

A Pilot Experience with Improvisational Theater to Reduce Burnout in Psychiatric Residency

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Abstract

Purpose: Rates of burnout are high during medical training including psychiatric residency. This study examined the impact of improvisational theater training on psychiatry residents' experiences of burnout and on several outcomes associated with improv training: tolerance of uncertainty, playfulness, and self-compassion. **Methods:** Fourteen psychiatry residents with minimal background in improvisational theater participated either in an improv (N = 9) or comparison group (N = 5). The improv group met weekly in 2020 for four weeks in person and two additional weeks online. Surveys were administered before the program, after the first four weeks, and following the complete program. **Results:** Nine residents participated in the improv program. Eight completed all follow up surveys (100%) as did all five non-participants (100%). Initial results indicated that improv contributed to residents' self-experienced well-being, either through reduced burnout or tolerance of uncertainty, increased playfulness, self-compassion, or some combination thereof. Residents reported that improv affected their work and life in general and that it differed substantially from other types of coursework in their psychiatric curriculum. **Conclusions:** This study, utilizing a relatively low-cost six-week program, suggests that improv can help psychiatry residents overcome burnout, increase tolerance of uncertainty, and enhance their playfulness, self-compassion, sense of joy, and connection to others.

Keywords

Burnout, Improvisation, Psychiatry, Education, Residency Training

1. Introduction

Burnout in medicine has become an increasingly important concern. It is characterized by symptoms of emotional exhaustion, depersonalization, and low personal accomplishment (Romani & Ashkar, 2014). Over half of physicians report some symptoms of burnout including cynicism, pessimism, disillusionment, exhaustion, and reduced effectiveness. It is associated with an increased rate of depression, alcohol and drug abuse, divorce, suicide, medical errors, difficult relationships with coworkers, and patient dissatisfaction, as well as physician attrition (Lacy & Chan, 2018). While physicians generally exhibit higher rates of resilience than the general US working population, burnout rates are quite high across specialties and correlate inversely with resilience (West et al., 2020). Physician burnout is associated with lower quality of care (Tawfik et al., 2019), and over twenty percent of physicians endorse plans to leave their practice in the next two years (Sincsky et al., 2021).

Burnout in medicine begins in medical training. It is estimated that at least half of medical students experience burnout at some point during their training (Ishak et al., 2013), and ten percent experience suicidal ideation within a given year (Dyrbye et al., 2008). Rates of burnout in residency training continue quite high, with an average rate of 35 percent across specialties (Rodrigues et al., 2018). It has been associated with depression, loneliness, suicidal ideation, lower patient satisfaction and poorer quality of care (Rodrigues et al., 2018; Shapiro et al., 2015).

Psychiatry as a specialty presents unique sources of burnout. As the field has developed rapidly, practice environments have shifted, and demands increased, the stress for psychiatrists has continued to increase (Kumar, 2011). Several specific work-related factors distinguish psychiatry from other medical fields. Intense emotional involvement, high rates of violence, and untoward results such as patient suicide or homicide provide unique stresses for psychiatrists (Bykov et al., 2022). The impact of the COVID-19 pandemic has been substantial for psychiatrists, with initial studies demonstrating increasing symptoms of burnout (Alkhamees et al., 2021; Öğütlü et al., 2021). Rates of burnout in psychiatric training are also quite high—a review of 22 studies identified a burnout rate for psychiatric residents of 37 percent (Chan et al., 2019). Trainees in psychiatry face many challenging experiences including patient aggression, patient suicide, mistreatment by colleagues, and working with victims of disasters and violence (Coverdale et al., 2019).

Strategies for preventing and reducing burnout are critical for retaining trainees and enhancing their capacities to care for their patients. The Accreditation Council of Graduate Medical Education (ACGME) has monitored particular stressors implementing, for example, work-hour limitations. Residency programs have created various wellness initiatives including yoga and exercise, mindfulness training, and gatherings to combat isolation, among others (Patel et al., 2019). One intervention increasingly applied in medicine with promise for

