Athens Journal of Psychology 2026, 2: 1-17
https://doi.org/10.30958/ajpsy.X-Y-Z

Using Simulated Patients' Ratings to Predict Psychology Graduate Students' Interviewing Skills

By Jillian Crocker[*], Corin Osborn[±], Luca Hartman[°], Brianna Domaceti[•], Hannah Friedland[♦], Alexis Tola[♥] & Ralph Cash[♠]*

Psychologists depend upon comprehensive interviews to help identify mental health conditions in order to provide evidence-based, effective interventions. Although it would be ideal for trainees to acquire interviewing skills before seeing their first client, there are limitations in the effectiveness of interviewing peers and obtaining useful feedback from peers and supervisors (Kaslow et al., 2009; Meier & Davis, 2011). Simulated patients (SPs) are often better suited to provide standardized experiences and impartial feedback (Kaslow et al., 2009). Students gain invaluable implicit feedback during role-plays with SPs, as they learn to adjust their skill development appropriately (Lovink et al., 2021). This study focuses on assessing the benefits of SPs in clinical psychology interview training. The Simulated Patient Assessment of Clinician Effectiveness Scale (SPACES) was created to enable SPs to offer feedback on the performance of psychology trainees' clinical interviewing. SPACES was adapted from the Arizona Clinical Interview Rating (ACIR) Scale (Stillman et al., 1977), a widely employed tool for assessing the interviewing skills of medical students. The items within SPACES cover the evaluation of clinician confidence, comfort level, perceived understanding, genuineness, and overall conversational flow. The Skills in Psychological Interviewing: Clinical Evaluation Scales (SPICES) was developed in response to the call for standardized methods of evaluating psychology students' skill development across the American Psychological Association's (APA's) competency areas. The SPACES form was analyzed and compared with the SPICES measure to determine the extent to which SP's SPACES ratings of students' (N=98) scores align with measures at the beginning and end of a semester of training in clinical interviewing with SPs. Results indicate that SP ratings do assess the likeability of interviewers but are not effective at assessing development of technical interviewing skills.

[*]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[±]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[°]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[•]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[♦]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[♥]Clinical Psychology Doctoral Students, Nova Southeastern University, Canada.
[♠]Professor and Director of the School Psychology Psy.D. Program, Nova Southeastern University, Canada.

Introduction

Clinical psychology has made significant progress during the 20th century. Advancements in psychological services have notably increased the life expectancy of individuals with mental disorders (Chan et al., 2023). However, approximately 22.8% of adults living in the United States, equivalent to 57.8 million Americans, are estimated to have one or more mental illnesses according to the National Institute of Mental Health (NIMH, 2024). As the United States (US) population continues to diversify, the prevalence of mental illness is likely to rise according to the US Congressional Budget Office (CBO, 2021). In response to the demand, the number of individuals graduating with doctorates in psychology is rapidly rising, as prevalence rates increased by 25% from 2008 to 2017 alone according to the American Psychological Association (APA, 2019). Moreover, health service psychology, or patient-facing psychology, has been growing at a faster rate than research-focused psychology, with over half of doctorates awarded in 2017 being in health service psychology and representing a 28% increase over 10 years (APA, 2019).

With the increasing need for clinical psychologists and the steady rise in future providers, maintaining standardized education and training is crucial. One metric of ensuring quality training for future psychologists is instilling accreditation standards, which demonstrate a program's dedication to comprehensive clinical training. The American Psychological Association's Standards of Accreditation (SoA) aim to establish and to enforce updated and well-rounded competency expectations that facilitate the education and evaluation of students. Current competencies outlined by the SoA include: 1) research, 2) ethical and legal standards, 3) individual and cultural diversity, 4) professional values, attitudes, and behaviors, 5) communication and interpersonal skills, 6) assessment, 7) intervention, 8) supervision, and 9) consultation and interprofessional/ interdisciplinary skills (APA, 2018). However, the practical application of these competencies can be complex. Programs must account for the varied experiences of students who enter with differing levels of prior training and education (Fouad et al., 2009; Rodolfa et al., 2013). Programs are challenged to ensure that standards are maintained while also adapting to the unique experiences of each student.

Training the growing number of graduates into qualified professionals requires the cultivation of several core skills, with clinical interviewing being at the forefront. Interviews, combined with clinical practices by psychologist Jean Piaget, began in the 19th century to explore thoughts objectively with standard and nonstandard questioning (Sommers-Flanagan et al., 2015). Today, interviewing skills are vital to interpersonal relationships, interventions, assessments, evidence-based decision-making, supervision, and consultation. Gathering information through the client experience is one of the pivotal points in assessment and treatment to arrive at a scientifically valid diagnosis (Sommers-Flanagan et al., 2015). As the initial point of contact, interviews set the tone for the therapeutic relationship and provide the first opportunity for establishing rapport. Client/patient perceptions of the relationship are key predictors of future outcomes and potential indicators of increased risk of dropping out of therapy (Flückiger et al., 2018; Jankowsky et al., 2023). To help students develop the skills necessary to build positive relationships

and strong therapeutic alliances from the initial interview, training programs frequently use role-play exercises.

This paper begins by introducing the importance of continued training in the growing psychology field, the role of competency models in training, and the outcome on patient care. A literature review then examines how interviewing skills are often taught and assessed in health service psychology doctoral programs and the role of simulated patients within the process. Methodology, including participants, relevant measures used, and procedures are then described before the results are outlined. A discussion then explains the implications and utility of the findings, and the paper ends with conclusions and a review of limitations.

