

# Do the attitudes and practices of Australian pharmacists reflect a need for education and training to provide care for people who are transgender?

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## Abstract

**Background:** Many transgender and gender diverse (TGD) people access care through community pharmacy in Australia. However, there is limited information available about the role of Australian pharmacists in providing care for TGD people.

**Objective:** To explore the attitudes, practices, and training needs of pharmacists in the provision of care for TGD people in Australia.

**Method:** Pharmacists Australia-wide were invited to participate in an online survey through Facebook, e-newsletters of pharmacy organizations and a professional pharmacy journal. Quantitative data were analysed for descriptive and inferential statistics. A Fisher exact test was used to investigate associations between two variables. Results with  $P$  value  $<0.05$  were considered statistically significant. Content analysis was used to analyse data from free-text responses.

**Result:** Of the 169 respondents, the majority were female (75.1%), aged below 40 years (74%) and with less than 10 years of working experience as a pharmacist (58%). Although 95% of the sample agreed that they had an important role in the provision of care for TGD people, only 29.6% were confident about their knowledge of pharmacotherapeutic treatments for gender affirmation. Only 2.4% had received education about TGD care at university, and only 5.3% received any TGD healthcare training over the past 5 years.

**Conclusion:** Although pharmacists had a positive attitude and recognized their role in TGD care, they expressed a lack of confidence in their knowledge to be a barrier to providing quality care. Most recommended the need for more education about TGD healthcare in pharmacy curricula and continuous professional education activities.

**Keywords:** pharmacy; healthcare; non-binary; professional education; gender diverse; LGBTQIA+

## Introduction

Transgender and gender diverse (TGD) people are people whose gender identity is different from their assigned sex at birth [1]. Competent healthcare provision to TGD people requires careful consideration of the cultural expectations and unique healthcare needs of this population [2]. Many TGD people access pharmacies for various reasons, including obtaining prescription and non-prescription medications and other services [3].

TGD people and pharmacists believe that pharmacists play an important role in TGD healthcare by providing pharmaceutical services such as dispensing prescription and non-prescription medications, counselling about hormonal therapies, performing medication reviews, and identifying adverse drug reactions [4, 5]. Pharmacies also provide services such as blood pressure checks, blood sugar checks, smoking cessation, lifestyle advice, needle syringe programme, and vaccinations that are potentially beneficial for improving the healthcare outcomes of TGD people [3]. However, previous

studies have reported that TGD people received pharmaceutical care that lacked cultural competence [5, 6]. Additionally, some TGD people stated that inadequate understanding of pharmacists about TGD healthcare issues potentially impacted the quality of care that they received [5].

Many TGD people have experienced negative healthcare encounters, including stigmatization, marginalization, deadnaming, and misgendering [7]. Deadnaming is an act of calling someone by the name they no longer use and misgendering is using non-gender-affirming language, for example, referring to a person with the wrong pronouns [8]. Such experiences in a pharmacy setting have deterred these people from accessing further care from that pharmacy [5, 6]. Some TGD people preferred minimal interactions with pharmacists and staff [5] or procured their hormonal medications from unverified online resources [6] to avoid perceived discomfort in these interactions. Previous studies have reported that pharmacists lacked comfort and confidence in their knowledge of gender-affirming therapies and communication skills to provide culturally respectful care to TGD people [4, 9, 10].

Although pharmacists are well-positioned to provide healthcare services to TGD people, they require more education in TGD healthcare to provide appropriate care [4, 9, 10].

While only a few studies have evaluated the attitudes and practices of pharmacists in providing care to TGD people [4, 9–11], no study has investigated the attitudes, practices, and training needs of Australian pharmacists at a national level. A previous qualitative study of pharmacists conducted in Queensland, Australia, found that pharmacists required additional training in TGD healthcare to enhance their communication abilities and clinical expertise in TGD health to provide adequate care to TGD people [10]. Therefore, this study aims to explore Australian pharmacists' attitudes, practices, and training needs for the provision of care to TGD people.

## Method

### Participants and recruitment

Convenience sampling was used to recruit the participants. All pharmacists in Australia currently registered for general practice with the Australian Health Practitioner Regulation Agency were eligible to participate.