alleviating burnout is improvisational theater (“improv”) (Hoffmann-Longtin et al., 2018; Mehta & Fessell, 2022). When engaging in improv, a group of participants collaboratively creates a story based on a small number of cues, as little as a suggested title. The goal of this is not to be funny or humorous, but to be able to honor one’s imagination in the present moment and to attune to what is added by others in the group. Many warm up games are used to help improvisors develop their ability to work as ensembles, and these exercises as well as experiences of group storytelling have been used with patients, corporate executives, and health care providers. Participants learn basic improvisation guidelines including the value of saying “yes... and” to what is offered up by others in a scene and working with mistakes as opportunities. Over the past twenty years of offering improvisational theater workshops to psychiatric trainees, we have observed the participants apply skills acquired through improv to their work and their lives (Fidler et al., 2011). Improv may help psychiatry residents by targeting key facets of well-being related to burnout, including tolerance of uncertainty, playfulness, and self-compassion. Improved tolerance of uncertainty, a documented outcome of improvisation training (Felsman et al., 2020), might help, for example, ease the anxieties of residents who require absolute certainty that nothing bad will happen to their patients when they realistically cannot make or obtain such guarantees (e.g. suicide). The use of play in serious work situations has been associated with increased job satisfaction and productivity (Burchiel & King, 1999). Lower self-compassion has also been linked to burnout through the mechanism of self-judgment (Montero-Marin et al., 2016) whereas decreased self-judgment might result from the joy, laughter, and celebration of one’s mistakes as experienced in an improv group.

Although some studies have examined the impact of improv training in medical education generally (Fessell et al., 2019; Fu, 2019; Gao et al., 2018; Harendza, 2020; Hoffmann-Longtin et al., 2018; Watson, 2011) none have involved training in psychiatric education or its potential effects on burnout. These papers generally describe curricula that have been impactful for medical students, predominantly using course evaluations. Some studies have also emerged using improvisation within residency training programs (Cai et al., 2019), with particular emphasis on empathy training. This study examined the impact of an improv program for psychiatry residents with the following two main questions: Can improvisational theater training reduce burnout for psychiatry residents? Can improvisational theater training enhance their uncertainty tolerance, playfulness, and self-compassion?

Originally, this study was designed to assess these questions at pre, post, and follow up. Due to the pandemic, these time points became T1 (pre in-person training), T2 (post in-person/pre online), and T3 (post online training). This design enabled us to ask new questions comparing the impacts of in-person vs. on-line improv. Additionally, participants in the improv group completed a previously published survey designed to evaluate improv training for medical stu-

dents. They also provided open-ended feedback about the experience.

2. Materials and Methods

An invitation to participate in the research program was made to all four years of a residency training program in the Southwest. Fourteen residents (M age = 32.92, SD = 7.59; 13 females, 1 male; 8 White, 4 Asian, 2 Hispanic) elected to participate in early 2020. Many were wary of improvisation, and for this reason, participation in the improvisation arm of the study was voluntary. As the program was in the evening after work, a decision was made that only residents who would find the experience interesting should participate. Residents therefore self-sorted into participant and comparison groups. Nine elected to participate in the improv group and five in the comparison group. One stopped attending the improv group due to schedule conflicts. Comparison group members came from the second, third, and fourth year of the program and were of similar age and gender. Participants provided informed consent and received dinner for compensation prior to each class. The comparison group members were provided with coffee cards acknowledging time spent completing forms. Study procedures were approved by the university's Institutional Review Board and carried out in accordance with established ethical guidelines.

Improv participants attended the first four weeks of the six-week program in person. The program was interrupted by the pandemic, and after a two-week hiatus continued online for two additional weeks. Participants in both conditions completed online assessments (described below) through REDCap prior to the course (Time 1), following the four-week in-person course (Time 2), and following the additional online courses (Time 3) (Harris et al., 2009).

The improv group met weekly for a 30-minute dinner, 75 minutes of improvisation exercises, and a 15-minute debrief. The curriculum emphasized basic improvisational theater guidelines taught in most introductory improv course, focused on building trust within the group, collaboration, accessing the imagination, embracing mistakes, spontaneity, and encouraging playfulness. The group played classic improv games such as “zip zap zop” where participants send words across a circle with a hand-clap facilitating focus, energy, and play. Other exercises included a “yes” circle where one participant points to another and takes their place after being told “yes,” and a collaboration exercise passing an imaginary cane, adding a physical detail and element of backstory. Later sessions included co-creating scenes. An environment was suggested, such as a barn, after which participants became objects in the environment while adding to the story. Other experiences included assigning spontaneous monologues as participants developed their ability to think on their feet.