Literature Review

What Interviewing Skills to Teach

Clinical interviews rely on strong verbal and nonverbal communication skills. Competent interviewers acknowledge their own areas requiring growth, remain conscious of personal biases, and are proactive in seeking to understand their clients in order to bridge any gaps in knowledge or skills (Solomon et al, 2017). While attending to these issues, the interviewer must also remain mindful of the purpose of the interview and remain sensitive to their own and the client's disclosure choices (Davies, 2019). Integrating these skills requires practice and intentional effort; thus, the skills needed to conduct effective interviews can be taught and are not necessarily inherent. An analysis of psychology trainee interviewing skills before and after explicit training reveals that training allows interviewers to develop increased empathic communication, to utilize their knowledge and training to demonstrate credibility, and effectively to address important aspects of the interview, such as consent and safety assessment (Osborn et al., 2023).

When interviewing, it is imperative that providers allow their patients to use their own words to describe their experiences and to avoid implying that there are 'right' or 'wrong' answers. One method of fostering open communication is in the use of open-ended questions, which prompts patients to elaborate (Bredart et al., 2014). Using a patient's own language during reflections and when synthesizing information can then support the patient in feeling validated and understood, in turn increasing patient ratings of satisfaction and enhancing their likelihood of continued care (Heavan et al., 2003; O'Keefe et al., 2001). Combining open-ended and close-ended questions to conduct an interview will also facilitate a client-centered approach. Following the lead of a patient encourages the use of active listening and empathic responding and is associated with increased positive clinical outcomes regardless of setting or diagnosis (Heavan et al., 2003). Throughout the interview process, providers often fixate on presenting problems or clinical concerns. In order to establish a positive environment, to build rapport, and to gather information regarding protective factors and patient strengths, it is valuable to spend interview time eliciting positive experiences and inquiring about patient wellness (O'Brian & Schlechter, 2016).

It is also important for clinical interview training to incorporate specific emphasis on and practice of safety and risk assessments. Unfortunately, many mental health providers are not provided with sufficient training to assess for suicidality (Schmitz et al., 2012), to feel confident enough to ask about or to evaluate for possible abuse (Young et al., 2001), or to be effective in responding to threats of violence and suicidal risk (Mackelprang et al., 2014; Osborn & Cash, 2020). However, even through brief targeting training opportunities, providers are able to increase their competency and their confidence in these skills (Osborn & Cash, 2020), illustrating the value of their inclusion within training programs.

How to Teach Interviewing Skills

Psychology and medical programs have been progressively employing role-play experiences to train and to evaluate students. Unlike other methods of instruction, role-playing facilitates opportunities to step into the role of provider in low-risk environments while enabling direct observation (Shae & Barney, 2015). Not only do students gain the opportunity to practice interviewing skills, but they may also role-play as the patient and develop increased empathy while gaining insight into patient experiences (Meier & Davis, 2011). Role-playing with a supervisor often improves student confidence and allows opportunities for direct modeling and practice of targeted clinical interviewing skills (Shae & Barney, 2015). While role-play with a supervisor may occur in direct supervision experiences, more often instruction surrounding interviewing skills occurs in group settings, and role-play activities occur as practice assignments between peers. While these experiences have the potential for benefits, they are often not taken seriously by students, include inaccurate portrayals of diagnoses or clinical experiences, and are not very effective (Kaslow et al., 2009; Meier & Davis, 2011).

Simulated patients (SPs) are actors specifically trained to portray particular diagnoses or symptoms within clinical settings to facilitate clinical training (Barrows, 1993). SPs are used across various disciplines (e.g., medicine, nursing, nutrition, pharmacy, occupational therapy, mental health) to train students, to facilitate competency acquisition, and to assess competencies (Barros, 1993; Beshgetoor & Wade, 2007; Cangelosi, 2008: Giles et al., 2014; Kaslow et al., 2009; Masters et al., 2015; Mesquita et al., 2010, Yap et al., 2012). The training that SPs receive creates role-play interactions that are more representative of actual client interactions within safe environments to practice skills without the potential risk of ethical dilemmas, harming clients, and increased levels of uncertainty (Kaslow et al., 2009; Masters et al., 2015).

Assessing Interviewing Skills

Despite the continued presence of interviewing skills within competency models for mental health professionals, structured evaluation and assessment of interviewing skills varies widely and is under-researched. Measures focusing on specific interview components, such as the Jefferson Scale of Physician Empathy (JSPE), are often used to assess abilities before and after training (Fernndez-Olano

et al., 2008). However, a limitation of single factor measures is that they evaluate only one aspect of an interview and not overall interviewing competency. Instead, it is beneficial to utilize measures that incorporate the range of skills and interpersonal exchanges that make up an effective clinical interview.

Use of Client and SP Feedback

To increase objectivity in skill assessment and supervision, client feedback has become a more common tool (Worthen & Lambert, 2007). Using rating scales (e.g., client satisfaction ratings) students and their supervisors have access to immediate feedback regarding the services provided and their perceived efficacy. When client feedback is consistently incorporated into supervision, students demonstrate greater improvement in their clinical skills than students who do not have client feedback incorporated into their supervision (Reese et al., 2009). Additionally, student self-evaluations appear to increase in accuracy, demonstrated by a stronger association between client outcomes and provider self-efficacy ratings for those for whom client feedback was a regular part of their training (Reese et al., 2009). Unfortunately, research shows that client satisfaction ratings are often influenced by social desirability pressures and can vary significantly based on how and when they are collected (Burroughs et al., 2005).

