

RESEARCH DIRECTIONS

Cultivating Cultural Competence in Pharmacy Education: Evaluation of Student Knowledge, Attitudes and Perceptions of a Workshop-Based Approach

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Keywords: *Cultural Competence; Inclusive Practice; Interactive Workshop; Pharmacy Education*

Abstract

A cultural competence workshop was embedded in the pharmacy curriculum. Cultural competence refers to the ability to interact effectively with individuals from diverse backgrounds, a skill essential for both higher education environments and professional healthcare settings. Personal cultural perspectives can subtly shape the delivery of healthcare. Enhancing cultural competence helps to address health inequalities, supporting the development of practitioners who are both inclusive and equipped for sustainable practice. Students engaged in small, diverse groups to discuss cultural perspectives and participated in activities designed to encourage critical reflection. These included evaluating a pharmacist-patient consultation involving language barriers, exploring how beliefs affect health practices, identifying inclusive terminology and recognising factors affecting health inequalities. A self-reflection tool was used to help students assess their own biases and areas for development.

Following the workshop, 82 students from 112 (73%) in the cohort completed a survey. The majority of respondents were aged 18-24, female, and represented a wide range of ethnic and religious backgrounds. While over half of the students could accurately define cultural competence and most identified inclusive language, fewer demonstrated understanding of how religious beliefs influence prescribing decisions. The majority of students reported positive outcomes from the workshop. Nearly three quarters felt their understanding of health inequalities had improved, and 70% became more aware of their own cultural biases. Two-thirds noted enhanced comprehension of inclusive language and acknowledged the need to further develop their cultural competence. Students appreciated the opportunity to learn about diverse cultures and beliefs, particularly valuing the interactive nature of the session and safe space for open discussion. However, gaps in deeper knowledge highlight the need for ongoing integration of cultural competence into the curriculum.

Introduction

The increasing multiculturalism of societies, driven by globalisation and migration, has significantly altered the landscape of healthcare delivery. Healthcare professionals are more likely to encounter patients from diverse cultural, linguistic, and socio-economic backgrounds. This diversity presents both opportunities and challenges, particularly in ensuring equitable, person-centred care. Cultural competence (CC) has been defined as “the acquisition and maintenance of culture-specific skills” that

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enable individuals to navigate new cultural contexts and engage effectively with diverse populations (Wilson et al., 2013). In pharmacy education, this translates to understanding how cultural beliefs influence health behaviours, medication use, and communication with patients (Tseng and Streltzer, 2008) and encompasses a combination of knowledge, attitudes, behaviours, and skills (Sharifi, Adib-Hajbaghery and Najafi, 2019). It is therefore an essential skill for all healthcare professionals, including pharmacists.

In the United Kingdom (UK), pharmacists are often the most accessible healthcare professionals, and their role in patient care extends beyond dispensing medications to include patient counselling, health promotion, chronic disease management and independent prescribing (Hindi, Schafheutle and Jacobs, 2017; Jongen, McCalman and Bainbridge, 2018). Misunderstandings or assumptions based on cultural differences can lead to miscommunication, reduced adherence to treatment, and ultimately poorer health outcomes. As highlighted by McCann et al. (2023), pharmacists and trainees often feel underprepared to manage culturally diverse patient interactions, underscoring the need for structured educational interventions.

Cultural competence is essential not only for delivering equitable and person-centred healthcare but also for promoting inclusive, collaborative environments in both higher education and the workplace. In higher education settings, particularly those with diverse student populations, cultural competence enhances peer collaboration, reduces intercultural misunderstandings, and contributes to a stronger sense of community and belonging. The literature shows that students who engage in culturally competent learning environments develop greater empathy, adaptability, and communication skills - attributes that are critical for academic success and future professional practice (Coleman et al. 2021). The General Pharmaceutical Council (GPhC), the UK regulator for pharmacy education and practice, has recognised the importance of cultural competence in its Standards for the Initial Education and Training of Pharmacists 2021 (GPhC, 2021). These standards emphasise person-centred care, equality, diversity, and inclusion as core components of professional practice to combat discrimination and health inequalities. Upon completing their initial education and training, student or trainee pharmacists are expected to demonstrate the required level of competence across all learning outcomes outlined in the standards. Learning outcomes such as “treat people as equals, with dignity and respect, and meet their own legal responsibilities under equality and human rights legislation, while respecting diversity and cultural differences” and “take responsibility for ensuring that personal values and beliefs do not compromise person-centred care” directly align with the principles of cultural competence.