At each time point, participants in both conditions completed several established measures.

The Professional Fulfillment Index (PFI) measured burnout (PFI-B; Cronbach's $\alpha = .903$) (Trockel et al., 2018) (Supplement 3).

The short Intolerance of Uncertainty Scale (IUS) measures uncertainty tolerance (IUS-12; Cronbach's $\alpha = .831$) (Carleton et al., 2007) (Supplement 4).

The Barnett Playfulness Scale (BPS; Cronbach's $\alpha = .722$) measures playfulness (Barnett, 2007). We also included a single-item self-identification with the adjective "Playful", as its own direct, standalone playfulness rating (Supplement 5).

The short Self-Compassion Scale (SCS; Cronbach's $\alpha = .834$), measures self-compassion (Raes et al., 2011) (Supplement 6).

At T2 only, improv participants completed a medical improv course evaluation (Watson, 2011) and answered the question: "How does this program differ from what you get out of your other courses?" Finally, at T2 and T3, they responded to the open-ended questions: 1) "Has your improvisation training affected your work? If so, how?" and 2) "Has your improvisation training affected your life outside of work? If so, how?"

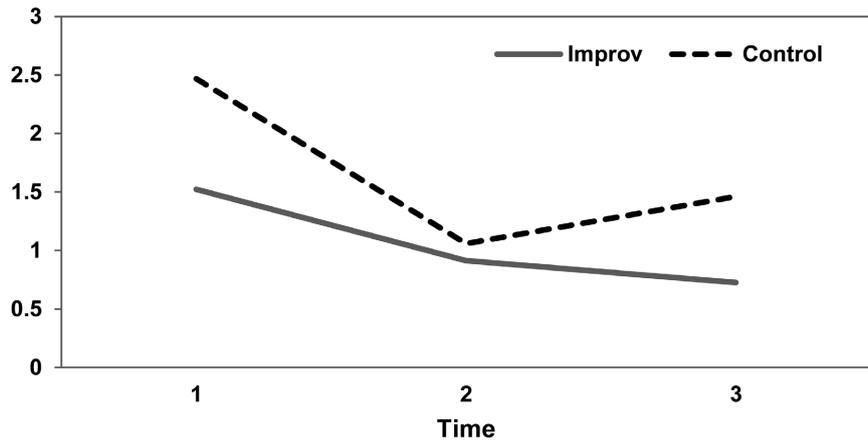
To answer our questions concerning whether improv (vs. comparison) helped reduce burnout and intolerance of uncertainty and increase playfulness and self-compassion, we ran three ANCOVAs for each of our repeated measures as well as their sub-scores. Specifically, we tested whether condition predicted outcome effects for in-person improv (T2, controlling for T1), online improv (T3 controlling for T2), and mixed in-person and online improv (T3 controlling for T1). Qualitative data analysis followed a grounded theory approach (Glaser & Strauss, 2017). Two raters developed coding schemes independently and discussed the emergent codes to consensus. Then a third rater applied the revised coding schemes to the responses. Reliability was calculated using Cohen's Kappa (Patton, 1990).

3. Results

Eight of eight participants completing the improv program (100%) completed follow up surveys, as did five of five non-participants (100%). The improv and comparison groups of psychiatry residents did not differ significantly by gender, race, age, baseline burnout, intolerance of uncertainty, playfulness, or self-compassion ($p > .05$). All ANCOVAs are reported in Supplemental Table S1. Despite the small group sizes, we highlight significant effects here.

