PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Cross-sectional survey of education on LGBT content in medical schools in Japan
AUTHORS	Yoshida, Eriko; Matsushima, Masato; Okazaki, Fumiko

VERSION 1 – REVIEW

REVIEWER	Gibson, Alec University of Washington
REVIEW RETURNED	15-Nov-2021

GENERAL COMMENTS	This manuscript is insightful and offers valuable information about the LGBT content covered in Japanese medical schools. This topic is of interest to medical educators given the limited data in the current literature and has the potential to influence how LGBT topics are addressed in medical schools outside the US and Canada. It is evident from the authors' data that additional work is needed to increase Japanese medical students' exposure to LGBT content. As such it would be a welcome contribution to the literature. Below are suggested edits to the submitted manuscript: Methods section: Page 6, Line 137: The data analysis section should explicitly state which studies the US and Canadian data came from and include citations. Results section: Page 12, Line 214: The authors should state that they were "unable to statistically compare our data with Australia and New Zealand" since they do make a comparison to these countries. Discussion section: Page 14, Lines 236-237: How specifically does the methodology used by Yamazaki et al. differ from this study? Also, the response rate in this study is different than in the study by Yamazaki et al. which is worth noting. Page 15, Lines 274-275: It would be helpful to mention examples of opportunities that would provide faculty with skills to teach about LGBT issues. It would also be helpful to include strategies for increasing LGBT content in Japanese medical school curricula. What have schools in other countries done that could be implemented in Japan to address the gaps identified in this study (such as LGBTQ pathway and certificate programs, supplemental education online or in-person, or changes to existing curricula)? Limitations section:

	The authors should include more discussion of the age of studies used for US and Canadian data. These studies are now 10 years old and the changes that have likely occurred in US and Canadian medical schools should be addressed.

REVIEWER	Moll, Joel Virginia Commonwealth University, Emergency Medicine
REVIEW RETURNED	17-Nov-2021

GENERAL COMMENTS	Overall interesting and important study to improve healthcare for LGBT patients in Japan by assessing current state. A couple minor considerations: Line 66: suggest change inequalities to inequities. inequitable healthcare can lead to health disparities. Equal implies all treated same, whereas equitable takes in barriers, social determinants or health, etc as equal treatment does not imply adjustments for social determinants etc Line 67: any idea what percent of Japanese identify as LGBT? Due to societal lack of support may be difficult but if known estimate would be helpful for context. Line 112 (and number 5 above): does you institution require any ethical review (Institutional Review Board) prior to a study like this? If so please mention this was done Line 123: Consider listing any secondary outcomes Line 154: Did you do subgroup analysis of type of medical school to see if that influenced time spent? Table 1: Listed "disorders if sex development and intersex" - not clear if this is how LGBT is termed in Japan or the definition compared to US comparison category since this is your highest content being taught would suggest better defining for non Japanese reader Line 291: additional limitation as mentioned is US data is older, and during that time a significant change in LGBT acceptance in society underwent in US. You mentioned this elsewhere, but is a limitation to your conclusion comparing Japan and US/Canada data. Consider mentioning if known, the support of Japanese society for equitable healthcare for LGBT patients, or LGBT rights in general as a potential correlate. Also any known information if taught at another level of training? Post medical school specialty, or continuing education for physicians that is required. If so would help the argument that basic education needed in medical school since not done elsewhere.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Alec Gibson, University of Washington
Comments to the Author:
This manuscript is insightful and offers valuable information about the LGBT content covered in Japanese medical schools. This topic is of interest to medical educators given the limited data in the current literature and has the potential to influence how LGBT topics are addressed in medical schools outside the US and Canada. It is evident from the authors' data that additional work is needed to increase Japanese medical students' exposure to LGBT content. As such it would be a welcome

contribution to the literature. Below are suggested edits to the submitted manuscript:

Response:
Thank you for taking the time and effort to provide so many important insights.

