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Abstract

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Keywords

Transgender, occupational therapy, education, students

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ABSTRACT

In order to be a successful practitioner, an occupational therapist must have proper knowledge for treating diverse populations, including clients who are transgender. However, many occupational therapy (OT) programs do not teach content that is specific to the transgender population. This study utilized a complementary mixed-methods design to determine how prepared occupational therapy students perceived themselves to be for working with transgender clients. Entry-level masters and doctoral level occupational therapy students from accredited OT programs across the United States that had completed at least their first Level II fieldwork were recruited to participate. Eighty-five occupational therapy students completed the quantitative survey, and a subsequent six students participated in the phone interview for the qualitative portion of the study. Nearly all of the participants reported that their educators prepared them "not at all" or "some" to work with clients who are transgender. The majority of the participants reported having had contact with members of the transgender community. However, only about a third of participants reported having any transgender content in their courses. The themes that emerged from the qualitative data were limited knowledge about the topic, patient as the educator, self-directed training, and awareness of barriers the transgender community faces. These findings suggest that academic accreditation standards need to be updated to include marginalized populations, including transgender content, to decrease barriers and improve overall care provided to clients.

Introduction

As of 2016, an estimated 1.4 million adults in the United States identified as transgender (Flores et al., 2016). Transgender refers to a person whose gender identity is different than the sex they were assigned at birth (Stryker, 2017). Despite this figure, health profession education curricula contain little to no training in working with people who are transgender. As a result, many healthcare professionals lack sufficient knowledge about transgender healthcare to ensure adequate services are provided. Coutin et al. (2018) found that many family medicine residents did not believe trans-health fell within their scope of practice and were likely to refer clients elsewhere. That same study showed that only 17% of healthcare specialists felt adequately prepared to care for transgender clients. This has a profound impact on access to care for this population, and providers specializing in transgender healthcare often have long waitlists (McPhail et al., 2016). In another study, over 80% of emergency physicians surveyed reported receiving no formal education on this population, despite almost 90% of them having cared for members of it (Chisolm-Straker et al., 2017). Beagan et al. (2015) found that doctors were uncomfortable treating this population due to lack of training in transgender healthcare.

Research by Cicero et al. (2020) found significant differences between transgender people and their cisgender (non-transgender) peers in both individual health-related factors and in health outcomes. The lack of training and familiarity among providers may contribute to such factors in both direct and indirect ways. One example of this is the extra burden placed on this population when their providers turn to them for missing information and education required to meet their health needs (Beagan et al., 2013). Insurance exclusions keep patients from accessing care as well. Some physicians and/or patients may employ loopholes, such as providing vague information or omitting information to ensure coverage of the costs associated with their care (Roller et al., 2015). However, such loopholes are not a comprehensive solution readily available to all. Occupational therapists have a clear mandate to follow their code of ethics, which includes providing care to all clients and striving for improved and equitable access to that care (American Occupational Therapy Association, 2020). As such, occupational therapy's role with transgender clients can and should extend beyond the treatment room through advocating and being agents for change regarding trans-healthcare.

Many individuals who are transgender also face discrimination in healthcare (Reisner et al., 2015). One study found that approximately 20% of transgender and gender diverse patients were refused care due to their gender identity (Stroumsa & Wu, 2018). And, as many as one in five transgender patients reported having postponed or avoided care due to having experienced disrespect or mistreatment from healthcare providers based on their gender identity (Reisner et al., 2015). A 2017 study by Acker revealed that 45% of students across majors of occupational therapy, social work, nursing, and psychology displayed moderate to high levels of transphobia. In addition, 75% of all respondents reported receiving little if any transgender content in their education (Acker, 2017). This fact may be linked to the lack of training and education they receive regarding the healthcare needs of people who are transgender.

