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Abstract

After they had learned exploration skills, 128 undergraduate helping skills students were taught to use the insight skill of interpretation. After training, students had higher self-efficacy for using interpretation and were rated by both themselves and volunteer clients as using interpretation more often. Students in a delay condition did not change over a comparable period of time in which they received no training in interpretation. Self-efficacy for interpretation increased after lecture/discussion, a fishbowl exercise in the lecture class, small group practice in the lab, and dyad practice in the lab. In post-training ratings, lab group practice was perceived as the most helpful, the fishbowl exercise the least helpful, and all other components moderately helpful. Students with the highest initial self-efficacy gained the least in self-efficacy but ended with the highest levels of self-efficacy. Students with more prior helping experience increased more in self-efficacy and had the highest final self-efficacy.

Keywords

interpretation, helping skills training, self-efficacy, lecture, modeling, practice

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Interpretation has been considered a central component of therapy since Freud's foundational writings on psychoanalysis. Framing the technique in his frequently used archeological terminology, Freud (1904) defined interpretation as " . . . extracting the pure metal of the repressed thoughts from the ore of unintentional ideas" (p. 252). From a helping skills perspective that also upholds interpretation as an important therapist technique, Hill (2009) offered a more concrete, practical definition, "Interpretations are interventions that go beyond what a client has overtly stated or recognized and present a new meaning, reason, or explanation for behaviors, thoughts, or feelings so clients can see problems in a new way" (p. 225).

Hill (2009) noted that interpretations can be important interventions in therapy to aid clients in learning more about themselves, particularly about what has previously been unknown or disavowed. Interpretations can also provide a conceptual framework to help clients understand how they came to have their difficulties and how those difficulties operate in the present. Frank and Frank (1991) indicated that having an explanation can make experiences seem less confusing, haphazard, or inexplicable and give the client a sense of mastery, security, and self-efficacy. Self-knowledge and resolution of inner conflicts through insight can thus lead to change, although this process is rarely linear and easy.

Interpretations are utilized, although in different forms and for different purposes, across many approaches to therapy (Gazolla, Iwakabe, & Stalikas, 2003), making them a common factor in psychotherapy. In addition, interpretations appear related to both proximal and sustained positive effects on client functioning (Caspar et al., 2000; Hoglend et al., 2008; Silberschatz, Fretter, & Curtis, 1986). However, although newly gained insight can give clients a sense of empowerment and motivation for change, the novel information shared and received in the interpretation process may also frighten, anger, or sadden clients. Hence, Hill (2009) suggested that interpretations need to be collaboratively constructed, with the helper/therapist serving as a consultant or a guide to the process rather than acting as the expert who "knows" all. The helper/therapist cannot see the client except through his or her own perspective, and the client cannot articulate all his or her experiences and feelings. The therapist/helper therefore tries to strike a balance between offering a new perspective and involving the client in the development of the interpretation.

As Hill (2009) noted, trainees are often hesitant to use interpretations because such interventions feel intrusive and/or they feel ill-prepared. They fear that the interpretation will be wrong or premature, will anger or upset clients, or will harm the therapeutic relationship. Trainees are often too passive and reluctant to share their own perspectives through interpretation, or

they are too aggressive and push their own thoughts onto clients. Training for using interpretations is thus a demanding and delicate undertaking.

Furthermore, undergraduate trainees typically have not had much exposure to psychotherapy theory, particularly specific theories on human functioning and therapeutic change (e.g., psychodynamic, cognitive-behavioral) and thus have minimal theoretical knowledge from which to develop interpretations. Providing undergraduate trainees with an adequate but not overwhelming amount of theory to consider when listening to clients and developing interpretations is thus a necessary but difficult instructional task. In addition, interpretation requires a good deal of intellectual effort and coordination. Considerable practice is necessary to meet the demands of attending to a client, remaining genuine and present, analyzing what is being heard and seen, and developing and articulating an interpretation. Although this process usually becomes more fluid and natural with experience, student trainees often are consciously effortful in performing each piece of this process. Finally, in our experience, trainees often have preconceived notions about interpretations from inaccurate media portrayals of therapy, from fantasies of therapists as omniscient and wise healers, or from having viewed tapes of, or having been in, therapy with experienced psychotherapists who are skilled at using interpretation. Such misconceptions often result in lofty or unreal expectations and can lead to a difficulty or hesitancy using the skill.

Outcomes of Training Students to Use Interpretation

In addition to changes in self-efficacy for using interpretation, as was discussed in the overview article (Hill, Spangler, Chui, & Jackson, 2014), we assessed students' ability to produce an interpretation in a session with a client. Hence, we added a role-play exercise prior to and following training, during which trainees conducted a 20-min helping session with a volunteer client (a classmate) playing a scripted role (the script primed for material that would elicit an interpretation). During the last 5 min, the helpers were asked to make at least one interpretation based on what the client said. Then, at the end of the role-play session, the trainee "helper" and the "client" rated the extent to which the helper used interpretations. Although not indicative of whether students could implement interpretations in sessions with actual clients, this exercise allowed us to determine if students could implement an interpretation in a contrived setting.

Purposes of the Present Study

The first purpose of the present study was to test the effectiveness of training undergraduate students enrolled in semester-long helping skills courses to use interpretations. Our second purpose was to test the effectiveness of components of training: instruction (i.e., reading, lecture/discussion), modeling (i.e., video vignettes portraying interpretation), and practice (i.e., a fishbowl exercise, group practice during the lab where the group leader or a trainee in the lab played a client and trainees responded as helpers, and trainee dyad practice). Our third purpose was to assess whether we could predict who would respond positively to training using the predictors of prior helping experiences, natural helping ability, attitudes toward learning helping skills, and initial self-efficacy for interpretation in relation to final ratings of, and change in, self-efficacy for interpretation and interpretation use in the role-play exercise.