#1 Methods section:
Page 6, Line 137: The data analysis section should explicitly state which studies the US and Canadian data came from and include citations.

Response:
We apologize that this citation was missing in the previous version of our manuscript. We have added the appropriate citation. (p.6, line 163)

#2 Results section:
Page 12, Line 214: The authors should state that they were “unable to statistically compare our data with Australia and New Zealand” since they do make a comparison to these countries.

Response:
Thank you for pointing out this mistake. We have addressed this comment by adding “statistically” as follows. (p.13, lines 242–244)

We were unable to statistically compare our data with Australia and New Zealand, because there was no information about how many schools there did not teach LGBT content. [15]

Because the median was not statistically tested between Japan and the U.S. and Canada, and the median was not shown in the Australian and New Zealand studies, the following text was added. (p13, line 248)

The study in Australia and New Zealand did not report the median number of hours.[15]

#3 Discussion section:
Page 14, Lines 236-237: How specifically does the methodology used by Yamazaki et al. differ from this study? Also, the response rate in this study is different than in the study by Yamazaki et al. which is worth noting.

Response:
Thank you for your constructive suggestion and for mentioning the strengths of our research. Following your suggestions, we added more details about the research methods used by Yamazaki et al. We also added a description of an important strength of our study, in which the response rate was higher than that of a previous study. (p.15, lines 273–280)

In Yamazaki et al.’s study, one faculty member was first selected from each of 80 medical schools based on a list of a medical education organization. Next, double postcards were sent to each of the 80 selected faculty members asking them to refer a key person who could provide accurate information about lectures on sexual and gender minorities (SGM) in their medical schools. Among 47 schools for which postcards were returned, 43 were considered eligible for the survey. Finally, the second questionnaire about lectures on SGM were sent, and 37 schools responded. Thus, the final response rate was 46.3% (37/80).[13] Accordingly, the current study has the strength of having a better response rate than that of Yamazaki et al.

#4 Page 15, Lines 274-275: It would be helpful to mention examples of opportunities that would provide faculty with skills to teach about LGBT issues. It would also be helpful to include strategies for increasing LGBT content in Japanese medical school curricula. What have schools in other countries done that could be implemented in Japan to address the gaps identified in this study (such as LGBTQ pathway and certificate programs, supplemental education online or in-person, or changes to existing curricula)?

Response:
Thank you very much for sharing these insights. We agree that it is better to discuss the kinds of initiatives that are needed in Japan more specifically. Thus, we added the following sentences in the revised Discussion. (pp.16–17, lines 330–347)

Yamazaki et al. recommended the following six steps to promote medical education on SGM: engaging appropriate stakeholders, developing a textbook or educational guide for SGM education, and developing a diverse curriculum team for each medical school, as well as conducting faculty development, curriculum development, and curriculum evaluation.[13] We believe that all of these steps are necessary in Japan. Our study highlighted the importance of the third step “diverse curriculum team for each medical school” and the fourth step “conducting faculty development”. In Japan, although workshops have/span> been held to devise and implement education about LGBT content in medical education courses, such meetings are not conducted on a continuous basis. Accessible online courses could potentially provide valuable opportunities for more educators in Japan to learn about teaching LGBT content, such as those offered by Stanford Medicine.[22] The current results also revealed that one school in Japan had made outstanding progress, spending 12 hours on LGBT education. It would be useful to share information about how this school started and evolved their teaching, so that schools who are not currently teaching LGBT content at all can start teaching it. There is also an urgent need in Japan to develop guidelines for medical education on LGBT content. In addition to education provided by each medical school, internet resources such as AAMC material can be used to provide opportunities for all medical students in Japan to learn LGBT content.[23]

22. Stanford Medicine. Teaching LGBTQ+ Health.
Available: https://mededucation.stanford.edu/courses/teaching-lgbtq-health/ [Accessed 22 Dec 2021]

23. Association of American Medical Colleges. AAMC videos and resources about LGBT health and health care.
Available: https://www.aamc.org/what-we-do/equity-diversity-inclusion/lgbt-health-resources/videos [Accessed 22 Dec 2021]

#5 Limitations section:
The authors should include more discussion of the age of studies used for US and Canadian data. These studies are now 10 years old and the changes that have likely occurred in US and Canadian medical schools should be addressed.

