

ORIGINAL ARTICLE

## Self-reported comfort treating severe mental illnesses among pre-doctoral graduate students in clinical psychology

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### Abstract

**Background:** One possible explanation for the dearth of psychologists working in severe mental illness (SMI) areas is a lack of training opportunities. Recent studies have shown that while training opportunities have increased, there remain fewer resources available for SMI training compared to other disorders.

**Aim:** Examines whether students express discomfort working with this population and whether they are satisfied with their level of training in SMI.

**Methods:** One-hundred sixty-nine students currently enrolled in doctoral programs in clinical psychology in the United States and Canada were surveyed for their comfort treating and satisfaction with training related to a number of disorders.

**Results:** Results indicate that students are significantly less comfortable treating and finding a referral for a patient with schizophrenia as well as dissatisfied with their current training in SMI and desirous of more training. Regression analyses showed that dissatisfaction with training predicted a desire for more training; however, discomfort in treating people with SMI did not predict a desire for more training in this sample. This pattern generally held across disorders.

**Conclusions:** Our results suggest general discomfort among students surveyed in treating SMI compared to other disorders.

### Keywords

Severe mental illness, clinical training, graduate training, stigma

### History

Received 28 August 2013

Revised 2 January 2014

Accepted 15 April 2014

Published online 19 June 2014

### Introduction

Severe mental illness (SMI), generally understood as psychotic disorders and treatment-refractory mood disorders, is both debilitating to individuals and a massive burden on the mental health system (Talbot & Sharfstein, 1986). Disproportionately few psychologists, however, are involved in the treatment of such disorders, particularly in recent years (Roe et al., 2006). In the 1960s, about half of psychologists worked in clinical settings likely to serve SMI populations (Norcross et al., 2005). More recently, however, as few as 9% of clinical psychologists reported working in such settings (Duffy et al., 2002). A review of APA surveys from 1963 to 2003 found that 19% of clinical psychologists were likely to work in settings serving SMI populations, compared to 30% of social workers and psychiatrists (Norcross et al., 2005).

This general trend contradicts the fact that research supports an increase in the use of psychological interventions in these populations (Levant et al., 2001; Roe et al., 2006). Interventions like cognitive behavioral therapy and social skills training have been recommended as adjunctive

treatments for psychotic disorders (Bellack, 2004; Lehman et al., 2004; Wykes et al., 2008), yet dissemination of these treatments is hampered by the lack of trained clinicians (Kuller et al., 2010). Furthermore, the recovery movement shifts intervention goals from pharmacological management of acute symptoms to symptom remission, employment, community re-integration and consumer-defined targets (Anthony, 1993; Deegan, 1993; Provencher et al., 2002; Wong & Solomon, 2002), all targets that call for the involvement of psychologists.

One possible explanation for this lack of clinical psychologists is that students in clinical psychology graduate programs in North America may be discouraged from or simply not encouraged to specialize in SMI (Roe et al., 2006; Rollins & Bond, 2001). Several findings in the 1990s suggested limited training opportunities working with SMI clients. A review of 71 graduate clinical psychology programs found that only about half of programs offered coursework focused on SMIs, that less than 30% of practicum time was devoted to treatment of individuals with SMI, and that in approximately half the programs, no graduates had specialized in SMI populations in the previous five years (Millet & Schwebel, 1994). A similar survey found that 26% of all programs would not encourage students who wanted to specialize in SMI to apply to their respective programs (Johnson, 1992). While each of these studies employed

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different methods, and cannot together be interpreted longitudinally, more recent survey work shows increased offerings of exposure to an SMI population. Reddy et al. (2010) conclude that there exists qualified support for the conclusion that training is less available for SMI compared to other disorder populations. Programs largely have faculty with SMI interests, research opportunities and practicum experience, but often lack specialized coursework, large research programs in this area and other areas important to this population (e.g. the consumer perspective) (Reddy et al., 2010). Also important is the observation that such available training is often elective, and many students could conceivably finish their graduate training without any exposure to this population.

