RESEARCH ARTICLE

Standardized Patient Modules in Medical School with the Lesbian, Gay, Bisexual & Transgender Patient in Mind

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Objective: This study was designed with the intent to serve as an exploratory pilot and first step toward integrating Lesbian, Gay, Bisexual, and Transgender (LGBT) clinical education into the curriculum of Osteopathic and southeastern medical schools.

Methods: Using a quasi-experimental study, second year Osteopathic medical students were studied for their clinical knowledge of LGBT health, attitudes toward LGBT patients, and use of sensitive language while obtaining sexual history from Standardized Patients (SPs) before and after exposure to a didactic module.

Results: We found attitudes of LGBT health to be unaffected by the intervention (P=0.63) while clinical knowledge improved (P=0.11). Sensitive language used by students during sexual history gathering was similar between groups with no correlation with student LGBT health/knowledge scores. The results support previous literature suggesting a change in medical school curriculum can increase student awareness of LGBT health needs. Attitude scores toward LGBT patients of the studied students were slightly lower than those of six other osteopathic schools, and within the constraints of this study it appears a single didactic module was insufficient in changing attitude scores.

Conclusion: With research being limited on this topic, our study provides guidance and methods for implementing LGBT care training into Osteopathic medical education. We hope our baseline data in conjunction with other studies will provoke further research into the most effective means for implementation. Further research should include multi-modal didactics including small group sessions, lectures, and clinical exposure to LGBT individual(s), as has been suggested and implemented in few other studies.

INTRODUCTION

Disparities in health care needs and access exist between cis-gendered heterosexual populations and the Lesbian, Gay, Bisexual, and Transgender (LGBT) community.[1] As described in Healthy People 2020, "LGBT individuals face health disparities linked to societal stigma, discrimination, and denial of their civil and human rights."[2] Evidence suggests people who identify as LGBT are more likely to suffer from psychiatric disorders,[3, 4] substance abuse,[5, 6, 7, 8, 9] victimization,[10] homelessness,[11, 12, 13] sexually transmitted diseases,[14, 15] obesity,[16] and commit suicide.[17, 18] Literature also supports the notion that despite heightened needs LGBT patients have for medical care, they are often less likely to utilize health care services to avoid the perceived, and often real, discrimination in the quality of services provided by healthcare providers.[19, 20, 21, 22]

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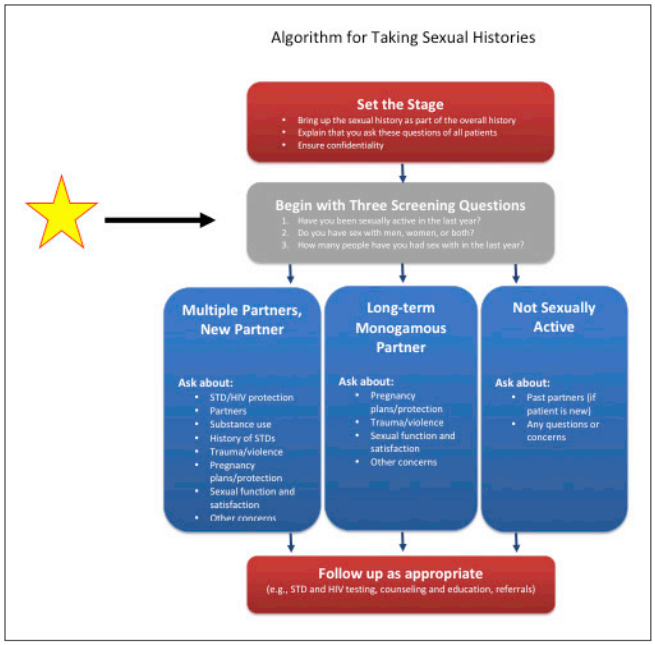
Initiatives to decrease health disparities of LGBT patient populations in the United States, such as Healthy People 2020 and the 2011 Institute of Medicine (IOM) report, have called for an expansion of applicable research on LGBT populations.[23, 24] Among the priority research topics suggested by the IOM, intervention research is specifically mentioned.[21] Intervention of medical education curriculum could be of benefit since Allopathic schools have an average of only 4-6 hours spent on topics concerning LGBT health and many schools lack a multi-cultural approach to case studies with regard to sexual orientation and gender identity.[1, 25, 26] In 2014, the Association of American Medical Colleges (AAMC) released a 280 page document for medical educators regarding incorporating LGBT sensitivity into medical curriculum. Within the document is an outline of schools who have implemented changes including six Allopathic medical schools that have created LGBT diversity committees, nine Allopathic schools in the United States that currently offer an elective on LGBT Health, and eleven