This cross-sectional survey study was advertised on Facebook pages of the Pharmaceutical Society of Australia's Early Career Pharmacists Group, Consultant Pharmacists Australia Group, James Cook University (JCU) Pharmacy Alumni, and JCU Pharmacy Students group. The Pharmaceutical Society of Australia (PSA) and the Pharmaceutical Guild of Australia (PGA) were requested to distribute the survey link to their members through e-newsletters. The survey link and QR code were included in an article published in the Australian Journal of Pharmacy, a professional pharmacy journal in Australia encouraging participation [12].

### Data collection

Based on the previous qualitative studies of pharmacists [5] and TGD people [10] and the Theoretical Framework of Acceptability (TFA) [13], an online survey instrument was designed using the Qualtrics platform [14]. The survey included three sections with a total of 30 questions—open and closed-ended questions with yes/no, multiple-choice or Likert scale responses. These questions assessed the attitudes and practices, and training needs of pharmacists in providing TGD healthcare. The TFA constructs of affective attitude, burden, opportunity cost and ethicality were reflected in the survey questions about attitudes and barriers to providing care to TGD people in pharmacy [13]. The questions evaluating the practices of pharmacists in providing TGD care were based on the TFA constructs of intervention coherence, opportunity cost, perceived effectiveness and self-efficacy [13]. This survey was piloted by two community pharmacists and three pharmacist academic staff of JCU for reliability and face and content validity. Addition of a free-text response to collect comments about asking pronouns of TGD people in pharmacy was recommended by two pharmacists and therefore the survey was revised accordingly (Supplementary Material 1, Question 7).

The survey was designed to take approximately 15 min to complete. Using a separate link to protect the anonymity of respondents, all participants were asked to indicate their willingness to participate in TGD healthcare training to be provided at a later stage. The survey remained open from July

2021 to May 2022, during which time the survey link and QR code were promoted through a journal article and various e-newsletters. The Internet Protocol address of the user's computer was recorded to prevent multiple participation of participants.

### Data analysis

Data were uploaded to SPSS software to enable the generation of descriptive and inferential statistics. Due to small sample sizes, a Fisher exact test was used to investigate associations between two categorical variables, such as the education level of the participants and their confidence in providing TGD care. The results were considered statistically significant if the *P* value was less than 0.05. Data from free-text questions were analysed by applying content analysis.

### Ethics

This study was approved by the Human Research Ethics Committee of JCU (Approval no. H8265). When participants confirmed their informed consent to participate, the Qualtrics system gave them access to the survey.

## Results

A total of 209 pharmacists responded to the survey; however, only 169 surveys were complete and included. Participant characteristics are presented in Table 1. Most participants were female (75.1%), aged below 40 years (74%), and with less than 10 years of working experience as a pharmacist (58%). This demographic presentation is higher than that of pharmacists within these categories in the snapshot of the pharmacy workforce in Australia [15]. More than 17% of participants identified as belonging to LGBTIQ+ communities. Although exact statistic in Australia is unavailable, it is estimated that about 11% of the Australian population identifies as LGBTIQ+ [16, 17].

### Data associated with the constructs of the TFA is reported below

#### Affective attitude, ethicality, intervention coherence, and self-efficacy

Overall, pharmacists displayed positive attitudes towards providing care to TGD people, suggesting high acceptability of such care delivery in pharmacy (Construct: Affective attitude, Ethicality). Although almost two-thirds of pharmacists were comfortable providing healthcare services to TGD people, only 41% were confident about providing such care (Fig. 1), indicating the 'self-efficacy' in providing such care was low. While more than 70% of pharmacists reported asking for the preferred names of TGD people, only about two-fifths frequently asked for personal pronouns (Construct: Intervention coherence). A free-text response about the use of pronouns generated 42 comments, and the themes derived from these responses are listed in Table 2.

About 95% of pharmacists agreed that they had an important role in providing care to TGD people (Fig. 2) (Construct: Affective attitude). More than 80% of pharmacists reported that they could provide culturally sensitive care to TGD people, and almost three-quarters agreed that they counselled TGD people with the same level of comfort as they counselled cisgender people about hormonal medications (Construct: Intervention coherence). However, only one-third