No recent study has surveyed currently enrolled students to ascertain students' own opinions about working with this population. Without input from students, it is unclear whether students desire training in the treatment of SMI that is not available or graduate programs are not offering SMI opportunities because of low student interest. Discomfort or perceived incompetence among students during their training might partially account for low engagement; however, without a clear assessment of student perspectives, the reasons for this disparity remain unknown.

This survey examines four hypotheses: first, that students will report lower levels of comfort treating schizophrenia compared to other disorders; second, that students will report lower levels of satisfaction with their training in treating schizophrenia compared to training for other disorders; third, that students will report less comfort obtaining referrals to clinicians specializing in treating schizophrenia (thus reflecting greater disconnection from settings and professionals that specialize in this population); and fourth, that lower levels of comfort in treating schizophrenia and lower levels of satisfaction with training for schizophrenia will predict greater desire for more training in treating schizophrenia. These hypotheses seek to determine whether students' lack of competence in this area or dissatisfaction with training might dictate whether they want more training. This could be informative as to whether or not students desire to shore up their perceived weaknesses, or if it is the case that even though students consider their own SMI training poor, they still do not desire more or improved training in this area. We also explored whether our hypothesized relationship between reported levels of comfort, satisfaction and the desire for more training holds for other disorder categories.

## Methods

### Participants

Participants were 164 students currently enrolled in clinical psychology graduate programs identified from the member list of the Council of University Directors of Clinical Psychology (CUDCP). This study targeted 169 academic institutions. Previous estimates suggest that training programs graduate between 4 and 20 students each year with a mode of 7 (Reddy et al., 2010). In the absence of a mean value of students per program, we used this modal value to calculate a response rate. Assuming five years to completion and a mode of seven students per program yields a survey response rate of

Table 1. Participant demographics.

	Mean (SD)	Percentage
Age	27.5 (3.8)	–
Years in doctoral program	2.8 (1.5)	–
Female	–	87.7
Race/ethnicity		
African American/Black	–	3.1
American Indian	–	0.6
Biracial	–	1.8
Hispanic/Latino	–	1.2
Other/no response <sup>a</sup>	–	3.1
South Asian/Indian	–	1.8
White	–	86.5
Degree expected		
PhD	–	91.4
PsyD	–	6.7
Masters	–	0.6

<sup>a</sup>Three students identified themselves as Arab-American/Middle Eastern, Middle Eastern and West Indian, respectively.

2.77% (164/5915) of all currently enrolled students in CUDCP programs. The sole inclusion criterion was being a student of a CUDCP member institution, all of which are at least regionally accredited in North America. The mean age of respondents was 27.54 years (SD = 3.80), and there were 20 male and 143 female participants. Respondents mostly identified as white ( $n = 141$ , 87%), with 11 (7%) identifying as Asian-American, and 5 (3%) identifying as African-American. Demographic statistics are listed in Table 1.

### Measures

Survey items were designed in concert with expert review from a statistician specializing in survey methodology. In all, the survey had 22 questions: 3 demographic questions, 7 graduate study classification questions (e.g. year in graduate study and primary research area of interest) and 11 questions probing self-reported competence treating, comfort referring, as well as varying types of knowledge regarding treatment for a variety of diagnostic groups. These items probed attitudes toward eight general diagnostic groups: anxiety disorders, mood disorders, bipolar disorders, schizophrenia spectrum disorders, developmental disorders, personality disorders, eating disorders and substance-related disorders. Some item responses were coded on Likert-type scales from zero to five (e.g. “what is your comfort level acting as primary clinician treating the following conditions?”, from “very uncomfortable” = 1 to “very confident” = 5), a zero to four (e.g. “how satisfied are you with amount of training available in your graduate program”, from “very unsatisfied” = 1 to “very satisfied” = 4) or zero to three (e.g. “indicate how knowledgeable you feel in regards to available psychosocial treatments for the following conditions”, from “not knowledgeable” = 1 to “very knowledgeable” = 3). Other items required marking multiple responses to indicate an affirmative (e.g. “please indicate in what areas you would like more training”).