Although this study was similar in purpose and format to the Spangler et al. (2014) and Chui et al. (2014) studies of training for the use of immediacy and challenge, there were a few important differences based on trainee feedback from the previous studies. We designed a standardized lecture that covered the crucial points in the text but also included new information on developing and delivering interpretations when working with clients. In addition, the lecture included more details than the text on historical and contemporary perspectives on the use of interpretation to promote insight (e.g., a discussion of Freud's writings on interpretation and a discussion of a theoretical perspective on the neuroscience of interpretation and insight offered by Cozolino, 2010). The lecture also included a number of detailed vignettes and corresponding exemplary interpretations to better illustrate the types of interpretations discussed in the text. In addition, based on the findings about the importance of practice and feedback, we added a fishbowl exercise (see Method section) as a means of offering additional time for modeling, practice, and feedback. Furthermore, because students in the previous studies had complained about the videos being forced, artificial, and boring, we used segments from HBO's *In Treatment* (García, 2008), a popular, fictional television showabout therapy in which a skilled therapist utilized interpretation. We chose clips in which the therapist utilized both exploration skills (e.g., restatements, reflection of feelings) as well as one or more interpretations in his work with one client. We posited that the higher production value and more dramatic nature of the clips would better engage the trainees in identifying what they believed were the merits and drawbacks of interpretations. Another difference between the previous studies and the current study is that we did not ask students for open-ended feedback on the components of

training. Because the qualitative results were fairly consistent across the previous two studies, we instead asked students to numerically rate their perceptions of the effectiveness of the components of training.

Method

Participants

Instructors. There were five (four European American and one Asian American) female instructors, all in counseling psychology (four advanced doctoral students and one PhD student with 35 years of teaching and research experience). The doctoral student instructors had been teaching assistants for the course previously (between 1 and 6 times), and three had been instructors for the class 2 times prior to the study. The professor had taught the course many times. Using a 9-point scale (1 = *not at all*, 9 = *completely*), instructors reported that they believed in the Hill model of helping skills ($M = 8.40$, $SD = 0.89$). They also reported, using a 5-point scale (1 = *low*, 5 = *high*), the extent to which they believed in and adhered to the techniques of a psychoanalytic/psychodynamic orientation ($M = 4.20$ ($SD = 0.45$), of a humanistic orientation ($M = 3.60$, $SD = 0.89$), of a feminist/multicultural orientation ($M = 3.40$, $SD = 0.89$), and of a cognitive-behavioral orientation ($M = 2.20$, $SD = 1.09$).

In addition, 11 individuals (8 females, 3 males; 6 European American, 2 East Asian, 2 South Asian, 1 Latino; 6 doctoral students, 5 undergraduate seniors), all of whom had previously taken at least one helping skills course, served as lab leaders or graduate teaching assistants. Using the scales described previously, they reported the degree to which they believed in the Hill model of helping skills ($M = 8.18$, $SD = 0.75$), in a humanistic orientation ($M = 4.18$, $SD = 0.40$), in a psychoanalytic/psychodynamic orientation ($M = 3.64$, $SD = 0.67$), in a feminist/multicultural orientation ($M = 3.64$, $SD = 0.81$), and in a cognitive-behavioral orientation ($M = 2.91$, $SD = 1.13$).

Students. Of the 159 students enrolled in the five sections of the helping skills course, 3 dropped the course, 1 did not provide consent, 14 did not attend the lecture on interpretation, 6 did not attend the lab on interpretation, and data for 7 were dropped because their lab leader was late and did not complete all the tasks. Of the students who provided consent, the included and excluded participants did not differ in age, self-rated natural helping ability, prior helping experience, or attitudes toward learning helping skills.

The 128 (95 females, 33 males; 84 European American, 13 Asian American, 11 African American, 6 Latino/a, 14 "Other" or not reported) participants were mostly upper-level psychology majors (105 seniors, 21 juniors,

1 sophomore, 1 not reported). The average age of participants was 21.48 (*SD* = 2.06 years). Students were in four helping skills courses at one university during one semester. All students had completed several prerequisite courses (e.g., introductory psychology, statistics). In addition, 80 (62.5%) were currently enrolled in or had completed either or both Introduction to Counseling Psychology and Introduction to Clinical Psychology. Although the tasks involved in the study were all requirements of the course, participation was voluntary and anonymous, whereby students could choose whether or not to give consent for their data to be used for the current study. Students were informed that participation in the study, including their ratings of skills use and self-efficacy, would have no bearing on their grades in the course.

Measures

We used the demographic form, Self-Efficacy for Interpretation (SEIn), Prior Helping Experiences (PHE), Attitudes Toward Learning Helping Skills (ALHS), and Natural Helping Measure (NHM) described in the overview article (Hill, Spangler, Chui, & Jackson, 2014). As described below, we also used other measures for the present study.

Interpretation Reading Quiz. This 10-item multiple-choice quiz was designed to determine the extent to which trainees read and understood the assigned reading for the study. An example item is: "The most helpful interpretations: (a) occur very frequently, (b) can occur at any time, (c) are often developed by the client in collaboration with the helper when the client is ready, (d) are made by the most experienced counselors, or (e) relate to the client's childhood" (correct answer: C).