**Table 1.** Participant characteristics.

Participant characteristics	Frequency (%)
<b>Gender</b>	
Male	36 (21.3)
Female	127 (75.1)
Other (Non-binary, bigender)	3 (1.8)
Prefer not to say	3 (1.8)
<b>Member of LGBTQIA+ communities</b>	
Yes	29 (17.1)
No	136 (80.5)
Prefer not to say	4 (2.4)
<b>Age (years)</b>	
21–30	65 (38.5)
31–40	60 (35.5)
41–50	25 (14.8)
51–65	16 (9.5)
65 and above	3 (1.8)
<b>Years of experience working as a pharmacist</b>	
0–5	59 (34.9)
6–10	39 (23.1)
11–15	23 (13.6)
15–20	17 (10.1)
More than 20	31 (18.3)
<b>Accredited/credentialled pharmacist</b>	
Yes	59 (34.9)
No	110 (65.1)
<b>Post-graduate qualification</b>	
Yes	52 (30.8)
No	117 (69.2)
<b>Geographical location</b>	
ACT	7 (4.1)
New South Wales	45 (26.6)
Northern Territory	1 (0.6)
Queensland	63 (37.3)
South Australia	13 (7.7)
Tasmania	4 (2.4)
Victoria	23 (13.6)
Western Australia	13 (7.7)
<b>Currently providing healthcare services to TGD people</b>	
Yes	128 (74)
No	44 (26)
<b>Work setting</b>	
Community pharmacy	122 (72.2)
Hospital Pharmacy	20 (11.8)
Other	27 (16)

of pharmacists were confident about their knowledge of pharmacotherapeutic treatments for gender affirmation (Construct: Self-efficacy).

### Burden and opportunity cost

Burden implies the minimum amount of effort required to provide care to TGD people, while opportunity cost indicates the beliefs, values, or profits required to be given up providing

such care. Both constructs identified the barriers to the provision of care to TGD people. The most common barriers to the provision of care to TGD people in pharmacy were a lack of TGD healthcare training resources (89.9%) and no or inadequate staff training in TGD healthcare (82.8%) (Fig. 3). More than half of the pharmacists agreed that stigma towards TGD people, lack of privacy of patient consultation, and time constraints posed challenges to providing care to TGD people. Only a quarter of pharmacists perceived the reluctance of staff to treat or engage with TGD people and the inability to establish a trusted relationship with TGD people in the pharmacy as barriers to providing care.

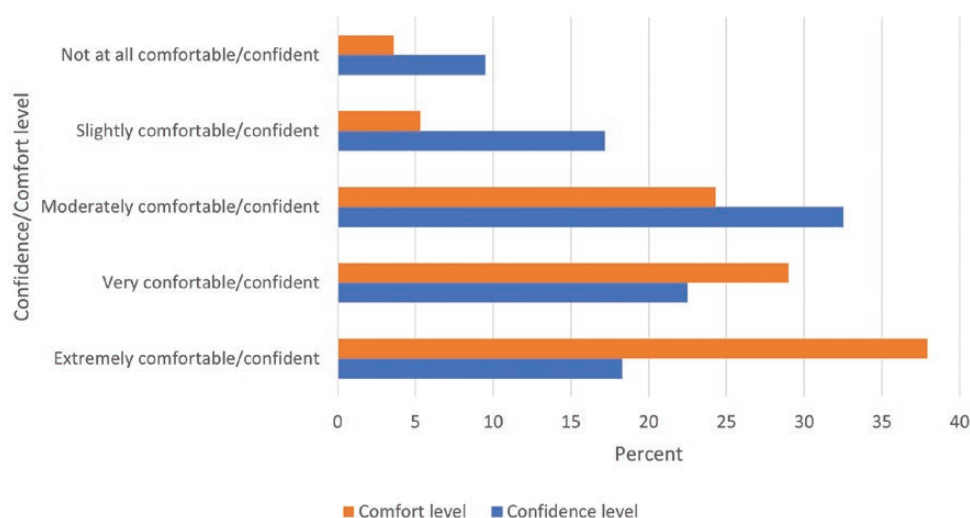
### Perceived effectiveness

The construct of perceived effectiveness was applied to understand pharmacists' education needs in TGD healthcare to provide adequate and appropriate care to TGD people. Only 2.4% of the pharmacists had received education about TGD care during their university degree, and only 5.3% had received any TGD healthcare training over the past 5 years. A small percentage of pharmacists reported being aware of TGD healthcare resources (15.4%), local TGD support groups (18.9%), and services (18.9%). About 95% of pharmacists agreed that pharmacists require more training in TGD healthcare, and many believed that such education should be included in the pre-registration pharmacy curriculum (89.3%) and continuing professional education (CPE) (94.1%). While less than 10% of pharmacists agreed that their pharmacy staff were adequately trained to provide culturally sensitive services to TGD people, approximately four-fifths agreed that their staff required training (Fig. 4). Three-quarters of pharmacists expressed their interest in participating in a training module about TGD healthcare that may be provided at a later stage.