To address some of the subjectivity and bias associated with direct client satisfaction ratings and feedback, SP feedback has been utilized to assess competencies and to monitor improvement overtime (Kaslow et al., 2009; Masters et al., 2015, Yap et al., 2012). As interactions with SPs have been found comparable to true client interactions, their feedback is viewed as an effective representation of how clients in the interactions may feel. Additionally, the SP presentations can be standardized, providing more consistent pre- and post-test experiences and allowing for more direct comparisons of skill changes over time (Block et al., 2018; Kaslow et al., 2009). The increased impartiality of feedback provided by SPs, as compared to that provided by true clients, paired with the decreased exposure to unnecessary risk associated with building competency via working with clients has led to the use of SPs for evaluative purposes by 94% of medical schools in the United States (Block et al., 2018; Kaslow et al., 2009).

The study aimed to evaluate students' ability to establish a rapport with interviewee SPs while learning and applying interviewing skills. The progress of the clinical trainee's rapport with the simulated patient was evaluated at the beginning and end of the semester. The second objective is to assess the technical interviewing skills of students, including risk assessment. The study will determine the capacity of SPs to evaluate technical skills developed over the second semester in an APA-accredited program. This study's findings will enhance the understanding of how students develop and refine their interviewing skills and the effectiveness of standardized patients in providing feedback on such skills.

Methodology

Participants

Data were collected from 100 first-year doctoral clinical psychology students at a large university in the southeastern United States in the winter of 2019 prior to the onset of the COVID-19 pandemic. The students were enrolled in a four-month interviewing course combined with lab sessions incorporating weekly three-hour meetings with a session facilitator and other students enrolled in the Clinical Psychology Ph.D. or Psy.D. program. The students were assigned to 10 groups of 10 students each. The students had minimal prior experience interviewing clients for clinical purposes. The course and lab sessions aimed to develop several skills, including professional standards and ethical decision-making, professional presentation, effective communication with diverse interviewees, appropriate relational and interpersonal skills, informative and well-integrated oral and nonverbal communication using professional language and concepts, and practical interpersonal skills combined with the ability to manage difficult communication situations. The course was developed in accordance with the SoA of the American Psychological Association (APA).

Data from two participants were removed due to missing scores on the Skills in Psychological Interviewing: Clinical Evaluation Scales (SPICES), an instrument developed specifically for evaluating clinical interviewing skills (Osborn, et al., 2023). Of the remaining 98 participants included, 77 identified their gender as female, 16 as male, and 5 did not specify. Ages of participants ranged as follows: 20-24 (n = 72), 25-29 (n = 19), 30-34 (n = 4), 40-44 (n = 2), or not specified (n = 1). Participants reported identifying as White (n = 62), Hispanic/Latinx (n = 21), African American (n = 6), Asian (n = 3), other (n = 3), and not specified (n = 3). Among these participants, 83 identified English as their first language, 11 reported Spanish as their first language, one noted Creole as the first language, and two specified 'other'. One participant chose not to report their first language. Nine participants indicated being trainees in the Ph.D. Clinical Psychology program, 88 were trainees in the Psy.D. Clinical Psychology program, and one participant chose not to disclose which program. Ninety-three participants reported being in their first year of their graduate program and four reported being in their second year. One participant chose not to answer.

Procedures

The present study employed simulated patients to assess the progress and competency of participants in basic interviewing skills. Simulated patients were provided with detailed descriptions of the case they were to portray, including the client's name, age, clinical setting, presenting problems, and personal background information. The simulated patients attended two-hour, face-to-face training sessions regarding the characteristics of each disorder to be portrayed. The training sessions were conducted by a psychology faculty member who was an expert in each of the five disorders to be portrayed by the simulated patients.

The course began with a pre-test, videotaped interview to establish a baseline score (i.e., the average of the two evaluators' ratings) of the participants' clinical interviewing skills before they received formal training. Each student was allotted 15-minutes to complete an interview with a simulated patient who portrayed an individual with a mental health disorder. The pre-test was conducted in person and video recorded for evaluation by two randomly assigned interns and/or post-doctoral residents utilizing SPICES. The students also received feedback from the simulated patient using the Simulated Patient Assessment of Clinician Effectiveness Scale (SPACES), a 12-item measure developed for this project for the purpose of providing feedback from simulated patients to students.

Participants engaged in a structured weekly didactic and practice session as part of the interviewing course requirements. The instruction sessions commenced with a brief comprehensive lecture covering a range of interview-relevant topics and skills, including assessing for suicide, threat, and abuse. Following the lecture, the students participated in two skills-based interventions each week. Each student completed bi-weekly 15-minute role-plays and received live feedback from peers and the course facilitator while the students reflected on their performance. The structure of these sessions was designed to facilitate students' utilization of role-playing to reduce the stress of and to increase skills necessary for initial clinical interviews with a clients at their first practicum sites. Simulated patients and facilitators rotated every week, and participants had the opportunity to role-play with a new simulated patient each encounter. A two-week scenario featuring a single diagnostic case allowed students to practice and to observe other trainees for each of the five mental health disorder portrayed. Furthermore, the students responded to modules focusing on basic interviewing skills, such as reflection, summarization, and empathy, guided by the observance of ethical considerations and diversity, among other components.

