Caring for Sexual and Gender Minority Patients: What Factors Explain Self-Reported Competence among Health Care Professional Students?

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Abstract

Background: Lesbian, gay, bisexual, transgender, queer and intersex people comprise approximately 5% of the U.S. population, yet health care professional student education on sexual and gender minority (SGM) health is sparse. This study explored the degree to which sociodemographic factors and student affiliation with SGM people explained self-reported competence in caring for SGM patients.

Methods: This study sought to define Reduced Models from an eight-variable Full Model that explained a meaningful amount (≥ 0.15) of total variance across a sample of health care professional students in terms of six criterion variables: Basic Knowledge, Attitudinal Awareness and Clinical Preparedness (subscales of the Lesbian, Gay, Bisexual, Transgender Development of Clinical Skills Scale); Attitudes Toward LGBT People Scale (ATLPS); and Beliefs and Behaviors (subscales of the Gay Affirming Practice Scale).

Results: Political affiliation, religiosity, and SGM affiliation were predictor variables in half of the Reduced Models. SGM-specific health training hours were included in Reduced Models for Clinical Preparedness and affirming Behaviors.

Conclusion: Sociodemographic factors, lived experiences, and amount of training in SGM-specific health matter when it comes to health care professional students' sense of preparedness in caring for SGM patients.

Introduction

Lesbian, gay, bisexual, transgender, queer and intersex people comprise approximately 5% of the U.S. population,[1-3] yet healthcare professional student education on sexual and gender minority (SGM) health topics is sparse.[4-8] Past studies have suggested that more SGM-specific health training,[5,9,10] personal and professional experiences with SGM people,[11-14] and certain sociodemographic factors are associated with increased clinician competence in caring for SGM patients.[15-16] Specifically, identifying as lesbian, gay, bisexual, transgender, or queer (LGBTQ); female sex-assigned-at-birth;[17-26] liberal political affiliation;[21,22,27] less religiosity; [9,14,22,28] and less spirituality[29] have predicted more affirming attitudes toward SGM people. Also, younger age,[10] white (versus non-white) race,[18,20,26] and less conservative religion,[9,21,30] have predicted less bias toward SGM people in past samples. Other variables that have been associated with greater SGM bias include belief in traditional gender roles,[21,31] acceptance of male aggressiveness,[31] racist attitudes,[21] lack of egalitarian humanism,[21] rural residence,[21] and lower educational attainment.[21] Association of professional identity with attitudes toward SGM people has not been well studied.[26,32]

This study builds on prior research by exploring how sociodemographic factors and association with SGM people relate to self-reported knowledge, attitudes, clinical preparedness, beliefs, and behaviors. Starting with a model that includes eight independent variables (Full Model), this study sought to define

Reduced Models that explained a meaningful (≥0.15) amount of total variance across a sample of health care professional students in terms of six criterion variables that measure constructs related to cultural competence in caring for SGM patients.

Methods

Participants

The sample for this study was a subset of health care professional students and faculty previously surveyed for another purpose.[33] The present sample was limited to students in the control group of the primary study who answered all eight independent variables being tested (n=48).T

Participant characteristics are shown in Table 1. The sample was primarily white (65%), female (68.8%), and heterosexual (66.7%). The majority of students were medical students in clinical years of training (52.1%). Approximately 90% of participants reported being mostly or very liberal. Overall, the sample was more spiritual than religious and represented a variety of religions.

[Insert Table 1 near here]

Ethical Review

The George Washington University IRB determined this study to be exempt (#180645) under Department of Health and Human Services regulatory categories 2 and 4.