Interpretation use. Two items on the use of interpretation (" . . . helped me understand the reasons behind my thoughts, feelings, and/or behaviors" and " . . . helped me gain a new perspective on my problems") were taken from the Insight scale of the Helping Skills Measure (Hill & Kellems, 2002). These two items are rated by clients and helpers using a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). Students did not discuss their ratings with each other or with their instructors. The two items were significantly correlated in this study, $r(75) = .47$, $p < .001$.

Training Evaluation Form. This form used a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*) for rating the perceived helpfulness of the following components of training: reading, lecture/discussion, video,

practice in a large class (fishbowl), group lab practice, dyad exercise in a lab, and lab leader feedback.

Procedures

In this section, we describe the procedures unique to this study. For procedures used in all three studies, see the overview article (Hill, Spangler, Chui, & Jackson, 2014).

During the third lab meeting of the semester, students completed the SEIn-1 as a baseline measure of self-efficacy and then were divided into dyads for a role-play exercise. One member of each dyad (the "client") was taken into a separate room, given a standardized role-play scenario, and asked to play the role as faithfully and naturally as possible. Meanwhile, the other member of each dyad (the "helper") was asked to read the Hill (2009) definition of interpretation and then instructed to conduct a 20-min helping session with the partner, utilizing exploration skills for about 15 min and then offering at least one interpretation in the last 5 min. At the end of the session, helpers completed the SEIn-2 and the interpretation items, and clients completed the interpretation items. Students in the dyads then switched roles and did another session using the same procedures with a different standardized vignette.

Classes were assigned randomly to either a delay or nondelay condition, with the two class sections in the delay condition ($n = 51$) completing interpretation training 1 week later than the three class sections in the nondelay condition ($n = 77$). During the week in which the nondelay groups received interpretation training, the delay groups were instructed in how to conduct intake sessions. Interpretation training took place during the middle of the semester (Weeks 7 and 8) after students had completed training in exploration skills (e.g., reflections of feelings, open questions) as well as training on the insight skill of challenge.

At the beginning of the lecture class, students completed the SEIn-3 and took the reading quiz. Instructors then provided a 45-min lecture using a standardized PowerPoint presentation. During this lecture, students engaged in practice by writing about a personal conflict and attempted to formulate an interpretation regarding the conflict. After the lecture, students completed the SEIn-4. Next, for the modeling component, instructors showed five clips from *In Treatment*; students discussed what they liked and disliked and then completed the SEIn-5. For the final part of the lecture class, the instructors orchestrated a fishbowl exercise, modified from group therapy training research and practices (Kane, 1995). A graduate student volunteer played the role of the client using a standardized vignette, with the instructor helping the

client explore and then making an interpretation. At this point, the exercise was paused and students were asked to critique the interpretation. A few students then took turns serving as the helper, again exploring briefly and then giving an interpretation, followed by class discussion. The students then completed the SEIn-6.

At the beginning of the lab, 2 to 5 days later, students completed the SEIn-7. Then, for about 15 to 20 min, a lab leader played the role of a client using a standardized vignette. After all students took one turn helping the client explore, they wrote an interpretation and then presented it, with the lab leader (as client) responding briefly. During the next 30 min in the lab group, one student explored a problem about which he or she felt some conflict or confusion. After two or three rounds of students taking turns helping the "client" explore, the students wrote an interpretation and then presented it to the "client," who responded briefly. Lab leaders provided feedback on the appropriateness, quality, and type of interpretation. Students then completed the SEIn-8. The final portion of the lab involved a dyad exercise using the same procedures as the pre-training exercise. Following each dyad session, the helper completed the SEIn-9 and interpretation items, and the client completed the interpretation items. They then switched roles, so that both members of the dyad had a chance to be helper and client. After the lab, students completed the Training Evaluation Form.

Results

Table 1 shows the intercorrelations, means, and standard deviations for variables used in the study ($N = 128$). Trainees' initial level of self-efficacy was not significantly related to client-rated interpretation use prior to training, although it was related to helper-rated interpretation use prior to training. Change in SEIn was not related to change in either client-rated or helper-rated interpretation use. Trainees' final level of self-efficacy was significantly correlated with interpretation use following training, as rated both by the clients, $r(67) = .29$, $p = .02$, and helpers, $r(67) = .38$, $p = .001$. Thus, trainees' assessment of their self-efficacy for using interpretation was more related to the use of interpretation after but not before training.

Effectiveness of Training

Changes in self-efficacy for interpretation. Figure 1 shows trainee ratings of self-efficacy for using interpretations across time. Hierarchical linear modeling (HLM) analyses (see the overview article for details) were conducted to test for patterns of change in self-efficacy for using interpretations across the

Table 1. Means, Standard Deviations, and Intercorrelations for Self-Efficacy for Interpretation and Predictor Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	*M*	*SD*
1. SEIn-1	—													5.21	1.70
2. SEIn-2	.55***	—												5.67	1.65
3. SEIn-3	.57***	.76***	—											5.74	1.47
4. SEIn-4	.55***	.65***	.85***	—										6.08	1.40
5. SEIn-5	.54***	.59***	.82***	.90***	—									6.12	1.36
6. SEIn-6	.45***	.51***	.72***	.88***	.90***	—								6.21	1.30
7. SEIn-7	.43***	.56***	.77***	.82***	.83***	.82***	—							6.05	1.33
8. SEIn-8	.45***	.50***	.64***	.65***	.67***	.68***	.76***	—						6.40	1.37
9. SEIn-9	.36***	.44***	.55***	.56***	.62***	.66***	.72***	.82***	—					6.67	1.34
10. Change	−.71***	−.23**	.14	.08	.05	.08	.12	.18	.41***	—				1.47	1.77
11. ALHS	.00	−.04	.08	.12	.14	.11	.14	.18	.08	.05	—			7.89	1.13
12. PHE	.19**	.28***	.30***	.25***	.27***	.25***	.26***	.38***	.34**	.10	.17	—		1.49	0.96
13. NHM	.30***	.28***	.30***	.18**	.20**	.13	.25***	.21**	.10	.21***	.21***	.31***	—	5.54	0.89