Response:
We agree with your comment. Accordingly, we have added a fourth limitation, as follows. (p.18, lines 377–383)

Fourth, the survey in the US and Canada used as a comparison were conducted in 2009–2010, [14] approximately nine years before the current study. In 2014, after this study was conducted,

the AAMC published practical, detailed and evidence-based recommendation for educational curricula on LGBT content.[18] Furthermore, in 2015, same-sex marriage was legalized across the US. Over the past ten years, various attempts and advances in medical education on LGBT content have been reported from the US and Canada.[26,27] Considering these developments, the gap between Japan and the US and Canada may currently be expanding.

26. Nowaskie DZ, Patel AU. How much is needed? Patient exposure and curricular education on medical students' LGBT cultural competency. BMC Med Educ 2020;20(1):490. doi: 10.1186/s12909-020-02381-1

27. Nolan IT, Blasdel G, Dubin SN, et al. Current State of Transgender Medical Education in the United States and Canada: Update to a Scoping Review. J Med
Educ Curric Dev 2020;7:2382120520934813. doi: 10.1177/2382120520934813

We found three errors that were not mentioned out by the editors and reviewers. We apologize for these mistakes. The following corrections have been made.
1) We added the citations in the following sections: (p.13, lines 234, 239, 247, 252. p.14, Table 4. p.19, line 412)
2) The notation of references #13 and #18 was incorrect, and has been corrected in the revised manuscript. (p21, lines 452-454. p.22, lines 492–496)
3) We added some information in the Competing Interest. (p.20, lines 430–434)

In addition, we used English editing to revise the manuscript and added acknowledgments. (p.19, line 405)

Reviewer: 2
Prof. Joel Moll, Virginia Commonwealth University
Comments to the Author:
Overall interesting and important study to improve healthcare for LGBT patients in Japan by assessing current state. A couple minor considerations:

Response:
We sincerely appreciate the time and effort you have taken to comment on our study.

#1, Line 66: suggest change inequalities to inequities. inequitable healthcare can lead to health disparities. Equal implies all treated same, whereas equitable takes in barriers, social determinants or health, etc as equal treatment does not imply adjustments for social determinants etc

Response:
Thank you for pointing out this error. We have changed “inequalities” to “inequities”. (p.4, line 82)

#2, Line 67: any idea what percent of Japanese identify as LGBT? Due to societal lack of support may be difficult but if known estimate would be helpful for context.

Response:
Thank you for your suggestion. We agreed with your comment, and have added the following text to the Introduction. (p.4, lines 83–88)

In Japan, no nationwide survey of the size of the LGBT population has been undertaken by government. However, several surveys have been conducted at the municipal level. A survey conducted in Osaka City, the third largest city in Japan, revealed that 2.7% of respondents identified as LGBT. When individuals who identified as asexual were included, the figure was 3.3%.[1] Social discrimination and health disparities against LGBT people have also been reported in Japan.

1. Hiramori D, Kamano S. Asking about sexual orientation and gender identity in social surveys in Japan: Findings from the Osaka city residents' survey and related preparatory studies. Journal of Population Problems 2020; 76(4): 443-466. doi: 10.31235/osf.io/w9mjn

#3, Line 112 (and number 5 above): does you institution require any ethical review (Institutional Review Board) prior to a study like this? If so please mention this was done

Response:
We apologize for the confusion regarding this point. We obtained approval from the ethics committee at our university. In the original version, we included information about ethics in lines 337–342 after the Competing Interests section. We have moved the Data sharing statement and Ethics statements to immediately after the Conclusions to improve clarity. (pp.18-19, lines 393–401)

Data sharing statement
No additional data are available.
Ethics statements
Patient consent for publication
Not required.
Ethics approval
The study was approved by the ethics committee of the Jikei University School of Medicine for Biomedical Research (ref no. 30-042(9063)).