Despite this, cultural competence education in pharmacy remains inconsistent. Traditional didactic approaches, while useful for conveying theoretical knowledge, often fail to engage students in the reflective and interpersonal aspects of cultural awareness, potentially reinforcing stereotypes rather than developing genuine understanding (Dogra, Reitmanova and Carter-Pokras, 2009). Cultural competence learning may be developed through experiential engagement supported by guidance from an educator. An interactive face-to-face workshop setting offers a valuable opportunity for students to develop the affective and behavioural dimensions of cultural competence (Haas, 2019). Nkhoma et al. (2023) demonstrated that while online modules improved students’ self-perceived competence, the affective domain, which is critical for empathy and cultural humility, showed the least improvement, suggesting that digital learning may not fully replicate the depth of face-to-face engagement. Markey et al. (2023) determined there are challenges with sustaining a meaningful learning atmosphere online, especially with a sensitive topic like cultural competence.

At Kingston University, the student population is richly diverse, reflecting the population of the wider London area (Kingston University London, 2024). This diversity presents both an opportunity and a challenge. While students bring a wealth of cultural perspectives to the learning environment, they may also hold unconscious biases or lack awareness of how culture influences healthcare. Embedding cultural competence education early into the pharmacy curriculum is therefore a strategic

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necessity, especially with the expanded experiential learning programme meaning students will encounter patients from the first year of the course.

This study aimed to evaluate students' knowledge and perspectives following a single face-to-face, interactive cultural competence workshop.

Methodology

Workshop design and delivery

The workshop on cultural competence was co-created with teaching practitioners from the MPharm programme. Using the definition of culture: "the ideas, customs, and social behaviour of a particular people or society," the workshop was designed to not only raise awareness and knowledge about race and ethnicity which are traditionally associated with the term culture, but using the wider definition which includes other types of culture such as disability (e.g., deaf culture), age, gender and sexual orientation (LGBTQ+).

Although various instructional strategies have been explored in the context of cultural competency education, no single method has been identified as definitively more effective than others (Prescott and Nobel, 2019). A face-to-face workshop was designed based on literature detailing the challenges of an online workshop providing a meaningful setting for cultural learning (Markey et al., 2023). The workshop aimed to create a safe and inclusive space for students to explore their own cultural identities, learn about others using the rich diversity of the student cohort, and critically examine how culture intersects with healthcare delivery. The tasks were inspired through colleagues' experiences in practice, previous studies in the literature such as Arif et al. (2017), who demonstrated success using patient case video vignettes, and to use the diversity of the cohort.

Participants were first-year pharmacy (MPharm) students (n=160). The cultural competence workshop was delivered within the module PY4000 (Academic Skills and Professional Development) within the first semester of teaching, before students attend placements.

Students were not required to complete any preparatory work or reading before attending the workshops. During the sessions, tutors adopted a facilitative role, focusing on structured dialogue rather than didactic lecturing. This approach encouraged students to actively participate in experiential learning through task completion and guided discussions, where they could contribute their own knowledge and lived experiences. The emphasis on peer learning acknowledges the value of students learning from and teaching one another (Nisbet et al., 2008). The use of small-group teaching was a key component of the workshop design, as it enhances student engagement and creates a more supportive environment for sharing personal experiences (Burgess et al., 2020).

A total of four identical two-hour sessions were conducted in a classroom setting, each accommodating 40 students and facilitated by two members of the pharmacy teaching team. They were divided into further smaller groups of 5 to 6 within the classroom. Using a similar approach to Lavery et al. (2015), students were unable to self-select their own groups and were instead allocated randomly to groups to encourage peer learning and sharing of cultural perspectives. Students worked on a range of activities which are outlined in **Figure 1**.