Despite the current knowledge deficit, some research suggests there is a desire among healthcare professionals to learn more. A survey of doctors and nurses revealed an interest in receiving specialized education on this population (Beagan et al., 2013). Another study surveyed physicians and found that most had not taken a course nor any lectures containing lesbian, gay, bisexual, transgender, queer, and other sexual identity (LGBTQ+) information (Beagan et al., 2015). There are public and sometimes free LGBTQ+ educational opportunities (Ross & Bell, 2017) available through universities, community centers, and outreach projects. Some include workshops that familiarize attendees with terminology, pronoun usage, and appropriate questions to ask someone who is transgender (Ross & Bell, 2017). However, healthcare professionals require more specialized training than these options can provide. A study by Kelley et al. (2008) showed that implementing one course regarding LGBTQ+ healthcare increased medical students' willingness to treat patients with gender identity differences. Participation also correlated with an increased opinion that familiarity with the concepts of sexual orientation and gender identity are vital in medical practice (Kelley et al., 2008).

Occupational therapists interact with transgender clients across all client populations and treatment settings. It is therefore essential that they receive the necessary professional training in order to provide appropriate care and avoid problematic interactions that lead to health disparities and poor outcomes. Currently, however, academic programs in occupational therapy have no formal requirement for transgender content within their curriculum. The resulting gap in knowledge leaves many practitioners ill prepared to work successfully with clients in this population. The purpose of this study was to examine occupational therapy students' perceptions about their preparedness to work with transgender individuals. The study's target population consisted of current students of accredited entry-level masters and doctoral occupational therapy programs in the United States who had completed their first Level II fieldwork.

Methods

Research Design

This study's purpose was to explore whether occupational therapy students have received training related to transgender topics, and if so, how well they believe it has prepared them for future practice with this population. Researchers used a complementary mixed methods design (Greene et al., 1989). First, a quantitative questionnaire was used to measure students' perceived level of preparedness. There was an option at the end of the survey for participants to indicate whether they would like to participate in a semi-structured phone interview. A general inductive approach was used to collect the qualitative data (Thomas, 2006). The study was approved and conducted in accordance with the university's institutional review board. Participants consented to participate in the study by completing and submitting the online survey.

The quantitative sampling procedures used convenience sampling (Creswell & Creswell, 2018) to recruit via email to faculty members at accredited U.S. entry-level masters and doctoral occupational therapy programs. The qualitative sample procedures used a saturation approach (Creswell & Creswell, 2018). The subsequent

volunteer participants taken from the survey were interviewed until the data reached saturation, which ended the qualitative data collection process. Inclusion criteria was comprised of students who had completed their first Level II fieldwork. Exclusion criteria for this study were third-year occupational therapy students at the university where the research was conducted, as well as schools not on the American Occupational Therapy Association website's programs list for accredited entry-level masters and doctoral occupational therapy programs.

Instruments

The quantitative portion of this study used a survey consisting of questions formulated by the researchers along with scales and questionnaires from other studies. The Transphobia scale from Nagoshi et al. (2008) and questions from table 1 and 2 from a study by Erich et al. (2007) on social workers' education regarding transgender content were modified. The Transphobia Scale "measures prejudice against transgender individuals" (Nagoshi et al., 2008). Questions adapted from Erich et al.'s 2007 study are indicated in Appendix A. Permission to use and modify these scales for the interview was obtained from the authors of those scales. The survey questions used in this study were reviewed and approved by an expert panel of people knowledgeable in transgender healthcare, which included transgender individuals.

The survey was administered through Qualtrics. A pilot survey was reviewed by an expert panel prior to the beginning of the study. The pilot survey was given to third year OT students of a midwestern university, using a snowball sampling technique over a two-week period. Based on review and consideration of student feedback collected during the pilot, no changes were made to the survey.

The phone interview contained 10 open-ended questions (see Appendix B) designed to have the participant describe if they have had training on transgender content before, and if so, what it consisted of. The interview questions were reviewed by an expert panel of people who were knowledgeable of transgender healthcare.

