes and from having a shared responsibility for the performance (Seppänen et al. 2019; Sherr and Oshima 2016). These may assist in the decompression effect whereby the performers focus on the creation and feel less pressure themselves (Xue and Shuyu 2019). Hence, the best state for the brain to achieve creativity is relaxed (Hatcher et al. 2019), which is maintained through reaching a flow state (Drinko 2013, 35-63). Consequently, experienced improvisers are relaxed because they can accomplish scene work without leadership (Drinko 2013, 92-110).

## Limitations

This study has limitations that must be noted in the interpretation of the findings. Adaptation and further renditions of the survey could improve its design. There were small samples of certain populations of respondents (non-binary; non-Caucasian people; and those from the global south; and only eleven self-identifying disabled improvisers). The complexity of the language used could have reduced the viability to complete the survey for those with English as an additional language. The restrictions of social media in some countries would have impacted on visibility of the survey for some populations too.

## Future directions for research

Future research should develop the survey, as this was its first use. This article focuses on the confirmatory use of the measure to identify perceived benefits of improv; future reports on the qualitative components are needed. Additionally, future studies may choose to develop the measure and recruitment methods (e.g., accessing countries with restricted social media platforms, translating the measure, and accounting for respondents' language level). Similarly, larger samples of the under-represented populations must be included in future research.

Importantly, future research should support identifying the barriers of accessing improv for under-represented groups. Of interest is to find out specifically for whom these traits of improv work, such as neurodivergent people (e.g., autistic people, those with OCD, generalized anxiety disorder, or dyspraxia).

## Conclusion

This paper set out to answer the perceptions and experiential variations between the demographic factors of respondents, the accuracy of past research for improvisers from around the world, and the reliability and validity of the presented measure. It was found that most respondents agree to the presented domains (research question 3) and often trust their scene partner. Performing improv increases trust, trust increases the benefits of most of the domains, and feeling relaxed increases trust in the respondents with their scene partner. Additionally, the survey seems to function both reliably and validly (research question 1). However, there were no differences in represented groups of respondents on their experience of the benefits of improv (research question 2).

**Declaration of interest statement** The authors declare that only the first authors has experience of participation and teaching of improv.

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No potential conflict of interest was reported by the authors.

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