### Procedure

The survey questionnaire and procedures were approved by the Institutional Review Board at the University of

North Carolina at Chapel Hill. We obtained permission from the CUDCP student liaison to distribute the questionnaire to all directors of clinical training whose contact information was available in the CUDCP address book or on respective university websites, resulting in e-mails to 216 e-mail addresses at 169 academic institutions. Directors were asked to distribute the questionnaire to all current students in the program and were given two follow-up reminders. Responses were collected through the Qualtrics survey program.

### Data analyses

Hypotheses one to three were addressed by computing difference scores between schizophrenia spectrum disorders and the mean value of all other disorders for three outcomes: comfort serving as primary clinician, satisfaction with training and comfort obtaining referrals. Difference scores were compared to a chance value of 0 *via* single-sample *t* tests. This strategy was used (as opposed to, for instance, an omnibus ANOVA and planned *t*-test comparisons) in order to specifically and simply examine the level of comfort and competence treating schizophrenia compared to students' level of comfort treating other conditions generally. This study did not seek to examine individual comparisons (e.g. schizophrenia vs. anxiety disorders or schizophrenia vs. bipolar disorder) but rather a general comparison to other areas. Hypothesis four was addressed by defining desire to receive more training in treating schizophrenia spectrum disorders as the outcome variable for a logistic regression analysis, with the following variables entered as simultaneous

model components: number of years in training, comfort treating schizophrenia spectrum disorders and satisfaction with training for schizophrenia disorders. Structurally similar logistic regression models were used for exploratory analyses of other diagnostic groups. The statistical software package SPSS (version 20; Chicago, IL) was used for all analyses.

### Results

Comfort acting as primary clinician in treatment, satisfaction with training and comfort obtaining a referral across diagnostic groups are illustrated in Figures 1–3, respectively; numerical results are reported in Table 2. For our first three hypotheses, we examined differences in comfort treating schizophrenia, satisfaction with training in this area and comfort obtaining referrals with this population. Respondents reported significantly less comfort acting as the primary clinician in treating schizophrenia than for other disorders,  $t(158) = -10.85$ ,  $p < 0.001$ ,  $d = -0.86$ , with scores differing by nearly a full point on a five-point scale, MD = -0.82, SD = 0.95, 95% CI [-0.97 to -0.67]. Respondents also reported being significantly less satisfied with their training in treating schizophrenia spectrum disorders than other disorders,  $t(154) = -11.25$ ,  $p < 0.001$ ,  $d = -0.89$ , with scores differing by approximately half of a point on a four-point scale, MD = -0.57, SD = 0.64, 95% CI [-0.68 to -0.47]. Likewise, respondents reported being significantly less comfortable obtaining referrals for patients with schizophrenia spectrum disorders compared to other disorders,  $t(152) = -6.65$ ,  $p < 0.001$ ,  $d = 0.50$ , with scores also differing

Figure 1. Graduate student comfort level treating individuals with various psychiatric disorder types.