Data Analysis

For the quantitative portion of the study, researchers used univariate statistics. The data was exported to IBM SPSS Statistics software (version 26), then the responses from the Likert scale were ordinally coded for each survey question individually. Univariate statistics of mean, range, standard deviation, median, and interquartile range (IQR) were used to analyze participant's responses not in relation to other variables. No inferential statistical procedures were used.

A general inductive approach was used by carefully analyzing the transcripts and paraphrasing all interview data into sentences or short phrases (Thomas, 2006). This was completed by the first author. Next, the first five authors analyzed the phrases as a group and developed themes that summarized the data and related to the objectives (Thomas, 2006). Analyzing the data as a group allowed for perspective triangulation and persistent observation, which promoted validity and credibility (Lincoln & Guba, 1985).

Results

Quantitative Data

The survey link and information were sent to qualifying occupational therapy departments in early October, 2019. The survey remained open for four weeks with one reminder email sent approximately two weeks after the survey opened. The Qualtrics survey was initiated by 122 students. 120 students agreed to participate in the study, while 2 students did not agree to participate in the study. Next, 97 students responded that they had completed the first Level II fieldwork. Eighteen students responded they had not and were, therefore, not included in the study. Eighty-five participants continued to fully complete the survey.

Tables 1-4 show data from the survey. Most of the participants identified with she/her pronouns (78.8%) and approximately 90% of the participants were between 20 and 29 years of age. More than three quarters of the participants resided in one of three United States regions: Central, Northeast, and Southeast. Approximately four in five participants were white. Over half of the participants had undergraduate majors in the sciences (54%) followed by liberal arts (40%). Details of participant demographics were provided in Table 1.

Table 1

Sociodemographic Characteristics of Participants

	***n* (%)**
Pronouns	
She/her	67 (78.8)
He/him	4 (4.7)
Other (write-in)	
Miss/Mrs.	4 (4.7)
Female	1 (1.1)
No response	9 (10.5)
Age (years)	
20-24	53 (62.4)
25-29	23 (27.1)
30-34	4 (4.7)
35-39	4 (4.7)
40+	1 (1.2)

Region	
Northwest	2 (2.4)
West	0
Southwest	3 (3.5)
South	2 (2.4)
West North Central	8 (9.4)
Upper Midwest	4 (4.7)
Central	29 (34.1)
Northeast	12 (14.1)
Southeast	24 (28.2)
No response	1 (1.2)
Ethnicity	
White	69 (81.2)
Black/African American	2 (2.4)
Asian	3 (3.5)
Native Hawaiian/Pacific Islander	0
American Indian/Alaska Native	0
Other (write-in)	
Hispanic/Latina/o	3 (3.5)
Biracial	2 (2.4)
South Asian	1 (1.2)
Black and White	1 (1.2)
Don’t know/Not sure	0
Prefer not to answer	3 (3.5)
No answer	1 (1.2)
Undergraduate Majors	
Liberal Arts	34 (40.0)
Sciences	46 (54.1)
No response	5 (5.9)
Undergraduate Minors	
French	1 (1.2)
Kinesiology	1 (1.2)
No response	83 (97.6)

Note. N = 85.

The majority of the participants (81%, n=69) reported they had contact with the transgender community. However, content on the transgender community was not included in 64% (n=54) of participants' courses or texts and in 52% (n=44) participants' classroom lectures. Approximately 61% (n=52) of participants had not worked with someone who identified as a member of the transgender community. Furthermore nearly 70% of the participants had not attended a workshop or seminar regarding persons who are transgender outside of their formal education.

When asked how prepared participants felt providing services using transgender-specific adaptive devices, most of participants answered "not competent at all" regarding each device: commercial gaff underwear (79%, n=66), tucking (74%, n=63), packing (73%, n=62), commercial chest binder (65%, n=55), and binding (62%, n=52). Nearly half of the participants (47%, n=40) defined transgender as one who has a gender identity different from their biological sex/sex assigned at birth and close to 13% of participants (n=11) defined as identifying with the opposite gender from the one which you were born. Other less frequent definitions were provided in Table 2.

