

School Psychology Students, Faculty, and Practitioners: An Evaluation of Training Experiences, Knowledge, and Comfort with GLBTQ Students

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Violence among sexual minority students is widespread in schools and can be found as early as elementary school. Although several studies have investigated issues related to gay, lesbian, bisexual, transgender, and questioning youth (GLBTQ), there remains a gap in the literature with respect to the training school psychologists receive and their knowledge and comfort level in working with GLBTQ youth. To address this gap, school psychology graduate students, faculty, and school psychology practitioners were invited to participate in a survey assessing their training experiences, knowledge, and comfort levels in working with GLBTQ youth. Participants were recruited through NASP-approved statewide organizations and graduate training programs. Results indicate that while participants rate their training as inadequate, they nonetheless feel comfortable working with this population. Demographic variables did not correlate with training, knowledge, and comfort as hypothesized. Implications for graduate training and future research are discussed in light of the present study's findings.

Various forms of violence have been present in schools for decades. Attempts have been made through policy changes and targeted training modules to address problems related to violent behavior; however, the prevalence of violence toward sexual minorities in schools remains high and can be found as early as elementary school (Center for Mental Health in Schools at UCLA [CMHS], 2007; Fontaine, 1998). Violence against gay, lesbian, bisexual, transgender, and questioning (GLBTQ) youth is often seen as socially sanctioned, leaving victims unprotected from harassment and abuse and instances of violence unreported by school administrators and staff (CMHS, 2007; Fontaine, 1998). Some have argued that schools tend to treat sexual minorities as nonexistent and disregard this sensitive topic (Black & Underwood, 1998; Marinoble, 1998). Nonetheless, sexual minority students do exist within schools and an increase in harassment toward LGBTQ youth has been reported since the mid-1990's (CMHS, 2007; Fontaine, 1998). Specifically, research from CMHS (2007) has reported that 34% of GLBTQ students have suffered anti-gay harassment in the school setting and more than 90% of GLBTQ youths have

experienced some other form of victimization (e.g., physical violence such as being punched, kicked, or beaten) on account of their actual or perceived sexual orientation. In addition, CMHS (2007) reports that one-third of all students and three-quarters of GLBTQ students consider school to be an unsafe place for sexual minority youth.

Harassment among sexual minority youth has been linked to a number of psychosocial stressors and health problems. Due to the physical and verbal harassment and abuse impacting GLBTQ youth (Herek, 2008), such individuals are at increased risk for emotional isolation, low self-esteem, poor academic performance, substance abuse, exposure to HIV and other sexually transmitted diseases, school dropout, and suicide. In fact, suicide is the number one cause of death among sexual minority students (Black & Underwood, 1998; CMHS, 2007; Fontaine, 1998; Marinoble, 1998; National Association for School Psychologists [NASP], 2006). Additionally, these students often lack familial support and are ostracized, isolated, and rejected by family members and friends, and many become depressed and even homeless upon disclosure of their sexuality (CMHS, 2007; Fontaine, 1998; Marinoble, 1998; NASP, 2006).

Given these risk factors, school staff and mental health providers need to be trained adequately on issues affecting sexual minority youth. Schools should be safe havens for all students, where they can develop their personal identities freely and are given the opportunity to learn in an atmosphere of dignity that is free of discrimination, harassment, violence, and abuse (CMHS, 2007; NASP, 2006). Furthermore, with 3% to 10% of the general population identifying as sexual minorities and many high school students classifying themselves as questioning their sexual identities, it is certain

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that professionals will encounter GLBTQ youth in their daily practices (CMHS, 2007). There are clear legal and ethical guidelines for school psychologists in working with GLBTQ youth (American Psychological Association [APA], 2002; NASP, 2010). However, it is unclear whether the existing guidelines are routinely applied in practice. Thus, ample training opportunities need to be provided to school staff, administrators, and health care providers, and changes in policy are required to address the current inequities and needs of this particular student population (CMHS, 2007; NASP, 2006).