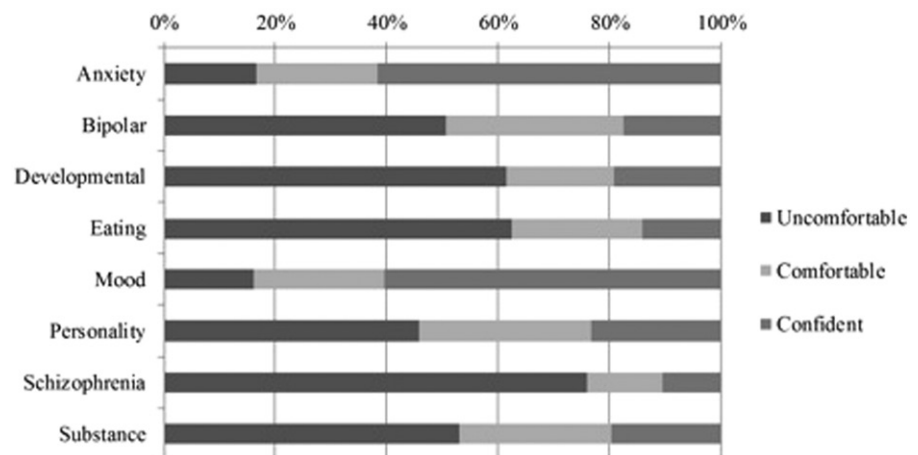


Figure 2. Graduate student satisfaction with their training for various psychiatric disorder types.

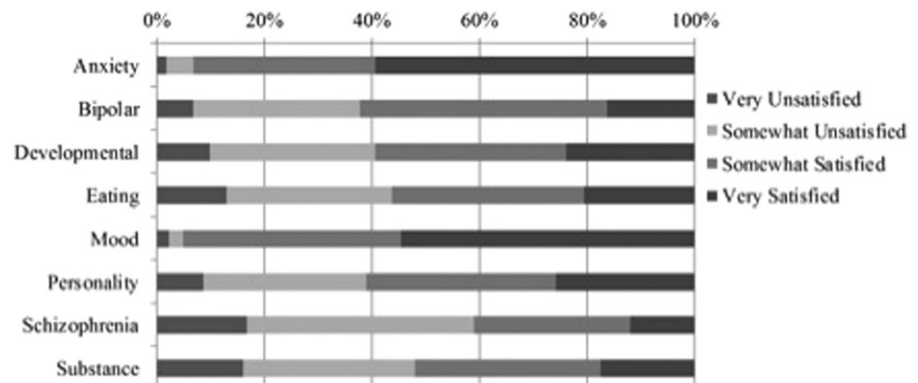


Figure 3. Graduate student comfort level obtaining a referral for individuals with various psychiatric disorder types.

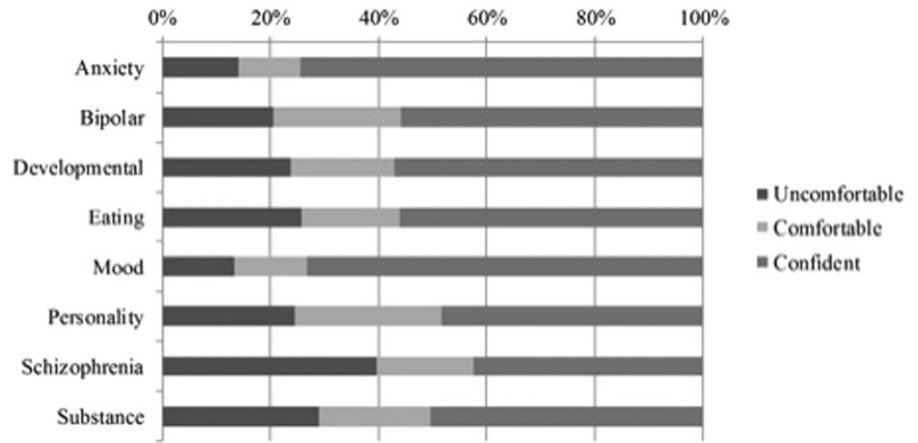


Table 2. Graduate student comfort level treating, satisfaction with training and comfort level obtaining a referral for individuals with various psychiatric disorders.