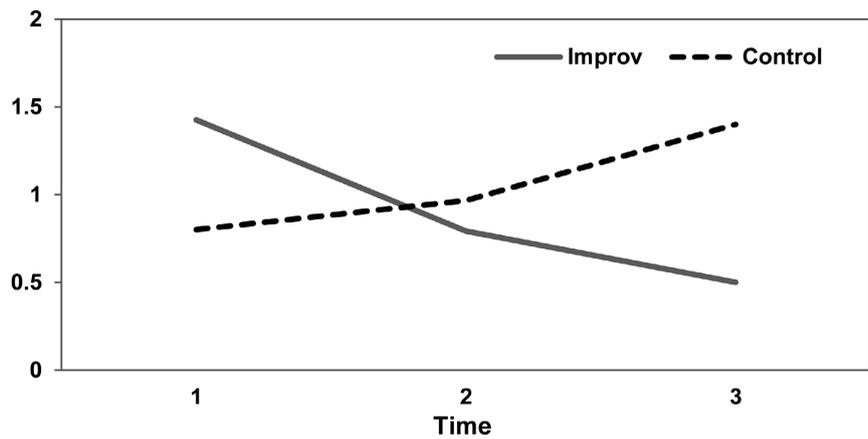
Improv led to decreased burnout scores, as well as the burnout subscale score of decreased interpersonal disengagement. While the comparison group also showed decreased burnout and disengagement over the same time period, their scores for both increased with the onset of the pandemic. In comparison, the improv group who moved to online improv at the onset of the pandemic continued to show falling rates of both burnout and disengagement through the completion of the program (Figure 1, Figure 2).

In-person improv led to reduced overall uncertainty tolerance as well as its sub-score for Inhibitory Anxiety (Figure 3). This was not the case for the comparison group. Improv training reduced isolation (an SCS sub-score) while that



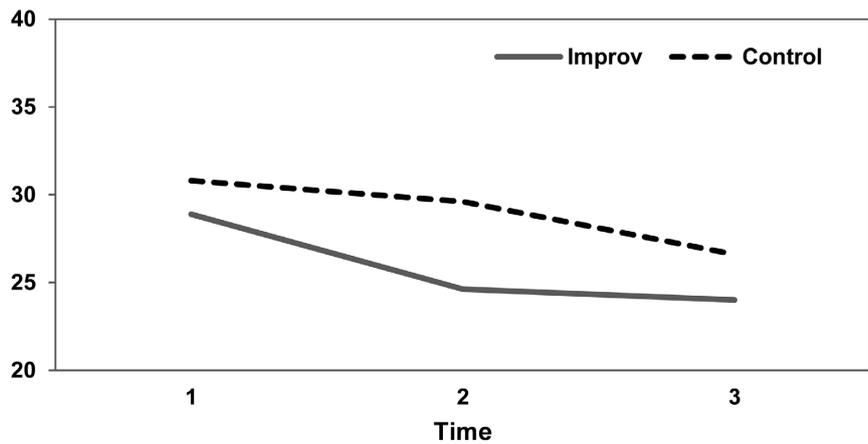
Note: Mean scores for the improv group by time were 1.52, .913, and .725, respectively; for the control group, they were 2.47, 1.06, and 1.46.

Figure 1. Overall burnout.



Note: Mean scores for the improv group by time were 1.43, .792, and .500, respectively; for the control group, they were .800, .967, and 1.40.

Figure 2. Disengagement.



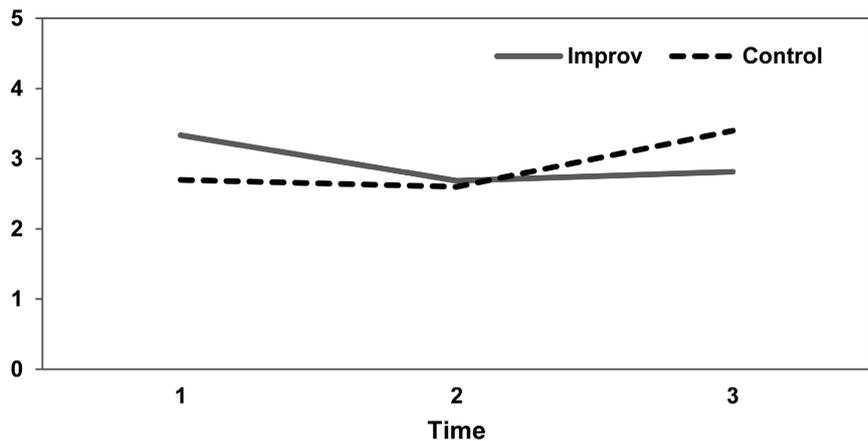
Note: Mean scores for the improv group by time were 28.89, 24.63, and 24.00, respectively; for the control group, they were 30.80, 29.60, and 26.60.