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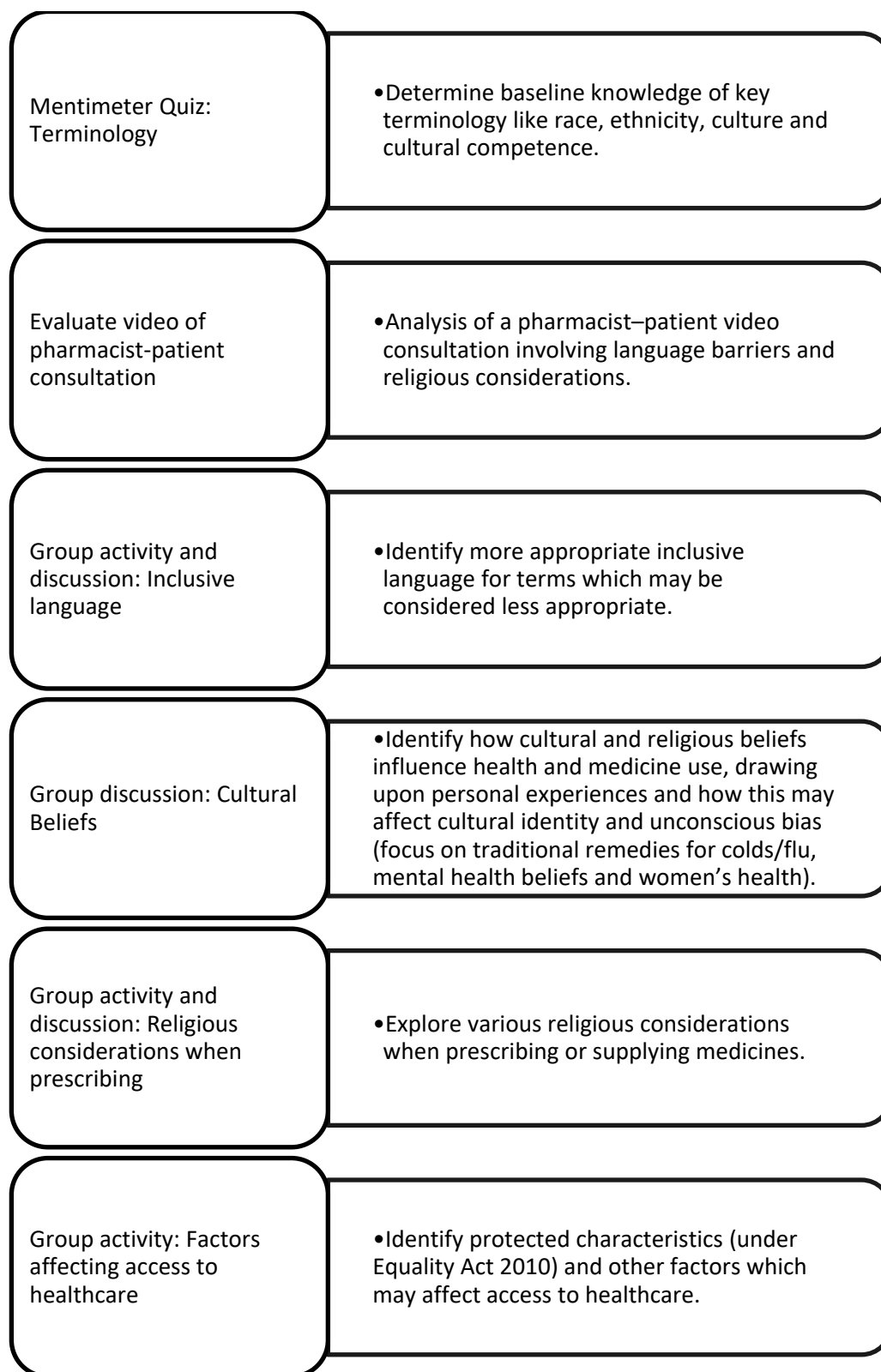


Figure 1 Workshop Overview

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Post-workshop, students completed a self-reflection survey tool to assess personal strengths, recognise biases, and identify areas for development in their cultural competence journey. These survey tools were not collected or graded as they were purely used for self-reflection and as an exercise of cultural awareness that allowed students to complete a reflective account of learning in their e-portfolio, which they develop throughout the four-year course.

Data collection

A survey tool was designed to assess knowledge acquisition, self-awareness, and perceived value of the workshop and was developed using available relevant literature. The survey tool to evaluate the cultural competence workshop was an arm of a larger study exploring the inclusive pharmacy curriculum at the university. An internal expert for equality, diversity and inclusivity reviewed the survey for content validity. The survey was piloted by five pharmacy students ranging from years 2, 3 and 4. Their responses were excluded from the data analysis.