Measures

The online survey asked a total of 144 questions (see Supplemental Material), 72 of which were included in this study. Items included 13 demographic and experience questions, the Lesbian, Gay, Bisexual, Transgender Development of Clinical Skills Scale (LGBT-DOCSS),[14] the Attitudes Toward LGBT Patients Scale (ATLPS),[33] and the Gay Affirming Practice Scale (GAPS).[34]

LGBT-DOCSS[14]

The LGBT-DOCSS is an 18-item scale with three subscales that measure constructs associated with self-reported competence in caring for SGM patients across interdisciplinary health care professionals. The scale has been tested for factor structure, reliability, and validity.[14] In the original instrument, respondents rated their agreement with each item on a 7-point scale from strongly disagree (1) to strongly agree (7) for a total score ranging from 18-126 for the overall scale. Subscale ranges are: Basic Knowledge (4-28), Attitudinal Awareness (7-49); Clinical Preparedness (7-49). Total scores for the full scale and each subscale are intended to be tallied and then divided by the total number of items to obtain a mean score. Higher scores reflect greater self-reported competence in each domain.

In this study, the LGBT-DOCSS was altered in four ways: First, the scale was reduced from a 7-point to a 5-point scale. Second, the visual display was reversed, but the greater values were retained for “strongly agree” and the lesser value for “strongly disagree.” Both changes were made to ensure cognitive consistency for respondents—i.e., the same Likert scale direction for each of the three instruments on the questionnaire. Third, the middle answer option was moved to the far right to distinguish it as “Not sure” rather than neutral. This method was recommended by Dillman[35] to provide a more authentic non-response option while retaining reasonable estimates of respondent attitudes.[36] Finally, one item in the factor analysis of the LGBT-DOCSS manuscript was different from the final instrument published.[14] Therefore, both items were included. After correspondence with the scale author (M. Pratt-Chapman to M. Bidell, October 2018); however, only the confirmed item was used in this analysis. Subscales were tallied for composite scores with a range of 4-20 (Knowledge), 7-35 (Attitudes), and 7-35 (Clinical Preparedness). Higher scores reflect greater knowledge, more affirming attitudes, and greater clinical preparedness, respectively.

ATLPS[33]

The ATLPS is an 11-item scale measuring practitioner attitudes–including comfort with SGM patient encounters, opinions of SGM people, and beliefs about professional role. Responses are measured on a 5-point Likert scale from strongly disagree (1) to strongly agree (5) for a total score of 11-55 with higher scores reflecting more affirming SGM attitudes. For this study, the rating scale was identical to the published instrument, but the directionality was reversed and the neutral answer option was changed to “no opinion” and shifted to the far right to provide a clear non-response option for cognitive consistency across all scales.

The ATLPS was adapted from a prior scale of the same name originally created to assess differences in medical student attitudes about gay and lesbian patients.[37] Wilson et al.[29] made the scale more inclusive by changing “gay and lesbian” or “homosexual” to “LGBT” for three measures, by changing the word “physician” to “healthcare professionals” in another item, and by consolidating four items to two while simplifying language to be more accessible. Sanchez et al.’s original scale adapted items from a validated survey about physician attitudes toward patients with AIDS.[38] Validity of Sanchez’s ATLPS has not been reported, but Wilson et al.[29] found strong internal reliability of items when used as a single factor scale. This study used Wilson’s version of the scale, but face validity of two items was determined to be highly questionable. Therefore, while this scale was chosen in order to compare outcomes with other published studies, findings should be interpreted with caution.

GAPS[34]

The GAPS is a 30-item scale designed to measure health practitioners’ beliefs and behaviors regarding care of gay and lesbian individuals. The instrument uses a 5-point Likert scale from strongly agree (5) to strongly disagree (1) for items 1-15 and from always (5) to never (1) for items 16-30. The directionality and scoring for items were retained from the original instrument with the neutral answer option shifted to

the far right to allow for a genuine non-response option as with the prior two scales. The range of possible scores for each subscale is 15-75 with a higher score reflecting more affirming Beliefs or Behaviors, respectively. Crisp established construct validity and strong internal reliability for each subscale.