Figure 3. Intolerance of uncertainty.

was not apparent in the comparison group over the same time period (Figure 4). The improv group also experienced falling scores of self-judgment while participating in the program. This continued through online improv during the pandemic. While the comparison group also endorsed falling self-judgment scores over the first time period, their scores went up following the isolation of the pandemic (Figure 5). Improv was also correlated with increased “dynamic” playfulness (a BPS sub-score), as well as endorsement of being “playful”.

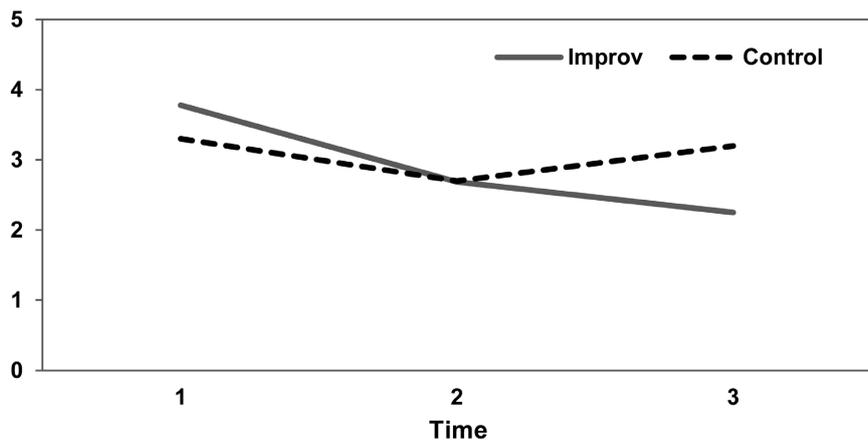
Descriptively, participants in the improv condition endorsed the 18-item medical improv evaluation questionnaire with extremely favorable responses (Supplemental Table S2).

In the qualitative analysis, 25 codes emerged across the three questions. For the ten codes without perfect agreement, we ran Cohen’s Kappa to test reliability. Based on guidelines from McHugh, four codes with a kappa below .6 were considered to have inadequate reliability and removed from the results



Note: Mean scores for the improv group by time were 3.33, 2.69, and 2.81, respectively; for the control group, they were 2.70, 2.60, and 3.40.

Figure 4. Isolation.



Note: Mean scores for the improv group by time were 3.78, 2.69, and 2.25, respectively; for the control group, they were 3.30, 2.70, and 3.20.

Figure 5. Self-judgment.

(McHugh, 2012). Codes for which all three coders agreed on their use are shown below in italics.

After the live improv sessions all participants reported that improvisation training affected their work. After in-person improv, they reported increased *awareness* (e.g., “It affected my awareness... awareness is the beginning!”), *bravery* (e.g., “knowing that I can be... brave”), *empathy* (e.g., “it has shown me how to accept the patient’s reality...in order to delve more deeply into their experience”), *flexibility* (e.g., “It’s helped me to accept the change or the reschedule and ...move forward”), *playfulness* (e.g., “knowing that I can be playful”), *presence* (e.g., “more present with my patients”). After the two additional online improv sessions, participants again reported increased *flexibility*, *playfulness*, and *presence*. Additionally, they reported increased *creativity* (e.g., “I became more creative”), *positivity* (e.g., “more...positivity”), *trust in self* (e.g., “I have a new perspective, trusting myself to handle whatever it is”) and decreased *ruminating* (e.g., “I don’t ruminate about my performance as before.”).

All participants reported that improvisation training affected their life outside of work.

After in-person improv they reported increased *flexibility*, *joy* (e.g., “more joy”), *playfulness*, *social comfortability* (e.g., “feeling more comfortable in conversations with new people”), and *relationship-building* (e.g., “I became closer and more intimate with my colleagues and friends.”). After online improv, participants again reported increased *flexibility*, *joy*, *playfulness*, *social comfortability*, and *relationship-building*. They added the training increased their *bravery*, *creativity*, *empathy*, *fun* (e.g., “...now I dare to be fun!”), *presence*; they also said the training affected their work through decreasing *stress* (e.g., “I am ...less stressed when it comes to plans.”). Participants said this program differed from other courses by *nonspecific affirmation* (e.g., “Nothing offers an experience like improv”), by its qualities of being *fun*, *self-affirming*, *relationship-building*, involving *interaction*, supporting *risk-taking*, it being *okay to mess up* and *okay to not know*.