Quantitative and qualitative data were collected from students by a post-workshop paper survey. The survey tool consisted of two main sections: The first section included three knowledge-based multiple-choice questions, designed to evaluate students' understanding of cultural competence, inclusive language, and religious considerations in prescribing and supplying medicines; statements to assess students' attitudes and their perceived comfort in delivering culturally competent care; and two open-ended questions to identify what they enjoyed most or learned most during the workshop and what improvements could be made. Responses related to perceptions and attitudes were measured using a Likert-type scale ranging from strongly disagree to strongly agree, and these questions were inspired by the Centre for Pharmacy Postgraduate Education (2025) culturally competent person-centred care self-reflection tool. The final section gathered demographic information from students, such as age, gender, and ethnicity.

Data analysis

Data was analysed using descriptive statistics with Microsoft Excel. Chi-square tests were used to establish if there were links between demographics such as gender, age and ethnicity, and the perceptions and attitudes responses. A cut-off value of $p < 0.05$ was used to establish statistical significance.

Qualitative data, such as free text questions and comments, were analysed using thematic analysis (Braun and Clarke, 2006,2019). The data was read and re-read to gain a deep understanding of the content. Initial codes were identified from the data, then grouped into broader themes. These themes were reviewed to ensure they accurately reflected the data and were distinct from one another.

Ethical considerations

This project was an arm of a larger study exploring the inclusive pharmacy curriculum at Kingston University. The project was reviewed and approved by the delegated ethical approval team at Kingston University, reference 1213/045.

Results

112 students attended the cultural competence workshops. 82 students completed the survey, giving a response rate of 73%.

Most respondents (95%) were between the ages of 18 and 24. A significant proportion of the participants were female (71%), and 86% identified as being from Black and Minority Ethnic (BME) backgrounds. The most common religion and belief, with over half of respondents (59%), was Islam. A minority of 12% identified as having a physical or learning disability. More detailed demographics can be seen in **Table 1**.

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Table 1 Demographic characteristics of first-year pharmacy students completing surveys, expressed as numbers and a percentage of total (%).

Age					
18-24		25-29		30-39	
78 (95%)		3 (4%)		1 (1%)	
Gender					
Male		Female		Other gender	Prefer not to say
21 (26%)		58 (71%)		1 (1%)	2 (2%)
Ethnicity					
Asian/Asian British	Black, British, Caribbean or African	Mixed or multiple ethnic groups	White	Arab	Other ethnic group
36 (44%)	11 (13%)	5 (6%)	8 (10%)	17 (21%)	5 (6%)
Religion and belief					
Islam	Christianity	Sikhism	Hinduism	Agnostic or Atheist	Other religion or belief
48 (59%)	15 (18%)	1 (1%)	2 (2%)	7 (9%)	9 (11%)
Disability					
Physical	Learning	Physical and learning	No disability	Other disability	Prefer not to say
4 (5%)	4 (5%)	1 (1%)	67 (82%)	1 (1%)	5 (6%)

Knowledge

Students were asked to select the definition of cultural competence. Students had to select the single most appropriate answer. Only about half of students (51%) were able to correctly define cultural competence. A third of students selected the definition of cultural appreciation (Han, 2019) understanding cultural differences within a diverse community, which can form a component of cultural competence, showing some but not complete understanding of the terminology (**Table 2**).

Table 2 Responses to question about definition of cultural competence, expressed as numbers and a percentage of total (%).

Understanding cultural differences within a diverse community	26 (32%)
Having superior knowledge of one's own cultural background	6 (7%)
Exclusively focusing on adapting to the dominant culture in a society	2 (2%)
Mastering a specific set of cultural norms and practices to work with diverse populations	6 (7%)
Recognising and effectively responding to the cultural needs and preferences of diverse groups	42 (51%)

Students were able to select more than one answer for the inclusive language question. The majority of students (81%) were able to identify inclusive language with terminology such as Black-British (54%) and LGBTQ+ person (27%). Less than a fifth of students (19%) believed terminology such as 'able-bodied (9%),' 'coloured people (6%),' and 'pensioners (5%),' were considered as inclusive terms in comparison to the other terminology.

