



# A qualitative study on the internal response of medical students during the transgender healthcare education: a focus on professional identity

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**Purpose:** This qualitative study examined the inner response of medical students who participated in a transgender healthcare education program. The factors that effected the inner response were investigated in order to suggest strategies for improving the effectiveness of the transgender healthcare education program.

**Methods:** The transgender healthcare education program consisted of 2 hours of lectures and 2 hours of clinical role-play over 3 weeks. Eight 4-year medical students in Seoul, South Korea, were selected considering gender, the route of admission to medical school, and religion. Each student was interviewed individually for approximately 30 minutes 3 times before, during, and after the educational program, and interviews were analyzed using thematic analysis.

**Results:** By attending the transgender healthcare education program, students have shown three types of inner response—confusion, acceptance, and negotiation. The students' personal identities and professional identities influenced these responses. In particular, students' existing professional identities motivated them to learn about transgender healthcare and played a key role in resolving the discomfort that occurred during the educational program. Through the transgender healthcare education, students were able to reduce prejudice against transgender people, understand the unique medical needs of the transgender population and increase their self-efficacy related to transgender health care.

**Conclusion:** The transgender healthcare education program allowed medical school students to acquire medical knowledge related to transgender patients and increase their cultural competence as future medical professionals. In addition, as the professional identity is critical in educating transgender healthcare, it should be considered thoroughly in order to effectively educate the medical students.

**Key Words:** Transgender persons, Health services for transgender persons, Undergraduate medical education, Health services accessibility

## Introduction

Transgender people are individuals with gender identities that differ from their recorded birth sex [1]. They

have unique medical needs, and many transgender people choose to undergo medical transition which can include hormone therapy or gender-affirming surgery to change their physical appearance to match their gender identity. In addition, studies have shown that transgender po-

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pulations have a risk of certain types of cancers, substance abuse, mental disorders, chronic diseases, and sexually-transmitted diseases than cisgender populations [1-6]. Among the many factors that contribute to health disparities in transgender people, a lack of proper healthcare providers is known to have a major effect on transgender patients [7,8]. Therefore, in recent years, more medical schools have included transgender healthcare in their curriculum to mitigate health inequities affecting transgender people [9].

Several studies have reviewed the current state of transgender healthcare curricula at medical schools in the United States and Canada [9-11]. A body of literature has also emerged on the development of a transgender healthcare education program to examine changes in the knowledge, attitudes, and beliefs of medical students concerning transgender people [12-16]. According to this body of research, transgender healthcare education programs significantly improve students' level of knowledge about transgender people and help students feel more comfortable treating transgender patients [12,14,15]. However, since most studies have taken a quantitative approach, it was difficult to assess the internal cognitive processes experienced by students who participated in the program in detail. Since changes in attitudes and beliefs occur privately within individuals, understanding the internal responses of students can help develop effective programs to encourage students to build cultural competency regarding transgender patients. In addition, understanding these complex inner processes can reduce the reluctance of students who are unfamiliar with the transgender community and dissuade them from rejecting the contents of the program.

The purpose of this study was to examine the internal responses experienced by medical students who participated in the transgender healthcare education program using a qualitative approach. The researchers also in-

spected the factors that took part in the internal responses that occurred during the educational program. The concept of professional identity and personal identity was used. Professional identity refers to "a representation of the self, achieved in stages over time during which the medical professional's characteristics, values, and norms are internalized, resulting in an individual who thinks, acts, and feels like a physician" [17]. After being accepted to medical school, medical students experience a long process of socialization and professional identity formation, and, once formed, their professional identity is continuously reconstructed by important experiences, including educational experiences [18,19].

Another important factor to consider related to the internal responses of students during the transgender healthcare education program is personal identity, which refers to the sum of various components such as personal characteristics, beliefs, experiences, intimate relationships, and the social groups to which an individual belongs. A student whose existing personal identity clashes substantially with the contents of education can have a harder time accepting the contents of educational program than others. In other words, if students' existing personal identities already correspond to the contents of educational program, it is easier for them to embrace the education [18]. In this study, the researchers explored how these factors—personal identities and professional identities effect the internal responses, which is a proxy to measure the effectiveness of the transgender healthcare education program.

In summary, the research question of this study was: How do medical students react internally while attending a transgender healthcare education program, and which factors affect these responses?

## Methods

### 1. Participants

The participants in this study were selected among fourth-year students at Seoul National University College of Medicine in Seoul, South Korea (Table 1). Fourth-year medical students were chosen as participants due to their relatively more developed professional identities as prospective doctors with 3 years of experience in medical school. The participants were also expected to have adequate knowledge for understanding the transgender healthcare education program and must have taken internal medicine, obstetrics, and gynecology classes in their second and third years of medical school. Using purposive sampling and snowball sampling with maximum variation, the researchers selected participants considering gender, the route of admission to medical school, and religion. There were four cisgender female students, three cisgender male students, and one male student who did not identify as a specific gender. Half of the students transferred to medical school after graduating from another undergraduate school. The exclusion criterion was previous experience attending a transgender healthcare education program and transgender-community-related social activities. The researchers met the participants in person or remotely through a Zoom meeting to explain

the purpose of the study and go over the education program's schedule. The participants provided informed consent and their anonymity was guaranteed. Ethical approval was obtained according to the policies of the Seoul National University College of Medicine (approval no., 2109-128-1257).