4. Discussion

To our knowledge this pilot study is the first to examine whether improv training might reduce burnout and intolerance of uncertainty and enhance playfulness and self-compassion among psychiatry residents. Despite its small sample, important findings emerged worthy of further investigation. Overall, in-person and online improv contributed to psychiatry residents’ well-being, likely through reduced burnout or increased uncertainty tolerance, playfulness, self-compassion, or some combination thereof.

The overall improv program reduced burnout and interpersonal disengagement. This suggests that the investment in relationship-building among colleagues facilitated by improv might reduce burnout. The finding that improv reduced uncertainty tolerance and inhibitory anxiety is important for residents,

with potential links to burnout prevention (Simpkin & Arabella, 2016). Despite being required to act on limited information at times, psychiatry residents must decide, for example, whether or not to admit a patient to a psychiatric hospital involuntarily, what medications to start, and what to say next in a therapy session, among many other interventions that require decision-making in the face of incomplete information.

While no effects were found of improv training on overall measures of playfulness or self-compassion, some aspects of playfulness and self-compassion were enhanced. In-person improv led to (relatively) increased endorsement of being “playful”, and in-person and mixed in-person and online improv led to a relative increase in the dynamic component of playfulness. Relative to the comparison group, participants in the online program also described feeling less isolated with the onset of COVID-19 on the isolation component of self-compassion. This is important, given the burnout experienced by trainees during the pandemic (Blanchard et al., 2021; Stacey et al., 2020). The online improv led to (relative) reductions in the self-judgment sub-score of self-compassion, a variable linked to burnout.

Participants reported that improv affected their work and outside life and differed substantially from other coursework. They credited improv with helping them to become more self-aware and self-trusting, more flexible, playful, present, positive, creative, brave, and empathic, and less ruminative at work. Outside of work, they said improv helped them to become more flexible, playful, joyful, brave, empathic, fun, present, socially comfortable and close with peers, and less stressed. The program differed from other aspects of their curriculum by being fun, encouraging interaction, camaraderie, and risk-taking and making it okay to “mess up and not know”.

Several limitations are evident. First, while our improv group’s size is representative of improv groups generally, our study was underpowered to detect smaller effects. Second, the improv condition was not randomly assigned. Those interested in participating in an improv program may more likely benefit from it, as it may be a closer fit to their general personality and way of relating to others. It is possible that more introverted individuals, for example, might have a different reaction to the program and may have self selected into the comparison group in this study. As the comparison group did not share a meal together, it is also conceivable that merely eating together served as a vehicle impacting the measurements in this study. It would be good to conduct a similar study in which the comparison group met and shared a meal but did not do improv. Additionally, most participants were female, despite a program with an equal number of male and female trainees. There may be a greater reluctance for men to participate in such a program, though that is not what is generally seen in community improv schools. It is uncertain whether the responses to improv training might differ by trainee gender. Finally, although trainees commented on the value of interacting in a new way with the faculty member who co-facilitated the group, many psychiatry departments would likely lack having even one im-

prov-qualified faculty member willing to engage trainees in improv.

Interestingly, many physicians are finding their way to improvisational theater training with groups in their local community. Most cities have improvisational theater groups who both perform and offer courses. If a faculty member were to take a level 1 course for 6 - 8 weeks, they would be able to support an improviser in the program. These improv training programs have become even more accessible as many now teach on-line programs. Many medical schools and residency training programs have begun to incorporate experiences of improvisation. We are aware that Arizona State University, the University of Minnesota, UC San Diego, and Northwestern among many others have implemented improvisational theater exercises into the curriculum. We are hopeful that this study begins a trend toward further analysis of the impact of improv in medical and residency education.

Key Practice Points

1) Burnout is highly prevalent in psychiatric residency. This pilot study of a relatively low-cost six-week improvisation training program suggests that improv can help trainees mitigate aspects of burnout.

2) Improvisation training might enhance the ability of psychiatric residents to tolerate uncertainty, a professional quality critical to making decisions based on incomplete and often insufficient information.

3) Improvisation training might enhance group cohesion and decrease isolation for residents in training.

4) Payfulness and self-compassion, linked inversely with burnout, might be enhanced for residency programs through an improvisational theater program.