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With regards to religious beliefs and prescribing, students had to select the single most appropriate answer to the question: “As a pharmacist, you will need to consider culture when prescribing or supplying medication. Which of the following statements is correct regarding the use of animal products such as gelatine in medicines?” Just over one third (38%) were able to identify the correct answer that people should be consulted if their faith or background will impact their medicine use, as individuals can have differing views (**Table 3**). A higher percentage of students selected that people from Muslim faith will not use these medicines. A chi-squared test showed that although the number of people indicating their religion as Islam selecting this option was higher than expected, this was not significant ($p=0.97$) and there was no correlation between any religious belief and the responses to this question.

Table 3 Responses to question about religious beliefs in prescribing, expressed as numbers and a percentage of total (%).

People from Hindu faith will not use these medicines as they may be derived from cows	9 (11%)
People from Jewish faith will not use these medicines as they may be derived from pigs	8 (10%)
People from Muslim faith will not use these medicines as they may be derived from pigs	33 (40%)
People from any faith or background can use these medicines as they are exempt due to medical reasons	1 (1%)
People should be consulted if their faith or background will impact their medicine use as individuals can have differing views	31 (38%)

Perceptions and Attitudes

The term “perceived benefit” refers to outcomes identified through students’ own self-assessment or reflection. These reported outcomes include increased confidence, satisfaction with the learning experience, and perceived gains in knowledge (Arruzza and Chau, 2021).

Approximately two-thirds of students agreed or strongly agreed with all the statements determining perceptions and attitudes (**Figure 2**). A fraction, 70% ($n=57$), believed the workshop improved their knowledge about protected characteristics. In addition, 74% ($n=61$) believed their awareness of health inequalities improved, and 69% ($n=57$) perceived increased awareness of their own cultural biases and assumptions about people of cultures or backgrounds different from their own. Some 65% ($n=53$) perceived improved awareness of how their cultural perspective influences their judgement about what is deemed to be ‘appropriate’, ‘normal’, or ‘superior’ behaviours, values, and communication styles. Other findings were that the session helped them recognise intersectionality (63%, $n=52$); that they believed the workshop improved their understanding of inclusive language (67%, $n=55$); a recognition that they had limited cultural competence and needed to develop their learning (67%, $n=55$); and an increased desire to take action and improve their cultural competence (68%, $n=56$). A chi-squared test value of 0.04 (p -value = 1.0) demonstrated no correlation between ethnicity and perception and attitude statements.

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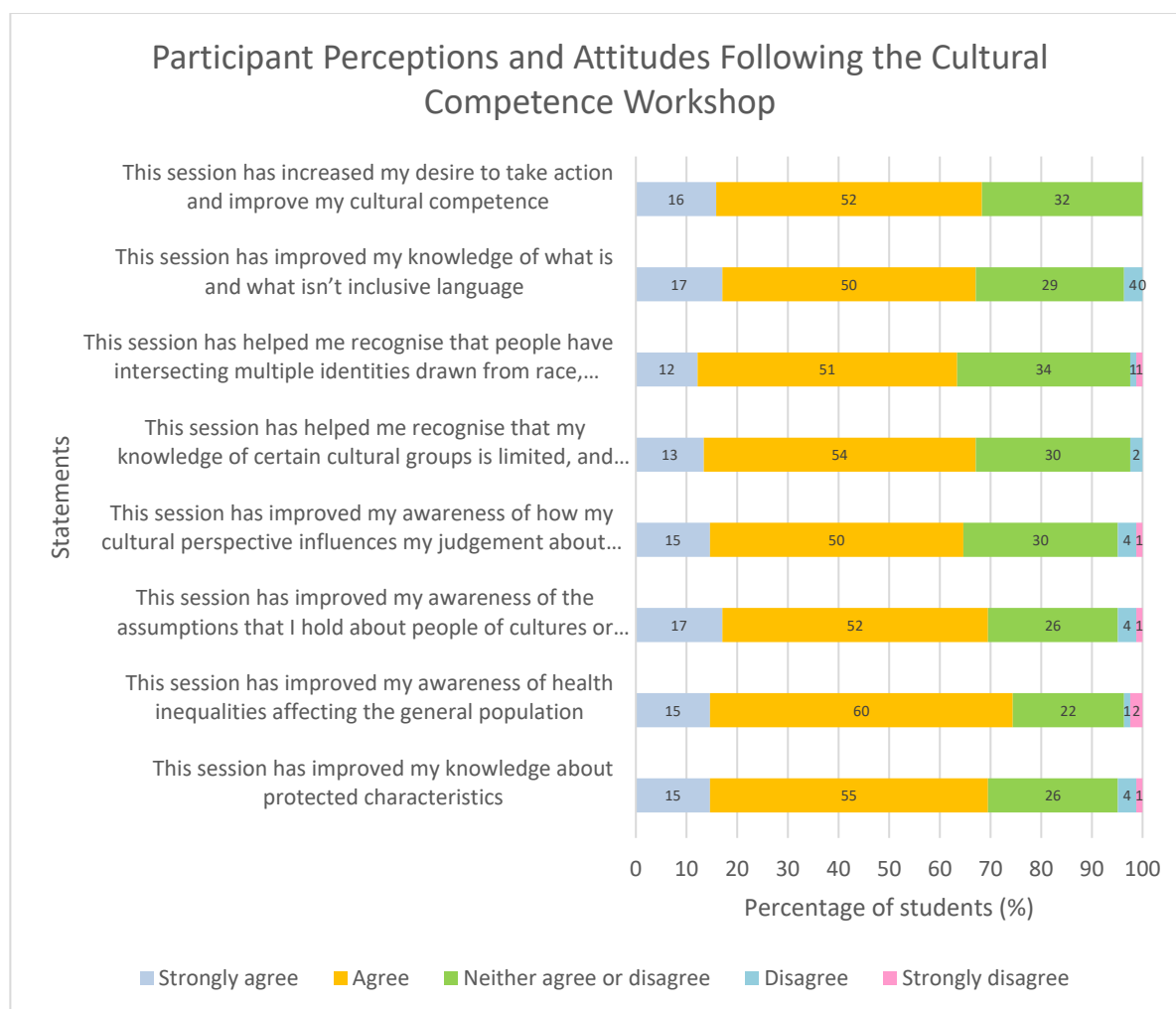