Note. $N = 128$. SEIn = Self-Efficacy for Interpretation; Change = change from SEIn-1 to SEIn-9; PHE = Prior Helping Experiences; ALHS = Attitudes Toward Learning Helping Skills; NHM = Natural Helping Measure.
**$p < .01$. ***$p < .001$.

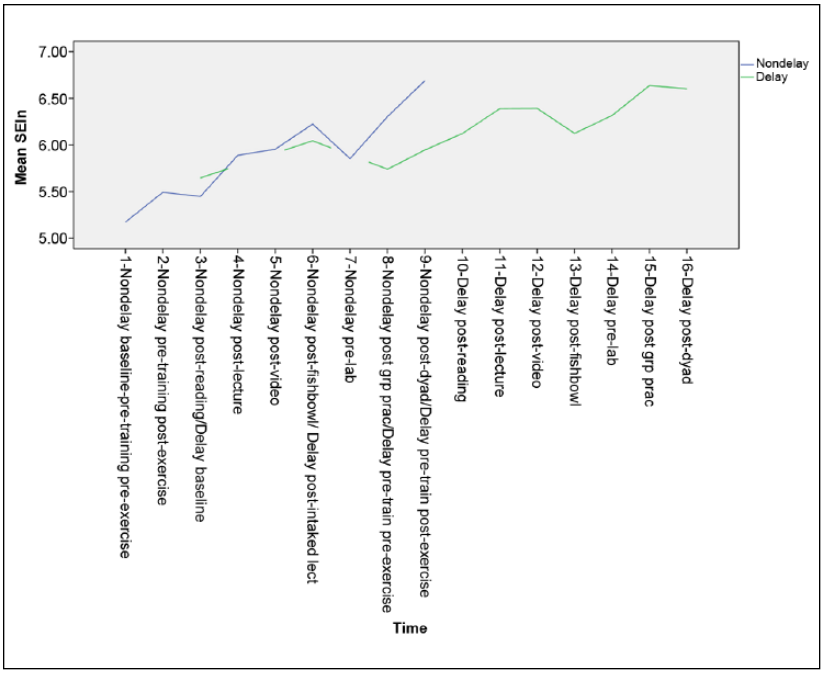

Figure 1. Change in SEIn over the course of training for nondelay and delay conditions.

Note. The overlap in the nondelay (unbroken blue) and delay (broken green) trajectories reflects the unchanged SEIn of the delay group whereasthe nondelay group SEIn increased as students underwent training. Both groups' SEIn increased during training in a similar cubic pattern. Breaks in the trajectory are due to the fact that no data were collected on the delay group at Times 5 and 7. SEIn = self-efficacy for interpretation.

different time points. Given that time points were nested within students, and students were nested within lab groups, a three-level model would have been optimal. Unfortunately, a post hoc power analysis of a three-level model using Optimal Design 2.0 software (Liu, Spybrook, Congdon, Martinez, & Raudenbush, 2009) showed that for a large effect size (.80) and alpha of .05, power was about .49, indicating that a three-level model was not adequately powered. Thus, we had to use a two-level growth model (time points within students). Because we were still concerned about whether intra-group factors were related to interpretation self-efficacy, however, we constructed a conditional model with nondelay–delay, membership in specific lab groups, and instructor as Level 2 predictors. Group membership was not significant for Time 9 (post-training for nondelay), nor for the linear, quadratic, or cubic

parameters. In addition, a general linear hypothesis test of the models, $\chi^2(1) = 3.19$, $p > .05$, indicated that the addition of the group variable did not make a significant difference in model fit to the data over the model without group. The instructor variable was not significant for Time 9, nor for the quadratic or cubic parameters. In addition, a general linear hypothesis test of the models, $\chi^2(1) = 1.438$, $p > .05$, indicated that the addition of the instructor variable did not make a significant difference in model fit.

Results showed a significant overall cubic growth pattern for ratings of self-efficacy for interpretation over time, $t(126) = 3.08$, $p < .01$, cubic slope $\beta = .05$. The cubic model accounted for the greatest proportion of overall variance (54.69%), compared with the linear and quadratic model, providing evidence for the overall effectiveness of training. As illustrated in Figure 1, the cubic pattern indicates an initial linear increase in self-efficacy throughout the lecture components, followed by a dip or decrease between the lecture and lab, and then resuming a linear increase throughout the lab components.

Table 2 shows fixed effects and variance components for the conditional cubic model comparing trainees in the nondelay and delay conditions. A significant effect was found for the nondelay versus delay conditions at Time 9, $t(126) = 2.39$, $p < .05$; a positive coefficient ($\beta_{01} = .60$) indicated that participants in the nondelay condition were significantly higher in self-efficacy after completing the training than participants in the delay condition who had not yet completed training. To test model fit, a general linear hypothesis test was run. The chi-square statistic, $\chi^2(1) = 13.72$, $p < .001$, indicated that the nondelay–delay model was a better fit for the data than the unconditional model.