Table 2

Participant Transgender Definitions

Definition	*n* (%)
One who has a gender identity different from their biological sex/sex assigned at birth.	40 (47.1)
Identifying with the opposite gender from the one which you were born.	11 (12.9)
Born in the wrong body, as the wrong gender, with a biological sex they don't identify with.	5 (5.9)
Someone who transitions from the gender identified at birth to another gender	3 (3.5)
"I don't understand how someone can think they are the opposite sex."	1 (1.2)
"Their born gender is the gender that they identify as."	1 (1.2)
"A means of identification."	1 (1.2)
No response	23 (27.1)

Note. N = 85. Responses were broadly categorized.

Participants were given the opportunity to provide their perception on preparedness to work with members of the transgender community. As listed in Table 3, 51% (n=43) of participants reported their educators did not prepare them to work with the transgender community at all and only 1% of participants stated that educators prepared them well to work with this population. Approximately 47% (n=40) and 39% (n=33) of participants were marginally knowledgeable and reasonably knowledgeable about issues unique to the transgender community respectively. As for the extent that participants felt competent to serve the transgender community, about 44% (n=37) felt minimally competent and 39% (n=33) felt somewhat competent.

Table 3

Perceived Preparedness to Work with the Transgender Community

Question	*n* (%)
How well have your educators prepared you to work with the transgender community?	43 (50.6)
Not at all	40 (47.1)
Some	1 (1.2)
A lot	1 (1.2)
No response	
To what extent are you knowledgeable about issues unique to the transgender community? I have/am:	2 (2.4)
No knowledge	40 (47.1)
Marginally knowledgeable	33 (38.8)
Reasonably knowledgeable	8 (9.4)
Very knowledgeable	2 (2.4)
Extremely knowledgeable	0
No response	
To what extent do you feel competent to serve the transgender community?	6 (7.1)
Not competent at all	37 (43.5)
Minimally competent	33 (38.8)
Somewhat competent	6 (7.1)
Very competent	2 (2.4)
Extremely competent	1 (1.2)
No response	

Note. N = 85. Questions adapted from Table 1 and 2 of Erich et al., 2007.

Participants expressed their attitude towards clients who are transgender. Of the 10 statements, more than 60% of participants either strongly disagreed or disagreed with eight statements. The statement in which the greatest proportion of participants (82%, n=70) either strongly disagreed or disagreed was “I am uncomfortable around clients/patients who do not conform to traditional gender roles.” The statement in which the least proportion of participants (42%, n=36) either strongly disagreed or disagreed was “I feel more prepared interacting with client/patient's whose gender I know.” The equal number of participants also strongly agreed or agreed to the same statement. All statements and participant responses are provided in Table 4.

Table 4

Attitudes Towards Clients who are Transgender

Statement	Strongly disagree /disagree	Neutral	Strongly agree /agree	No response
	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
I do not like it when I cannot identify the client/patient's gender.	57 (67.1)	16 (18.8)	12 (14.1)	0
I feel more prepared interacting with client/patient's whose gender I know.	36 (42.4)	12 (14.3)	36 (42.4)	1 (1.2)
I think there is something wrong when a client/patient says they are neither a man nor a woman.	69 (81.2)	9 (10.6)	6 (7.1)	1 (1.2)
I feel better when a client/patient knows whether they are a man or a woman.	53 (62.4)	17 (20.0)	15 (17.6)	0
I avoid talking to clients/patients about their gender when it is unclear to me.	37 (43.5)	12 (14.3)	34 (40.0)	2 (2.4)
I do not like conversing with clients/patients about their gender.	58 (68.2)	17 (20.0)	9 (10.6)	1 (1.2)
I need to know the client/patient's gender when treating them.	61 (71.8)	72 (84.7)	12 (14.1)	1 (1.2)

I do not like when I cannot tell what gender my client/patient identifies as.	61 (71.8)	11 (12.3)	12 (14.1)	1 (1.2)
I am uncomfortable around clients/patients who do not conform to traditional gender roles.	70 (82.4)	8 (9.4)	7 (8.2)	0
I feel better when a client/patient identifies in a traditional male or female role.	60 (70.1)	9 (10.6)	15 (17.6)	1 (1.2)

Note. N = 85. Questions adapted from Nagoshi et al., 2008.