#4 Line 123: Consider listing any secondary outcomes

Response:
Thank you for your suggestion. We have added the secondary outcomes as follows, so that our research interests could be better understood. Because this was an exploratory study, there were many secondary outcomes. (pp.5–6, lines 145–147)

The secondary outcomes were: teaching methods, the extent to which LGBT health areas are taught, the evaluation methods of LGBT-related learning, and strategies to increase time devoted to education of LGBT content.

#5 Line 154: Did you do subgroup analysis of type of medical school to see if that influenced time spent?

Response:
Thank you for your question.
The results of the analysis by school type were as follows.

preclinical	Mean hours (SD)	Median hours (25th-75th percentile)	"Not known"	Missing

Public	1.1(1.8)	0.75(0-1.5)	4 schools	0
Private/other	1.9(2.8)	1(0-2)	5 schools	0

clinical	Mean hours (SD)	Median hours (25th-75th percentile)	“Not known”	Missing
Public	0.3(0.7)	0(0-0)	8 schools	2
Private/other	0.4(0.6)	0(0-1)	10 schools	3

We have added the following statistical results in the revised Results. (p.7, lines 201–203)

The time spent in preclinical and clinical training was also not significantly different between public and private/other schools (Wilcoxon’s rank-sum test, p=0.19, p=0.76).

We also added the following text to the Methods section. (p.6, lines 165–166)

Wilcoxon’s rank sum test was used to test the significance of difference in hours spent teaching LGBT content between public and private/other schools.

#6 Table 1: Listed "disorders if sex development and intersex" - not clear if this is how LGBT is termed in Japan or the definition compared to US comparison category since this is your highest content being taught would suggest better defining for non Japanese reader

Response:
Thank you for raising these points. In Japan, there is currently some debate about whether to include disorders of sexual development and intersex in the definition of LGBT (i.e., LGBTI). Although we used the same questions from the questionnaire developed in the US and Canada which included this item, as you pointed out, it is necessary to provide an explanation for this. We have added the following explanation in the Discussion section. (p.15, lines 290–293)

Although teaching about DSDs is important, it is not a substitute for teaching LGBT content. The term LGBTI is sometimes used to include intersex in LGBT in Japan,[17] whereas DSDs refer to a wide range of congenital conditions, not sexual orientation or gender identity.

We have also changed the description of the AAMC guidelines to improve accuracy as follows. (p.15–16, lines 295–299)

In contrast, in the US, the guidelines for medical education from the Association of American Medical Colleges (AAMC) summarized the health disparities of individuals who are LGBT, gender nonconforming, or born with DSD, including social issues, and provided professional competency objectives to improve health care for these people.[18]

17. Yeo H. Sex education tips for obstetricians and gynecologists to know. DSDs: a new understanding and sex education of differences of sex development (disorders of sex development) [In Japanese]. Obstetrical and gynecological practice; 2021:70(1):89-94

18. Association of American Medical Colleges. Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who Are LGBT, Gender Nonconforming, or Born With DSD: A Resource for Medical Educators. Washington, DC: Association of American Medical Colleges; 2014. Available: https://store.aamc.org/downloadable/download/sample/sample_id/129/ [Accessed 23 Dec 2021]

#7 Line 291: additional limitation as mentioned is US data is older, and during that time a significant change in LGBT acceptance in society underwent in US. You mentioned this elsewhere, but is a limitation to your conclusion comparing Japan and US/Canada data.