Statistical Analysis

Data were accessed through the secure RedCap database and analyzed using SPSS 24 (Armonk, NY). Since answers to the independent variables being tested were criteria for inclusion in the study, independent variables had no missing data but resulted in a limited sample size. Data for independent variables were not imputed due to the personal nature of sex-assigned-at-birth, sexual orientation, religiosity, spirituality, and political affiliation—characteristics that are inherent to the nature of the respondent. Missing data for dependent variables was less than 5%. Based on Cheema,[39] this low amount of missing data can be dealt with in numerous ways, including multiple imputation techniques or leaving data as missing. For this study, data were left as missing.

G*Power 3.1.8.2 (Faul, Erdfelder, Buchner, & Lang, 2009) was used to conduct posthoc power analyses for all models, individual predictor variables within models, and model comparisons. *F* tests were used to test Models using the "Fixed model: R2 deviation from zero" option in with effect size set to medium (f^2=.15) and a=.05. To test individual predictor variables, two-tailed *t*-tests were conducted for multiple regression assuming a fixed model. Based on the posthoc power analyses, the secondary sample was underpowered (1-b<.80) for most models to explain a medium effect (f^2=.13) for a=.05 and for most individual predictors to detect a small effect (f^2=.02) for a=.05.[40] For Reduced Models, power ranged from (1-b)=.36-.75 with all Reduced Models powered at (1-b)≥.50. Because the sample was underpowered, variance in the criterion variable explained by individual predictors and for each model were examined rather than statistical significance.[40]

Multiple linear regression was used to test the value of an eight-variable model (Full Model) for each criterion variable. The eight independent variables were: sexual orientation, sex-assigned-at-birth, political affiliation, religiosity, spirituality, SGM affiliation (identifying as or having a friend or family member who identifies as LGBTQ), number of SGM-specific training hours, and number of SGM patient interactions in the last six months. Statistical significance of independent variables within each model as well as percent of variance explained was examined. Using Cohen's[40] benchmark's for a small proportion of variance explained, any variable explaining >2% unique variance was included in the Reduced Model. Reduced Models were examined for statistical significance and proportion of variance explained based on Cohen's[40] benchmarks: small (R^2 =.02), medium (R^2=.13), and large (R^2=.26). For all Reduced Models, interaction effects were examined by creating cross-product terms.[42] Selection of final variables was based on model comparisons.[41,42] Tolerance and VIF were checked for all Reduced Models to ensure that collinearity did not apply. Correlations of all independent variables and each criterion variable were also examined.

Descriptive and inferential statistics were reported. Ordinary Least Squares was used to test individual predictor variables. Multiple *R* was reported for correlation between the criterion variable and all predictors in each model. Multiple R^2 was reported for percent variance in each criterion variable explained by all predictors in each model. Reduced Models were considered meaningful and parsimonious if there was no more than a 10% drop in total variance from the Full to the Reduced Model.

Results

Reduced Models explained a statistically significant amount of variance for Basic Knowledge and Attitudinal Awareness subscales of the LGBT-DOCSS, for the one-factor ATLPS, and for the Beliefs and Behaviors subscales of the GAPS ($p \leq 0.05$). The Reduced Model for the Clinical Preparedness subscale of the LGBT-DOCSS did not explain a statistically significant amount of variance.

All eight potential predictor variables included in the Full Model were included in one or more Reduced Models (see Tables 2-7). Political affiliation, religiosity, and SGM affiliation were predictor variables in half of the Reduced Models. Less religiosity, greater SGM affiliation, and greater number of SGM patients explained greater self-reported Basic Knowledge of SGM health (LGBT-DOCSS). Political affiliation was the only meaningful predictor of self-reported SGM-affirming attitudes as measured by the Attitudinal Awareness subscale LGBT-DOCSS. Together religiosity, spirituality, and number of SGM-specific health training hours explained a statistically insignificant, but meaningful amount of variance for self-reported Clinical Preparedness in caring for SGM patients (LGBT-DOCSS). Unlike the LGBT-DOCSS Reduced Model for the Attitudinal Awareness subscale which included only political affiliation, the ATLPS Reduced Model included sexual minority status, female sex-assigned-at-birth, less religiosity, and greater SGM affiliation that together explained a third of the variance in self-reported affirming attitudes toward SGM people. Political affiliation and SGM affiliation together explained nearly half of the variance in self-reported beliefs about how providers should care for SGM patients as measured by the GAPS-Beliefs subscale. Together, sexual orientation, political affiliation, spirituality, and number of SGM training hours explained slightly more than half of variance in the sample as measured by the GAPS-Behavior subscale.