Qualitative Data

Authors conducted six phone interviews to gain deeper knowledge of the subject matter. Interview participants varied in ages from 20-24 years old (n=4), 25-29 years old (n=1), and 30-34 years old (n=1). They were in occupational therapy programs in Florida (n=2), New York (2), South Carolina (n=1), and Colorado (n=1). The following themes were identified: (i) limited knowledge; (ii) patient as educator; (iii) self-directed training; (iv) and awareness of barriers.

Limited Knowledge

Participants reported various levels of limited knowledge and understanding regarding treating clients who are transgender. After asking participants how their formal education prepared them to provide services to members of this population, participant #4 reported, “I don’t think my schoolwork has prepared me much.” In addition, participant #1 had a similar response:

> I feel like I only know what I know, and it barely scratches the surface. There’s so much more to learn. But I only know what I know because we decided to dive deep into what it is, how to work with a transgender client. Other than that, I don’t think in my education in the OT program I would have learned much at all.

Participants reported specific areas where they did not have sufficient knowledge. These included areas specific to transgender care, such as post-surgery showering and wound care as well as documentation using identity-confirming language and billing for medical necessity. Documentation is an important factor in care to ensure that clients receive appropriate services that are reimbursable.

Patient as the Educator

The second theme identified was that participants expected transgender clients to educate them about their healthcare needs. Participant #2 stated, “I think I would be comfortable talking to my client and including them in everything and learning from them.” This participant also discussed the importance of open communication. They stated, “When I do have a client with needs that are different than mine or somebody that I know, I would be comfortable just talking to them about it because they are the expert.” Participant #1 felt that “it is okay to ask, just be respectful.”

Several participants mentioned that occupational therapists should provide holistic care. While this approach is appropriate for all clients, the necessity of some familiarity with the needs of particular populations was not widely noted among participants. Participant #5 stated:

> I have no training on assistive devices clients who are transgender may use or how to approach that other than to just communicate with the clients and see what their needs are, which is obviously a very important staple of what OT is about.

Participants also discussed reasons practitioners may avoid asking their clients who are transgender questions. Participant #5 stated, “There seems to be some very much blurred lines on how to just communicate with this population. Like understanding how to properly use pronouns, but I’d be respectful and considerate of like how they want to be treated.” Referring to interactions between occupational therapists and their clients, participant #1 noted:

> They don’t know how to act towards a transgender individual, just because I feel they don’t know how to relate, or they don’t know how to approach it, and they don’t want to fight. They don’t want to seem offensive. If you are hesitant sometimes that might seem as you don’t want to work with them or they might not open up to you as much, so that rapport would already be completely tarnished.

Self-Directed Training

Several participants identified they had elected to seek out transgender education and training. Their experiences comprised of a transgender workshop, a safe zone training, watching a documentary about a transgender member of the military, and a transgender workshop at an American Occupational Therapy Association (AOTA) conference. Additionally, participants sought out education through a sex and sexuality workshop at a state conference, a transgender alliance short course in an undergraduate program, a research project, and attending transgender awareness events. A majority of the participants stated they recognized their OT program was not preparing them to work with transgender individuals. For that reason, they sought training in transgender care from other sources. Participant #4 stated, “I don’t think my schoolwork has prepared me much...it would mostly be the work that I’ve done on my own outside of class”.