Response:
We agree with your comment, and have added a description of a fourth limitation as follows. (p.18, lines 377–383)

Fourth, the survey in the US and Canada used as a comparison were conducted in 2009–2010, [14] approximately nine years before the current study. In 2014, after this study was conducted, the AAMC published practical, detailed and evidence-based recommendation for educational curricula on LGBT content.[18] Furthermore, in 2015, same-sex marriage was legalized across the US. Over the past ten years, various attempts and advances in medical education on LGBT content have been reported from the US and Canada.[26,27] Considering these developments, the gap between Japan and the US and Canada may currently be expanding.

26. Nowaskie DZ, Patel AU. How much is needed? Patient exposure and curricular education on medical students' LGBT cultural competency. BMC Med Educ 2020;20(1):490. doi: 10.1186/s12909-020-02381-1

27. Nolan IT, Blasdel G, Dubin SN, et al. Current State of Transgender Medical Education in the United States and Canada: Update to a Scoping Review. J Med Educ Curric Dev 2020;7:2382120520934813. doi: 10.1177/2382120520934813

#8 Consider mentioning if known, the support of Japanese society for equitable healthcare for LGBT patients, or LGBT rights in general as a potential correlate.

Response:
We have addressed your comments by adding the following text to the revised Discussion. (p.16, lines 316-323)

However, the movement for the rights of LGBT people in Japan is slowly making progress. For example, there is a growing movement at the local government level to issue certificates for same-sex partnerships. Medical institutions are also beginning to provide support for LGBT people. For example, Juntendo University Hospital in Tokyo established a working group in 2021 to consider and respond to patients, families and staff regarding sexual orientation and gender identity, and has started activities such as providing learning opportunities for medical staff and a sexual orientation and gender identity consultation service.[21]

Because the addition of these sentences made the paragraphs longer, we separated the paragraphs from the next sentence and added the phrase “From a medical education perspective” at the beginning of the sentence. (p16, line 324)

21, Juntendo University. Juntendo News; 2021[In Japanese]. Available: https://www.juntendo.ac.jp/news/20211111-01.html [Accessed 23 Dec 2021]

#9 Also any known information if taught at another level of training? Post medical school specialty, or continuing education for physicians that is required. If so would help the argument that basic

education needed in medical school since not done elsewhere.

Response:
Thank you for your suggestion. We have added information about training at other levels in Japan. (p.17, lines 348-352)

To the best of our knowledge, no previous survey has examined the current status of post-graduate education for physicians on LGBT issues in Japan. Although a small number of lectures and workshops have recently been held in the level of academic society,[24,25] the opportunities for physicians to learn about LGBT content after graduation are still limited. Therefore, it is important to provide opportunities for education on LGBT content in undergraduate education.

24. Japanese Society of Gender Identity Disorder. Expert training [In Japanese]. Available: http://www.okayama-u.ac.jp/user/jsgid/expert.html [Accessed 22 Dec 2021]
25. Japan Primary Care Association. The 18th CPD autumn seminar. A practical course on the care of LGBT people for primary care physicians [In Japanese]. Available: https://www.primary-care.or.jp/seminar_c/20210919/pro.html#28 [Accessed 22 Dec 2021]

We found three errors that were not mentioned out by the editors and reviewers. We apologize for these mistakes. The following corrections have been made.
1) We added the citations in the following sections: (p.13, lines 234, 239, 247, 252. p.14, Table 4. p.19, line 412)
2) The notation of references #13 and #18 was incorrect, and has been corrected in the revised manuscript. (p21, lines 452-454. p.22, lines 492–496)
3) We added some information in the Competing Interest. (p.20, lines 430–434)

In addition, we used English editing to revise the manuscript and added acknowledgments. (p.19, line 405)

VERSION 2 – REVIEW

REVIEWER	Gibson, Alec University of Washington
REVIEW RETURNED	12-Jan-2022

GENERAL COMMENTS	The authors have made significant improvements to the manuscript and have addressed all of my previous comments and concerns. This manuscript will be a welcome contribution to the literature.