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Analysis of Learning Outcomes in LGBTQ+ Medical School Curriculum

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Introduction

Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) youth are at increased risk for negative health outcomes such as sexually transmitted diseases, depression, substance abuse, and anorexia/bulimia, when compared to their heterosexual peers.¹ In addition, LGBTQ+ youth have increased barriers to healthcare as compared to heterosexual youth, varying from lack of insurance to lack of trust of the provider.²

From the provider perspective, one New York study identified that 51% of physicians reported that they did not feel prepared to deal with issues of sexual orientation with adolescent patients, and 75% thought that adolescent sexual orientation should be addressed more in physician training.³ According to a survey conducted at the University of Vermont College of Medicine, 89.9% of the Class of 2016 and 85.4% of the Class of 2015 did not feel informed about resources for LGBTQ+ patients.⁴

The purpose of this public health project is to assess the impact of the current curriculum at University of Vermont College of Medicine on students' knowledge of issues relevant to LGBTQ+ youth and comfort interacting with LGBTQ+ youth in a clinical setting. A literature review and input from Outright VT! were the basis of a survey that accompanied three standardized patient encounters.



Methods

Survey:

Two anonymous surveys were distributed to 104 University of Vermont College of Medicine 2nd year medical students before and after 3 clinical skills encounters with standardized patients. Surveys were voluntary and made available online.

The survey contained 3 demographic and 30 general questions that assessed knowledge, attitudes and skills of UVM COM students pertaining to youth who identify as LGBTQ+.

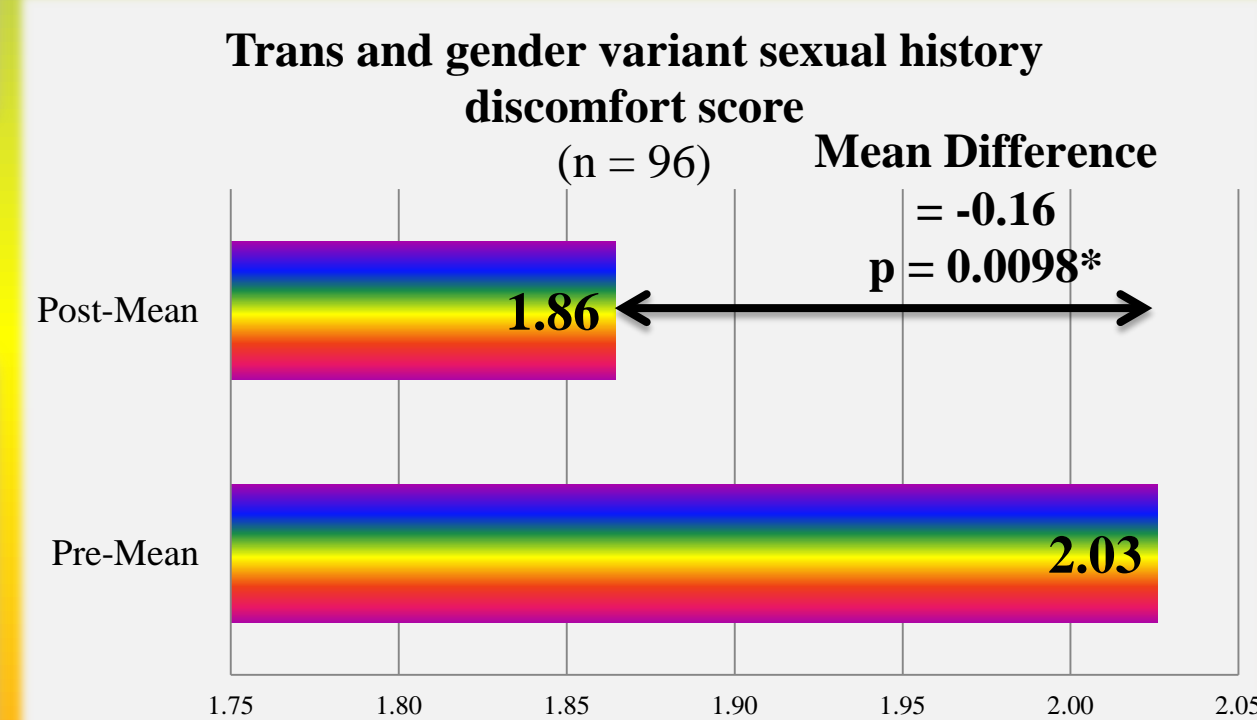
True or False Knowledge statements assessed student understanding of risk factors, screening standards, stereotypes and misconceptions of the LGBTQ+ community. Attitudes and Skills statements were based on a 4-point Likert scale.