Most of the participants expressed that their OT programs taught them to provide holistic, client-centered care, with an emphasis on respecting a client and their differences. However, no participants reported receiving transgender-specific training in their OT programs that would prepare them with the knowledge to do so with this population. Participant #2 stated:

> I do think that the things that I've done outside of my grad program have given me a little bit more information and have opened my eyes and my thoughts on including people...it seems scary when you don't know something...so I think just educating myself as much as I could kind of just allowed me to feel more comfortable, so that when I do have a client with needs that are different than myself...I would be comfortable.

Awareness of Barriers

Students were asked what potential barriers they may face when working with clients who are transgender. Many mentioned possible situations relating to rapport with clients. These include mistakenly using the wrong pronoun, the occupational therapy student being hesitant to discuss gender identity with the client, the client being hesitant to talk about gender identity with the occupational therapy student, and addressing the client's comfort level with completing activities of daily living (e.g., showering and dressing during the session). Participant #3 expressed how the client's comfort level with their occupational therapy student "affects...how…therapy goes forward."

Another common barrier involved the attitudes of colleagues. Participant #4 noted: "I think the biggest [barrier] is interacting with other healthcare professionals who might not be empathetic to the things that transgender patients are going through or who might not respect names and pronouns as they should." Students anticipated that caring for transgender clients may be novel in some workplaces. Participant #2 expressed: "if [transcare] has never been included in the practice before, it would be a big deal."

Mixed Methods Analysis

A mixed method approach was utilized to render a more inclusive dataset and broaden the depiction of occupational therapy students' perceptions of preparedness to work with transgender individuals. Both quantitative and qualitative data supported the finding that exposure to the transgender community alone did not increase level of confidence when working with this population. When looking at both types of data, the concepts of comfort and competence were not directly related: the fact that students felt comfortable with gender identity as a component of therapist-client interaction did not translate into increased confidence in knowledge or overall preparedness for providing services. Possible reasons for this discrepancy emerged from the qualitative portion of the research study, which indicated that because their occupational therapy education did not prepare them sufficiently, they resorted to utilizing self-directed trainings or even their own clients as a means to bridging the competency gap.

Mixed method results highlighted possible areas of content to be included in occupational therapy education to improve students' perceived level of preparedness to work with members of the transgender community. Use of adaptive devices, documentation, and billing were among the most consistently mentioned areas to include. Furthermore, participants in the interviews identified concerns that non-gender affirming therapeutic environments could prove to be an additional barrier to providing care for transgender clients. Therefore, education provided to occupational therapy students should also focus on facilitation of advocacy skills in addition to intervention content.

Discussion

This study was the first to use a mixed methods approach to evaluate the perceived preparedness of occupational therapy students of accredited masters and doctoral programs to work with transgender clients. The authors found that occupational therapy students did not feel prepared to work with the transgender population. The feelings of incompetency were consistent across all types of interactions with transgender clients, from rapport building through documentation and billing. The majority of participants expressed feelings of incompetency specifically in provision of clinical care involving the use of specific adaptive devices. When participants were asked how competent they felt to provide services using five pieces of adaptive equipment with transgender clients, the majority felt either "not competent at all" or "minimally competent." This data highlighted gaps in current course content.

Most participants reported having had contact with the transgender community, but only roughly a third reported having any transgender content in their occupational therapy curriculum. Previous literature also revealed a lack of transgender content in health profession curricula (Beagan et al., 2013, 2015; McPhail et al., 2016). When asked how well their educators have prepared them to work with the transgender community, nearly all reported either "not at all" or "some."

Additionally, half of the students rated themselves as having no knowledge or marginal knowledge of issues unique to the transgender community and only 7% reported feeling "very competent" to serve members of this population. Notably, this study found that comfort and competence were not directly related, echoing previous literature finding that healthcare students felt comfortable interacting with, but not educated enough to treat transgender clients (Greene et al., 2018; Nowaskie & Sowinski, 2018). Students in healthcare professions are generally open to learning about transgender content (Beagan et al., 2013; McPhail et al., 2016). This study found that about a third of OT students had independently accessed transgender workshops and other self-directed trainings to learn more about transgender topics and content. OT students in another study echoed this sentiment (Bolding et al., 2020). However, these workshops vary greatly in content and quality, are not standardized, and do not specifically address occupational therapy concepts and their application.