At the end of the semester, the participants completed a post-test interview to evaluate progress and competency in their interviewing skills. The post-test interview was conducted in person, and participants were randomly assigned to a 15-minute interview time slot. During the interview assessment, students were instructed to avoid using notes, as the aim was to prepare them for sitting with and focusing fully on a client. Following the post-test, two interns or post-doctoral residents were randomly assigned to assess the student's skills along with an experienced faculty member using the Skills in Psychological Interviewing: Clinical Evaluation Scale (SPICES). To be eligible to begin their first practicum experience, students needed to pass the class by scoring 80% or higher based on the average scores of all three raters. The standardized patients provided feedback to the students who interviewed them using the Simulated Patient Assessment of Clinician Effectiveness Scale (SPACES).

Test Instruments

The Simulated Patient Assessment of Clinician Effectiveness Scale (SPACES)

The Simulated Patient Assessment of Clinician Effectiveness Scale (SPACES) was created to enable SPs to offer feedback on the performance of psychology trainees' clinical interviewing. SPACES was adapted from the Arizona Clinical Interview Rating (ACIR) Scale (Stillman et al., 1977), a widely employed tool for assessing the interviewing skills of medical students. The items within SPACES cover the evaluation of clinician confidence, comfort level, perceived understanding, genuineness, and overall conversational flow. Its purpose is to enhance clinical training by comprehensively assessing critical aspects of clinician-patient interactions.

The Skills in Psychological Interviewing: Clinical Evaluation Scales (SPICES)

The Skills in Psychological Interviewing: Clinical Evaluation Scales (SPICES, Ketterer, 2014) was developed in response to the call for standardized methods of evaluating psychology students' skill development across many of the American Psychological Association's (APA's) nine profession-wide competency areas.

Results

The SPACES scores were analyzed and compared with the SPICES results to determine the extent to which SP's SPACES ratings of students' scores align with the SPACES competency measures at the beginning and end of a semester of training in clinical interviewing with SPs. The current study evaluates the utilization of SPACES in assessing the clinical effectiveness of students from SPs' perspectives.

Descriptive Statistics

Results included the scores of 98 participants from a graduate program in clinical psychology on the SPICES and SPACES measures at pre-and-post-test. Of note, two participants were removed from statistical analyses due to missing one or more scores on the SPICES measure. On the average, participants received higher scores at post-test (SPICES; $M = 94.35$, $sd = 3.33$), as compared to pre-test (SPICES; $M = 84.51$, $sd = 7.39$). Similarly, simulated patients appeared to rate participants more positively at post-test (SPACES; $M = 43.38$, $s = 4.37$) than at pre-test (SPACES; $M = 41.13$, $s = 6.30$).

Table 1 depicts the minimum, maximum, mean, and standard deviations of the scores obtained by participants on the SPACES and SPICES at two timepoints.

Table 1. *Descriptive Statistics of Scores Obtained by Students on the SPACES and SPICES at Pre-and-Post Test*

Variable	Descriptive Statistic				
	N	**Min**	**Max**	**Mean**	**Standard Deviation**
Pre-Test SPACES	98	26.00	48.00	41.13	6.30
Post-Test SPACES	98	19.00	48.00	43.38	4.37
Pre-Test SPICES	98	33.00	97.50	84.51	7.39
Post-Test SPICES	98	15.67	101.67	94.35	3.33

Internal-Consistency Reliability

To confirm the psychometric properties of the assessments, the internal-consistency reliability of the SPACES and SPICES were assessed using Cronbach's alpha at pre-test and post-test. The reliability statistics for the pre-test SPACES test showed a strong internal consistency ($\alpha = 0.848$). Alpha coefficients ranged from 0.813 to 0.854 after item removal, suggesting each item contributes approximately equally to the scale's internal consistency. The post-test SPACES also demonstrated strong internal consistency ($\alpha = 0.753$), and alpha coefficients if items were deleted ranged from 0.695 to 0.763. Similarly, the pre-test SPICES showed robust internal consistency ($\alpha = 0.851$). An item-deleted analysis revealed minimal changes in the overall alpha when individual items were removed from pre-test ($\alpha = 0.836$ to 0.855). However, the post-test SPICES exhibited internal consistency below the expected level ($\alpha = 0.596$), and the Cronbach's Alpha ranged from 0.536 to 0.629 after removal.

Paired-Sample t-Test

Paired-sample t-tests were conducted to examine whether completing the practicum course would lead to perceived improvement as well as assessed gains regarding clinical interviewing skills. Students obtained significantly better scores on the SPICES at post-test ($M = 94.35$, $s = 3.33$) as compared to pre-test ($M = 84.51$, $s = 7.39$), demonstrating higher ratings of skill development by instructors at post-test, ($t(97) = -13.07$, $p < 0.001$, $d = 1.32$). Similarly, significantly better ratings by SPs of perceived interviewing effectiveness were obtained on SPACES by students at post-test ($M = 43.38$, $s = 4.37$) as compared to pre-test ($M = 41.13$, $s = 6.30$), suggesting an increase in perceived clinical skills by simulated patients ($t(97) = -2.97$, $p = 0.002$, $d = 0.300$). Overall, results show that students completing the practicum course developed better clinical interviewing skills, as indicated by both simulated patient and instructor ratings.