Training

Sexual minority issues are part and parcel of school counseling and other psychology professions but seem largely absent in school psychology training. In fact, the majority of research in this area has focused on training of school counselors and other psychology professionals that engage in counseling services, rather than school psychologists per se. A study by Pilkington and Cantor (1996) examined syllabi of graduate courses in social psychology, developmental psychology, personality, learning theory, abnormal psychology, family therapy, and ethics to determine how frequently sexual minority issues were focused upon and discussed. The researchers found that sexual minority issues were included in the course curricula of less than 25% of these graduate courses (Pilkington & Cantor, 1996). Similar results were found in a study by Erwin (2006) that examined training of school counselors in sexual minority issues. Erwin found that although sexual minority students reported a need for counseling services, counselors often did not feel adequately trained to work with these students. These studies suggest that training in sexual minority issues is not common in graduate education in school psychology.

Bahr, Brish, and Croteau (2000) examined school psychologists' training in sexual minority issues as related to professional ethics. They suggest that three ethical principles should be considered in the inclusion of these issues in training programs. First, the principle of professional relationships and responsibilities requires that school psychologists be familiar with the individual differences of the students with whom they work. Second, school psychologists must be competent to work with a variety of individuals. Third, according to the professional practices principle, school psychologists must respect the rights of every individual. These three ethical guidelines necessitate adequate training and competency when working with diverse populations, including sexual minority youth. When considering these ethical principles that guide the practice of school psychology, it is important that training programs include current issues related to GLBTQ youth. Although there is current literature suggesting ways in which these issues can be included in training (e.g., Bahr et al., 2000), there is little research that examines the amount of training school psychologists actually receive in this area.

Knowledge

Knowledge of GLBTQ issues and concerns, as well as the dissemination of pertinent information about GLBTQ individuals, is a common area of interest to researchers seeking to evaluate this broad area (e.g., Butler, 1995; Evans, 1994; Hirsch, 2007; Mudrey & Medina-Adams, 2006; Savage, Prout, & Chard, 2004). Within this area, little research has been performed to evaluate the knowledge of school-based personnel, including current teachers, school psychologists, school counselors, and other school professionals.

It appears that school-based professionals, including pre-service teachers (i.e., those who have not completed educational and certification requirements) and school psychologists, have relatively low levels of knowledge regarding GLBTQ issues and concerns (Hirsch, 2007; Mudrey & Medina-Adams, 2006; Savage et al., 2004). In a sample of pre-service teachers, who were undergraduate students taking education courses, Mudrey and Medina-Adams (2006) found that female pre-service teachers had greater knowledge than males and that non-minority pre-service teachers had greater knowledge than racial/ethnic minority pre-service teachers. A study by Hirsch (2007) determined that future teachers, on average, correctly answered only 10.88 questions out of 18 questions pertaining to knowledge of GLBTQ issues. Only 13.3% of the sample accurately answered 80% or more of the questions. With regard to school psychologists' knowledge, a study by Savage and colleagues (2004) revealed that school psychologists had low to moderate levels of knowledge about dropout rates, academic challenges, and violence experienced by lesbian and gay male students. To our knowledge, no other research has been conducted examining the knowledge of school psychology graduate students, school psychology graduate faculty, or school psychology practitioners. The knowledge of school psychologists with respect to GLBTQ issues is important given that school psychologists are perhaps the individuals most ideally situated in the school setting to handle the issues and concerns of students who identify as GLBTQ.

Attitudes and Comfort

Discrimination against sexual minorities is common in schools (Kahn, 2006). Negative attitudes and discrimination in schools on the basis of sexual orientation and gender expression are not only displayed by students but may be expressed by teachers, counselors, administrators, school psychologists, and other school staff. Sears (1991), for example, surveyed prospective teachers' attitudes and feelings toward sexual minorities, encounters with high school-aged sexual minorities, and knowledge about sexual minority issues. Results indicated that eight out of ten prospective teachers reported negative feelings toward sexual minority individuals and one-third were classified as "high-grade homophobic." Hirsch (2007) expanded Sears' (1991) study to include prospective teachers' behaviors. Hirsch (2007) surveyed 203 future educators who completed