### 2. Educational intervention

All participants participated in a 4-hour transgender healthcare education program over a period of 3 weeks. The first hour of class was an offline lecture about basic concepts such as gender, the diagnostic criteria for gender dysphoria, and changes in the diagnostic criteria for gender dysphoria in the Diagnostic and Statistical Manual of Mental Disorders. The second hour of class was an online lecture about gender classification, the general healthcare of transgender patients, medical transition, and gender-friendly communication methods. The third and fourth hours of the class consisted of clinical role-play. The students were classified into two groups, and two clinical scenarios were conducted. The scenario was about a transgender woman whose parents could not accept that their child was transgender. The second scenario was about a transgender man who came to the clinic for a general medical check-up and gynecologic counseling (Appendix 1). The students role-played as a doctor, patient, and two active observers in turns. For the first scenario, the roles included only one active observer as well as the parent

Table 1. Participants of the Study

Participants	Sex	Gender	Religion	Route of admission
A	Male	Cisgender	Catholic	Pre-med
B	Male	Cisgender	None	Bachelor's
C	Male	Not specified	None	Pre-med
D	Male	Cisgender	None	Bachelor's
E	Female	Cisgender	None	Bachelor's
F	Female	Cisgender	Protestant	Pre-med
G	Female	Cisgender	Protestant	Pre-med
H	Female	Cisgender	None	Bachelor's

of the patient. All of the students role-played as a doctor at least once. One educator was assigned to each group and gave feedback after the students completed the performance. A total of four educators who were medical specialists with clinical experience treating transgender patients led the classes.

### 3. Data collection and analysis

The participants were interviewed 3 times: before the start of the education program, at the halfway point of the program, and after the last session of the program. Each participant was interviewed individually in a private room, and each interview lasted approximately 30 minutes. The interview questions were semi-structured and are presented in Appendix 2. The interviews were recorded and transcribed verbatim. During each session, the researchers thoroughly observed and recorded the important verbal and non-verbal reactions of the participants. The data was collected from January 2022 to February 2022. Thematic analysis was used to analyze the data. The thematic analysis was done through six-step process of Braun and Clarke—referring all data collected as the data corpus, reading the transcripts for multiple times, generating the codes and labels to represent important features of the data, searching for themes to generate coherent patterns from the data and finally weaving the data to draw certain conclusion [20]. Each researcher examined the data

and derived important themes from the data independently. After each step of analysis, the researchers discussed and agreed on common themes and categories that emerged from the data. The quotes used in the results section of this paper were chosen carefully to represent these themes and categories.

## Results

### 1. The internal response during the educational program: confusion, acceptance, and negotiation

The participants in this study had conflicting attitudes simultaneously, such as confusion and acceptance, toward transgender healthcare during the educational program (Table 2). The students experienced confusion because they were unsure about which words to use to avoid offending transgender patients and maintain professionalism enough so that patients could still rely on them. They were also confused about the extent to which they should ask transgender patients in the clinical field about their gender identities, especially when patients wanted to hide their gender identities.

“I thought I was accepting of gender minorities, but it was

Table 2. The Internal Responses to Transgender Healthcare Educational Program

Responses	
Confusion	Confusion about appropriate terminology
	The need for model scenarios
	Discomforts arose from personal experiences
Acceptance	Discomforts arose from religious beliefs
	“Would not be embarrassed”
Negotiation	“Confidence providing counseling”
	Appreciating the social needs of transgender healthcare education
	Willing to provide medical care to transgender patients
Expecting refusal from fellow students	Reluctant to conduct medical transition procedures
	Expecting refusal from fellow students

difficult to construct my lines when I tried to speak as a doctor.”

A lot of students who found it difficult during the clinical role-play class said it would be very helpful to see a “model scenario” for each clinical scenario so that they could become more fluent when asking questions to transgender patients in the clinical field. The students seemed to become more confused because they did not have the opportunity to observe role models who treated transgender people on an outpatient basis or in surgery. The “model scenario” that they requested could be interpreted as an indicator of the need for role models.

In addition, there were students who felt discomfort towards the contents of the education. For example, another student, F, was confused because she believed medical transition went against her religious beliefs. When she was asked why she was confused during class, she said:

“Religion is not like an accessory or an attachment and rather is a characteristic of someone’s core. I cannot accept performing medicine that goes against religion in both my mind and heart. I was confused because I had to think about what is good and bad.”

When the researcher asked about how she would react if a transgender patient came to her clinic, she said she would refer the patient to another doctor and that she would be unable to withstand the inner contradiction.

