A systematic review using thematic analysis exploring cultural competence in pharmacy education: What is done? How is it done? What does it mean?

Rawand Jarrar
Newcastle University
Rosemary Lim
University of Reading
Charlotte Lucy Richardson
Newcastle University
Atta Abbas Naqvi
University of Reading
Adam Pattison Rathbone
Newcastle University
Wing Man Lau (Wing.Lau@newcastle.ac.uk)
Newcastle University

Research Article

Keywords: Pharmacy, pharmacy education, cultural competence, cultural awareness, cultural sensitivity, culture, pharmacist, health professionals, patient centred care

Posted Date: January 16th, 2023

DOI: https://doi.org/10.21203/rs.3.rs-2382602/v1

Abstract

Background: There is an increased need for a healthcare workforce that is culturally competent, to improve health outcomes and reduce health disparities for patients from diverse cultural backgrounds. This is important in the context of pharmaceutical care for patients, as the inability to recognise a patient's health beliefs, which could be influenced by their cultural background, can lead to reduced medication adherence and poor treatment outcomes. This systematic review aims to explore cultural competence teaching and training in pre-qualification pharmacy education.

Methods: Medline, Scopus, PsychInfo, Web of Knowledge, CINAHL, and Embase databases were systematically searched for studies that explored cultural competence in pharmacy education and were published in English from January 2012 to December 2021. Methodological quality of studies was assessed using the Mixed Methods Appraisal Tool (MMAT). Data from included studies were thematically analysed.

Results: Overall, 47 papers (46 studies) were included in the review. Of these, 40 papers focused on interventions for teaching cultural competence to pharmacy students only, the remaining studies included students from pharmacy and other health discipline programmes. Half of the studies focused on cultural competence in general (n = 20, 50%), while the remaining studies focused on competence on specific aspects e.g., cultures, religions and disabilities. Most studies (n = 24, 60%) report implementation of interventions that took place over a week. Twenty-one studies reported that cultural competence interventions were compulsory. There were variations in how cultural competence is conceptualised in studies; some studies focused on the need to increase knowledge about different cultures or 'knowing how'; other studies focused on behavioural aspects that would help students while they work with patients from diverse backgrounds, or 'showing how'; some studies described cultural competence as a continuum that includes both 'doing' knowledge and behavioural aspects.

Conclusion: There is variation in how cultural competence is taught in pharmacy education programmes, which could be a consequence of differences in how authors conceptualised cultural competence. Further research is needed to develop a unified understanding of the meaning of cultural competence and how it should be taught to pharmacy students.

Background

Culture refers to the values, beliefs and norms that are adopted by a specific group to guide their thinking and actions. It can include ethnicity, age, gender, disability, religion, socioeconomic status, sexual orientation, and health beliefs (1, 2). Culture is unconscious and affects all aspects of life, including experiences of health and illness. The influence and impact of culture on health is complex and not always understood, but there should be an awareness of the need to consider culture when providing care (1–4). With increasing diversity of populations due to globalisation, the need for culturally competent health professionals has increased ((4, 5). Failure to address cross-cultural issues in the delivery of healthcare services can reduce patient satisfaction and compromise health outcomes (4, 5).

When health practitioners possess culturally competent attitudes, knowledge and skills, healthcare outcomes can be improved for patients (1, 6) Cultural competence has been defined in several ways. One of the earlier definitions by Cross (7) stated that cultural competence is: *'a set of congruent behaviours, attitudes, and policies that come together in a system, agency, or amongst professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations'*. Campinha-Bacote (8) conceptualised cultural competence not as a goal that can be fully achieved and defined it as: *'an ongoing process in which the healthcare provider continuously strives to achieve the ability to effectively work within the cultural context of a client'*. (1, 6) The literature indicates that there may be different ways that cultural competence can be understood, which may present challenges for the training of healthcare professionals in this area.

As integral members of the healthcare team, pharmacists are medicines experts tasked with the delivery of pharmaceutical care (6). Pharmaceutical care relates to medication supply but also how the medication is used and can be influenced by non-clinical patient-related factors, such as culture, socioeconomic status and language (6). Failure to accommodate a patient's health beliefs, for example how to support medicines use whilst Muslim patients fast during Ramadan, could lead to poor treatment adherence and reduced health outcomes (1). In line with the General Pharmaceutical Council's Standards for pharmacy professionals in the UK and the Accreditation Standards and Guidelines for the Professional Program in Pharmacy in the US, when considering a patient's culture, pharmacists should not stereotype by applying cultural characteristics from a specific culture to all patients, as this can lead to inappropriate healthcare decision making (1, 9). Rather, pharmacists should "*recognise and value diversity, and respect cultural differences – making sure that every person is treated fairly whatever their values and beliefs*" (10). Similarly, the US department of health and human services released the national standards for culturally and linguistically appropriate services which indicate that healthcare organisations should *"provide effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs"*(11). The Pharmacy Council of New Zealand (PCNZ) and the Truth and Reconciliation Commission of Canada also call for pharmacists who are able to demonstrate cultural competence skills and demonstrate cultural safety and humility knowledge (12, 13). However, there is no specific guidance on how to implement programmes that would help develop a culturally competent pharmacy workforce.