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measures assessing their attitudes toward, feelings about, and knowledge of sexual minorities and their anticipated behaviors toward sexual minority students. Example questions included, "I would feel nervous being in a group of homosexuals" and, "I would feel comfortable working with a female homosexual." Results indicated that prospective teachers expressed relatively positive attitudes and feelings toward sexual minorities. However, the prospective teachers also displayed somewhat contradictory behaviors; for example, teachers indicated that they would behave differently toward a sexual minority student than toward a heterosexual student because they would be unwilling to discuss age-appropriate topics related to sexual orientation in the classroom. Ninety-four percent of prospective teachers said they would refer a student who wanted to talk about sexual orientation to the school counselor or school psychologist. Similar findings were reported in a study by Ruebensaal (2006), in which school counselors were more likely to refer the client to the school psychologist if he or she identified as lesbian or gay. Given that teachers often refer sexual minority students to school psychologists, it is particularly important to examine school psychologists' attitudes and feelings in working with students who identify as GLBTQ. It is important to note that in the study by Ruebensaal (2006) as well as in most studies in this body of literature, findings related to attitudes toward individuals who identify as gay or lesbian cannot necessarily be generalized to attitudes toward those who identify as bisexual, transgender, or queer. Thus, while collapsing the various categories of sexual minorities is commonplace in the literature, it is important to note that individual differences between groups may be masked by this approach (Herek, 2002).

There is currently a gap in the literature on school psychologists' comfort level in working with students who identify as sexual minorities. Previously, comfort level has been measured by single questions embedded within a comprehensive study. No study to date has utilized a wide-range examination of school psychologists' comfort in working with students who identify as sexual minorities. While a relationship between attitudes and comfort has been found (Ruebensaal, 2006), attitude measures may not be fully representative of an individual's beliefs. Therefore, it is important when examining training and knowledge to obtain an accurate gauge of comfort within various situations.

The purpose of this study was to address the gaps related to school psychologists' training experiences, knowledge, and comfort level in working with GLBTQ youth. Specifically, the current study examined: (a) the overall training experiences among participants with respect to GLBTQ issues; (b) participants' knowledge regarding

GLBTQ issues and differences across groups pertaining to their knowledge; and (c) the comfort levels across groups when working with the GLBTQ population. Based on prior research in this area (Pilkington & Cantor, 1996), there were several hypotheses made regarding the questions in the current study. First, the researchers hypothesized that the amount of training received would be positively correlated

with knowledge of GLBTQ issues and comfort level, corroborating previous research findings (e.g., Hirsch, 2007; Mudrey & Medina-Adams, 2006; Ruebensaal, 2006; Savage et al., 2004). Second, it was hypothesized that certain demographic characteristics (conservative political orientation, religious orientation, and geographic region) would be negatively correlated with knowledge and comfort level, as has been found in prior studies (Kahn, 2006; Ruebensaal, 2006; Savage, 2004; Sears, 1991; Smith, 2007).

Method

Participants

Three groups were invited to participate in this nationwide survey: school psychology graduate students, school psychology graduate faculty, and school psychology practitioners. Any individuals who did not fit into one of these three categories were excluded from this study.

School psychology graduate students and faculty were recruited through personal contact with the program directors of all NASP-approved graduate programs (NASP, 2008). To better ensure generalizability of findings, a random sample of program directors were asked to distribute the questionnaire to full-time school psychology faculty, as well as school psychology graduate students within their programs, by means of the programs' email listservs. Microsoft Excel was used to select a random sample of programs and organizations. Out of 177 graduate programs, 120 were randomly chosen to participate in the study. Out of 120 programs, 96 (80%) responded to the email inquiry and agreed to distribute the survey to their programs' faculty and graduate student body. The rest of the programs either did not respond ($n = 22$) or refused to send out the survey due to conflicts of interest with the survey content and overall University policies ($n = 2$).

School psychology practitioners were recruited through random sampling of each state's school psychology association. Out of 50 statewide organizations, 40 were randomly selected to be contacted. Out of these 40 organizations, 24 responded (60%) and indicated that they were willing to distribute the survey to their organization members. After obtaining permission from each association's governing board, the survey was sent via email to their listserv by the president or another board member.