[Insert Tables 2-7 near here]

Discussion

Despite the underpowered sample, five of the six Reduced Models explained a statistically significant amount of total variance for their respective criterion variables. This finding was unexpected. This means that sociodemographic factors, lived experiences, and amount of training in SGM-specific health matter a great deal when it comes to health care professional students' overall sense of competence in caring for SGM patients.

Political affiliation—only one independent variable—explained nearly half of the total sample variance in self-reported attitudes about SGM patients based on one subscale (Attitudinal Awareness, LGBT-DOCSS)

and was included in half of the Reduced Models. It is important to note that the political affiliation variable was dichotomized to “liberal” versus “not liberal” by combining conservative, very conservative, neither liberal nor conservative, and apolitical into the “not liberal” category due to small sample sizes for each level. The significance of political affiliation in explaining variance in criterion variables tested in this study is striking.

The association of political affiliation with health care professional student attitudes in this study is a challenging finding. Health care professional schools cannot and should not make acceptance into health care professional training subject to political affiliation. However, negative attitudes toward SGM patients should not be tolerated. This finding suggests that solutions are needed to bridge polarized social attitudes when it comes to patient care. Health care is a helping profession with a guiding value to “do no harm.” While social and political attitudes may vary widely among health care professionals and students, the principles of patient autonomy, medical and research beneficence, and justice can serve as an ethical framework for bridging sociopolitical divides in order to optimize the health and wellness of patients from diverse lived experiences. Future studies that examine ways to bridge political and social differences through exploration of shared professional values are needed.

The fact that association with friends and family who identify as LGBTQ explained greater self-reported knowledge and more affirming attitudes and beliefs toward SGM patients suggests a possible way forward for future education and training. Specifically, educational interventions should consider student dialogue with SGM community members, faculty, and peers as one way to increase student’s sense of knowledge and to foster more affirming attitudes and beliefs about their SGM patients.

The association of strong spirituality with more affirming clinical preparedness and behaviors is a novel finding and contrary to past research.[33] In fact, this is the first known study to report the association of strong spirituality with greater self-reported clinical preparedness and more affirming clinical behaviors for SGM patients. It is important to interpret this finding with caution for several reasons: First, there was an interaction between spirituality and number of training hours on self-reported clinical behaviors. Second, definitions of spirituality vary, making it a complex construct to interpret. Third, social desirability bias may have played a role in self-report scores. It is important to note that greater spirituality did not equate to greater religiosity or vice versa: These variables were negatively associated. Further exploration of the relationship between health care providers’ spirituality and attitudes toward SGM people is warranted.

There were several key limitations in this study: limitations of one of the instruments, the small sample size, and the non-representative nature of the sample. First, the ATLPS was found to have significant limitations. Several items on the ATLPS warrant serious examination. According to Wilson et al.[33] items 2, 3, 5, 7, 8, and 9 should be reverse coded: Given these instructions “Healthcare professionals in private practice have a responsibility to treat LGBT patients” and “LGBT patients should disclose their LGBT status to their healthcare providers” should be reverse coded. This means that strong agreement with these items would create a lower score for the overall scale, indicative of less affirming attitudes. The

face validity of assuming health care professionals do not have a responsibility to treat LGBT patients is highly problematic. Respondents could also have a variety of reasons for agreeing or disagreeing with the statement that patients should disclose their SGM status to their health care providers—thus, this item lacks precision. Sanchez et al.[38] (from which Wilson et al.'s scale is adapted) are silent on the specific items that should be reverse coded, simply indicating that items should be coded to yield high scores aligned with more affirming SGM attitudes. In sum, two of the eleven items of the ATPLS appear highly problematic. Fortunately, another subscale (Attitudinal Awareness, LGBT-DOCSS) also measured attitudes and has greater psychometric rigor than the ATLPS.