“If a transgender patient comes to me, I will refer them to another doctor. I think it would be difficult for me to treat a transgender patient due to the conflict with my religious beliefs.”

At the same time, the students felt they became more competent when it came to meeting the medical needs of

transgender patients. Nearly all of the participants said they would have felt “embarrassed” if they had not attended the transgender healthcare education program and were satisfied with the program since it made them more prepared.

“Through the transgender healthcare education program, I was able to understand more about the medical difficulties transgender people experience. For example, now I don’t think I will be perplexed when I encounter questions such as how to approach a situation where a female transitioning to a male through hormone therapy needs a cervical examination.”

“Before the practicum and theory classes, I thought that, even as a doctor, I did not know more than transgender people or lesbian or gay people about medical information related to gender minorities. As I learned more about related information in the class, I realized I would be able to provide medical consultations to them.”

There were other students who actively accepted the contents of the educational program, saying that the educational program “corresponds to what the society wants from the medical professionals.”

One participant, H, said that students who feel uncomfortable about the transgender healthcare education program should cope with their feelings on their own.

“Even if the contents of the course make you feel a bit uncomfortable, being educated about this topic should not be up for debate because the society is developing in the direction of inclusivity. Even if this content is uncomfortable, we need to understand that this content is necessary. If we do not receive this education, I believe it is the same as discriminating against gender minorities.”

Another student, A, also said that it would be “behind

the times” not to learn about healthcare for transgender people.

“Since doctors are not free from catering to what society wants, I feel it would be difficult to build trust with people once we are labeled as being behind the times, having an outdated mindset, and discriminating against gender minorities.”

However, interestingly through this educational program, most students did not entirely refuse or accept the contents of transgender healthcare educational program but negotiated how they would practice what they learned from the educational program in their own way (Table 2). Most of the students stated that they thought they would be able to provide appropriate information about general health issues and medical transition to transgender patients and give proper emotional support. Many students specifically thought of ways to provide medical care to transgender patients especially related to their future specialties. They also stated they wanted to learn more about transgender healthcare in terms of their specialization. Some of them even shared specific future plans to express that they are queer-friendly when they become doctors.

“If I receive psychiatric training, I think I would be able to consult the caregivers of transgender patients. I also feel like I can consult transgender patients as a medical professional when they share their experiences as a transgender person or their worries and difficulties.”

“I learned in class that many children and adolescents experience gender confusion. If I place a rainbow teddy bear in the examination room to give pediatric patients the impression that I am queer-friendly, I think queer patients will be able to feel a little more at ease in the examination room.”

However, even though most of the students recognized the social need for transgender healthcare education, many of them thought some of their colleagues would not enjoy learning about transgender healthcare since it would increase the burden of studying for medical students.

“I think there will be strong resistance from students if they are told to learn about medicine for gender minorities as a part of medical school curricula since there is already a large study burden.”

B said that, in order to persuade the students who are resistant to learning about transgender healthcare, the extent to which it should be included in formal medical curricula should be proportional according to the epidemiological proportion of transgender groups with specific diseases.

One of the students, A, even persuaded his colleagues about the necessity of transgender healthcare education. However, most of the students did not actively advertise the need for transgender healthcare education since they thought it might offend some of their colleagues who think learning about transgender healthcare is unnecessary or even “bizarre.”

In addition, none of the participants decided to specialize in transgender medicine and facilitate medical transition themselves, which indicates that they negotiated rather than fully accepting the educational program. The students thought that doctors who facilitate medical transition were different from themselves and that those doctors had a special “mission” and would “actively advocate” for transgender health.

“As a doctor, rather than performing specialized medicine just for transgender patients, I want to provide necessary medical care to transgender patients in the context of providing adequate medical services to anyone

who needs them in a general and equal manner.”

Participants also added that, even though they did not want to facilitate medical transition themselves, they were willing to play a role in transgender healthcare.

“When I imagined treating transgender patients in the past, I thought I had to be a ‘human rights warrior’ fighting for transgender people to care for them. However, after I took the classes, the psychological burden of treating transgender patients was lifted a lot by realizing that, as a doctor, I just have to listen to what transgender patients are experiencing and consult or respond to the medical issues patients have.”

## 2. Key factors in the internal responses of the educational program: personal identities and professional identities

The participants whose personal identities corresponded to the values of the transgender healthcare education program easily accepted the program contents, whereas the participants whose personal identities conflicted with the values of the education program had a harder time accepting the program (Table 3). In this study, the personal identities of the participants in terms of gender and the route of admission to medical school

was not significant. However, the students’ personal experiences related to transgender people affected how they accepted the educational program. The students whose personal identities corresponded to the education program had more exposure to transgender communities through personal experiences or media. They tended to actively reflect on the program and study transgender health independently. For example, one student, H, who has a transgender friend, said:

“I thought about my transgender friend when I was in the lecture. My friend might have also wanted to tell me that they are transgender sooner but could not. I regret not being more open to gender expressions in front of my friend.”