Of the 834 respondents, 64% ($n = 534$) were students, 10.5% ($n = 87$) were faculty, and 25.5% ($n = 213$) were practitioners. The participants were 83% women ($n = 691$) and 17% men ($n = 141$). Two participants did not indicate their sex. Practitioners reflected a breadth of experience in the schools, ranging from one year of practice to 38 years, with a mean of 10 years of experience as a school psychologist ($SD = 6.5$). Students also varied in their stage of graduate training, with approximately 48% of students in their first two years of training and 52% in their final two years of training ($M = 5.5$ years of graduate schooling, $SD = 3.2$). Types of training were roughly evenly distributed, with approximately 38% of students in specialist (i.e., EdS)

programs, 40% of students in doctoral programs, and 22% in specialist doctoral (i.e., PsyD or EdD) programs. Work/school settings for respondents were equally dispersed across urban (35%) and suburban (36%) areas, with the remaining 19% of respondents working or attending school in a rural area. Ten percent of respondents did not answer this question. Remaining demographic information for participants' ethnicity, sexual orientation, political affiliation, and religiosity is presented in Table 1.

Measures

The survey was a six-page questionnaire based on the school climate literature on GLBTQ youth developed by the authors. Three versions of the questionnaire (i.e., student, professor, and practitioner forms), containing between 50 and 55 questions each, were divided into four separate sections that addressed demographics, training experiences, knowledge, and comfort level for each respondent.

The first section of the survey (Section A) included demographic questions. Typical demographic information

(e.g., date of birth, ethnicity, highest degree earned/working toward) as well as additional information more closely related to the topic of this study (e.g., personal relationships with individuals who identify as GLBTQ, sexual orientation, school policy related to GLBTQ issues and concerns) were addressed. Section B measured participants' training experiences in GLBTQ issues. School psychology graduate students and school psychology practitioners were asked to answer nine questions pertaining to whether or not they received training in various areas related to GLBTQ students and issues, how effective their training was in preparing them to serve GLBTQ students (measured on a four point Likert-type scale), and through what means they received their training (e.g., peer presentations, graduate course, assigned readings, professional development). These questions were developed by the authors as a means of measuring student training and revealed strong internal consistency for the present sample (Cronbach's $\alpha = .89$). Example questions included, "Did you receive training related to the counseling needs of GLBTQ students?" and, "How well do you think

Table 1

Participant Demographic Characteristics

Variable	Students		Faculty		Practitioners	
	N	%	N	%	N	%
Gender						
Female	458	85.8	54	62.1	179	84
Male	76	14.2	33	37.9	32	15
Missing	0	0	0	0	2	1
Mean age in years	26.7 (5.5)	44.3 (11.3)	40.0 (11.9)			
Ethnicity						
African-American	27	5.1	4	4.6	4	1.9
Asian-American	20	3.7	3	3.4	1	0.5
Hispanic-American	30	5.6	4	4.6	2	0.9
Caucasian	442	82.8	76	87.4	200	93.9
Missing/Other	14	2.6	0	0	6	2.8
Sexual Orientation						
Gay/Lesbian	14	2.6	3	3.4	9	4.2
Bisexual	13	2.4	4	4.6	3	1.4
Heterosexual	497	93.2	76	87.4	199	93.4
Questioning/Other	20	1.8	4	4.6	2	1.0
Census Region						
Northeast	205	38.0	16	19.3	48	22.9
Midwest	188	35.2	22	26.5	65	31.0
South	87	16.3	27	32.5	84	40.0
West	53	10.5	18	21.7	13	6.2
Work or University Setting						
Urban	247	46.3	65	75	49	23.0
Suburban	183	34.3	13	15	113	53.1
Rural	104	19.4	9	10	51	23.9
Political Affiliation						
Democrat	286	53.7	59	67.8	116	54.5
Republican	80	15	5	5.7	33	15.5
Independent	111	20.8	14	16.2	30	14.1
Missing/Other	56	10.5	9	10.3	34	15.9
Religiosity						
Identify Religious/Spiritual	183	34.5	33	40	47	22.1
Not at all Religious/Spiritual	350	65.5	54	60	166	77.9