Allopathic schools have adapted LGBT health topics into their medical curriculums.[1] None of these schools are in the Southeast United States. Additionally, a 2011 study found that Osteopathic medical schools (N=19) spend zero clinical education hours on LGBT health topics.[24] Standardized Patient (SP) encounters within the medical curriculum rarely include LGBT patients. Systematic evaluations of schools with LGBT health studies incorporated into their SP education are limited to a few case studies; though there has been an overall positive feedback from students involved in said studies.[27, 28, 29]

Since current data suggests that LGBT health and sensitive sexual history training is lacking in southeastern and Osteopathic medical school curriculums, the present study was designed to assess the outcomes of a didactic module. This study sought to determine if second year Osteopathic medical students would change in their clinical knowledge of LGBT health, attitudes toward LGBT patients, and use of sensitive language while obtaining sexual history from SPs after exposure to said module. The investigators hypothesized that the didactic module would increase knowledge, attitudes, and sensitive language of the students based on results from previous studies showing increased knowledge and attitudes following multi-modal didactics or increased exposure to LGBT patients. [30, 31] This study was designed to serve as a pilot with a quasi-experimental approach in an attempt to guide methods for implementing LGBT care training into Osteopathic medical education. Given the limited research on this topic, this study will provide another contribution to the current literature in determining which methods are effective or ineffective in changing medical student knowledge, attitudes, and sensitivity towards LGBT patient care.



National Association of Community Health Centers and National LGBT Health Education Center Program of the Fenway Institute. Taking routine histories of sexual health: a system-wide approach for health centers.

METHODS

All second year medical students completing the required Reproductive and Endocrine System Curriculum Block in Fall of 2016 at the Edward Via College of Osteopathic Medicine Carolinas (N=160) and Virginia campuses (N=189) (VCOM-CC and VCOM-VA) were invited to participate in the study via an e-mail. No students were excluded from participation in an effort to limit selection bias within the study. The demographics of the second year VCOM students of each campus were not specifically collected, however the general campus populations had similar ages (22-28 years VCOM-CC; 22-39 VCOM-VA), sex (M:F 1:0.8 VCOM-CC; M:F 0.8:1 VCOM-VA), and ethnicity (15-19% Asian, 64-67% Caucasian, 6-9% African American, 4-9% Hispanic, and 3-4% other). Of note, health professional attitudes have not been shown to differ between age, sex, ethnicity, orientation, or socioeconomic status (solely high religiosity and lower self-reported familiarity with religious perspectives on sex).[32]

During week one of the block, we assessed baseline medical attitudes towards LGBT patients via a validated survey titled "Attitudes Toward LGBT Patients Scale," which was designed to assess third and fourth year medical students with varying degrees of exposure to LGBT patients.[31] Baseline clinical knowledge was measured with permission from another validated survey titled "Medical Student Knowledge of LGBT Health Concerns" found in the same study mentioned above.[31]

During the fourth week of the Reproductive block, VCOM-CC students who completed the pretest surveys (N=51) were e-mailed a PowerPoint self-directed module titled, "The Sexual History Examination and the LGBT Patient." The module contains a series of cited educational slides, multiple choice questions, and a video on sensitive sexual history.[1, 33, 34, 35] The learning objectives of the module were presented as follows:

1. Define the terms sex, gender, gender expression, gender identity, sexual orientation, lesbian, gay, bisexual, and transgender
2. Define the health care barriers specific to LGBT populations
3. Define health concerns that are more prevalent in LGBT populations
4. Address the importance of communication skills in obtaining accurate sexual histories in patients such as non-judgmental neutral language and reminding the patient of confidentiality
5. Address the importance of obtaining accurate sexual history for developing correct diagnosis and screening recommendations.