In addition, she said she watched a video clip containing interviews of people on the street asking about how they feel and think about transgender people.

“I continued to look up interviews related to this topic on YouTube because I wanted to know how transgender people were treated in our society. I felt heartbroken about the ways they were treated in this society, so I wanted to know more about their lives.”

She also conducted searches about techniques for

Table 3. Factors Related to Internal Responses of Transgender Healthcare Education

Categories	Subcategories	Themes
Personal identity	Past exposure to transgender communities	Personal experiences
		Exposure to media
		Classes on minorities in society
		Lack of exposure
	Religion	Discomforts
		Not experiencing discomforts
Existing professional identity	Motivation to learn about transgender healthcare	Related to the responsibilities of medical professionals
		Not related to the responsibilities of medical professionals
	Coping with negative feelings from the educational program	Coping with negative feelings from the educational program



performing sex affirmation surgery on the internet and showed great satisfaction with the educational program.

However, another participant, D, who had little exposure to transgender communities and was indifferent toward the health of transgender people, did not reflect on the program or research about transgender health outside of the educational program and showed some discomfort with the class. He said:

“In class, asking about marital status during outpatient obstetric care was described as inappropriate. However, I don’t know if that is an offensive question for patients. Asking whether patients have a partner rather than their marital status seems excessive.”

As mentioned above, one of the students, F felt uncomfortable during the class as she thought the contents of the educational program contradicts to her religious belief. However, whether the individual was religious did not determine whether the discomfort occurred. Rather, it depended on the degree to which individuals believed religion to be an essential component of their identity. For example, A, who was a Christian since childhood, said that religion did not make him uncomfortable with the transgender healthcare educational program. On the topic of whether his religion conflicts with the values of the transgender healthcare education program, he said:

“I don’t think it is right to reject transgender or homosexual people from society since they were created by God as well.”

Throughout the program, students’ existing professional identities helped them relieve the discomfort they had experienced during the educational program (Table 3). The clinical role-play class, in particular, evoked professional identity more than the lectures. Below is a quote from an

interview with F after she attended the clinical role-play class.

“I continued to feel conflicted during the clinical role-play class, but through the class, I realized that it is inappropriate not to provide necessary medical consultation when I encounter transgender patients in clinical practice just because I feel confused. Being a doctor, you cannot choose to only do things that you want to do. I thought I should provide necessary treatment even if I feel confused myself.”

She said she would advise other students to take the class even though they may also feel confused.

In addition, the professional identity also worked as the motivation to learn about the transgender healthcare. For example, G, who thought a doctor should have professional knowledge about their area of expertise and demonstrate therapeutic partnership with patients, was willing to learn how the guidelines for the medical treatment of transgender patients change according to whether patients are undergoing hormone therapy.

The students were less motivated to learn about the contents that they found to be not relevant to the medical field, which did not evoke their existing professional identities as prospective medical staffs. One student, B, did not enjoy learning the specific terms related to gender identity since he thought it would not be necessary when he becomes a doctor.

“I find it interesting to learn about something I would actually use when I become a doctor in the future, so I think it would be interesting to learn about clinical and medical knowledge necessary for actual transition in the transgender medical education program.”

Another student, A, did not enjoy listening to part of



the lecture about the importance of being a queer-friendly doctor because he thought it was too “prescriptive.”

“It is a given that we should not have prejudice toward transgender people or discriminate against them, so I didn’t find it too useful to discuss these topics in such a prescriptive manner. I wanted to learn more about medical and scientific information related to gender minorities through these classes.”

### 3. The enhancement of cultural capacity of medical students through the educational program

The students stated that they had changed in three ways after the educational program (Table 4). First, many of the students—particularly those who had no close relationships with openly transgender individuals—said they could ease prejudice against transgender people even without having met any transgender patients during the program.

“I realized gender minorities are not a different category

of people but those who have different sexual preferences or identities. I was able to discard some of the biases I had against gender minorities.”

“I was able to learn more about transgender people. It is easy to fear what is unknown, and the fear I had about transgender people disappeared as I learned about and discussed transgender healthcare.”

Second, the students also began to envision real transgender people visiting their clinics in the future, and this imagined scenario helped them to specifically picture themselves providing medical services to transgender patients within their specializations.

“I was satisfied with the class because now I can think of the possibility of a transgender patient when I see a patient who presents as male and has an identification number that starts with a 2 (a feature of women’s identification numbers in Korea).”