Another limitation of this study is the small, convenience sample derived from one academic institution,[33] limiting generalizability. The voluntary, opt-in recruitment approach may have resulted in respondents who were more likely to be interested in SGM health generally. Furthermore, the study was cross-sectional; therefore, results are only a snapshot in time and may not represent evolving student-reported knowledge, attitudes, clinical preparedness, beliefs, and behaviors over time. This sample also lacks representativeness in that it was overwhelmingly liberal. Future studies should consider oversampling conservative, male, non-white, and non-Christian health care professional students to allow for subgroup analyses of political affiliation, sex-assigned-at-birth, race, and religion. However, while the sample size was small, findings were statistically significant—which means results are actually stronger than in a larger (powered) sample.[43] So while the findings cannot be assumed generalizable, the findings should be interpreted as valid for the sample studied.

Finally, it is important to emphasize the exploratory nature of the study. While constructs were drawn from the literature, there was little prior research on which to test predetermined models for their predictive value.

Conclusions

Additional research studies in diverse settings with diverse samples are needed to confirm results reported from this study. Researchers can build on the present study by improving the psychometric rigor and availability of scales that measure health professional student clinical preparedness and behaviors. Refinement or replacement of the ATLPS as a gauge of health care professional attitudes about SGM health and health care is of particular importance given problematic face validity of several items. As theory and research on SGM clinical preparedness grows, confirmatory studies using more sophisticated modeling techniques—such as hierarchical modeling of theory-driven variables and mixed effects models are warranted. Additional approaches to measure implicit bias and longitudinal clinical practices of student learners are also needed. Ultimately, the field will benefit from assessing clinical competence through objective instruments, not simply self-reported measures. In tandem, innovative educational approaches are needed to ensure that affirming care is provided to SGM patients regardless of the sociopolitical background of the provider.

Abbreviations

ATLPS: Attitudes Toward LGBT People Scale

GAPS: Gay Affirming Practice Scale

LGBT-DOCSS: The lesbian, gay, bisexual, and transgender development of clinical skills scale

LGBTQI: Lesbian, gay, bisexual, transgender, queer, and intersex

SGM: Sexual and gender minority

Declarations

Ethics approval and consent to participate

This study was determined to be exempt from full IRB review by the George Washington University IRB (#180842). This study was a secondary analysis of data collected for another purpose. The full dissertation is available on Health Sciences Research Commons at https://hsrc.himmelfarb.gwu.edu/smhs_crl_dissertations/1/.

Consent for publication

The results reported in this article were reported in a substantially different form as part of a mixed methods dissertation published in Health Sciences Research Commons available at https://hsrc.himmelfarb.gwu.edu/smhs_crl_dissertations/1/. The copyright was retained by the author who consents to publication in this journal under the open access option. Results were also reported in a poster entitled “Getting sexual and gender minority health ‘into the brick and mortar’: Results from a mixed methods implementation study” for the Academy Health 12th Annual Conference on the Science of Dissemination and Implementation in Arlington, VA on December 5, 2019.

Availability of data and materials

Data is available upon request to the corresponding author.

Competing interests

The authors declare no competing interests

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Authors’ contribution

MPC conceptualized the study, collected and analyzed data, wrote the manuscript, and approved the final submission. JP reviewed the manuscript, provided feedback, and approved the final version.