Figure 2 Participant Perceptions and Attitudes Following the Cultural Competence Workshop.

Views about workshop format

Students' descriptive words and quotes of what they enjoyed or learned most from the workshop were grouped into two main themes. Qualitative feedback highlighted appreciation for the interactive format, groupwork, and the opportunity to learn about different cultures and beliefs in a safe learning space (**Table 4**).

No themes were identified for what improvements could be made to the workshop, as there were only five student responses with different comments varying from the length of the workshop (too long), timetabling (too early), and identifying varying activities that were least enjoyed. The majority of students left this question blank or commented "nothing."

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Table 4 Themes identified from the qualitative data on the cultural competence workshop

Theme	Description	Quotes from students
1. Building cultural competence in healthcare	Enhanced understanding of how cultural factors affect patient care and the importance of applying this knowledge in practice.	"Reflecting on the different terms people use to describe others, and how some of those words can be harmful, made me more conscious of my own language and behaviour." "The workshop helped me gain a deeper understanding of how cultural beliefs, language, religion, and social background can impact a patient's expectations and experiences within healthcare."
2. Creating a safe space to learn through interaction and shared perspectives	A respectful and supportive environment enabled participants to engage more openly, (although there was initial hesitation) with the interactive activities and group discussions, which were key to learning, allowing participants to hear diverse viewpoints and reflect on their own assumptions.	"As we talked more, people started to feel more comfortable, and it became easier to share and learn from each other." "I particularly found the group discussions helpful, as they encouraged me to consider perspectives I had not previously thought about."

Discussion

The workshop successfully engaged students in reflective and experiential learning, with the majority reporting increased awareness of cultural bias, inclusive language, and health inequalities.

Demographics

The demographic profile of the cohort - predominantly younger people (95% aged 18–24), female (71%), and from ethnic minority groups (86%), but also varying religious beliefs and disabilities - reflects the increasing diversity of student populations in UK higher education. This diversity underscores the importance of equipping students with the cultural competence necessary to navigate both academic and professional healthcare environments.

Perceptions and attitudes

One of the most encouraging outcomes was the high percentage of students (74%) who reported improved awareness of health inequalities. This suggests the workshop was effective in highlighting the structural and systemic factors that contribute to disparities in healthcare access and outcomes. The increased desire to take action by two-thirds of students indicates a shift from passive awareness to active commitment. By framing cultural competence within the context of health equity, students were encouraged to think beyond individual interactions and consider the broader social determinants of health (McGregor et al., 2019).