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your training related to the risk factors associated with GLBTQ students prepared you to work with this population?" A different set of questions was given to school psychology graduate faculty pertaining to the content of their courses and whether they felt it prepared their students to work with GLBTQ youth. The third section of the survey (Section C) used a 14-item scale to measure participants' knowledge about GLBTQ issues. To assess respondents' knowledge of GLBTQ-related issues, 14 true/false questions were included in the survey. Questions were adapted from the Knowledge about Homosexuality Questionnaire (Harris, Nightengale, & Owen, 1995) and included questions such as, "Homosexuality is a phase which children outgrow" and, "According to the American Psychological Association, homosexuality is an illness." This measure has shown high internal consistency across studies, with a Cronbach's alpha of .86 (Bliss & Harris, 1999; Koch, 2000). Lastly, Section D measured participants' comfort in taking action in various scenarios related to GLBTQ youth. Respondents were given 13 scenarios assessing their comfort level in addressing GLBTQ-related issues or working directly with GLBTQ youth. These items were adapted from the Index of Homophobia (Bouton, Gallaher, Garlinghouse, Leal, Rosentein, & Young, 1987) which has demonstrated consistently high reliability coefficients ranging from .90 to .95 (Hudson & Ricketts, 1980; Patgolum-An & Clair, 1986). The scenarios outlined a variety of situations commonly encountered with GLBTQ youth, including counseling a student who identifies as GLBTQ or overhearing homophobic statements from teachers or administrators. On a scale of 1 to 4, with 1 being the "least comfortable" and 4 being "very comfortable", a total comfort score was calculated for respondents.

Procedures

The survey was approved by the University of Kentucky Institutional Review Board and email invitations were sent using state-level school psychologist association listservs to access practicing school psychologists and the NASP-approved graduate program list to access program directors. An accompanying letter was attached to each email explaining the purpose of the study. One reminder prompt was sent to each university institution or professional organization if a reply had not been obtained. As an additional incentive for completing the survey, participants were informed that two respondents' emails would be chosen at random to win a monetary gift card.

All responses were given a numerical code and transferred from the online survey database to a statistical program (Statistical Package for the Social Sciences Version 18.0; SPSS 18.0) for analyses.

Results

Demographic Relationships

To assess the relationship between respondents' training experiences, knowledge, and comfort levels, Pearson

bivariate correlations were examined. Demographic variables, including respondents' religiosity, gender and relationship with a GLBTQ individual, were included in the correlational matrix using Spearman's Rank Order correlation to examine relationships with the three dependent variables. As shown in Table 2, amount of training, knowledge of GLBTQ issues, and comfort levels with GLBTQ topics were all correlated, though to a small degree. Not surprisingly, having a close relationship with a person who identified as a sexual minority was correlated with having a higher comfort level with GLBTQ individuals, although the correlation was relatively small. Further, gender was also negatively correlated with comfort. On a scale of 1 to 4, with 1 being the "least comfortable" and 4 being "very comfortable", a total comfort score of 52 was calculated for respondents. Females ($M = 38.9, SD = 8.3$) reported higher comfort levels in working with GLBTQ youth than did males ($M = 36.8, SD = 8.7$), although the results were not significant at the .05 level, $t(830) = 0.008, p = .93, 95\% CI [3.64, 3.68]$.

Given the low intercorrelations among training, knowledge, and comfort levels, separate one-way Analysis of Variance (ANOVA) tests were used to ascertain differences among the dependent variables based on geographic location (Northeast, Midwest, South, and West), political affiliation (Democratic, Republican, Independent, or Other), ethnicity/race (African American, Asian American, Hispanic American, and Caucasian), and sexual orientation (Gay/Lesbian/Bisexual or Heterosexual). All ANOVA results were analyzed using Bonferroni's adjustment to control for Type I error (Tabachnick & Fidell, 1996). As presented in Table 3, training, knowledge, and comfort levels did not significantly vary depending on one's geographic region, political affiliation, or ethnicity/race. However, respondents who identified as gay or lesbian had significantly higher comfort and knowledge scores than those who identified as heterosexual. Using eta squared to calculate effect sizes, however, the magnitude of these differences was small for both comfort ($\eta^2 = .02$) and knowledge ($\eta^2 = .01$).