There was a significant association between the comfort level in providing healthcare to TGD people and familiarity with TGD health resources ( $P = 0.001$ ), awareness about local TGD support groups ( $P = 0.015$ ), being an accredited pharmacist ( $P = 0.017$ ), and belonging to the LGBTQIA+ community ( $P = 0.013$ ). Pharmacists familiar with TGD health resources and support groups and those who were accredited pharmacists or belonged to the LGBTQIA+ community were more comfortable providing care to TGD people. Additionally, there was a significant association between the confidence level in providing healthcare to TGD people and gender ( $P = 0.046$ ), years of experience ( $P = 0.016$ ), familiarity with TGD health resources ( $P < 0.001$ ), awareness about local TGD support groups ( $P < 0.001$ ), and awareness about local TGD health services ( $P < 0.001$ ). Interestingly, a higher proportion of males (61.1%) indicated they were extremely/very confident in providing care to TGD people, compared to females (36.2%).

### Discussion

Although this study found that most pharmacists were providing care to TGD people in their practice settings, many lacked knowledge of TGD care and were unaware of the resources to provide appropriate care to TGD people, consistent with findings from an international study [4]. While for pharmacists in this sample, comfort and confidence levels in providing care to TGD people were higher than those reported for pharmacists in previous international studies [4,



**Figure 1.** Confidence and comfort level of pharmacists in providing care to TGD people.

**Table 2.** Use of pronouns—themes and illustrative quotes.

Theme	Frequency	Quote
Awkwardness	6	I just don't know when is a good time to ask it and how is the best way to address it.
Challenging for staff	2	It is hard for my older staff members to adapt and respect the change.
Comfortable in asking because of open attitude or exposure to TGD people professionally or personally	6	I identify as gay and am completely aware of and comfortable making transgender customers at ease with their preferred names and pronouns.
Confusion	5	Unsure about when to refer to he/she in a stage of their treatment.
Electronic prescription record challenges	2	The hospital system can be difficult to update.
Ignorance	3	They were born male; I call them by their male name. They were born female; I call them by their female name. It's simple.
Medicare issues	5	Medicare often needs you to use the name registered with Medicare to claim correctly. It's a bit humiliating for them to have to check why their script has been rejected for name mismatches.
Use non-gendered pronouns to circumvent asking for pronouns	5	I avoid the use of gendered pronouns wherever possible.

9], their request was for more education about TGD healthcare for pharmacists, pharmacy students, and staff.

## Strengths and limitations

There is no other study to date to quantitatively survey Australian pharmacists about their attitudes, knowledge, and training needs in TGD healthcare. The constructs of the TFA were valuable in determining the acceptability factors that may have affected pharmacists' provision of TGD care.

