

# Teaching Job Interview Skills to Psychiatrically Disabled People Using Virtual Interviewers

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## Summary

Patients with psychiatric illnesses such as schizophrenia, posttraumatic stress disorder (PTSD), mood disorders, and other psychotic disorders often experience unemployment, which in turn leads to discouragement, loss of productivity, and ultimately deterioration in mental and physical health. Therefore, returning to work helps reintegrate these individuals into their communities. A major challenge for those returning to employment is the job interview.

A representative sample of patients with psychiatric disabilities found important benefits in using a prototype simulation that teaches job interview skills. Participants used the simulation with ease, thought the simulated interviewer was realistic and helpful, and enjoyed the immersive experience of job interview training.

The simulation and training system was developed in partnership with Professor of Psychiatry Morris Bell, Ph.D., Yale University School of Medicine.

*By Morris Bell, Ph.D., Yale University School of Medicine*

The aim of this initial investigation was to test the tolerability of the Job Interview Simulation for clients of vocational rehabilitation programs and to gather their impressions of the training procedures. The aim was to obtain responses from 10 participants who would be representative of typical clients in vocational rehabilitation and who would reflect diversity of age, gender, ethnicity, and types of mental illnesses of the population. Responses included participant ratings on 17 Likert-scale questions about their reactions to the simulation, 4 questions about their opinion of usability, and 2 questions about their overall opinion of usefulness of the simulation and likelihood that they would use this simulation when fully developed.

## Results

The study was successful in recruiting participants with chronic mental illness who are currently engaged in vocational rehabilitation. They are a representative sample reflecting the diversity of the population.

## Participant Characteristics

The sample was composed of 5 males and 5 females between the ages of 24 and 60 (mean = 42.3; SD = 10.0). Six were African American and 4 were Caucasian; 8 were single, 1 was

married, and 1 divorced. They ranged in education from 12 years to 16 years (mean = 13.2; SD = 1.2).

Eight were work experienced (had at least 1 full year of competitive employment in the past), and 2 were not. However, typical of this population, in the past 3 years only 1 had had full-time competitive employment, 6 had held some part-time work, and 3 had not worked at all.

Also typical of this population, 6 had been arrested in the past and 3 had been incarcerated, 2 with felony convictions. Eight carried diagnoses of schizophrenia or schizoaffective disorder; 1 was diagnosed with chronic posttraumatic stress disorder (PTSD) and 1 with borderline personality disorder. Alcohol and substance abuse were common comorbidities for most of the participants, with an average lifetime abuse of alcohol of 4.5 years (9.7 years) and drug abuse of 2.1 years (4.6 years).

Despite having at least a high school education, and most having held a full-time job at one time in their lives, these participants have significant barriers to their returning to full-time employment, including serious mental illness, vulnerability to substance abuse, and criminal histories. It is precisely for these reasons that they are appropriate for vocational rehabilitation services and could potentially benefit from job interview training.

## Reactions to the Job Simulation

Table 1. Responses to Features of the Simulation  
(Scale is 1 to 5; Disagree to Agree)

	N	Minimum	Maximum	Mean	SD
1. Ease to learn simulation	10 2	5	4.60	.966	
2. Enjoy playing simulation	10 2	5	4.60	.966	
3. Able to try new things to say	10 4	5	4.80	.422	
4. Interviewer looks and acts real	10 1	5	4.30	1.252	
5. Interviewer treated respondent fairly	10 1	5	4.10	1.287	
6. Choices of what to say to interviewer	10 2	5	4.20	1.033	
7. Choices of realistic responses	10 3	5	4.50	.707	
8. Helpful introductory screens guidelines	10 3	5	4.50	.850	
9. Usefulness of help agent feature	10 3	5	4.20	.919	
10. Usefulness of help on	10 3	5	4.50	.850	

Table 1. Responses to Features of the Simulation  
(Scale is 1 to 5; Disagree to Agree)

	N	Minimum	Maximum	Mean	SD
a statement feature					
11. Usefulness of help on a response feature	10 3	5		4.40	.843
12. Usefulness of view conversation feature	10 3	5		4.30	.949
13. Overall usefulness of help feature	10 3	5		4.50	.850
14. Ease of using program	10 4	5		4.50	.527
15. Prototype useful in improving interviewing skills	10 4	5		4.70	.483
16. Likely to use bigger simulation when available	10 3	5		4.50	.707
17. Overall simulation rating	10 4	5		4.80	.422

Table 1 shows the scores on the 1 to 5 Likert Scale (Disagree to Agree). All means are above 4.0. Especially encouraging is that their overall rating (Item 17) had only a range of 4 to 5 and the mean was 4.8. Ease of using the program (Item 14) showed a similar range and a mean of 4.5. Such a high rating on this item indicates that despite cognitive and symptom limitations of these participants, they felt that they could negotiate use of the software. It is also of note that the item with the lowest score was about whether the simulated interviewer treated the respondent fairly (Item 5). The mean score was still quite high (4.1), but the range was from 1 to 5. This finding indicates that participants were willing to use the full range of the scale. It also means that some of them felt considerable discomfort and may have had an attributional bias toward feeling mistreated by authorities. This is precisely the kind of reaction that simulation training may help to correct.