Table 2. *SPICES and SPACES Scores at Pre-and-Post Test. Note that higher Scores on SPICES and SPACES Indicate Greater Clinical Skills*

	Pre-Test Scores		**Post-Test Scores**		**t-test**	
	Mean	*Standard Deviation*	*Mean*	*Standard Deviation*	*t-score*	*p-value*
SPICES	84.51	7.39	94.34	3.34	-13.065	<0.001
SPACES	41.13	6.30	43.38	4.37	-2.968	0.002

Bivariate Correlations

Results of non-directional, bivariate correlations showed significant positive associations between post-tests scores on the SPICES and the pre-test scores on the SPICES ($r = 0.208$, $r^2 = 0.043$, $p = 0.04$), as well as on the post-test scores on the SPACES ($r = 0.251$, $r^2 = 0.063$, $p = 0.01$). Notably, results indicate that students receiving more positive evaluations from instructors at pre-and-post-test timepoints were more likely to receive positive feedback from simulated patients at post-test. Further, a significant positive association was found between pre-test SPICES scores and pre-test SPACES scores ($r = 0.279$, $r^2 = 0.078$, $p = 0.006$). These findings suggest that students obtaining positive evaluations from simulated patients were more likely to receive positive scores from instructors at the pre-test condition. The positive correlation between scores obtained on the SPICES at post-test and the scores obtained on the SPACES at pre-test approached significance ($r = 0.195$, $r^2 = 0.038$, $p = 0.055$), suggesting that SPs may recognize early those students who relate well as interviewers. Future studies may examine more fully the association between skill development results at post-test and the feedback of simulated patients at the pre-test condition.

Table 3. *Bivariate Correlations between Pre-and-post Test SPICES and SPACES Scores*

Measure	**1**	**2**	**3**	**4**
1. Pre-Test SPICES		0.208*	0.276**	0.038
2. Post-Test SPICES	0.208*		0.195	0.251*
3. Pre-Test SPACES	0.276**	0.195		0.049
4. Post-Test SPACES	0.038	0.251*	0.049	

*p < 0.05 level (2-tailed).
**p < 0.01 level (2-taled).

Multiple Linear Regression

A multiple linear regression analysis was used to determine the unique contributions of the following variables in predicting skill development evaluations at post-test: (1) skill assessment at pre-test, (2) simulated patient evaluation at pre-test, and (3) simulated patient evaluation at post-test.

Table 4. *Summary of Multiple Linear Regression Analyses for Predicting SPICES at Post-Test*

	Regression Statistics		
Variables	*B*	*SE B*	*β*
Pre-Test SPICES	0.072	0.045	0.160
Pre-Test SPACES	0.074	0.053	0.139
Post-Test SPACES	0.182*	0.074*	0.239*

*p<0.05

The overall model was statistically significant, showing that the predictors accounted for 9.2% of the variance in post-test scores on the SPICES ($F(3, 94) = 4.280$, $p = 0.007$). Results showed that post-test scores on the SPACES predicted post-test scores on the SPICES above and beyond other predictors ($B = 0.182$, $SE\ B = 0.074$, $p = 0.016$, $sr^2 = 0.057$).

Discussion

Clinical interviewing is a crucial aspect of graduate training, as it establishes effective communication and rapport building, which, in turn, can lead to improved mental health outcomes. Moreover, clinical psychologists utilize clinical interviews to identify mental health conditions (Sommers-Flanagan et al., 2015). Once clients decide to pursue treatment, accurate diagnoses can guide evidence-based interventions for a variety of conditions. Simulated patients can be used to train and assess upcoming cohorts, meeting the needs of a growing number of trainees. The current study aimed to determine if students can establish rapport with SPs, improve their interviewing skills, and maintain and develop the connection skills over time.

Intervention Efficacy

This research study evaluated the level of technical and interpersonal interviewing skills students possess, using the SPICES 26-item measure and SPACES 12-item measure. In the current study, the SPICES exhibited high internal consistency at the pre-test, but there was some variability at the post-test. The decrease in alpha for post-test evaluation is likely due to the inclusion of ratings from three evaluators, one of whom was an experienced faculty member, increasing the variability compared to the pre-test ratings. The measure has previously been validated and found to have strong internal consistency and inter-rater reliability (Ketterer, 2014). Moreover, the results revealed a statistically significant positive correlation between pre-test and post-test SPICES scores, indicating that interviewing skill assessments before formal instruction and practice are significant but weak predictors of how students will respond to formal interviewing training.

The SPICES post-test scores were significantly higher than the SPICES pre-test scores and reflected a large effect, strongly suggesting that the training and practice improved students' technical interviewing skills and that the course achieved its objective of improving the students' technical interviewing skills

overall. The findings are consistent with previous unpublished data indicating an increase of at least one standard deviation in the SPICES scores from pre-test to post-test annually. In addition, the SPACES scores revealed a statistically significant change from pre-test to post-test, although this was a small effect. This small change from pre-test to post-test, especially given the large degree of skill improvement, suggests that two processes are involved. The SPs' ratings on SPACES may reflect something about the interviewers which might be called likeability or charisma, whereas the SPICES scores most likely reflect technical skill development. Skills may well be easier to tach and much more amenable to specific instruction than likeability. However, using stimulated patients (SPs) in training can significantly enhance the overall likability of interviewers by fostering a positive attitude during the learning process (Gorski et al., 2022).