A significant proportion of respondents reported increased awareness of their own cultural biases (69%) and a deeper understanding of how their cultural perspectives shape judgments about normative behaviours (65%). These outcomes align with previous research indicating that cultural competence training can lead to meaningful shifts in self-perception and intercultural sensitivity (Coleman et al., 2021). This is a crucial step in the development of cultural competence, as it encourages students to critically examine their assumptions and how these may influence their

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professional behaviour. The use of a self-reflection tool was instrumental in facilitating this process, providing students with a structured opportunity to assess their strengths and areas for growth (Tarver and Herring, 2019). Reflection is a key component of professional development, and its integration into cultural competence education supports lifelong learning. Cultural competence is an essential component for any higher education curriculum, not only healthcare courses. Coleman et al. (2021) found that students who regularly participated in cultural competency activities reported improved self-awareness, identity development, and the ability to manage their university experience more effectively.

Knowledge

The results revealed areas for improvement. While 81% of students could identify inclusive language, only 51% of students were able to correctly define cultural competence, with a significant proportion (32%) confusing it with cultural appreciation. This finding aligns with Han (2019), who noted that students often conflate related but distinct concepts, suggesting a need for clearer conceptual framing in teaching materials. Only 38% of students correctly identified that religious beliefs regarding medication use should be addressed on an individual basis. A slightly larger proportion (40%) selected a generalised assumption about Muslim patients, indicating a tendency toward stereotyping. This finding is consistent with previous studies (Kai et al., 2007) that highlight the risk of essentialising cultural identities when cultural competence is taught in isolation or without sufficient depth. Without a pre-workshop survey baseline, it is difficult to determine if there was an overall improvement in cultural competence knowledge.

From a pedagogical standpoint, the results suggest that one-off workshops, while impactful, are insufficient for developing sustained cultural competence. Although two-thirds of students expressed a desire to continue improving their cultural competence, the relatively low baseline knowledge indicates that cultural competence must be embedded longitudinally across the curriculum. This approach is supported by Campinha-Bacote's (2002) model of cultural competence, which emphasises the need for continual self-assessment and skill-building.

Workshop format

The diversity of the student cohort was a strength of the workshop. Working in mixed groups allowed students to learn from one another's lived experiences. Peer learning in this context also mirrored the collaborative nature of healthcare practice. The workshop's emphasis on group discussion and lived experience likely contributed to these gains, as active learning strategies have been shown to encourage deeper engagement and retention (Freeman et al., 2014). However, diversity alone does not guarantee cultural competence. Structured facilitation and guided reflection are essential to ensure that diverse perspectives are explored respectfully and meaningfully.

The qualitative data further illuminate the pedagogical value of the workshop format. Using small group teaching methods, students felt encouraged to ask questions, explore sensitive topics and reflect on their own biases within a safe and structured learning environment, an approach that mirrors the benefits identified by Steinert (2004).

The overall positive student feedback, coupled with the absence of consistent suggestions for improvement, indicates that the workshop format was both engaging and effective. However, the few comments regarding timing suggest that logistical considerations can influence student engagement and should be factored into future iterations.

Limitations

A limitation of the study is its reliance solely on post-intervention surveys, which limits the ability to measure change effectively. Without a pre-survey to establish baseline knowledge or attitudes, it is difficult to assess the true impact of the intervention. While open-ended questions offer some qualitative insight, a mixed-methods approach would provide a more robust evaluation.

Conclusion

This study reinforces the value of interactive, face-to-face workshops in initiating cultural competence development among pharmacy students. The workshop successfully raised awareness of cultural competence and encouraged students to reflect on their own biases and assumptions. The use of group work cultivated a sense of community and promoted collaborative learning. However, the variation in knowledge highlights the limitations of one-off interventions and the need for a more integrated, scaffolded approach. These findings support the integration of cultural competence as a longitudinal theme across the pharmacy curriculum. Embedding cultural competence into clinical case discussions, communication skills training, and experiential learning can help students apply their knowledge in real-world contexts and adapt to the evolving cultural landscape of healthcare.

Future research should explore longitudinal outcomes and the impact of repeated exposure to cultural competence training on clinical decision-making and patient care.

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<https://doi.org/10.1177/0022022113492889>