Furthermore, there were participants who expressed having to rely on their transgender clients to provide them with education regarding their care. However, it is not appropriate for a client to be responsible for educating their occupational therapist in order to get appropriate care. A client should be able to trust that their occupational therapist is well trained and competent to serve their needs without depending on them for extensive information, and transgender clients are no exception. This is a particular concern as it can contribute to a problematic client/service-provider power dynamic. Putting the burden of responsibility for informing providers on the client, who may or may not be in a position to carry out that task, can lead to poor health outcomes, increased health disparities, and interactions that negatively impact the client's experience of the services they receive.

The qualitative portion of this study provided valuable additional insight into participants' perceptions. One of the main themes found was the limited knowledge participants reported regarding their understanding of how to work with clients who are transgender. A 2018 study found similar results, stating that there was a lack of even theoretical knowledge on this topic (Aylagas-Crespillo et al., 2018). According to the occupational therapy code of ethics, a practitioner should seek training in the needs of any population with whose needs they are unfamiliar. Since an occupational therapist will likely work with a transgender individual at some point over the course of their career, it is important for all practitioners to receive education in best practices for this population.

Another theme found during the interviews was the widely held expectation that patients would and should educate health care providers on the specifics of transgender health. However, this places an extra burden on the patient and may contribute to a frustrating experience of having to explain sensitive, and often not relevant, details of their life to a person who is insensitive and ill-equipped to meet their needs. Furthermore, since therapists do not hold the same expectations of other clients, singling out this one group of people would contribute to the disparity in health care that transgender patients face.

A third theme was barriers that participants perceived they might confront. Among these were their own issues of discomfort, particularly around pronoun usage and activities of daily living. Additional concerns included possible negative attitudes from colleagues and workplaces that may not allow for privacy around disclosure of gender and other personal details even when unnecessary for service provision. To address these areas of concern, students should have opportunities built into their academic training to learn about both the needs of this population and best practices for meeting them, including workplace education and environmental or protocol modifications. These concerns further provide opportunities for improvements in intake documentation and therapist-client communication.

Implications for Occupational Therapy Education

One recent study on implementation of an interprofessional experience found that providing a case study with a standardized patient from the transgender community and allowing for discussion with that patient were found to be most useful by students (McCave et al., 2019). A panel discussion with members of the transgender community

has been found to increase students' confidence in providing care for this population (McCave et al., 2019; Newsome et al., 2018). Positive contact with members of this population is necessary for improving attitudes (Noonan et al., 2018).

Transgender education should be woven throughout the OT curriculum to provide context for transgender needs given a variety of client factors and performance skills, as well as throughout the lifespan. However, there is currently no curriculum standard designed to accomplish this goal, and OT educators often draw from the World Professional Association for Transgender Health (WPATH) Standards of Care (World Professional Association for Transgender Health, 2011). While the WPATH Standards of Care can provide information, including possible medical needs, it does not necessarily communicate how healthcare professionals can apply these standards to common practice settings or how to prepare practitioners who are informed and equipped to meet the needs of this population.

Furthermore, it is critical for occupational therapy students to develop skills to advocate for the transgender population in the healthcare setting. It is possible that an occupational therapist may work with other healthcare professionals who are not educated on transgender needs and may even observe discriminatory practices (Beagan et al., 2013). Occupational therapy students must first become educated themselves before they can advocate for the transgender population in the workplace.

Conclusion

This study addressed the gap in research related to occupational therapy students' perceived preparedness to work with clients who are members of the transgender community. The study had several strengths. The mixed methods design allowed the interview themes to compliment the survey results. The survey developed by the authors provided useful data, especially pertaining to common adaptive equipment used by the transgender population. Limitations included that the survey's validity and reliability was unknown and the qualitative portion was not a generalizable sample, with only six participants completing interviews. In addition, "no response" was an answer choice available throughout the survey. Also, there may be alternative explanations for the data. Students may have exaggerated their comfort level due to response bias. Lastly, the findings may not be generalizable to all OT students. Most of the survey participants reported living in the eastern half of the United States. Participants were not asked to state their university, so the number of responses per university is unknown.