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Declaration

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Supplemental Table S1. Repeated Measures ANCOVAs

Measure	F tests					
	In-Person Improv (T1 - T2)		Online Improv (T2 - T3)		Mixed In-Person and Online Improv (T1 - T3)	
	F (1, 10)	<i>p</i>	F (1, 9)	<i>p</i>	F (1, 10)	<i>p</i>
IUS	5.61	.039*	1.01	.342	.705	.421
IUS-PA	.645	.441	.117	.740	.029	.869
IUS-IA	5.36	.043*	.104	.755	1.62	.232
PFI-B	1.34	.274	5.37	.046*	7.07	.024*
PFI-WE	.492	.499	.688	.428	2.01	.187
PFI-ID	1.63	.230	9.28	.014*	11.16	.007**
Playfulness	3.14	.107	1.10	.322	4.20	.068°
Gregarious	1.25	.290	1.68	.228	4.94	.050°
Uninhibited	2.23	.166	.459	.515	.678	.430
Comedic	.035	.855	.103	.755	.014	.909
Dynamic	5.48	.041*	.956	.354	5.50	.041*
Playful	5.40	.042*	.581	.466	3.49	.091°
Self-Compassion	.429	.527	2.77	.130	3.05	.112
Self-kindness	.436	.524	2.20	.172	2.07	.181
Self-judgment	.451	.517	2.83	.127	5.06	.048*
Common Humanity	.499	.496	.002	.970	.006	.939
Isolation	.004	.953	6.66	.030*	1.77	.213
Mindfulness	.041	.844	.855	.379	.690	.426
Over-identification	2.51	.144	2.15	.177	3.08	.110

* $p < 0.05$; ** $p < 0.01$, ° $p < 0.10$.

Supplemental Table S2. Medical Improv Program Evaluation—Northwestern Evaluation

Watson, K, "Perspective: Serious play: teaching medical students with improvisational theater techniques." *Acad Med* 2011 Oct 86(10): 1260-5.

Item	No. (%) of students who agree or strongly agree	Average rating
The teacher created an atmosphere in which I could take risks.	8 (100)	4.75
I felt supported by my classmates.	8 (100)	4.75
I felt free to try new things in this class.	8 (100)	4.75
I felt free to fail in this class.	8 (100)	4.375
I felt playful and spontaneous in this class.	7 (87.5)	4.75
I felt good about myself in this class.	8 (100)	4.375

Continued

I learned something new about myself in this class.	7 (87.5)	4.875
This class helped me become a better listener.	7 (87.5)	4.375
This class helped me become more observant.	7 (87.5)	4.375
This class helped me respond in the moment.	8 (100)	4.625
This class helped me to be a more flexible and resourceful person.	8 (100)	4.625
This class increased my confidence in myself.	8 (100)	4.50
This class improved my ability to deal with stressful situations.	8 (100)	4.375
This class increased my comfort with ambiguous situations.	8 (100)	4.375
This class helped me become a better team member/collaborator.	7 (87.5)	4.25
This class helped me feel more fearless.	7 (87.5)	4.375
Studying improv could make me a better doctor.	8 (100)	4.875
I would recommend this class to other psychiatry residents.	8 (100)	5.00

Note: Students rated agreement on a five-point scale (1 = strongly disagree, 5 = strongly agree). 8 students completed this. In every instance when a participant did not agree or strongly agree, they selected neutral.

Supplement 3—Professional Fulfillment Index

Trockel M, Bohman B, Lesure E, Hamidi MS, Welle D, Roberts L, Shanafelt T. A brief instrument to assess both burnout and professional fulfillment in physicians: reliability and validity, including correlation with self-reported medical errors, in a sample of resident and practicing physicians. *Academic Psychiatry*. 2018 Feb; 42(1): 11-24.

How true do you feel the following statements are about you at work during the past two weeks?

(0) Not true at all. (1) Somewhat True (2) Moderately True (3) Very True (4) Completely True

- a. I feel happy at work
- b. I feel worthwhile at work
- c. My work is satisfying to me
- d. I feel in control when dealing with difficult problems at work
- e. My work is meaningful to me
- f. I'm contributing professionally (e.g., patient care, teaching, research, and leadership) in the ways I value most

To what degree have you experienced the following?