Changes in use of interpretation from pre- to post-training. The sample sizes were smaller ($n = 77$) for these analyses due to incomplete and inaccurately labeled data. Our rating forms included an identification section in which clients were to enter their identification number in a specified field as well as a field in which they were to enter the identification number of their "helper." Several of the identification fields were either left blank or were incomplete, providing us with no means of identifying who completed the form or identifying which client matched with which helper.

Despite the reduction in sample size, we examined the usable data. An ANOVA between those with complete versus those with missing data indicated no significant differences in SEIn-1, $F(1, 127) = .00$, $p > .05$; SEIn-9, $F(1, 127) = .37$, $p > .05$; or SEIn-9 − SEIn-1, $F(1, 127) = .38$, $p > .05$. Table 3 shows the means, standard deviations, and correlations among the predictor variables and interpretation use ratings. Paired-sample *t*-tests on the average interpretation items yielded a significant effect for both the client ratings,

Table 2. Growth Curve Analysis of Self-Efficacy for Interpretation for Nondelay and Delay Conditions.

Fixed effect	Coefficient	*SE*	*t* ratio	*df*	*p*
Intercept 2, β_{00}	6.047	0.190	31.667***	126	<.001
Intercept, nondelay vs. delay, β_{01}	0.598	0.250	2.391*	126	.018
Linear, nondelay vs. delay, β_{11}	0.593	0.175	3.380***	126	<.001
Quadratic, nondelay vs. delay, β_{21}	0.274	0.092	2.989**	126	<.003
Cubic, nondelay vs. delay, β_{31}	0.048	0.016	3.075**	126	<.003

Random effect	Variance	*df*	χ^2	*p*
Intercept 1, r_0	1.632	123	1516.636***	<.001
Linear slope, r_1	0.137	123	183.591***	<.001
Quadratic slope, r_2	0.006	123	186.666***	<.001
Cubic slope, r_3	0.001	123	126.42	.398
Level 1 error, *e*	0.395			

Note. $N = 128$.
*$p < .05$. **$p < .01$. ***$p < .001$.

$t(76) = 2.19$, $p < .05$, and helper ratings, $t(76) = 3.55$, $p < .001$, such that both clients and helpers gave higher ratings of the helpers' use of interpretations post-training as compared with pre-training.

Effects of Training Components

For this analysis, data from the self-efficacy measures were combined along the same timeline for the delay and nondelay conditions, such that SEIn-1 was pre-training and SEIn-9 was post-training for all participants. Because Mauchly's test indicated that the assumption of sphericity for a repeated-measures ANOVA was violated, $\chi^2(35) = 354.23$, $p < .001$, the degrees of freedom were corrected using Greenhouse–Geisser estimates of sphericity ($\varepsilon = .51$). Results of the ANOVA indicated overall significant differences in SEIn across time, $F(4.09, 372.12) = 28.08$, $p < .001$. To examine the contribution of each additional component, eight contrasts were constructed and

Table 3. Means, Standard Deviations, and Intercorrelations for Outcome and Predictor Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	*M*	*SD*
1. Interp Cl Pre	—												3.89	0.85
2. Interp Cl Post	.36**	—											4.10	0.64
3. Interp Cl Chg	−.73***	.38**	—										0.22	0.86
4. Interp Hr Pre	.17	.22	−.01	—									3.66	0.77
5. Interp Hr Post	−.03	.22	.19	.26	—								4.01	0.67
6. Interp Hr Chg	−.17	−.02	.15	.68***	.54***	—							0.35	0.87
7. SEIn-1	.01	.03	.02	.35**	.18	−.17	—						5.22	1.68
8. SEIn-9	.00	.29	.22	.34**	.38**	.00	.34**	—					6.66	1.39
9. SEIn-Chg	−.01	.19	.15	−.08	.14	.18	−.69***	.45***	—				1.42	1.79
10. ALHS	.05	−.09	−.12	−.04	−.05	−.01	.05	.08	.02	—			8.04	1.09
11. PHE	.01	.08	.04	.12	−.01	−.11	.21	.34**	.08	.22	—		1.52	1.05
12. NHM	.13	.18	.01	.23	.10	−.13	.37**	.22	−.19	.33**	.29	—	5.64	0.83

Note. $N = 77$. Interp = interpretation use as measures by two items on the Helping Skills Measure; Cl = client-rated; Hr = helper; Pre = before training in interpretation; Post = after training in interpretation; Chg = post-training score minus the pre-training score; SEIn-1 = Self-Efficacy for Interpretation score before training; SEIn-9 = Self-Efficacy for Interpretation score after training; PHE = Prior Helping Experiences; ALHS = Attitudes Toward Learning Helping Skills; NHM = Natural Helping Measure.
**$p < .01$. ***$p < .001$.

compared, controlling for the alpha with a Bonferroni adjustment (.05/8 = .006). Significant differences were found between SEIn-5 and SEIn-6 (.26, $p < .006$), SEIn-6 and SEIn-7 (−.35, $p < .006$), and SEIn-8 and SEIn-9 (.40, $p < .006$). The differences between SEIn-1and SEIn-2 (.55, $p > .006$), SEIn-2 and SEIn-3 (.02, $p > .006$), SEIn-3 and SEIn-4 (.35, $p > .006$), and between SEIn-4 and SEIn-5 (.09, $p > .006$) were not significant. Thus, participants' self-efficacy increased after the fishbowl exercise and lab dyad practice, but decreased during the 2- to 5-day period between the end of lecture class and the start of the lab.