Results highlighted the persistent need to include transgender-specific content in occupational therapy curricula. While many participants expressed a high level of perceived comfort interacting with members of this population, the majority perceived they did not feel adequately prepared to provide services. Furthermore, despite participants' awareness of resources that they could seek out individually, these were not enough to bridge the gap between general knowledge and competence as a service provider. Methods for implementing content should be further explored to create effective lesson plans that include facilitation of intervention and advocacy skills.

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APPENDIX A

Survey Questions

Education and exposure to the transgender community:

Response choices: yes, no, no response

1. Have you had contact with members of the transgender community?
2. Did any of your courses/texts include content on the transgender community?*
3. Do classroom lectures include content on the transgender community?
4. Have you worked with someone who identifies as a member of the transgender community?
5. Have you attended a workshop or seminar regarding persons who are transgender outside of your formal education?

Adaptive equipment competency:

How prepared do you feel providing services including the following adaptive devices?

Response choices: not competent at all, minimally competent, somewhat competent, very competent, extremely competent, no response

6. Binding
7. Commercial Chest Binder
8. Packing
9. Commercial Gaff Underwear
10. Tucking

11. What does transgender mean to you?
    Participants typed their own response in a textbox

Perceived preparedness to work with the transgender community:

12. How well have your educators prepared you to work with the transgender community?**

    Not at all

    Some

    A lot

    No response

13. To what extent are you knowledgeable about issues unique to the transgender community?** I have/am:

    No knowledge

    Marginally knowledgeable

    Reasonably knowledgeable

    Very knowledgeable

    Extremely knowledgeable

    No response

14. To what extent do you feel competent to serve the transgender community?**

    Not competent at all

    Minimally competent

    Somewhat competent

    Very competent

    Extremely competent

    No response

<u>Attitudes towards clients who are transgender***</u>

Response choices: Strongly disagree, disagree, neutral, agree, strongly agree, no response

15. I do not like it when I cannot identify the client/patient's gender.
16. I feel more prepared interacting with client/patient's whose gender I know.
17. I think there is something wrong when a client/patient says they are neither a man or a woman.
18. I feel better when a client/patient knows whether they are a man or a woman.
19. I avoid talking to clients/patients about their gender when it is unclear to me.
20. I do not like conversing with clients/patients about their gender.
21. I need to know the client/patient's gender when treating them.
22. I do not like when I cannot tell what gender my client/patient identifies as.
23. I am uncomfortable around clients/patients who do not conform to traditional gender roles.
24. I feel better when a client/patient identifies in a traditional male or female role.

*Question adapted from Table 1 of Erich et al., 2007.

**Questions adapted from Table 1 and 2 of Erich et al., 2007.

***Questions adapted from the Transphobia Scale in Nagoshi et al., 2008.

APPENDIX B

Interview Questions

1. What does transgender mean to you?
2. Have you had specific transgender-related content in your OT program?
    a. If yes: tell me about that experience.
3. Have you attended any workshops, seminars that addressed transgender content?
    a. If yes: tell me about that experience.
4. Have you worked with a client who identifies as transgender?
5. How do you think your education prepared you or did not prepare you for future work with clients who identify as transgender?
6. Do you have any uncertainties about treating transgender clients?
    a. If so, explain.
7. What additional information would be helpful in order to feel comfortable working with transgender clients?
8. Can you think of work settings where you would interact with a client who is transgender?
9. What are some potential barriers you may face when working with clients who are transgender?
10. Where would you see transgender content fit within your OT curriculum?

What age category are you?: 20-24, 25-29, 30-34, 35-39, 40+
Which state do you live in?