Table 2

Intercorrelations among Demographic and Dependent Variables

	1	2	3	4	5	6	7
1. Training	-						
2. Knowledge	.09**	-					
3. Comfort	.11**	.23**	-				
4. Religiosity	.02	.05	.06	-			
5. Gender	-.06	.04	-.09**	-	-		
6. Sexual Orientation	-.02	.06	.08	-	-	-	
7. Relationship w/GLBTQ	.02	.01	.12**	-	-	-	-

Note. * $p < .05$, ** $p < .01$. Religiosity, Gender, Sexual Orientation, and Personal Relationship with GLBTQ individual all reflect dichotomous variables.

Table 3

ANOVA Omnibus Results for GLBTQ Training, Knowledge, and Comfort: Group Differences According to Demographic Status

Demographic Measure	Training			Outcome Knowledge			Comfort		
	<i>n</i>	<i>F</i>	<i>p</i>	<i>N</i>	<i>F</i>	<i>p</i>	<i>N</i>	<i>F</i>	<i>p</i>
Political Affiliation	823	2.3	.057	818	2.26	.061	826	1.54	.061
Geographic Location	826	.855	.464	821	.360	.782	826	.360	.782
Race/Ethnicity	830	.421	.656	825	.477	.752	830	1.23	.296
Sexual Orientation	830	2.45	.38	830	1.06	.03**	825	3.04	.01**

Note. **p* < .05, ***p* < .01.

Training

Survey questions provided information on respondents’ level of training in GLBTQ issues across a number of forums (e.g., entire course content dedicated to GLBTQ issues versus readings or lectures addressing the topic). Students and practitioners were asked to rate the prevalence of GLBTQ training, while faculty were asked to indicate how much and through what means their program delivered this training. One-way ANOVA was used to assess group differences. Results showed some incongruence between student and practitioner reports versus faculty reports of training experiences. Overall, students and practitioners rated their training lower than the level of training indicated by faculty, although the results were not statistically significant, $F(2, 831) = 1.30, p = .27$. In other words, faculty reported providing higher levels of GLBTQ training than students and practitioners reported they received.

On a scale of 1 to 4, with 1 being the *least competent* and 4 being *very competent*, students (*Mdn* = 1.45, *IR* = 1.60) and practitioners (*Mdn* = 1.68, *IR* = 1.85) also rated themselves in the range of “incompetent” with respect to their perceived ability to work effectively with GLBTQ youth). Table 4 displays the separate areas in which each respondent rated both their training and perceived effectiveness of training with GLBTQ youth. Students and practitioners indicated that very little graduate training was devoted to GLBTQ issues. However, those that did receive training in the various domains rated this training as very helpful in preparing them to work with the GLBTQ population (*Mdn* = 3.65, *IR* = 3.69).

Knowledge

Across all three groups, respondents answered an average of 64% of questions correctly. On the 14-question test of knowledge about GLBTQ issues, faculty appeared to be the most knowledgeable (*M* = 9.76, *SD* = 2.98), followed by students (*M* = 9.40, *SD* = 2.65) and practitioners (*M* = 9.12, *SD* = 2.30). ANOVA results reflected significant differences for knowledge between groups, $F(2,826) = 4.26, p = .01$. However, the differences in mean score were quite small, as reflected in the effect size which was calculated using eta squared ($\eta^2 = .01$).

Out of the 14 true/false questions, respondents were most likely to incorrectly rate as “true” the statement that “homosexuality describes a person’s sexual preference.” Consistent with the literature, females were significantly

Table 4

Student and Practitioner Training Experiences with GLBTQ Youth

	Students	Practitioners
Counseling		
Received Training	2.04 (.90)	1.93 (.76)
Training Effective?	2.09 (.77)	2.38 (.75)
Interventions		
Received Training	1.67 (.86)	1.70 (.71)
Training Effective?	1.83 (.87)	2.15 (.79)
Risk Factors		
Received Training	1.90 (.85)	1.90 (.71)
Training Effective?	2.02 (.78)	2.31 (.73)
Ethics		
Received Training	1.78 (.82)	1.66 (.73)
Training Effective?	2.00 (.85)	2.13 (.88)
Advocacy		
Received Training	1.67 (.83)	1.58 (.70)
Training Effective?	1.89 (.83)	1.99 (.82)
Identity Development		
Received Training	1.59 (.80)	1.51 (.69)
Training Effective?	1.73 (.78)	1.88 (.85)
Mental Health		
Received Training	1.83 (.84)	1.88 (.69)
Training Effective?	1.96 (.74)	2.23 (.78)
Physical Health		
Received Training	1.26 (.60)	1.34 (.62)
Training Effective?	1.43 (.71)	1.69 (.86)
Overall Training	1.84 (.76)	1.98 (1.13)