The PowerPoint module served as the study intervention and was not provided to the students who completed the pretest survey at VCOM-VA (N=18) (the control group) until the conclusion of the study.

The PowerPoint Learning Module for the Sexual History Examination and the LGBT patient can be viewed at

http://bit.ly/SexualHistoryLGBT.

During the eighth week of the Reproductive block, students participate in SP sessions in which actors and actresses play the roles of patients with medical ailments and evaluate students on their history and physical exam skills. The SP clinical scenarios unfortunately did not involve an LGBT patient due to the curriculum being previously established. However, SP actors from VCOM-CC and VCOM-VA respectively evaluated the VCOM-CC and VCOM-VA students on the sensitivity of their sexual-history gathering. SP actors were provided with the didactic module and given an orientation/training on sensitive sexual history exams with the LGBT patient in mind. SPs were then briefed on the language indicators used for sensitivity before grading students. The SPs evaluated medical students based on meeting 0, 1, 2, or 3 of the following criteria (developed from previous literature):[33, 24]

Was gender-neutral language used throughout the SP encounter?

Did the student allow the patient to self-identify their sexual orientation?

If the SP answers "yes" to being sexually active, did the student ask, "do you have sex with men, women, or both?"

During the tenth week of the Reproductive block, we assessed post-intervention medical knowledge of LGBT populations and students' attitudes towards treating LGBT patients by issuing post-test survey questions to participating second year students at both VCOM-CC and VCOM-VA. These questions were the same as the pre-test questions sent out at the beginning of the study and distributed in the same manner. Results from the pre- and post-surveys were matched with individual SP performance evaluations and were used to compare the results between campuses as a whole and between individual subjects.

Chi-square analyses were used to evaluate for statistically significant differences in the quantitative attitudes and knowledge surveys (pre and post-) between the exposure group (VCOM-CC) and the control group (VCOM-VA). An alpha error level of significance was set at 5% (0.05). A correlation coefficient was calculated with matched individuals to establish any relationship between post-exposure attitudes score and SP sensitive language measures as well as knowledge score vs. language measures.

RESULTS

Participation

160 VCOM-CC students and 189 VCOM-VA students were invited to participate in an attitudes and knowledge surveys (pre- and post-). Of the VCOM-CC student body, 36 completed the attitudes surveys and 37 completed the knowledge surveys. Of the VCOM-VA student body, 12 completed the attitudes surveys and 8 completed the knowledge surveys. There was a total dropout of 42% between the two campuses. Since the investigators only evaluated SP data on subjects consenting via post-test surveys, there was a total sample size of N=51 for the exposure group and N=18 for the control group.

Attitudes

Overall, baseline LGBT attitudes scores were similar between both the Carolinas and Virginia campuses (Carolinas mean +/- se of 75% +/- 1%; and Virginia 63% +/- 2%). Attitude scores did not significantly change with the intervention (Carolinas 76% +/- 1%), nor in the control group (Virginia 74% +/- 3%; $\chi^2 = 0.23$, P = 0.63, DF = 1).

Sensitive Language

Use of the 3 "sensitive language" measures during SP encounters were similar between both the Carolinas and Virginia campuses (Carolinas 2.2 +/- 0.9; and Virginia 2.7 +/- 0.1). Additionally, use of sensitive language was not significantly correlated with a higher attitudes (Carolinas R = 0.16, Virginia R = 0.27) or knowledge score (Carolinas R = 0.39, Virginia R = -0.31) on the post-test of individual students on either campus.