Finally, the students realized that transgender people have unique medical needs that differ from those of the cisgender population. The following two quotes are from

Table 4. The Improvement of Cultural Capacities after Taking the Transgender Healthcare Educational Program

Categories	Subcategories	Themes
Alleviation of prejudice against transgender people	Thinking away from stereotypes about transgender people	Recognizing that he/she believed negative stereotypes about transgender people
		Accepting each transgender person as an individual with unique characteristics
	Alleviating negative feelings about transgender people	Lessening fear and reluctance toward transgender people
Ability to envision transgender people visiting their clinics	Ability to envision transgender people visiting their clinics	Ability to envision transgender people visiting their clinics
Recognizing the unique medical needs of transgender people	Recognizing the unique medical needs of transgender people as a group	Understanding medical transition through hormonal therapy and surgeries
		Understanding the medical concerns of transgender people
		Understanding the lack of access to medical care experienced by transgender people
	Recognizing the unique medical needs of transgender people as individuals	Unique needs related to the extent of transition
		Unique needs related to pregnancy

the same student, D. The first interview was conducted before the student attended the transgender healthcare education program, and the second interview was taken after the student finished the program.

“First of all, I don’t think transgender patients would have more physical problems than average especially if they did not receive any surgery. I think issues more frequently experienced by transgender people would be psychiatric.”  
“I knew that gender minorities have their own unique issues, but I never contemplated how I, as a medical professional, can help with those issues in a professional capacity. I liked the opportunity to think about these issues and practice. I now know how to consult or educate transgender patients when I encounter them in clinical practice.”

Some of the students pointed out that the unique medical needs of transgender people are not limited to needs related to medical transition. They began to understand the lack of access to medical care experienced by the transgender population.

“Through the class, I was able to think about specific scenarios such as difficulties a transgender patient who has not received gender affirmation surgery but is undergoing hormone therapy would experience when coming in for a health check-up. I also thought about the inconvenience and emotional exhaustion transgender people have to experience when switching care providers.”

The students also came to understand the needs of unique needs of transgender people as individual patients.

“I learned that the medical needs of transgender people related to pregnancy, delivery, and changes in their bodies

differ for each individual. Before I took the class, I assumed everyone would want to change their body in the same direction and would want to get pregnant and give birth, but I realized that each individual pursues different directions.”

“I tended to think about transgender people as having a single fixed identity, so before I took the class, I did not realize that transgender people have diverse medical statuses based on medical treatment or the situations each person is in.”

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## Discussion

By attending a transgender healthcare educational program, medical students successfully lessen their prejudice against transgender people, understand the unique medical needs of transgender people, and plan ways to prepare to encounter transgender people in the clinical setting in the future. According to previous studies, a lack of medical education about the health of transgender people and discrimination against transgender people by medical professionals were key factors in the poor access to medical care experienced by transgender people [21–23]. Therefore, the results of this study are positive and indicate that a transgender healthcare education program shows the possibility of enhancing the cultural capacity of medical students toward transgender people.

The results of this study not only highlight the need for transgender healthcare education programs but also suggest ways to improve transgender healthcare education programs to be more effective. One important issue is the need to closely consider professional identities of medical students. This is important since the professional identities of students help to cope with negative feelings such as confusion or discomfort during the educational program. The professional identities of students that have formed

over a course of a 4-year medical school program work as motivation to students to learn the contents of transgender educational program and cope with the discomfort that arouse during the educational program due to their personal experiences or religious beliefs.

However, students' professional identities are not always helpful for fostering transgender-friendly doctors. In accordance with students' professional identities, most of the medical students already believed that "medicine should be fair and universal for everyone." This belief enabled the students to be persuaded about the need to learn about transgender healthcare since it is topic they likely have not learned about in their formal medical education curriculum. However, this belief also led to the distorted conclusion that transgender medicine should be "neutral." Several students said that transgender healthcare should be approached using the standard methods included in core medical education curricula if the prevalence rate of a common disease is similar among transgender people and that lecturers should adopt a "neutral and academic" tone when discussing transgender healthcare, indicating that the students believed medical education, including education about transgender healthcare, should be "un-biased." Although it cannot be disputed that healthcare access should be fair and universal for everyone, the actual practice of medicine still reflects certain values held by medical personnel. As many studies have pointed out, current formal medical education curricula highlight specific values [24,25]. In addition, there are certain populations, including transgender people, that are generally excluded from medical education curricula and the medical system. Therefore, for the practice of medicine to be truly "impartial," special attention must be given to marginalized populations, including transgender people, and more time should be allocated to medical school curricula for students to learn about the unique medical needs of these populations. In addition, educating

merely about the healthcare of marginalized populations is not sufficient, and being openly friendly and supportive to marginalized populations is as crucial as simply being medically knowledgeable for reducing the degree to which marginalized populations remain vulnerable to discrimination. This is why the Association of American Medical Colleges recommends that medical students be educated to become advocates for lesbian, gay, bisexual, transgender, queer (LGBTQ) individuals [26]. Prejudice against transgender people is common in Korean society, and the voices of transgender people are rarely heard [23]. Therefore, it is even more important to inspire future doctors in Korea to be advocates for marginalized populations including transgender people in order to encourage them to utilize healthcare services without feeling threatened.