	Comfort treating M (SD)	Training satisfaction M (SD)	Referral comfort M (SD)
Anxiety disorders	3.57 (1.16)	3.51 (0.68)	3.97 (1.12)
Bipolar disorder	2.47 (1.12)	2.71 (0.82)	3.50 (1.24)
Developmental disorders	2.33 (1.20)	2.73 (0.94)	3.56 (1.31)
Eating disorders	2.30 (1.13)	2.64 (0.96)	3.47 (1.33)
Mood disorders	3.54 (1.16)	3.47 (0.67)	3.94 (1.22)
Personality disorders	2.60 (1.16)	2.78 (0.93)	3.32 (1.24)
Schizophrenia spectrum disorders	1.94 (1.07)	2.36 (0.90)	3.04 (1.36)
Substance use disorders	2.51 (1.17)	2.53 (0.96)	3.36 (1.36)

Table 3. Logistic regressions predicting desire for more training in schizophrenia spectrum disorders.

Predictor	$\beta$	SE $\beta$	Wald's			$e^\beta$ (odds ratio)
			$\chi^2$	df	p	
Years of training	-0.047	0.120	0.152	1	0.697	0.954
Comfort treating	0.114	0.178	0.408	1	0.523	1.121
Satisfaction with training	-0.755	0.223	11.455	1	0.001 <sup>a</sup>	0.470
Constant	1.988	0.622	10.213	1	0.001 <sup>a</sup>	7.302
Test			$\chi^2$	df	p	
Overall model likelihood ratio test			13.247	3	0.004 <sup>a</sup>	
Hosmer and Lemeshow goodness-of-fit test			8.626	8	0.375	

<sup>a</sup> $p < 0.05$ , corrected for multiple comparisons.

by half of a point, MD = -0.54, SD = 1.01, 95% CI [-0.70 to -0.38].

Given the observed elevated levels of comfort in treating and satisfaction with training reported for anxiety and mood disorders (see Figures 1–3), we conducted *post-hoc* analyses to verify that the above results were not solely due to this trend. We repeated the *t* tests above with difference scores recalculated with mood and anxiety disorders excluded. All three comparisons remained statistically significant after Bonferroni correction (number of tests  $n = 3$ ).

For the fourth hypothesis, we examined the relationships between satisfaction with training and comfort treating people with schizophrenia. Logistic regression results for schizophrenia spectrum disorders are listed in Table 3. The results indicated that lower satisfaction with training predicted a desire for more training in schizophrenia spectrum disorders, and that neither comfort serving as primary clinician nor number of years in training predicted desire for more training. Although goodness of fit was adequate (Hosmer and Lemeshow test  $p = 0.38$ ) and parameter estimates were confirmed to be stable using bootstrapping with 100 samples, the regression model correctly classified only 62% of student preferences for more training. Together, the model accounted for 11.2% (Nagelkerke  $R^2$ ) of the variance in desire for more training, indicating that factors not considered by our model substantially contribute to the desire for more training.

For other diagnostics group (anxiety disorders, mood disorders, bipolar disorder, personality disorders and eating

disorders), satisfaction with training but not comfort in treating also predicted a desire for more training. However, the regression model was no longer significant for anxiety disorders after Bonferroni correction (number of tests  $n = 8$ ). Both satisfaction and comfort predicted a desire for more training in developmental and substance-use disorders, though the model was no longer significant for developmental disorders after Bonferroni correction. Number of years of training was not a significant model component in any regression model. Model fit was adequate, and parameters were validated as stable *via* bootstrapping for all models.

### Discussion

These results support our first three hypotheses: students reported being less comfortable treating schizophrenia spectrum disorders, less satisfied with their training in schizophrenia spectrum disorders and less comfortable obtaining referrals for individuals with schizophrenia spectrum disorders as compared to other disorders. Our fourth hypothesis was partially confirmed: students reporting lower satisfaction with their training in schizophrenia spectrum disorders tend to wish for more training opportunities with this population. Students who reported less comfort treating such disorders, however, tended to be equally likely to want more training as those who reported greater comfort. Despite a recent increase in the number of faculty specializing in SMI (Reddy et al., 2010), students appear to be the least

comfortable treating, least satisfied with their training in and least comfortable obtaining referrals for schizophrenia spectrum disorders (see Figures 1–3). Our results indicate that students remain on an average significantly less comfortable treating and obtaining referrals for individual with schizophrenia-spectrum disorders despite increased opportunities to work with faculty members specializing in SMI.