(0) Not at all (1) Very little (2) Moderately (3) A lot (4) Extremely

During the past two weeks I have felt...

- a. A sense of dread when I think about work I have to do
- b. Physically exhausted at work
- c. Lacking in enthusiasm at work
- d. Emotionally exhausted at work

During the past two weeks my job has contributed to me feeling...

(0) Not at all (1) Very little (2) Moderately (3) A lot (4) Extremely

- a. Less empathetic with my patients
- b. Less empathetic with my colleagues
- c. Less sensitive to others' feelings/emotions
- d. Less interested in talking with my patients

- e. Less connected with my patients
f. Less connected with my colleagues

Supplement 4. Intolerance of Uncertainty Scale (IUS-12)

Carleton RN, Norton MP, Asmundson GJ. Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of anxiety disorders*. 2007 Jan 1; 21(1): 105-17.

Please rate each of the following questions on a scale of 1 to 5, where 1 is “Not at all characteristic of me” and 5 is “entirely characteristic of me”.

1. Unforeseen events upset me greatly
1 2 3 4 5
2. It frustrates me not having all the information I need
1 2 3 4 5
3. One should always look ahead so as to avoid surprises
1 2 3 4 5
4. A small, unforeseen event can spoil everything, even with the best planning
1 2 3 4 5
5. I always want to know what the future has in store for me
1 2 3 4 5
6. I can't stand being taken by surprise
1 2 3 4 5
7. I should be able to organize everything in advance
1 2 3 4 5
8. Uncertainty keeps me from living a full life
1 2 3 4 5
9. When it's time to act, uncertainty paralyzes me
1 2 3 4 5
10. When I am uncertain I can't function very well
1 2 3 4 5
11. The smallest doubt can stop me from acting
1 2 3 4 5
12. I must get away from all uncertain situations
1 2 3 4 5

Version 8/13/2019

Supplement 5. Barnett Playfulness Scale (BPS)

Barnett LA. The nature of playfulness in young adults. *Personality and individual differences*. 2007 Sep 1; 43(4): 949-58.

Please rate the extent to which each word describes you by circling a number on the provided 10-point scale.												
	Very Little										A Lot	Unsure
Cheerful	1	2	3	4	5	6	7	8	9	10	X	
Happy	1	2	3	4	5	6	7	8	9	10	X	
Friendly	1	2	3	4	5	6	7	8	9	10	X	

Continued

Outgoing	1	2	3	4	5	6	7	8	9	10	X
Sociable	1	2	3	4	5	6	7	8	9	10	X
Spontaneous	1	2	3	4	5	6	7	8	9	10	X
Impulsive	1	2	3	4	5	6	7	8	9	10	X
Unpredictable	1	2	3	4	5	6	7	8	9	10	X
Adventurous	1	2	3	4	5	6	7	8	9	10	X
Clowns around	1	2	3	4	5	6	7	8	9	10	X
Jokes/teases	1	2	3	4	5	6	7	8	9	10	X
Humorous	1	2	3	4	5	6	7	8	9	10	X
Funny	1	2	3	4	5	6	7	8	9	10	X
Active	1	2	3	4	5	6	7	8	9	10	X
Energetic	1	2	3	4	5	6	7	8	9	10	X
Playful	1	2	3	4	5	6	7	8	9	10	X

Version 8/13/2019

Supplement 6. Short Self Compassion Scale

Raes F, Pommier E, Neff KD, Van Gucht D. Construction and factorial validation of a short form of the self-compassion scale. *Clinical psychology & psychotherapy*. 2011 May; 18(3): 250-5.

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never Almost always 1 2 3 4 5

- ____ 1. When I fail at something important to me I become consumed by feelings of inadequacy
- ____ 2. I try to be understanding and patient towards those aspects of my personality I don't like.
- ____ 3. When something painful happens I try to take a balanced view of the situation.
- ____ 4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
- ____ 5. I try to see my failings as part of the human condition.
- ____ 6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- ____ 7. When something upsets me I try to keep my emotions in balance.
- ____ 8. When I fail at something that's important to me, I tend to feel alone in my failure.
- ____ 9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
- ____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
- ____ 11. I'm disapproving and judgmental about my own flaws and inadequacies.
- ____ 12. I'm intolerant and impatient towards those aspects of my personality I don't like.