We were concerned that students not doing the reading could have influenced the self-efficacy changes for the reading component. Reading quiz scores, however, were not significantly related with SEIn-3 (post-reading), $r(126) = -.16$, $p = .08$, or with change in self-efficacy after reading (SEIn-3 − SEIn-2), $r(126) = -.07$, $p = .41$, confirming that reading alone was not associated with self-efficacy for interpretation.

The means and standard deviations for the retrospective ratings of helpfulness for the seven components of training from least to most helpful were as follows: Fishbowl exercise, 3.39 ($SD = 1.03$); video, 3.50 ($SD = 0.97$); reading, 3.52 ($SD = 0.90$); lecture, 3.84 ($SD = 0.80$); lab dyad, 4.02 ($SD = 1.12$); lab leader feedback, 4.13 ($SD = 0.79$); and lab group practice, 4.45 ($SD = 0.74$). Figure 2 provides a bar graph of these means. Because Mauchly's test indicated that the assumption of sphericity was violated, $\chi^2(20) = 73.31$, $p < .001$, the degrees of freedom were corrected using Greenhouse–Geisser estimates of sphericity ($\varepsilon = .83$). Results of an ANOVA indicated an overall significant difference in the perceived helpfulness of the components, $F(5.01, 570.65) = 23.38$, $p < .001$. To examine the contribution of each added component, contrasts were constructed and compared, controlling for the alpha with a Bonferroni adjustment (.05/21 = .002). The lab group practice component was significantly higher in perceived helpfulness than the reading, lecture, video, fishbowl, and dyad components, with mean differences ranging from 0.44 to 1.06 ($p < .002$). The lab leader feedback component was significantly higher in helpfulness than the reading, video, and fishbowl components, with mean differences ranging from 0.61 to 0.74 ($p < .002$). The lab dyad component was significantly higher than the fishbowl exercise (.63, $p < .002$), and lower than lab group practice (−.44, $p < .002$). The lecture component was significantly higher than the fishbowl exercise (.45, $p < .002$), and lower than the lab group practice (−61, $p < .002$). The reading component was significantly lower than the feedback and lab group practice (−.61 and −.93, $p < .002$). The video component was significantly lower than the feedback and lab group practice components (−.63 and −.95, $p < .002$). Finally, the fishbowl component was significantly lower than the lecture, lab dyad, feedback,

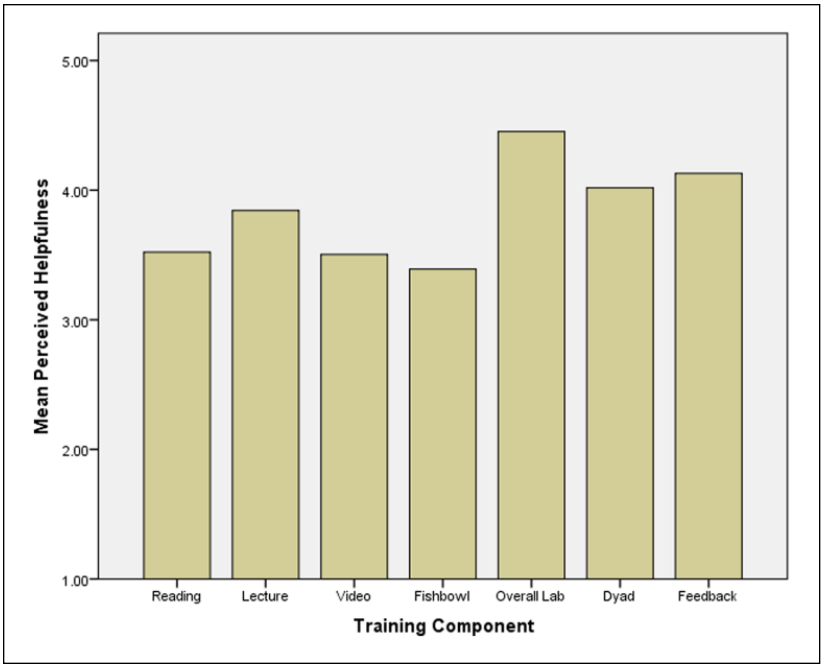

Figure 2. Mean perceived helpfulness of each training component assessed retrospectively.

and lab group practice components (−.45 to −1.06, $p < .002$). Thus, the lab group practice component was perceived as the most helpful and the fishbowl exercise was perceived as the least helpful component.

Predictors of Outcome of Training

Bivariate correlations (see Table 1) indicated that SEIn-1 (initial self-efficacy) and PHE correlated positively with SEIn-9 (final self-efficacy). In contrast, both SEIn-1 and NHM correlated negatively with SEIn-9 − SEIn-1 (change in self-efficacy). We thus ran a set of growth curve analyses to examine whether SEIn-1, PHE, and NHM predicted post-training SEIn or change in SEIn. For this model, the data for delay and nondelay conditions were combined along the same timeline, so that SEIn-1 was pre-training and SEIn-9 was post-training for all participants. Table 4 shows the coefficients, standard errors, and *t* ratios for fixed effects and variance and chi-square values for random effects from the linear model. We report results for fixed effects and variance components.

Table 4. Growth Curve Analysis Predicting Student Post-Instruction Level of Self-Efficacy for Interpretation and Change in Self-Efficacy for Interpretation Over Time Using Initial Self-Efficacy for Interpretation and Natural Helping Ability.