Encounter:

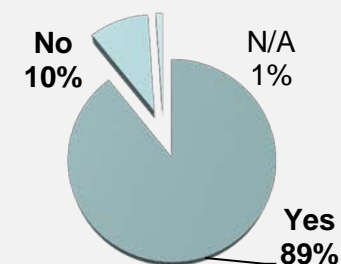
After an introductory lecture, students participated in 3 patient encounters with representative LGBTQ+ standardized patients. Students took a patient centered sexual history and collectively generated a differential diagnosis based on the patient's chief complaint.

Analysis

Data analysis and management was conducted in JMP/SAS (SAS Institute, Cary NC). Descriptive frequency distributions and means were generated. Comparison of pre curriculum exposure versus post curriculum exposure responses were conducted with paired t-tests and McNemar's test for paired samples. The survey was offered to 104 medical students. The pre survey response rate was 100%. The follow-up rate was 92.3% (n = 96). Those who were lost to follow-up were compared to the analysis sample with t-tests and Fisher's exact tests. There were no significant differences between survey participants and those lost to follow-up.

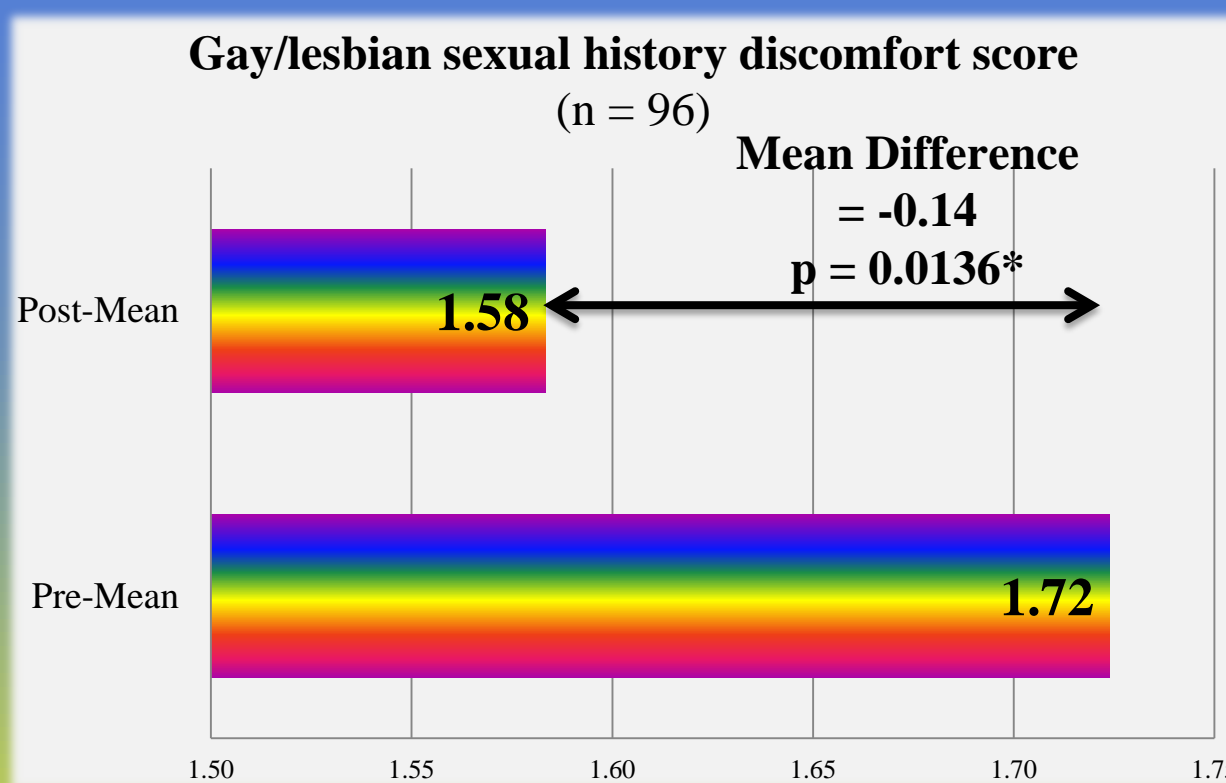


Did you affirm the confidentiality of the encounter, assuring patient that information discussed will not leave the room?