One interesting result from this study was that, even though most of the students succeeded in enhancing their cultural capacity regarding the healthcare for transgender people they did not consider offering medical transition to be a part of their job. There are several possible explanations for this finding. One explanation is that few participants planned to specialize in medical fields that were specifically related to medical transition. Obstetrics and gynecology, urology, and plastic surgery are examples of some specialties within the scope of medical transition. This suggests that the transgender healthcare education program would be more effective if it contained two different tracks: one to cover the required curriculum and another that contains elective curricula. In fact, many schools, including Harvard Medical School, use these two tracks to teach LGBTQ healthcare. Harvard Medical School has incorporated LGBTQ health issues across the 4-year curriculum to educate general medical professionals to be more queer-friendly. At the same time, Harvard Medical School has also opened elective courses about LGBTQ health for students who want to pursue

further education about healthcare and LGBTQ populations. They also provide open courses about LGBTQ health for physicians [27]. Since not all medical professionals can or should specialize in transgender health, this two-track model seems appropriate since it both raises the cultural capacity of medical personnel overall and fosters the education of students who wish to be doctors specializing in transgender health. Ideally, every medical student should learn about the basic concept of gender, the principles of transgender healthcare, and the process of medical transition, and students who are specifically interested in transgender health should have opportunities to learn more about medical transition in greater depth by observing hormone therapy or gender-affirming surgery, conducting studies about transgender health, and getting to know transgender communities to foster better transgender healthcare. Furthermore, instruction on the specific methods used in medical transition should be provided routinely throughout residency programs specifically for medical transition.

Another possible explanation as to why students did not accept medical transition as being a component of their future careers may be that the students had little time to go through the “hidden curriculum” of transgender healthcare education due to existing medical institutions’ lack of preparedness for providing transgender healthcare education. A lack of faculty members who actually practice medical transition in teaching hospitals is one example of this resource gap. The participants in the study could not engage in in-person observations of medical transition outpatient care or surgery, and they, therefore, had no access to medical professionals specializing in medical transition to function as role models. In addition, the cultures of medical schools that do not prohibit discrimination based on sexual orientation and gender identity could also influence the effectiveness of the transgender healthcare education program. In this study,

several participants said they felt confused and somehow pressured when their peers said that the program was unnecessary and “bizarre.” If a culture that strongly prohibits discrimination against social minorities had been established, the students would not have felt this same pressure even if they were reluctant to learn about transgender healthcare. A culture that prohibits discrimination leads to free expressions of discrimination against social minorities and reluctance to learn about healthcare related to social minorities and can cause some to feel peer pressure, weakening their motivation to learn about healthcare related to social minorities including transgender people. In other words, even though a certain degree of societal pressure can help students become more open to learning about transgender healthcare, medical institutions are not always prepared to provide this education and function as providers of hidden curricula, therefore hindering students who wish to learn about transgender healthcare. According to previous studies, medical students learn not only from formal education but also from the informal and sometimes more powerful form of education referred to as the “hidden curriculum” [25,28]. Therefore, merely incorporating transgender healthcare education as a part of students’ formal education is insufficient. In order for the transgender educational program to be truly successful, changes in medical institutions, such as implementing inclusive and non-discriminatory policies, improving the cultural competency of faculty members, and providing role models who conduct medical transition procedures, are needed [26].

Through this study, the transgender healthcare education program could trigger various responses like confusion, acceptance and negotiation and the personal identities and professional identities affect these responses. As the professional identities allows medical school students to get motivated and cope with the

discomfortable feelings, it could be said that they play important roles in developing cultural competence as future medical professionals regarding transgender healthcare. Therefore, in order to increase the effectiveness of the program, the professional identities of medical students should be considered.

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## References

1. Safer JD, Tangpricha V. Care of the transgender patient. *Ann Intern Med.* 2019;171(1):ITC1-ITC16.
2. Quinn GP, Sanchez JA, Sutton SK, et al. Cancer and lesbian, gay, bisexual, transgender/transsexual, and queer/questioning (LGBTQ) populations. *CA Cancer J Clin.*

- 2015;65(5):384-400.
3. Nuttbrock LA. Culturally competent substance abuse treatment with transgender persons. *J Addict Dis.* 2012; 31(3):236-241.
4. Carmel TC, Erickson-Schroth L. Mental health and the transgender population. *J Psychosoc Nurs Ment Health Serv.* 2016;54(12):44-48.
5. Baral SD, Poteat T, Strömdahl S, Wirtz AL, Guadamuz TE, Beyrer C. Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. *Lancet Infect Dis.* 2013;13(3):214-222.
6. Rich AJ, Scheim AI, Koehoorn M, Poteat T. Non-HIV chronic disease burden among transgender populations globally: a systematic review and narrative synthesis. *Prev Med Rep.* 2020;20:101259.
7. Korpaisarn S, Safer JD. Gaps in transgender medical education among healthcare providers: a major barrier to care for transgender persons. *Rev Endocr Metab Disord.* 2018;19(3):271-275.
8. Sanchez NF, Sanchez JP, Danoff A. Health care utilization, barriers to care, and hormone usage among male-to-female transgender persons in New York City. *Am J Public Health.* 2009;99(4):713-719.
9. Nolan IT, Blasdel G, Dubin SN, Goetz LG, Greene RE, Morrison SD. Current state of transgender medical education in the United States and Canada: update to a scoping review. *J Med Educ Curric Dev.* 2020;7:23821-20520934813.
10. Dubin SN, Nolan IT, Streed CG Jr, Greene RE, Radix AE, Morrison SD. Transgender health care: improving medical students' and residents' training and awareness. *Adv Med Educ Pract.* 2018;9:377-391.
11. Muntinga M, Beuken J, Gijis L, Verdonk P. Are all LGBTQI+ patients white and male?: good practices and curriculum gaps in sexual and gender minority health issues in a Dutch medical curriculum. *GMS J Med Educ.* 2020;37(2):Doc22.