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Tables

Table 1. Sample Characteristics (n=48)

Variable	Level	Statistic
Role, n (%)	Medical student (preclinical)	7 (14.6)
	Medical student (clinical)	25 (52.1)
	Other health graduate student	16 (33.3)
Age, M (SD)		26 (4.1)
Race+, n (%)	Asian	13 (27.1)
	Black	1 (2.1)
	Hispanic	4 (8.3)
	White	31 (64.6)
	Other	1 (2.1)
	System missing or Refused	1 (2.1)
Sex-assigned-at-birth, n (%)	Female	33 (68.8)
	Male	15 (31.3)
Gender identity	Female	33 (68.8)
	Male	15 (31.3)
	Transgender/ Genderqueer	0 (0)
Sexual orientation, n (%)	Straight	32 (66.7)
	Bisexual	6 (12.5)
	Lesbian or gay	8 (16.7)
	Other (e.g. asexual, queer, pansexual)	2 (4.2)
SGM affiliation	Self-identify as SGM	14 (29.2)
	Family member who is SGM	6 (12.5)
	Friend who is SGM	22 (45.8)
	Acquaintance who is SGM	6 (12.5)
	Do not know anyone SGM	0 (0)
Political affiliation, n (%)	Very liberal	21 (43.8)
	Liberal	22 (45.8)
	Neither liberal or conservative	0 (0)
	Somewhat conservative	4 (8.3)
	Very conservative	1 (2.1)

	Apolitical	0 (0)
Religion, n (%)	Agnostic	11 (22.9)
	Atheist	5 (10.4)
	Christian: Catholic	11 (22.9)
	Christian: Protestant	8 (16.7)
	Hindu	3 (6.3)
	Jewish	6 (12.5)
	Muslim	1 (2.1)
	Other	5 (12.5)
	Prefer not to answer	1 (2.1)
	System missing	5 (10.4)
Spirituality, n (%)	Not at all spiritual	6 (12.5)
	Slightly spiritual	15 (31.3)
	Somewhat spiritual	20 (41.7)
	Very spiritual	7 (14.6)
Religiosity, n (%)	Not at all religious	16 (33.3.)
	Slightly religious	16 (33.3)
	Somewhat religious	12 (25.0)
	Very religious	4 (8.3)

+Categories were not mutually exclusive

Table 2. Model Comparisons: LGBT-DOCSS Basic Knowledge (n=48)

	Individual Predictors						Model Statistics					
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*
Full Model : 8 IV's							0.451	0.204	8	39	1.247	0.299
Sexual orientation (0=LGB, 1=Straight)	0.791	0.817	0.164	0.968	0.339	0.019						
Sex-assigned-at-birth (0=F, 1=M)	0.539	0.801	0.110	0.673	0.505	0.009						
Political affiliation (0=Liberal, 1=Not liberal)	-0.658	1.152	-0.088	-0.571	0.571	0.007						
Religiosity (0=Not religious, 1=Religious)	-1.441	0.806	-0.298	-1.788	0.082	0.065¥						
Spirituality (0=Not spiritual, 1=Spiritual)	0.147	0.766	0.032	0.192	0.849	0.001						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-1.965	1.154	-0.285	-1.703	0.097	0.059¥						
Number of patients (continuous)	-0.020	0.018	-0.201	-1.150	0.257	0.027¥						
Number of SGM training hours (continuous)	0.011	0.011	0.161	-1.150	0.359	0.018						
Reduced Model : 3 IV's							0.402	0.161	3	44	2.822	0.050*
Religiosity (0=Not religious, 1=Religious)	-1.393	0.669	-0.289	-2.082	0.043*	0.083¥						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-1.872	0.973	-0.272	-1.923	0.061	0.071¥						
Number of patients (continuous)	-0.011	0.014	-0.106	-0.748	0.458	0.011						

* indicates *p<.05;* ¥ indicates >2% unique variance explained

Table 3. Model Comparisons: LGBT-DOCSS Attitudinal Awareness (n=48)