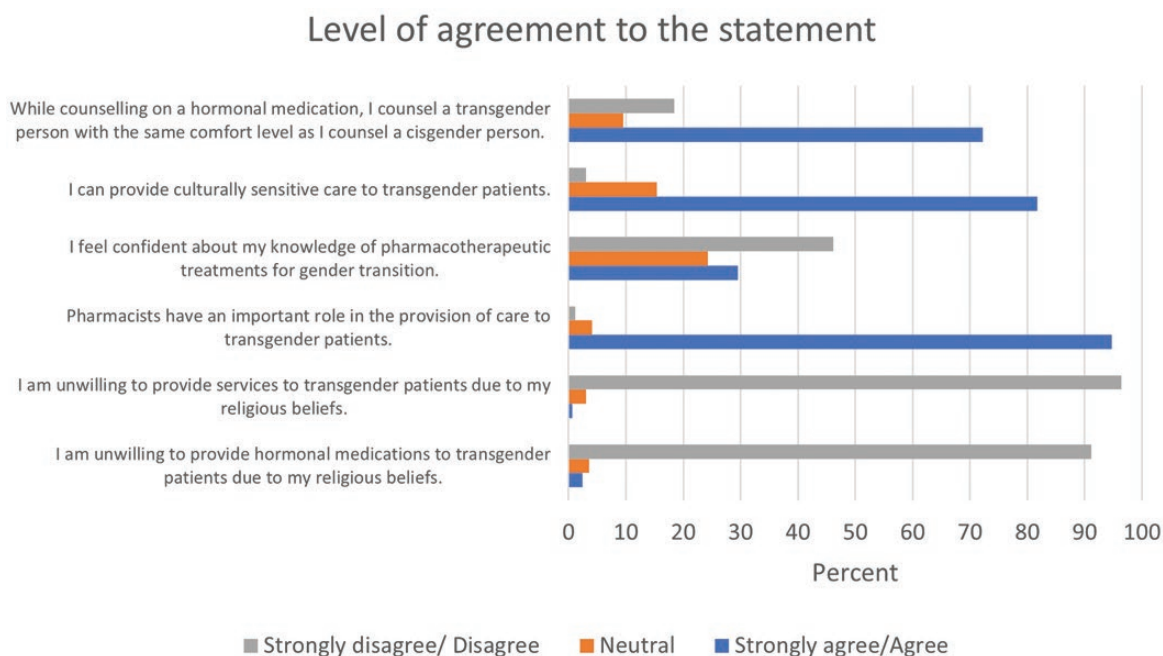
There are several limitations to this study. Although the survey link was live for 11 months, the survey response was low. The possible reason may be that this survey was conducted during the COVID-19 pandemic, and many pharmacists were very busy during this period because of more duties, such as the rollout of COVID-19 vaccinations through community pharmacies in Australia. Since this is an exploratory study, the limited sample size may affect the generalizability of results. The participants were significantly younger and more likely to identify as female. The proportion of pharmacists identifying as LGBTQIA+ was substantially greater than the size of the general LGBTQIA+ population. The study sample may not be representative of the whole pharmacist

workforce registered for general practice and, therefore, may affect the generalisability of the results. Higher acceptance of gender and sexual diversity by the younger pharmacist population may be a possible factor in participating in the study. Participants with greater interest in providing care to TGD people may have responded to the survey compared to the general pharmacist population. This could have potentially introduced bias into the results. Additionally, in Australia, pharmacies can be only owned by pharmacists. Many older pharmacists serve as pharmacy proprietors, and they may not be directly involved in routine pharmacy care provision to clients. This may be a reason for the low participation of the pharmacists from the older age group. Furthermore, pharmacists who do not use social media, do not subscribe to professional journals and newsletters of the PSA and the PGA or have limited internet access or literacy may not have participated in this survey.

## Comparison with published literature

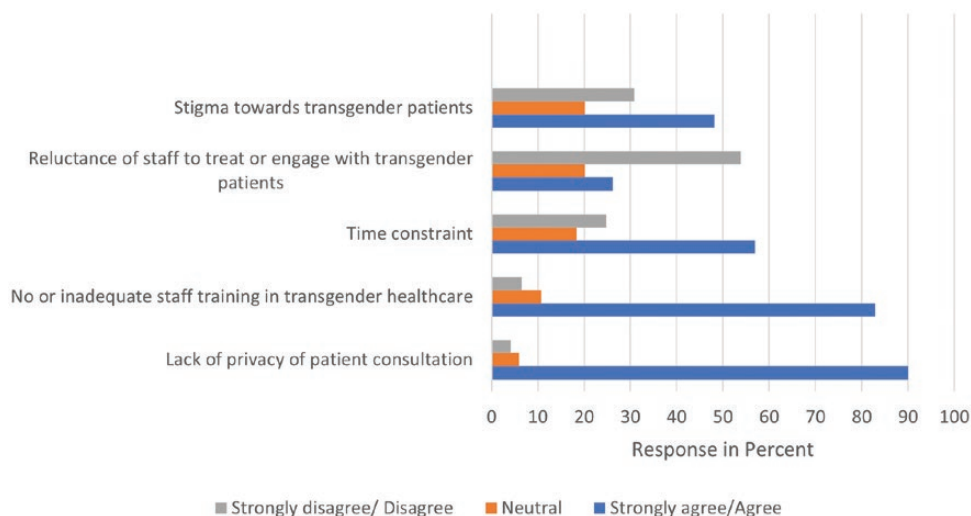
Similar to previous Australian studies [5, 9, 18, 19], lack of privacy in community pharmacies was highlighted as an important barrier in providing care in pharmacy. Lack of privacy