Fixed effect	Coefficient	*SE*	*t* ratio	*df*	*p*
Intercept, β_{00}	5.213	0.815	6.396***	124	<.001
Prior helping experience	0.376	0.108	3.475***	124	<.001
Natural helping ability	−0.0640	0.136	−0.472	124	.638
Initial SEIn	0.229	0.080	2.852**	124	.005
Linear, π_1					
Prior helping experience	0.057	0.028	2.055*	124	.042
Natural helping ability	−0.014	0.035	−0.411	124	.682
Linear, π_1, Initial SEIn-1	−0.148	0.021	−6.940***	124	<.001

Random effect	Variance	*df*	χ^2	
Intercept 1, r_0	1.368	124	966.975***	<.001
Linear slope, r_1	0.064	124	357.732***	<.001
Level 1 error, e	0.494			

Note. $N = 128$. SEIn = Self-Efficacy for Interpretation.
*$p < .05$. **$p < .01$. ***$p < .001$.

Both SEIn-1, $t(124) = 2.82$, $p < .001$, and PHE, $t(124) = 3.47$, $p < .001$, were significantly positively related to SEIn-9. In contrast, SEIn-1 was significantly negatively related to change in self-efficacy over time (SEIn-9 − SEIn-1), $t(124) = -6.94$, $p < .001$, whereas PHE was significantly positively related to change, $t(124) = 2.06$, $p < .05$. NHM was not significantly related to either change in SEIn or SEIn-9. Hence, participants who had higher initial self-efficacy for interpretation and/or those who had more prior helping experience had higher final levels of self-efficacy, whereas those with less self-efficacy initially, and/or those who had more helping experiences, had a greater change in self-efficacy. The general linear hypothesis test chi-square statistic, $\chi^2(1) = 133.33$, $p < .001$, indicated that the nondelay–delay model was a better fit to the data than the unconditional model. Thus, adding prior helping experience and initial self-efficacy for interpretation as covariates helped to explain both final levels and growth in self-efficacy over the course of training.

Discussion

Undergraduate students who had already gone through half of a semester of training in exploration skills were able to benefit from a total of 4 hr of training in the skill of interpretation. Next, we discuss the overall effectiveness of training, then the effectiveness of the components of training, and finally the predictors of the outcomes of training.

The Effects of Training

Training was effective for increasing students' self-efficacy for using interpretation, and students used more interpretations in a role-play session with a classmate, providing evidence that students felt more confident and were actually able to use the skill. Furthermore, students in the nondelay condition improved more in self-efficacy than did students in a delay condition, suggesting that these changes were not due to time alone.

Although self-efficacy and use of interpretations were not significantly related prior to training, they were after training. Thus, self-efficacy was more associated with actual use of interpretations after training than it was prior to training. Students' self-efficacy for using interpretation prior to training may have been influenced by experiences giving interpretations to friends and family. After training, students had more knowledge and experience upon which to base their judgments of self-efficacy. These findings point to the importance and nuance of self-efficacy as a critical factor in counselor training, as found in previous helper training studies (e.g., Larson et al., 1992; Lent et al., 2009). The moderate sizes of the associations between ratings of actual use of interpretation and self-efficacy suggest that, although critical, self-efficacy is not a proxy for actual skill performance.

Components of Training

Reading was not associated with an immediate increase in self-efficacy, a finding that could not be attributed to students not doing the reading as they all passed the quiz (i.e., they correctly answered at least 7 of the 10 multiple-choice questions). Interestingly, however, reading was rated as moderately helpful in the retrospective ratings, suggesting that, in retrospect, students could see the value in having done the reading.

After the lecture/discussion component, students rated themselves higher in self-efficacy than they had before the training, suggesting that they gained from this highly interactive experience. Interestingly, at the end of training, when they retrospectively rated all the components, the lecture/discussion

was rated only moderately, perhaps because it was not viewed as being as helpful as practice.

Self-efficacy ratings did not increase after students watched the videos of the therapist from the *In Treatment* television show (García, 2008) using interpretations, although the videos were retrospectively rated as being moderately helpful. Some students noted in the discussion that this therapist was very aggressive and did not follow the basic helping skills principles that they were learning, so they may have disparaged his efficacy and trustworthiness.

Practice was the big "winner" in helping students learn about interpretations. Practice was implemented in three ways: a fishbowl exercise, small lab group practice, and dyad practice. These had different effects, and so will be discussed separately.

The fishbowl exercise was added to the lecture class to allow students to see the use of interpretations modeled by their instructor in a role-play, practice interpretation by "pausing" and entering the role-play, and receive feedback from their instructor and other students regarding interpretation. Students rated themselves significantly higher in self-efficacy following the exercise, suggesting a gain from it. At the end of training, however, students retrospectively rated the fishbowl component as the least helpful component of training. One possible explanation for such low relative helpfulness ratings is that a majority of the students in each class only observed and did not participate in the fishbowl exercise because of time constraints. Perhaps the fishbowl exercise is better suited for small groups where everyone has the opportunity to participate.

Immediately after both small group and dyad practice, there were increases in ratings of self-efficacy. Furthermore, the overall lab was rated as the most helpful component. These results reflect students' reports that, although other components were helpful as a foundation for theoretical understanding, they really learned how to do the intervention by trying to apply it themselves in practice.

Although feedback was not specifically manipulated, students rated it as a helpful component of training. Thus, students valued receiving feedback from their instructors, lab leaders, and classmates about how they were doing in terms of implementing the skills.

In summary, although practice was viewed as the most helpful component, the similarity of retrospective ratings of helpfulness and the fact that all components were rated above the midpoint on the 5-point scale suggest that all components enabled students to learn the skill. Given that students have different learning styles, it seems valuable to include many different methods to help students learn the helping skills.