Note. All figures are average scores based on a scale of 1 (Not at all helpful or No training) to 4 (Very helpful and Three or more modes of training). Faculty members were asked if their overall training was effective, and were therefore not asked about individual training domains. Standard deviations are provided in parentheses.

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more likely to answer the 14 questions correctly than males, $t(830) = 2.11, p = 0.001; d = 0.80, 95\% CI [.56, 3.7]$.

Comfort

With the highest possible score being 52, respondents rated themselves at a mean of 37.3 ($SD = 9.8$), suggesting a moderate level of comfort in working with GLBTQ youth. Faculty rated themselves as most comfortable ($M = 39.8, SD = 13.6$), followed by students ($M = 37.0, SD = 7.0$) and practitioners ($M = 36.2, SD = 9.5$). These differences were statistically significant at the .05 level, $F(2, 831) = 5.47, p = .01$. However, using eta squared to calculate an effect size, the difference ($d = .01$) was minimal (Cohen, 1988).

Across respondents, being alone with a same-gender sexual minority student was rated as the most comfortable scenario ($M = 3.82, SD = 0.93$). Two scenarios were equally rated as the most uncomfortable for respondents. One of the scenarios perceived as uncomfortable involved a student seeking help because of transgender feelings ($M = 2.12, SD = 0.97$) while the other scenario described a school psychologist working in a school that discriminated against sexual minorities ($M = 2.13, SD = 0.87$).

Discussion

The purpose of the current study was to expand the literature base examining school psychologists' training, knowledge, and comfort levels in working with GLBTQ youth. In order to understand the various background characteristics of the survey respondents and their association with these variables, a number of demographic questions were also included in the survey related to political affiliation, sexual orientation, geographic region, and religious orientation.

With regard to training, the results of the study suggested that student and practitioner reports were somewhat inconsistent with faculty reports when indicating how much training was conducted at the university level. School psychology faculty reported more training in GLBT areas, while overall, students and practitioners judged their training less favorably and reported feeling incompetent to work with sexual minorities. There are several possible explanations for these findings. First, at best, training offered in graduate programs may not be relevant or helpful to the work being done in school settings and, at worst, may actually be harmful. For example, studies done by Erwin (2006) and Pilkington and Cantor (1996) found elements of heterosexual bias and discrimination in graduate training programs. Heterosexual bias may have been present in the training being assessed by the present study and may have been perceived by respondents. Given that the questionnaires did not explicitly tap into heterosexism or discrimination present in graduate training, this hypothesis remains speculative.

Second, it is possible that the amount of training offered at the university level may not be adequate in making students feel prepared to work with sexual minority youth upon completion of their graduate training. For instance,

Erwin (2006) found that students in counseling programs did not feel prepared to work with lesbian and gay clients upon completion of their training, even though some training had been provided. Thus, our results appear consistent with prior research in suggesting that many students feel "incompetent" to work with GLBTQ populations. Although faculty in our sample reported having provided training in GLBTQ issues, it is clear that students require additional training or exposure to GLBTQ clients to feel more competent in working with this particular population.

Results related to faculty, students, and practitioners' knowledge levels of GLBTQ issues fit our expectations based on previous research studies among school counselors. Overall, school psychologists rated their training as inadequate and answered just over half of the questions concerning GLBTQ issues correctly, suggesting the need for factual-based training that addresses common GLBTQ concerns. The fact that there was no significant difference in knowledge level between the groups indicates that training in this area is consistently low, and seems to remain so over time. That is, current graduate students are no more knowledgeable on GLBTQ issues than school psychologists who were trained years ago, despite the fact that the extent and severity of sexual minority victimization has increased over the past two decades (CMHS, 2007; Gay, Lesbian and Straight Education Network, 2007). With increased victimization and visibility of GLBTQ youth, the training offered by universities should increase as well. Unfortunately, the results of this study do not indicate that this is the case for current school psychology graduate students.