**Figure 2.** Level of agreement with statements regarding attitudes and confidence to provide TGD care.

### Barriers to provide care to TGD people in pharmacy

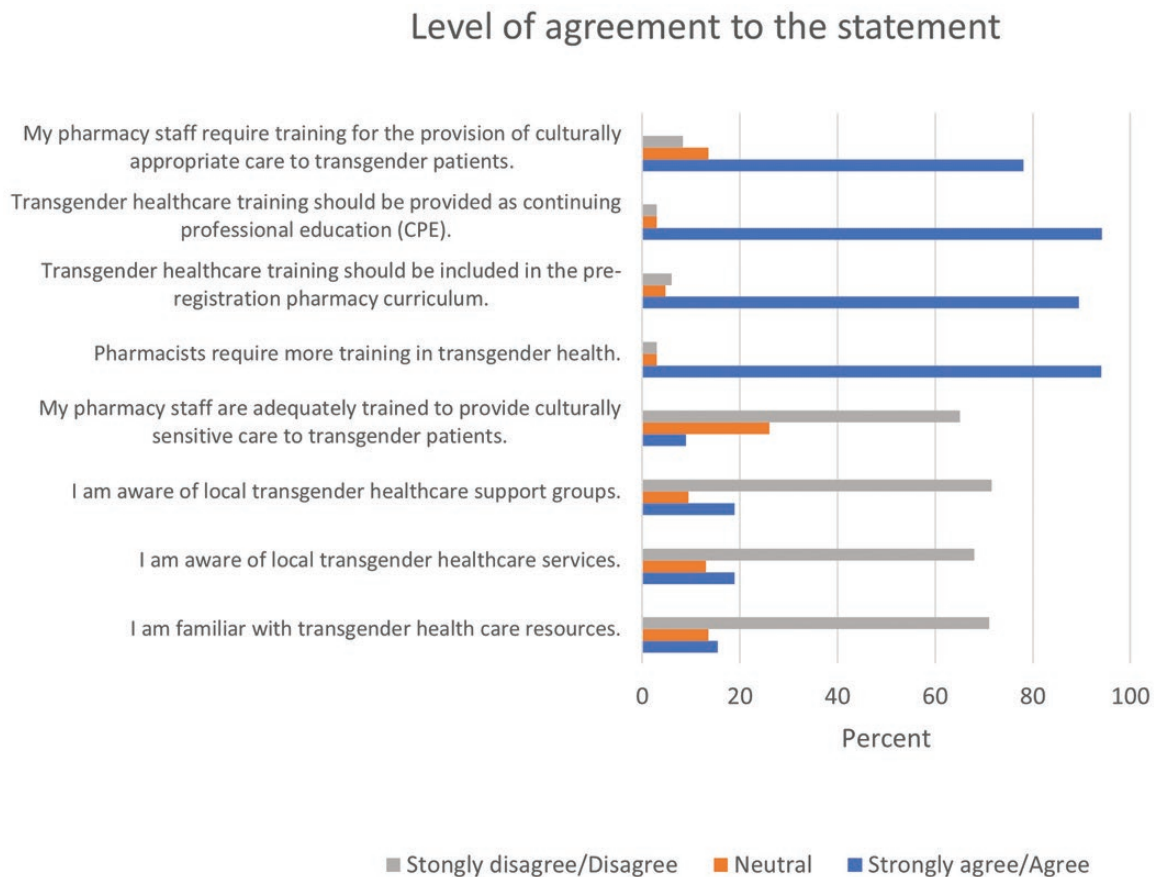


**Figure 3.** Barriers to the provision of care to TGD people in pharmacy.

of consultation may cause accidental outing of the gender or sexual identities of people to other clients and staff present at the pharmacy [5, 9]. Utilization of private spaces for consultation should be prioritized to protect privacy and confidentiality of people visiting pharmacies. Time constraints of pharmacists pose challenges in utilizing the private spaces for consultation [20]. In such situations, strategies such as lowering voice, asking clients to return to pharmacy during quieter times, and offering telephone or online consultation may assist in protecting their privacy and confidentiality [18].