The importance of a single intake interview conducted by doctoral students has been called into question due to mixed findings (Hutchinson et al., 2008). However, multiple practice with and feedback from SPs allows students to gain insight into patient experiences and to improve their interviewing skills (Meier & Davis, 2011). Working with SPs can help clinicians develop skills in responding to anxiety-provoking and challenging interview situations. Moreover, SPs may provide secondary psychological benefits through rapport building with students, based, in part, on communicating their perception of the interviewers.

Interviewer's interpersonal likeability probably influences the interviewee's perceptions of them. However, in this study, there was limited room for improvement, since the clinical trainee's initial scores were already high at pre-test (M=41.13, sd= 6.30) with a maximum possible score of 48. Clinical psychology trainees, who are selected through a careful graduate admission process, likely possess basic interpersonal skills at admission. Nevertheless, SPs may aid in further developing these interpersonal and communication skills (Zraick et al., 2003). SP feedback could benefit trainees by allowing them to practice their skills on real individuals, receive feedback on their performance, and reflect on their practice (Gorski et al., 2022). The clinical psychology trainees in the presentd study receive bi-weekly feedback from simulated patients for each role-play, and this could very well have aided in their improved SPICES scores from the beginning to the end of the semester.

Utilization of Client Feedback

More than a third of patients who attend their first therapy session do not return for their next visit (Simon et al., 2012). Although it would be ideal for trainees to acquire interviewing skills before seeing their first client, factors that may impede the development of interviewing effectiveness include a lack of motivation to change, unclear bias mitigation strategies, and the absence of communication training (Hagiwara et al., 2020). Therefore, novice clinicians may get dismissed by or even do damage to their clients because they are not aware of their skill deficiencies. Interestingly, clients who do not return report both favorable and unfavorable outcomes of therapy, such as high satisfaction and maximum

improvement, as well as low satisfaction, weak alliance, and no improvement (Simon et al., 2012). The rationale for their non-return is difficult to discern without receiving more explicit feedback. Further research is also warranted, as some clients may continue therapy despite initial judgments (Odell et al., 1998).

The present study aimed to investigate the extent to which the ratings of SPs could predict their ability to rate the skill development of the students. The results showed that while the SPs' ratings correlated with scores on the interviewing skills scales, they only accounted for a small proportion of the variance. There was no significant correlation between the pre-test and post-test SPACES scores, indicating the SPs' scores were not related between the two time points. However, the 12-item SPACES displayed high internal consistency at both pre-test and post-test, indicating the measure is reliable at detecting interpersonal likeability.

The authors also sought to explore whether the SPs' pre-test score was associated with the post-test skills score. However, the correlational analysis did not reveal any significant correlation between these two scores. SP's pre-test evaluation of the clinical trainee does not seem to be a reliable predictor of their final scores, suggesting that likeability varies over time.

The consistency of scores between SPs and skill evaluations during the pre-test phase was also investigated. The analysis demonstrated a statistically significant, positive correlation between the pre-test SPICES and pre-test SPACES scores, indicating that as the SPICES scores increased, so did the SPACES scores to some extent. Notably, this correlational analysis produced one of the highest coefficients in the study, suggesting the relationship between simulated patients' ratings and skill evaluations is strongest before the clinical trainees acquire technical skills. This observation suggests that entry-level students exhibit general affability before developing technical skills.

The regression analysis revealed that the post-test SPACES was a significant predictor of post-SPICES, further supporting an effect of the timing of assessment. Clinical psychology trainees who tend to be more likable may perform better on SPICES, possibly due to their increased competence or test-related anxiety. Likeability can influence how individuals are perceived and evaluated, ultimately affecting their ability to perform well. Further research is necessary to investigate whether the SPs can predict more than just affability.

Conclusion

Employing reliable assessments to evaluate trainees on the APA SoA competencies accurately is important while giving feedback and evaluating their eligibility for commencing clinical work. The pre-practicum course is designed to help meet every practicum site's unique needs, a requirement not applicable to all courses. Therefore, it is important to utilize assessment tools to ensure that trainees meet the standards set by the APA. The interventions and methods used in this course provide tailored feedback, both live and through the SPICES and SPACES, which supports students while they are developing their clinical interviewing skills, as evident from the feedback provided by both simulated patients and skill raters.

The assessments utilized in the current study effectively capture the underlying structure from the perspective of both simulated patients and interns or post-doctoral students.

A correlation was revealed between the scores given by SPs and skill raters, both before and after the SPs acquired technical skills. SPs exhibit the ability to assess likability which is related to but different from technical expertise. Implications of this study suggest that perceptions of the simulated patient and rater of technical interviewing skills should be considered independently and together to improve the accuracy of assessing the developing psychologist.

References

American Psychological Association (APA) (2019) *Master's and Doctoral Degrees Awarded in Psychology*, 2008-2017: By Subfield, Institution Type, State, Gender, and Race/ Ethnicity. Washington, DC

American Psychological Association (APA) (2018) *Standards of Accreditation for Health Service Psychology and Accreditation Operating Procedures*. Washington, DC.