Predictors of Outcome of Training

Students who were initially highest in self-efficacy for using interpretations were still the highest at the end of training, but those who actually gained the most from training in terms of self-efficacy were those who were initially low in self-efficacy. Hence, self-efficacy seems to play an important role in students' learning.

In addition, students who were highest in self-efficacy after training, and who changed the most during training, were those who had engaged in prior helping experiences. Students probably sought out these experiences because they had some self-efficacy for being helpers, and these experiences probably strengthened their resolve to be helpers. These results point to the benefits of practical experiences in helping students learn about their chosen profession to see whether the profession fits for them.

Limitations and Implications

In this study, data from one lab had to be dropped because the instructor was late and students in that lab did not get the full training. Also, as noted in the Results section, there were missing data on the interpretation rating forms. Future researchers need to be very clear about how such forms are to be completed to avoid such missteps.

In terms of implications, it would be very interesting to examine how helpers change over time in the use of interpretation given the difficulty in learning this skill. We expect that supervision about using interpretation with specific clients is crucial to being able to understand timing and conceptualization. We also suspect, from our clinical experience, that case conceptualization skills are crucial for helping therapists develop interpretations with clients (see also Eells, 2007), so further research on how to develop interpretations for specific clients would be particularly interesting to investigate. Other limitations and implications are in the final article (Hill, Spangler, Jackson, & Chui, 2014).

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References

Caspar, F., Pessler, J., Stuart, J., Safran, J. D., Samstag, L. W., & Guirguis, M. (2000). One step further in assessing how interpretations influence the process of psychotherapy. *Psychotherapy Research*, *10*, 309-320. doi:10.1080/713663734

Chui, H., Hill, C. E., Ain, S., Ericson, S. K., Ganginis Del Pino, H. V., Hummel, A. M., . . .Spangler, P. T. (2014). Training undergraduate students to use challenges. *The Counseling Psychologist, 42*, 758-777.

Cozolino, L. (2010). *The neuroscience of psychotherapy: Healing the social brain* (2nd ed.). New York, NY: W.W. Norton.

Eells, T. D. (Ed.). (2007). *Handbook of psychotherapy case formulation*. New York, NY: Guilford Press.

Frank, J. D., & Frank, J. B. (1991). *Persuasion and healing: A comparative study of psychotherapy* (3rd ed.). Baltimore, MD: Johns Hopkins University.

Freud, S. (1904). *On psychotherapy* (Standard ed., Vol. VII, pp. 257-268). New York, NY: W. W. Norton & Company.

García, R. (Producer). (2008). In treatment: Season one [Television series]. Los Angeles, CA: Home Box Office.

Gazolla, N., Iwakabe, S., & Stalikas, A. (2003). Counsellor interpretations and the occurrence of in-session client change moments in non-dynamic psychotherapies. *Counselling Psychology Quarterly*, *16*, 81-94. doi:10.1080/0951507031000136676

Hill, C. E. (2009). *Helping skills: Facilitating exploration, insight, and action* (3rd ed.). Washington, DC: American Psychological Association.

Hill, C. E., & Kellems, I. S. (2002). Development and use of the Helping Skills Measure to assess client perceptions of the effects of training and of helping skills in sessions. *Journal of Counseling Psychology*, *49*, 264-272. doi:10.1037/0022-0167.49.2.264

Hill, C. E., Spangler, P. T., Chui, H., & Jackson, J. L. (2014). Training undergraduate students to use insight skills: Overview of the rationale, methods, and analyses for three studies. *The Counseling Psychologist, 42*, 702-728.

Hill, C. E., Spangler, P. T., Jackson, J. L., & Chui, H. (2014). Training undergraduate students to use insight skills: Integrating the results of three studies. *The Counseling Psychologist, 42*, 800-820.

Hoglend, P., Bogwald, K. J., Amlo, S., Marble, A., Ulberg, R., Sjaastad, M. C., . . . Johansson, P. (2008). Transference interpretations in dynamic psychotherapy: Do they really yield sustained effects? *American Journal of Psychiatry*, *165*, 673-771. doi:10.1176/appi.ajp.2008.07061028

Kane, C. M. (1995). Fishbowl training in group process. *The Journal for Specialists in Group Work*, *20*, 183-188.

Larson, L. M., Suzuki, L. A., Gillespie, N., Potenza, M. T., Bechtel, M. A., & Toulouse, A. L. (1992). Development and validation of the Counseling Self-Estimate Inventory. *Journal of Counseling Psychology*, *39*, 105-120. doi:10.1037/0022-0167.39.1.105

Lent, R. L., Cinamon, R. G., Bryan, N. A., Jezzi, M. M., Martin, H. M., & Lim, R. (2009). Perceived sources of change in trainees' self-efficacy beliefs. *Psychotherapy: Theory, Research, Practice, Training*, *46*, 317-327. doi:10.1037/a0017029

Liu, X., Spybrook, J., Congdon, R., Martinez, A., & Raudenbush, S. W. (2009). *Optimal design for multi-level and longitudinal research* (Version 2.0). Ann Arbor: University of Michigan Survey Research Center of the Institute of Social Research.

Silberschatz, G., Fretter, P. B., & Curtis, J. T. (1986). How do interpretations influence the process of psychotherapy? *Journal of Consulting and Clinical Psychology*, *54*, 646-652. doi:10.1037/0022-006X.54.5.646

Spangler, P. T., Hill, C. E., Dunn, M. G., Hummel, A. M., Walden, T. T., Liu, J., . . .Salahuddin, N. M. (2014). Training undergraduate students to use immediacy. *The Counseling Psychologist, 42*, 729-758.

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