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KNOWLEDGE QUESTIONS	n	%	n	%	p-value
Correct answer [TRUE] to "Tobacco use among lesbian, gay and bisexual youth is higher than heterosexual youth."	49	51.0	84	87.5	<.0001
Correct answer [FALSE] to "Among males 14 years of age or older, less than half the HIV infections are from male-to-male sexual contact."	23	24.0	53	55.2	<.0001
Correct answer [FALSE] to "Men who have sex with men do not need to be vaccinated for HPV."	89	92.7	94	97.9	0.0588
Correct answer [FALSE] to "Lesbians and bisexual female youth have a significantly lower prevalence of pregnancy than heterosexual youth."	47	49.0	58	60.4	0.1724
Correct answer [FALSE] to "There is no difference between sex and gender."	92	95.8	95	99.0	0.1797
Correct answer [FALSE] to "Lesbians are more physically active than heterosexual women."	77	80.2	78	81.3	0.8185
Correct answer [FALSE] to "When compared to heterosexual youth, lesbian, gay, bisexual and transgender youth experience less school related violence."	93	96.9	95	99.0	0.3173



Results

Fifty (52.1%) respondents were male, 46 (47.9%) were female; 38 respondents (39.6%) were 26-30 years old, 52 (54.2%) were younger than 26 and 6 (6.3%) were older than 30. All 96 (100%) respondents knew at least one person who identified as LGBTQ+, with most familiarity among gay and lesbian populations.

Out of a 4 point score with 4 being disapproval and 1 being approval, discomfort for exploring the following genre of topics with a patient decreased significantly: same sex practices by 0.06 (p-value < .05), gay or lesbian sexual history by 0.14 (p-value < .05), bisexual history by 0.16 (p < .05), and transgender and gender variant sexual history taking by 0.16 (p < .05).

In answering true or false questions that tested material covered in the medical school curriculum about LGBTQ+ issues, there was a 13% increase in knowledge scores (from 70% correct to 83%, p-value <0.01). Tobacco use among LGB youth being higher than heterosexual youth was answered correctly by 84 (87.5%) respondents after the curriculum, compared to 49 (51%) (p-value <0.01) before completing the curricula.

In addressing history taking skills important to the LGBTQ+ population⁶, 89% of respondents confirmed with the patient that the information would be kept confidential and 36% asked the patient to clarify unfamiliar terms (with 57% responding to this task as not applicable.)

Discussion

After a lecture series and patient encounter concerning the LGBTQ+ youth there was significant increase in knowledge concerning medical issues important to the LGBTQ+ youth. In addition, there was an increase in comfort with taking a sexual history regardless of the sexual preference or gender identity of the LGBTQ+ patient. During the patient encounter the majority of medical students assured the patient about confidentiality, an important practice emphasized by LGBTQ+ youth. After exposure to LGBTQ+ topics in the curriculum, medical student's attitudes towards sexual preference shifted with a small but significant decrease in disapproval of same sex attraction and behavior.

This project establishes a method in which to examine future curriculum change concerning topics on LGBTQ+ youth. Survey results suggest that the UVM curriculum has a modest but significant positive impact on attitudes, knowledge and skills needed to provide quality medical care to LGBTQ+ youth. A recent study indicates that medical schools devote little time to education on LGBTQ+ health⁷. The improvements seen in this study argue that teaching LGBTQ+ content in the curriculum is beneficial. In addition, given that students reported highest levels of discomfort in taking sexual histories from transgender and gender non-conforming patients, the authors recommend developing a standardized patient encounter that reflects these communities. In addition, it would be useful to re-survey this cohort after the completion of their first year of clinical rotations in order to assess the degree to which they retained the benefits of the pre-clinical curriculum on LGBTQ+ health.

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