Although students remain disproportionately dissatisfied with their training in this area, it is notable that their lack of comfort and confidence treating schizophrenia spectrum disorders did not predict a desire for more and improved training with this population in the current sample: 57% of students reported a desire for more training in schizophrenia spectrum disorders. This frequency is higher than the average percentage of students reporting desire for more training in all other disorders combined (47%), but is less than for substance use disorders (63%) and personality disorders (66%). Schizophrenia spectrum disorders fell within a general trend of lower satisfaction tending to correlate with a desire for more training. Comfort administering treatment, however, failed to predict a desire for more training in all categories except substance use disorders, suggesting that, in general, students who are uncomfortable treating individuals with a particular disorder are not motivated to seek additional training to remediate perceived weaknesses. This could suggest a trend on the part of students to not seek opportunities that would allow them to meet competencies with areas other than their specialty. This trend could be particularly problematic for schizophrenia-spectrum disorders, for which the greatest frequency of students report discomfort, and thus may graduate from their respective programs with relative discomfort or incompetence treating this population.

However, the trend toward a general lack of desire to remediate self-reported relative weaknesses was not specific to schizophrenia spectrum disorders. Schizophrenia-spectrum disorders were not qualitatively distinct from other disorders in either the frequency of students desiring more training or in the general pattern of regression results. Some prior work focusing on clinical supervision of mental health professionals in training to work with this population has emphasized stigma against individuals with psychotic disorders as a barrier to effective training and practice (Buck & Lysaker, 2010; Lysaker et al., 2009). If students who were uncomfortable with schizophrenia held stigmatizing attitudes about individuals with these disorders, we might expect those students to report less desire for more training. Since the majority of students desire more training for these disorders, this suggests that the low numbers of students working with and researching this population might be best accounted for by sociological factors such as availability of training opportunities or lack of appropriate role-models for such work. Future research should better examine the relationships between stigma, discomfort, training preferences and training opportunities.

Importantly, we cannot infer any causal relationship between student discomfort and what appears to be a lack of roles for clinical psychologists treating individuals with SMIs. As Reddy et al. (2010) suggest, students' discomfort

with this population could precede their enrollment in training programs. Student choice might be a driving factor in the diminished role of psychologists in treating this population if students simply do not request more treatment experiences with individuals with SMI. Furthermore, there are many other reasons clinical psychologists' role in treating SMI could be diminishing that have little to do with graduate training, including a shift toward research settings, greater involvement in administrative roles or the proliferation of the evidence-based treatments geared toward administration by MA-level rather than doctoral-level practitioners.

These results must be interpreted with caution, as our study was limited in a number of ways. First, the response rate to our survey (2.77%) was very low. This might be attributable to the method of delivery of the survey (e-mail solicitation), a lack of compensation or reliance on program directors to send the survey out to their students. Second, because of this method, it is unknown whether specific graduate programs or types of programs were over- or under-represented in the sample. It is possible that a few large programs generated the bulk of responses. Third, our respondents were overwhelmingly white and female. Although this could limit the generalizability of our results, doctoral students in clinical and counseling psychology are also majority white (68.5%) and female (77.3%) (APA, 2010). Fourth, we did not collect data on perceived availability or quality of training opportunities or on students' attitudes about individuals with schizophrenia spectrum disorders. Consequently, we are not able to distinguish between the following two possibilities: (a) training is either unavailable or of poor quality and (b) training opportunities are adequate, yet discomfort persists even after training. Qualitative research into student attitudes and training experiences could address this concern. Fifth, it may be inaccurate to presume that (lack of) desire for more training is a good indicator of future behavior. Despite these limitations, these results are valuable given the dearth of research in this area.

## Declaration of interest

The authors have no financial interest to disclose.

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