	Individual Predictors						Model Statistics					
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*
Full Model : 8 IV's							0.725	0.526	8	39	5.404	<0.001**
Sexual orientation (0=LGB, 1=Straight)	-1.043	1.411	-0.097	-0.739	0.464	0.007						
Sex-assigned-at-birth (0=F, 1=M)	-0.187	1.383	-0.017	-0.135	0.893	0.000						
Political affiliation (0=Liberal, 1=Not liberal)	-10.845	1.990	-0.650	-5.450	<0.001**	0.361¥						
Religiosity (0=Not religious, 1=Religious)	-0.437	1.392	-0.040	-0.314	0.755	0.001						
Spirituality (0=Not spiritual, 1=Spiritual)	-0.233	1.322	-0.023	-0.176	0.861	<0.001						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-1.076	1.993	-0.070	-0.540	0.592	0.004						
Number of patients (continuous)	-0.025	0.030	-0.110	-0.814	0.421	0.008						
Number of SGM training hours (continuous)	-0.020	0.020	-0.136	-1.012	0.318	0.012						
Reduced Model : 1 IV							0.682	0.465	1	46	40.007	<0.001**
Political affiliation (0=Liberal, 1=Not liberal)	-11.372	1.798	-0.682	-6.325	<0.001**	0.465¥						

* indicates $p<.05$; ** indicates $p<.001$; ¥ indicates >2% unique variance explained

Table 4. Model Comparisons: LGBT-DOCSS Clinical Preparedness (n=48)

	Individual Predictors						Model Statistics					
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*
Full Model : 8 IV's							0.354	0.125	8	39	0.698	0.691
Sexual orientation (0=LGB, 1=Straight)	-0.122	1.996	-0.011	-0.061	0.952	0.000						
Sex-assigned-at-birth (0=F, 1=M)	-0.845	1.956	-0.074	-0.432	0.668	0.004						
Political affiliation (0=Liberal, 1=Not liberal)	-1.424	2.816	-0.082	-0.506	0.616	0.006						
Religiosity (0=Not religious, 1=Religious)	-2.351	1.970	-0.209	-1.194	0.240	0.032¥						
Spirituality (0=Not spiritual, 1=Spiritual)	1.944	1.871	0.182	1.039	0.305	0.024¥						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-0.719	2.820	-0.045	-0.255	0.800	0.001						
Number of patients (continuous)	-0.012	0.043	-0.050	-0.274	0.785	0.002						
Number of SGM training hours (continuous)	0.036	0.028	0.237	1.303	0.200	0.038¥						
Reduced Model : 3 IV's							0.328	0.108	3	44	1.768	0.167
Religiosity (0=Not religious, 1=Religious)	-2.486	1.792	-0.221	-1.388	0.172	0.039¥						
Spirituality (0=Not spiritual, 1=Spiritual)	2.040	1.720	0.191	1.186	0.242	0.029¥						
Number of SGM training hours (continuous)	0.035	0.022	0.226	1.566	0.125	0.050¥						

* indicates *p<.05;* ¥ indicates >2% unique variance explained

Table 5. Model Comparisons: ATLPS Attitudes (n=48)

	Individual Predictors						Model Statistics						
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*	
Full Model : 8 IV's							0.618	0.381	8	39	3.005	0.010*	
Sexual orientation (0=LGB, 1=Straight)	-3.733	1.444	-0.386	-2.586	0.014*	0.106¥							
Sex-assigned-at-birth (0=F, 1=M)	-3.486	1.415	-0.354	-2.463	0.018*	0.096¥							
Political affiliation (0=Liberal, 1=Not liberal)	-1.653	2.037	-0.111	-0.812	0.422	0.010							
Religiosity (0=Not religious, 1=Religious)	-1.804	1.425	-0.186	-1.266	0.213	0.025¥							
Spirituality (0=Not spiritual, 1=Spiritual)	-1.059	1.353	-0.115	-0.783	0.439	0.010							
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-2.768	2.040	-0.201	-1.357	0.183	0.029¥							
Number of patients (continuous)	-0.022	0.031	-0.110	-0.713	0.480	0.008							
Number of SGM training hours (continuous)	-0.007	0.020	-0.054	-0.356	0.724	0.002							
Reduced Model : 4 IV's							0.581	0.337	4	43	5.468		0.001*
Sexual orientation (0=LGB, 1=Straight)	-3.760	1.410	-0.388	-2.666	0.011*	0.110¥							
Sex-assigned-at-birth (0=F, 1=M)	-3.425	1.388	-0.348	-2.468	0.018*	0.094¥							
Religiosity (0=Not religious, 1=Religious)	-2.601	1.241	-0.269	-2.095	0.042*	0.068¥							
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-2.429	1.857	-0.176	-1.308	0.198	0.026¥							