12. Sawning S, Steinbock S, Croley R, Combs R, Shaw A, Ganzel T. A first step in addressing medical education curriculum gaps in lesbian-, gay-, bisexual-, and transgender-related content: the University of Louisville Lesbian, Gay, Bisexual, and Transgender Health Certificate Program. *Educ Health (Abingdon)*. 2017;30(2):108-114.
13. Mintum MS, Martinez EI, Le T, et al. Early intervention for LGBTQ health: a 10-hour curriculum for preclinical health professions students. *MedEdPORTAL*. 2021;17:11072.
14. Najor AJ, Kling JM, Imhof RL, Sussman JD, Nippoldt TB, Davidge-Pitts CJ. Transgender health care curriculum development: a dual-site medical school campus pilot. *Health Equity*. 2020;4(1):102-113.
15. Park JA, Safer JD. Clinical exposure to transgender medicine improves students' preparedness above levels seen with didactic teaching alone: a key addition to the Boston University model for teaching transgender healthcare. *Transgend Health*. 2018;3(1):10-16.
16. Braun HM, Garcia-Grossman IR, Quiñones-Rivera A, Deutsch MB. Outcome and impact evaluation of a transgender health course for health profession students. *LGBT Health*. 2017;4(1):55-61.
17. Brennan N, Corrigan O, Allard J, et al. The transition from medical student to junior doctor: today's experiences of Tomorrow's Doctors. *Med Educ*. 2010;44(5):449-458.
18. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. A schematic representation of the professional identity formation and socialization of medical students and residents: a guide for medical educators. *Acad Med*. 2015;90(6):718-725.
19. Reimer D, Russell R, Khallouq BB, et al. Pre-clerkship medical students' perceptions of medical professionalism. *BMC Med Educ*. 2019;19(1):239.
20. Kiger ME, Varpio L. Thematic analysis of qualitative data: AMEE guide no. 131. *Med Teach*. 2020;42(8):846-854.
21. Cobos DG, Jones J. Moving forward: transgender persons as change agents in health care access and human rights. *J Assoc Nurses AIDS Care*. 2009;20(5):341-347.
22. Poteat T, German D, Kerrigan D. Managing uncertainty: a grounded theory of stigma in transgender health care encounters. *Soc Sci Med*. 2013;84:22-29.
23. Son I, Lee H, Park J, Kim SS. Social stigma and medical marginalization in healthcare service among transgender people in South Korea. *Korean J Sociol*. 2017;51(2):155-189.
24. Phelan SM, Burke SE, Cunningham BA, et al. The effects of racism in medical education on students' decisions to practice in underserved or minority communities. *Acad Med*. 2019;94(8):1178-1189.
25. Turbes S, Krebs E, Axtell S. The hidden curriculum in multicultural medical education: the role of case examples. *Acad Med*. 2002;77(3):209-216.
26. Hollenbach AD, Eckstrand KL, Dreger AD. Implementing curricular and institutional climate changes to improve health care for individuals who are LGBT, gender non-conforming, or born with DSD: a resource for medical educators. Washington DC, USA: Association of American Medical Colleges; 2014.
27. Bendix T. Harvard Medical School aims to take leading role in LGBTQ health care. <https://www.nbcnews.com/feature/nbc-out/harvard-medical-school-aims-take-leading-role-lgbtq-health-care-n802646>. Published September 2017. Accessed September 3, 2022.
28. Lempp H, Seale C. The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching. *BMJ*. 2004;329(7469):770-773.