Health Knowledge

Carolinas students' average post-test knowledge scores (74% +/- 3%) exceeded average pretest scores (56% +/- 2%), while the average pre- and post- test scores in Virginia remained at 7.8 +/- 0.4 ($\chi 2 = 2.61$, P = 0.11, DF = 1). Although it was not of statistical significance, these results show an increase in knowledge scores between the pre- and post- tests in the exposure group, suggesting that the module intervention was successful in increasing knowledge of LGBT health in the short term (Figure 1).

DISCUSSION

In our research, we used a voluntary educational intervention to improve the care of LGBT patients. Our study showed a modest increase in short-term gain of clinical knowledge towards the LGBT patient population, which is consistent with previous studies that have used two hour didactic methodology (although these studies included small group discussions).[34, 36] Unlike our study, however, one of the studies also demonstrated an increase in comfort with a Lesbian SP encounter.[34] Didactic methodology has also been shown to increase comfort and sensitive language in SP encounters with LGBT patients.[34] Our particular study failed to show that a single learning module significantly changed the sensitivity and attitudes of student doctors at VCOM towards LGBT populations. We conclude that these results could be due to VCOM-VA students having a higher baseline attitudes scores than reflected in their test results, or perhaps students attained the material in the survey questions from their coursework or other outside sources. However, students exposed to the didactic module did have an apparent increase in short-term LGBT clinical knowledge. Therefore, within the constraints of the study, our results support that a change in medical school curriculum is important in increasing awareness of future doctors to LGBT health needs.

Six other Osteopathic medical schools averaged ~83% on the same survey of attitudes towards treating LGBT patients in a recent assessment.[37] The present study results show that the two VCOM campuses have similar, slightly lower, results on this survey (see results), indicating a need for curricular change in Osteopathic schools. However, this conclusion is difficult to make when considering the sample size in mentioned study (N=972)[35] versus the sample size in our study (VCOM-CC: N=51; VCOM-VA: N=18).

Despite our results, there were limitations in the present study. Firstly, SP encounter evaluated in the study did not include an

LGBT patient case and was only evaluated using sensitive language indicators. Secondly, self-selection bias could have been present given the high drop-out rate and the possibility that the students who chose to complete both surveys may have had better attitudes towards LGBT patients than their colleagues who opted out of the study. Finally, the low statistical power in our study (from low volunteer and high dropout rates) make the results more difficult to interpret.

We suggest further research should include multi-modal didactics including a combination of small group sessions, lectures, and clinical exposure to LGBT individual(s), which has been suggested and implemented in few other studies.[30, 34, 35] It would be beneficial for similar future studies to collect subject demographic data concerning religiosity and self-reported familiarity with religious perspectives on sex, as these have been shown to correlate with lower attitudes towards LGBT patients.[32] The investigators suspect this religiosity phenomenon may have played a role in the low participation in the present study, a topic which may be worthy of future studies. The lack of student participation in our study, despite a large number of invited participants, stresses a need for future studies to include incentives for subject participation to increase sample size and decreases self-selection bias (e.g., mandatory attendance or school credit). This has shown to be effective in a more recent study.[38] Increasing student involvement may also be a factor in participation rates, as two more recent student-designed programs had more participation than our study.[38, 39] We suggest a next step to include following participants in longitudinal studies to evaluate physicians as they enter residency and practice to examine long-term changes in comfort/knowledge with LGBT patients. Finally, with enough pilot studies, a meta-analysis would be beneficial to determine which educational intervention(s) provide the best long-term results.

CONCLUSIONS

Our study was created with the need and importance of educating future Osteopathic physicians with the LGBT patient in mind. We view our work as a contribution to the ongoing conversation about the need for integrating LGBT health topics into the medical curriculums of Osteopathic medical schools (particularly those in the Southeast United States). We hope our baseline data in conjunction with other studies will provoke further research into the most effective means to train future physicians to provide more knowledgeable and sensitive care to the LGBT population.

AUTHOR DISCLOSURES:
No relevant financial affiliations.

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