* indicates *p*<.05; ¥ indicates >2% unique variance explained

Table 6. Model Comparisons: GAPS Beliefs (n=48)

	Individual Predictors						Model Statistics					
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*
Full Model : 8 IV's							0.706	0.498	8	39	4.839	<0.001**
Sexual orientation (0=LGB, 1=Straight)	-1.514	2.161	-0.094	-0.700	0.488	0.006						
Sex-assigned-at-birth (0=F, 1=M)	-1.204	2.118	-0.074	-0.568	0.573	0.004						
Political affiliation (0=Liberal, 1=Not liberal)	-12.058	3.049	-0.485	-3.954	<0.001**	0.201¥						
Religiosity (0=Not religious, 1=Religious)	-1.595	2.133	-0.099	-0.747	0.459	0.007						
Spirituality (0=Not spiritual, 1=Spiritual)	0.418	2.026	0.027	0.206	0.838	0.001						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-7.433	3.054	-0.324	-2.434	0.020*	0.076¥						
Number of patients (continuous)	<0.001	0.047	0.000	0.000	1.000	<0.001						
Number of SGM training hours (continuous)	-0.007	0.030	-0.034	-0.247	0.806	0.001						
Reduced Model : 2 IV's							0.693	0.480			20.786	<0.001**
Political affiliation (0=Liberal, 1=Not liberal)	-12.561	2.784	-0.506	-4.512	<0.001**	0.235¥						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-8.067	2.571	-0.352	-3.137	0.003*	0.114¥						

* indicates *p*<.05; ** indicates *p*<.001; ¥ indicates >2% unique variance explained

Table 7. Model Comparisons: GAPS Behaviors (n=48)

	Individual Predictors						Model Statistics					
	b	SE b	B	*t*	*p*	sr^2	R	R^2	dfreg	dfres	*F*	*p*
Full Model : 8 IV's							0.73	0.533	8	39	5.571	<0.001**
Sexual orientation (0=LGB, 1=Straight)	-4.789	3.249	-0.191	-1.474	0.149	0.026						
Sex-assigned-at-birth (0=F, 1=M)	-0.106	3.185	-0.004	-0.033	0.974	0.000						
Political affiliation (0=Liberal, 1=Not liberal)	-14.587	4.584	-0.377	-3.182	0.003*	0.121¥						
Religiosity (0=Not religious, 1=Religious)	-3.534	3.207	-0.141	-1.102	0.277	0.015						
Spirituality (0=Not spiritual, 1=Spiritual)	8.096	3.046	0.34	2.658	0.011*	0.085¥						
SGM affiliation (0=SGM affiliation, 1=No affiliation)	-4.474	4.591	-0.125	-0.975	0.336	0.011						
Number of patients (continuous)	0.005	0.070	0.009	0.069	0.945	0.000						
Number of SGM training hours (continuous)	0.120	0.045	0.350	2.633	0.012*	0.083¥						
Reduced Model : 4 IV's							0.712	0.507			11.036	<0.001**
Sexual orientation (0=LGB, 1=Straight)	-6.180	2.704	-0.246	-2.286	0.027*	0.060¥						
Political affiliation (0=Liberal, 1=Not liberal)	-16.603	4.227	-0.429	-3.928	<0.001**	0.177¥						
Spirituality (0=Not spiritual, 1=Spiritual)	7.238	2.619	0.304	2.763	0.008*	0.088¥						
Number of SGM training hours (continuous)	0.130	0.037	0.381	3.510	0.001*	0.141¥						

* indicates *p<.05;* ¥ indicates >2% unique variance explained

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