Table 2. Usability  
(Scale is 1 to 5; Poor to Excellent)

	N	Minimum	Maximum	Mean	SD
18. Ease to use	10 3	5		4.10	.876
19. Directions were clear	10 3	5		4.10	.738
20. Ease to navigate	10 3	5		4.10	.876

Table 2. Usability  
(Scale is 1 to 5; Poor to Excellent)

	N	Minimum	Maximum	Mean	SD
21. Interactions seemed real	10 3	5	5	4.50	.850
22. Simulation useful to train job skills	10 3	5	5	4.40	.699
23. Likelihood of using simulation	10 3	5	5	4.50	.699

These items cover many of the same areas as those in Table 1, but the nature of the scale allows for judgments that have a higher ceiling such as very good or excellent, and these items are focused more narrowly on usability. Again, all the scores are very favorable with high agreement that it was easy to use, that it was highly useful for training job interview skills, and that the participant would be highly likely to want to use the full simulation when it is available. Indeed, it was to this final item (Item 23) that respondents gave their highest rating.

Table 3. Additional Responses  
(No = 0; Yes = 1)

	N	Minimum	Maximum	Mean	SD
24. Simulation was entertaining	10 0	1	1	.90	.316
25. Curious to try simulation again	10 0	1	1	.80	.422
26. Ever practiced job interviews using role- play	10 0	1	1	.40	.516
27. Comparable alternative to role-play	10 1	1	1	1.00	.000

Table 3. Additional Responses  
(No = 0; Yes = 1)

	N	Minimum	Maximum	Mean	SD
28. Expected questions asked	10	0	1	.20	.422

Finally, 9 out of 10 found the simulation entertaining, which may be important for maintaining interest and engagement with the exercises. Eight out of 10 said that they would be curious to try the simulation again, and all 10 agreed that this simulation was a comparable alternative to a live role-play. As reflected above in responses suggesting some discomfort with the questioning, 9 out of 10 did not expect the questions that they were asked. This result suggests that the participants were unprepared for the standard interview questions that the simulation used and that they have a great deal to learn about what to expect in a job interview.

### Qualitative Responses (Free Response)

Participants made a number of comments that add to our understanding of their experience. They all saw it as helpful overall, although they varied in what they liked most about it. Comments included the following: "I learned a lot from this simulation, about myself and job interviewing." "It kept me interested and focused." "It portrayed accurately what might be said in a job interview." "I felt the interactions were life-like." "It stimulated my brain. I thought it was very educational."

Some also commented on how anxiety provoking a job interview can be and that the simulation itself was realistic in causing anxiety. Comments included the following: "I felt that the interviewer was stoic and unapproachable. Her appearance intimidated me. It was a learning experience." "Gave tough questions I had to answer." "Better than role-play. You had the actual feel of being in an interview." "Felt like an actual interview." "Molly didn't hire on the spot, so don't know if I'd be hired."

Because it felt so realistic to the participants, they also viewed it as a chance to overcome their fear of the situation through practice and to get better at it. Comments along these lines were the following: "I wanted to take full advantage of the program, so when I go on an interview I can do a good job." "It was interesting to see how to improve my skills." "I was not as nervous as I would be in a real-life situation." "Job interviews are difficult sometimes; I found this one a little more understanding." "It teaches you how to interact with the person that is interviewing you."

When asked what would improve the simulation, their comments supported the need for further development. They had suggestions about additional interview questions and wanted a greater variety of possible responses, for example: "More questions about job related issues." "Should be more questions about your resume." "More variety of interview responses." "Would like more questions about physical ability." "Thought it was engaging. Adding more options would make it more realistic and appealing. More interactive like."

Participants also stated that they really liked the special features of the simulation, especially the Coach and the ability to review the transcript of the dialogue afterward, for example: "Wanted to see the reaction of the job coach if I answered in a way that wasn't entirely accurate." "This training is comparable [to role-play] because it gives you feedback and helps improve interviewing skills." "Overall, I feel this simulator is excellent in helping people be better interviewers in getting jobs. Thanks a lot."

## **Conclusion**

A representative sample of patients with mental illness and engaged in vocational rehabilitation had a strongly positive response to the prototype Job Interview Simulation. They found it easy to use, enjoyed the experience, and thought it realistic and helpful. Almost all described the interview as anxiety provoking but said that the anxiety diminished as they became more skilled. They saw the benefit of its special features such as the Coach and the transcript, and they believed that they could learn the skills being taught through these methods. At the same time, they could see the need for further development, especially a greater variety of questions and possible responses. Participants were enthusiastic about wanting to use the final product when it becomes available.