Barrows, H. S. (1993) An overview of the uses of standardized patients for teaching and evaluating clinical skills. *Academic Medicine* 68(6):443–451.

Beidas RS, Cross W, Dorsey S (2013) Show me, don't tell me: Behavioral rehearsal as a training and analogue fidelity tool. *Cognitive and Behavioral Practice* 21(1):1-11.

Benjamin LT Jr. (2005) A history of clinical psychology as a profession in America (and a glimpse at its future). *Annual Review of Clinical Psychology*, *1*, 1–30. https://doi.org/10.1146/annurev.clinpsy.1.102803.143758

Beshgetoor D, Wade D (2007) Use of actors as simulated patients in nutritional counseling. *Journal of Nutrition Education and Behavior* 39:101-102.

Block L, Brenner J, Conigliaro J, Pekmezaris R, DeVoe B, Kozikowski A (2018) Perceptions of a longitudinal standardized patient experience by standardized patients, medical students, and faculty. *Medical Education Online*, *23*(1), 1548244. https://doi.org/10.1080/10872981.2018.1548244

Bredart A, Marrel A, Abetz-Webb L, Lasch K, Acquadro C (2014) Interviewing to develop patient-reported outcome (PRO) measures for clinical research: Eliciting patients' experience. *Health and Quality of Life Outcomes, 12*(1), 1-20. doi: 10.1186/1477-7525-12-15

Burroughs TE, Waterman BM, Gilin D, Adams D, McCollegan J, Cira J (2005) Do on-site patient satisfaction surveys bias results? *The Joint Commission Journal on Quality and Patient Safety*, *31*(3), 158-166.

Cangelosi PR (2008) Accelerated nursing students and theater students: Creating a safe environment by acting the part. *Nursing Education Perspectives,* 29:342-346.

Chan JKN, Correll CU, Wong CSM, Chu RST, Fung VSC, Wong GHS, Lei JHC, Chang WC (2023) Life expectancy and years of potential life lost in people with mental disorders: A systematic review and meta-analysis. *eClinicalMedicine*, *65*, 102294. https://doi.org/10.1016/j.eclinm.2023.102294

Congressional Budget Office (CBO) (2021)

Curtis JR, Back AL, Ford DW, Downey L, Shannon SE, Doorenbos AZ, Kross EK, Reinke LF, Feemster LC, Edlund B, Arnold RW, O'Connor K, Engelberg RA (2013) Effect of communication skills training for residents and nurse practitioners on quality of communication with patients with serious illness: A randomized trial. *Journal of the*

American Medical Association (JAMA), *310*(21), 2271–2281. https://doi.org/10.1001/jama.2013.282081

Davies J (2019) Developing a model for evidence-based clinical forensic interviewing. *International Journal of Forensic Mental Health, 18*(1), 3-11. doi: 10.1080/14999013.2018.1508096

Doolen J, Giddings M, Johnson M, Guizado de Nathan G, O Badia L (2014) An evaluation of mental health simulation with standardized patients. *International Journal of Nursing Education Scholarship*, *11(1)*. https://doi.org/10.1515/ijnes-2013-0075

Fernndez-Olano C, Montoya-Fernndez J, Salinas-Snchez AS (2008) Impact of clinical interview training on the empathy level of medical students and medical residents. *Medical Teacher, 30*(3), 322-324.

Flückiger C, Del Re AC, Wampold BE, Horvath AO (2018) The alliance in adult psychotherapy: A meta-analytic synthesis. *Psychotherapy, 55*(4), 316–340. https://doi.org/10.1037/pst0000172

Fouad NA, Grus CL, Hatcher RL, Kaslow NJ, Hutchings PS, Madson MB, Collins FL Jr, Crossman RE (2009) Competency benchmarks: A model for understanding and measuring competencies in professional psychology across training levels. *Training and Education in Professional Psychology* 3(4 Suppl) S5-S26. https://doi.org/10.1037/a0015832

Giles A, Carson N, Breland H, Coker-Bolt P, Bowman P (2014) Use of simulated patients and reflective video analysis to assess occupational therapy students' preparedness for fieldwork. *The American Journal of Occupational Therapy* 68(2) S57-66. https://doi.org/10.5014/ajot.2014.685S03

Gorski S, Prokop-Dorner A, Pers M, Stalmach-Przygoda A, Malecki Ł, Cebula G, Bombeke K (2022) The Use of simulated patients is more effective than student role playing in fostering patient-centered attitudes during communication skills training: A mixed method study. *BioMed Research International*, *2022*, 1498692. https://doi.org/10.1155/2022/1498692

Heaven C, Maguire P, Green C (2003) A patient-centred approach to defining and assessing interviewing competency. *Epidemiologia e Psichiatria Sociale, 12*(2), 86-91. doi: 10.1017/S1121189X00006138

Hutchinson RL, Krippner KM, Hutchinson EP (1998) Effects of an intake interview on students' anxiety and depression. *Journal of College Student Psychotherapy 3*(1)*,* 59–71. doi:10.1300/J035v03n01_06.

Jankowsky K, Zimmermann J, Jaeger U, Mestel R, Schroeders U (2023) First impressions count: Therapists' impression on patients' motivation and helping alliance predicts psychotherapy dropout. Retrieved from psyarxiv.com/nhs6c; Schroeders, U., Loos, A., Wiedemann, S., & Jankowsky, K. (2023, March 10).