Despite the lack of training reported by students and practitioners, respondents feel surprisingly comfortable working with GLBTQ students in the school setting. These results supported our hypothesis that more training would result in an increased comfort level with GLBTQ youth. Given that having a close relationship with an individual who identified as GLBTQ was significantly and positively correlated with comfort, it is possible that students merely had more exposure to GLBTQ individuals and therefore were more comfortable with them. It could be that respondents reported greater levels of comfort due to this exposure of having more personal experiences with GLBTQ individuals. As has been shown in prior research, increasing comfort with issues of diversity can result from personal experiences or relationships with others from diverse backgrounds. Smith (2007) found that respondents who had had positive interactions with lesbian women or gay men reported lower levels of homophobia. Training programs may therefore help to improve knowledge of GLBTQ issues as well as changing individuals' comfort levels with this population. More research is needed to explore the relationships among these variables. In particular, it remains unclear whether having a sexual minority family member may reduce homophobia in school psychologists. It is also unclear how best to define a "close" relationship with a person who identifies as GLBTQ, nor is it known how close one needs to be with a GLBTQ

individual in order for this relationship to reduce homophobia and increase comfort levels in working with sexual minorities. Given that this survey included only one question to assess whether the respondent was “close” to someone who identified as a sexual minority, much more information is needed to explore these questions as they pertain to school psychologists.

The results from the demographic questions did not support the authors’ hypotheses. Religious orientation, geographic region, political affiliation, and ethnicity/race were not significantly correlated to knowledge and comfort level, as we had predicted. This may indicate that school psychologists are able to separate their personal from their professional lives, such that they do not allow their belief systems to interfere with their work in schools.

This study had a number of limitations. Random sampling is a vital part of ensuring the generalizability of survey results (Langston, 2005; Ray, 2003); thus, surveys were sent out to a random sample of NASP-approved programs. However, programs nonetheless participated through self-selection. Although every attempt was made to ensure that most faculty, students, and practitioners completed the survey, there were a number of potential respondents who did not. It is unclear if willing participants differed in terms of knowledge, training, and comfort level from those who did not participate in the survey or who were not members of statewide NASP organizations, creating a potential selection bias. Moreover, because faculty and students were not from the same training programs, direct correlations between the training offered and training received could not be assessed. Future research should include students from non-NASP-approved programs and should contact practitioners through their respective counties or consortiums to ensure all school psychologists are reached regardless of their NASP membership status and affiliation. In addition, the survey did not address years of work experience or personal experiences participants had had with GLBTQ individuals. Research shows that those with more exposure to others from diverse backgrounds (including GLBTQ populations) have more tolerance and higher comfort levels with individuals from diverse backgrounds (Green, Murphy, Blumer, & Palmanteer, 2009). Again, additional research is needed to explore in more depth the relationship between personal experiences with GLBTQ populations and individuals’ levels of knowledge and comfort. Finally, as with any survey, participants can affect the outcome by answering in a fashion they deem socially appropriate or pleasing to the researcher (Langston, 2005). Although the current study attempted to curtail possible social desirability effects by piloting the study and using questions from other scales already tested and used in the field, this phenomenon could affect results, particularly with a socially and politically controversial topic (Kimberlin & Winterstein, 2008; Nauta & Kluwer, 2004; Sjöström & Holst, 2002).

As the results of the present study showed, there is a critical need to address the lack of training related to GLBTQ

individuals within graduate school programs and to provide professional development opportunities for practitioners. Results indicate that more training is necessary for school psychologists to provide appropriate services, to meet educational needs, and to create a school environment that is a safe place for all children to learn. Further research is therefore needed to determine which training options might be the most helpful in increasing knowledge and comfort levels in working with GLBTQ youth. In addition, studies that examine training which will translate effectively into school practices that support and encourage GLBTQ mental and physical well-being are warranted. These higher levels of knowledge and comfort should be a goal not only for school psychologists but for all practitioners who work with GLBTQ youth, in order to provide improved care to a population that is becoming more visible within our schools and society.

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