Although pharmacists reported that they could provide culturally sensitive care to TGD people, this was not evidenced to the same extent in their asking for preferred names and personal pronouns of TGD people. Notably, more pharmacists

asked for training to improve their knowledge about gender-affirming therapy than for gender terminology. A previous study indicated that most pharmacists could not define the term ‘transgender’, suggesting a lack of awareness about the gender terminology [4]. Familiarity with gender terminology, asking for preferred names and personal pronouns and using them in any communication with the patient, staff, or other healthcare professionals are the components of providing culturally sensitive care to TGD people [2]. It should be considered that there is a difference between confidence and competence in providing care [21]. Many TGD people have reported being deadnamed and misgendered in healthcare settings, including pharmacies [5], and such experiences have impacted their mental health negatively [22]. Another recommendation



**Figure 4.** Level of the agreement to statements regarding awareness and training about TGD care.

is to update the electronic prescription records to include pronouns, biological sex, and affirmed gender identity. The provision of these fields will improve medication safety and avoid deadnaming or misgendering TGD people. The comfort of providing care to TGD people was linked to greater coherence of the components of the care delivery to TGD people. Familiarity with TGD health resources and awareness about local TGD support groups might have enhanced the understanding of the pharmacists about the TGD culture and their healthcare needs. Such awareness might have improved their self-efficacy in providing care to TGD people.

As in previous international studies [4, 9], most pharmacists in this study perceived that they played an important role in TGD care. Two studies reported that about a quarter of pharmacists received formal education in TGD care at universities and through CPE activities [9, 11]. However, in this study, significantly less participants report receiving such education in comparison to data coming from the USA [9, 11]. Most perceived barriers to providing TGD care in Australian pharmacies included a lack of educational resources and training in TGD care. These barriers may have affected the intervention coherence and self-efficacy of the pharmacists, possibly leading to less effective care provision to TGD people. Therefore, designing and including education about TGD healthcare in CPE activities and university pharmacy curricula is essential to promote pharmacists' clinical and cultural competence. Most pharmacists advocated for additional training for their pharmacy staff. A previous study stated

that pharmacists recommended more training for staff to improve staff attitudes and inclusivity of TGD people in pharmacy [10]. Future studies evaluating the impact of such training on awareness about gender-affirming care in pharmacies may be necessary.

This is also the first study to assess preferred topics and modes of CPE delivery for TGD healthcare for pharmacists. Given the time constraints, pharmacists preferred online modules for CPE. Along with the topics that would improve their clinical knowledge of gender-affirming therapies, most pharmacists favoured the inclusion of the voices of TGD people and experts in TGD healthcare in such training. A panel discussion with TGD people has been found to improve the awareness and knowledge of pharmacy students about TGD healthcare [23]. Online modules that include TGD people's experiences may allow TGD people to be actively involved in educating pharmacists and respect their partnership in improving the healthcare of the broader community. The high interest exhibited by the pharmacists in the training module that might be offered at the later stage of the research indicates demand for TGD healthcare educational activities. The findings from this study provide a foundation for designing the education intervention in TGD healthcare for Australian pharmacists. Further research to assess the impact of the educational intervention on pharmacists' confidence, knowledge, and skills in providing care to TGD people is essential. There is also a need for research about the effect of such training on the overall health outcomes of TGD people visiting pharmacies.

## Conclusion

This is the first study to explore the attitudes, practices, and training needs of Australian pharmacists about the provision of TGD care. Although most pharmacists felt comfortable and confident in providing care to TGD people in Australian pharmacies, many recognized significant barriers to such care provision. The main barriers included a lack of resources and education in TGD healthcare, stigma towards TGD people, lack of privacy of patient consultation, and time constraints. Only a few pharmacists received education about TGD care in their university degrees and through CPE activities. Pharmacists recommended more education about TGD healthcare, preferably through online modules. Such education is necessary for pharmacists to improve their knowledge about gender-affirming therapies and cultural competence in the provision of TGD healthcare and has the potential to impact the healthcare outcomes of the TGD people visiting pharmacies and the broader community.

## Supplementary material

Supplementary data are available at *International journal of Pharmacy Practice* online.

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## Author contributions

Swapna Chaudhary (Conceptualization, Methodology, Data Curation, Formal analysis, Writing—Original Draft, Visualization), Daniel Lindsay (Methodology, Formal analysis, Supervision, Writing—Review & Editing), Robin Ray (Methodology, Supervision, Writing—Review & Editing), and Beverley Glass (Methodology, Supervision Writing—Review & Editing)

## Conflict of interest

None declared.

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## Data availability

Data are available on request.

## Data access statement

Authors collected data in the form of a survey and have full access to the collected data.

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