Kaslow NJ, Grus CL, Campbell LF, Fouad NA, Hatcher RL, Rodolfa ER (2009) Competency assessment toolkit for professional psychology. *Teaching and Education in Professional Psychology, 3*(4), S27-S45. doi: 10.1037/a0015833

Ketterer J (2014) Assessing clinical competency: The simulated patient assessment and research collaboration. NSU Florida Theses and Dissertations. Available at: https://nsuworks.nova.edu/cps_stuetd/96

Mackelprang JL, Karle J, Reihl KM, Cash RE (2014) Suicide intervention skills: Graduate training and exposure to suicide among psychology trainees. *Training and Education in Professional Psychology* 8(2):136. https://doi.org/10.1037/tep0000050.

Masters K, Beacham A, Clement L (2015) Use of a standardized patient protocol to assess clinical competency: The University of Colorado Denver Comprehensive Clinical Competency Examination. *Training and Education in Professional Psychology* 9(2): 170-174.

Meier ST, Davis SR (2011) *The elements of counseling* (7th ed.). Belmont, CA: Brooks/ Cole.

Mesquita AR, Lyra DP Jr, Brito GC, Bicie J, Balisa-Rocha A, Aguiar PM, Abilo C, de Almeida Neto B (2010) Developing communication skills in pharmacy: A systematic review of the use of simulated patient methods. *Patient Education and Counseling* 78:143-148.

National Institute of Mental Health (NIMH) (2024)

O'Brian KF, Schlechter A (2016) Is talking about what's wrong necessarily right: A positive perspective on the diagnostic interview. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*(4), 262-264.

O'Keefe M, Sawyer M, Roberton D (2001) Medical student interviewing skills and mother-reported satisfaction and recall. *Medical Education, 35*(7), 637-644. doi: 10.1046/j.1365-2923.2001.00971.x

Odell M, Quinn, WH (1998) Therapist and client behaviors in the first interview: Effects on session impact and treatment duration. Journal of Marital and Family Therapy, 24(3), 369–388. https://doi.org/10.1111/j.1752-0606.1998.tb01091.x

Osborn CL, Rosenthal T, Tola A, Strauss M, Schmaltz M, Cash RE (2023) Characteristics of effective interviewing: Exploratory factor analysis. *Athens Journal of Social Sciences, 10*(4), 295-312. https://doi.org/10.30958/ajss.10-4-4

Osborn CL, Cash RE (2020) Effects of interview training with simulated patients on suicide, threat, and abuse assessment. *Athens Journal of Social Sciences, 8*, 1-14.

Reese RJ, Usher EL, Bowman DC, Norsworthy LA, Halstead JL, Rowlands SR, Chisholm RR (2009) Using client feedback in psychotherapy training: An analysis of its influence on supervision and counselor self-efficacy. *Training and Education in Professional Psychology, 3*(3), 157–168. https://doi.org/10.1037/a001 5673

Rodolfa E, Greenberg S, Hunsley J, et al. (2013) A competency model for the practice of psychology. *Training and Education in Professional Psychology* 7(2):71-83.

Schmitz WM Jr, Allen MH, Feldman BN, Gutin NJ, Jahn DR, Kleespies PM, Quinnett P, Simpson S (2012) Preventing suicide through improved training in suicide risk assessment and care: An American Association of Suicidology Task Force report addressing serious gaps in US mental health training. *Suicide and Life-Threatening Behavior* 42(3):292-304.

Shea SC, Barney C (2015) Teaching clinical interviewing skills using role-playing: Conveying empathy to performing a suicide assessment: A primer for individual role-playing and scripted group role-playing. *Psychiatric Clinics of North America, 38*(1), 147-183. doi: 10.1016/j.psc.2014.10.001

Solomon DT, Heck N, Reed OM, Smith DW (2017) Conducting culturally competent intake interviews with LGBTQ youth. *Psychology of Sexual Orientation and Gender Diversity, 4*(4), 403-411. doi: 10.1037/sgd0000255

Sommers-Flanagan, J, Zeleke WA, Hood MHE (2015) Clinical Interview. In R. L. Cautin & S. O. Lilienfeld (Eds.), *The Encyclopedia of Clinical Psychology* (1st ed.). John Wiley & Sons, Inc. DOI: 10.1002/9781118625392.wbecp117

Stillman PL, Brown DR, Redfield DL, Sabers DL (1977) Arizona Clinical Interview Rating Scale [Database record] APA PsycTests. https://doi.org/10.1037/t13924-000

Worthen VE, Lambert MJ (2007) Outcome oriented supervision: Advantages of adding systematic client tracking to supportive consultations. *Counselling and Psychotherapy Research*, *7*(1), 48-53.

Yap K, Bearman M, Thomas N, Hay M (2012) Clinical psychology students' experiences of a pilot objective structured clinical examination. *Australian Psychologist* 47(3): 165-173.

Young M, Read J, Barker-Collo S, Harrison R (2001) Evaluating and overcoming barriers to taking abuse histories. *Professional Psychology: Research and Practice* 32(4): 407–414.

Zraick RI, Allen RM, Johnson SB (2003) The use of standardized patients to teach and test interpersonal and communication skills with students in speech-language pathology. *Advances in Health Sciences Education: Theory and Practice*, *8*(3), 237–248. https://doi.org/10.1023/a:1026015430376