Appendix 1. The Scenarios of Clinical Role-Play of Transgender Patient Encounter

Case 1. A mother who attended psychiatric consultation with a son who wanted to undergo a male-to-female transition	
Situation	Consulting a mother who visited a psychiatric hospital because she thought her son, who wants to transition to a female, needs psychiatric treatment
1. Patient	<p>Male/22 years old, college student</p> <ol style="list-style-type: none"> <li>1. Gender identity: transgender (male-to-female)</li> <li>2. Sexual orientation: straight</li> <li>3. Sexual history: none</li> <li>4. Situation: The patient came out to her mother because she needed her parents' consent to proceed with the transition process after identifying herself as a male-to-female transgender person. Her mother was adamant that she needed psychiatric care and forced her to visit a psychiatric hospital.</li> </ol>
2. Caregiver	<p>Female/50 years old, office worker</p> <ol style="list-style-type: none"> <li>1. Gender identity: cisgender woman</li> <li>2. Sexual orientation: straight</li> <li>3. Sexual history: man</li> <li>4. Situation: (1) After her son told her he wants to transition to a female, she and her son had multiple arguments at home. (2) The mother thinks being transgender is a psychiatric disease that can be cured through psychiatric treatment. She thinks her son would not be able to engage in normal social life or get a job if this disease is not treated.</li> </ol>
3. Doctor	<ol style="list-style-type: none"> <li>1. Situation:               <ol style="list-style-type: none"> <li>(1) Patient information: male/22 years old; Kim, Jinwoo</li> <li>(2) Identification number:</li> <li>(3) Reason for appointment: identity consultation.</li> </ol> </li> <li>2. Role: (1) Ask what brought them in. (2) Understand the patient's gender identity, sexual orientation, and sexual history. (3) Explain to the caregiver the patient's gender identity and orientation. (4) Explain the necessary steps for transgender people to transition.</li> </ol>
Discussion points	<ol style="list-style-type: none"> <li>1. Did the doctor adequately ask about the patient's disease history?</li> <li>2. Did the doctor respond adequately to the mother's worries?</li> <li>3. What were additional areas that needed to be explained to the patient and caregiver?</li> </ol>



Case 2. A man who came in for a consultation about getting a health check-up and managing health	
Situation	Consulting a man who came in to ask about which examinations he should get for his health check-up and additional items to consider
1. Patient	<p>Male/40 years old, office worker</p> <ol style="list-style-type: none"> <li>Gender identity: transgender man</li> <li>Sexual orientation: straight</li> <li>Sexual history: Had a sexual relationship with a man 20 years ago and has had relationships with women since.</li> <li>Disease history: (1) Trans man undergoing hormone therapy. (2) Receives testosterone regularly at a local clinic for the past 2 years. (3) No prior conditions including diabetes and hypertension. (4) History of surgery: received a mastectomy in Thailand 1 year ago. Has not received any surgical procedures affecting the uterus or vagina.</li> <li>Situation: (1) Getting ready to receive his first health check-up. (2) Wonders whether he should get a cervical cancer screening since he did not receive any surgical procedures related to sexual organs. He has a fear of revealing that he is a transgender man to a doctor he does not know. (3) He displays hesitance and does not directly ask about what he wants to know even though he made the appointment to ask about health check-up examinations. (4) He also wants to know issues that can occur during hormone therapy and what he should be careful about as a transgender man.</li> </ol>
2. Doctor	<ol style="list-style-type: none"> <li>Situation                             <ol style="list-style-type: none"> <li>(1) Patient information: Male/40 years old; Park, Youngsoo</li> <li>(2) Identification number:</li> <li>(3) Reason for appointment: consult about health check-up examinations.</li> <li>(4) Note: Wants to consult about additional necessary examinations beyond the basic items such as a basic blood exam, chest computed tomography, endoscopy, and colonoscopy.</li> </ol> </li> <li>Role: (1) Understand the patient's gender identity, sexual orientation, and sexual history. (2) Check the patient's history of disease and any surgical procedures received. (3) Understand the patient's situation by recording the patient's disease history even when the patient does not ask about what they want to know directly and does not provide adequate explanations</li> </ol>
Discussion points	<ol style="list-style-type: none"> <li>Did the doctor adequately ask about the patient's disease history?</li> <li>Did the doctor consult the patient proactively by trying to understand what the patient feared and what the patient was curious about?</li> <li>Did the doctor adequately explain future actions?</li> <li>What were additional areas that needed to be explained to the patient?</li> </ol>

## Appendix 2. Semi-constructed Interview Questions

### Interview questions before the start of the educational program

- Have you ever had any personal experience regarding transgender communities? How are your feelings towards transgender people?
- What do you think transgender healthcare is? Do you think transgender specific healthcare is needed?
- What do you think the medical staffs should do regarding the transgender healthcare?
- What do you expect from this program?

### Interview questions during the educational program

- How was your experience taking the transgender healthcare educational program? How did you feel?
- (Have you ever looked up more about the related content or talked to others after taking the class?
- Did the classes meet your expectations before taking the class? If you didn't satisfy it, in what way?
- Did you feel uncomfortable when you were taking the educational program? How did you deal with the discomfort?

### Interview questions after the educational program

- What do you think transgender healthcare is? Do you think transgender specific healthcare is needed?
- What do you think the medical staffs should do regarding the transgender healthcare? What would you do regarding the transgender healthcare?
- Do you think has changed the most since you took the class?
- Do you think transgender healthcare educational program should be the part of the required curricula? If you think it should, what aspects are important?