The development of a culturally competent health workforce requires the integration of cultural competency training for professionals in education and training programmes. However, before embedding cultural competence in curricula, a clear definition of the concept needs to be established. A recent systematic review focused on the assessment of cultural competency within pharmacy programmes and acknowledged that no best practice exists, and there is considerable variation in the assessment of cultural competence given the variation in the intended learning outcomes, design and audience of interventions (14). Currently, there are no systematic reviews that interrogates the fundamental idea of what cultural competence is and how it is/has been taught pharmacy education. This systematic review therefore aimed to explore cultural competence teaching and training in pharmacy education, by answering the following questions:

1. How is cultural competence conceptualised in pharmacy education?
2. What cultural competence interventions have been developed and delivered in pharmacy education?

Methods

The protocol of this study was registered with PROSPERO (Reference number CRD42021295875). This study is reported using the standardised criteria for reporting systematic reviews, the PRISMA Checklist (15).

Eligibility criteria

To be included, studies had to:

1. Be published between 1st of January 2012 and 31st of December 2021 in a peer-reviewed journal
2. Use qualitative or quantitative methods or both qualitative and quantitative methods to collect primary data
3. Be written in English
4. Explore or describe interventions (or alternative terms with the same meaning) to improve cultural competency in pre-qualification pharmacy education
5. Studies that did not meet the inclusion criteria were excluded. For example, conference papers, abstracts, book chapters and dissertations, literature reviews and systematic reviews, or studies focusing on cultural competence in postgraduate or post-registration pharmacy education or in areas other than pharmacy education.

Searches

Searches were completed on the following databases: Medline, Scopus, PsychInfo, Web of Knowledge, Cumulative Index of Nursing and Allied Health Literature (CINAHL) and Embase. Search results from each database were exported to the Rayyan systematic review application (16), which allowed for the removal of duplicate records and screening. A snowballing approach was also undertaken to identify additional papers: reference lists of included papers and relevant systematic reviews on cultural competence were reviewed. Searches were carried out by one author (RJ) and quality checked by two other authors (RL, WML). Screening of titles and abstracts were conducted by one author (RJ), and a sample of 20% of results was checked by RL and WML. Screening of full texts was done by RJ and WML. Any discrepancies were resolved by discussion with a third author (RL).

Study risk of bias assessment

Risk of bias was assessed using the Mixed Methods Appraisal Tool (MMAT) (17) that is designed to allow the appraisal of mixed methods, qualitative and quantitative studies including randomised controlled trials, non-randomised controlled trials and descriptive studies. Studies were not excluded based on the results of the risk of bias assessment. One author (RJ) assessed all included papers, and a 10% sample was checked by a second reviewer (RL). Any discrepancies were resolved by discussion.

Data extraction

A standardised data extraction form was created (See supplementary material 1). Extracted information included: authors, year of publication, title of the study, study objectives, country where the study was conducted, methods for data collection and analysis, definition(s) of cultural competence, alternative terms and concepts related to cultural competence, methods for integrating cultural competence in pharmacy education programme, year level where interventions were introduced, interventions used to enhance cultural competence in education, specific topics covered in the interventions and the outcomes of the interventions. One author (RJ) independently extracted data from included studies and a 10% convenience sample was quality checked by a second reviewer (RL), with discrepancies resolved by discussion with a third (WML).

Data synthesis

Extracted data were managed via NVivo. Three authors (RJ, APR, AAN) was involved in data extraction and all authors in analysis using the method of Thomas and Harden (18). Data were thematically analysed in three stages: stage 1 to identify the study characteristics; stage 2 to identify the study findings in descriptive themes that capture and summarise the findings of the literature; and stage 3 which identifies analytic themes, to go beyond the original findings of the literature and add new knowledge. A deductive analysis was used throughout, which focused on i) conceptualisations of cultural competence and ii) how cultural competence teaching was embedded and delivered within pre-qualification pharmacy education curricula. Extracts of data are reported in the results to contribute to the credibility and context of the findings.

Results

Study selection

The study selection process is summarised in the PRISMA Diagram (See Fig. 1). The search identified 6,708 records. After the removal of duplicates, 5,056 papers were retrieved and included in the screening of titles and abstracts which excluded 4,975 papers. Eighty-one papers were included in the full text review with 40 papers remaining for inclusion. The main reasons for exclusion were, no description of cultural competence training (n = 23), not part of a university programme (n = 13) and did not report the results of a research study (n = 5). Seven additional papers were found for inclusion after screening the reference lists of relevant systematic review papers and included studies. This resulted in a total of 47 papers for inclusion in this study.

Risk of bias in studies

The results of risk of bias assessment using the MMAT tool are provided in the supplementary information (see supplementary material 2). There was a variation in the methods used to collect and analyse data on the impact of culture competence interventions. The majority of the papers (32 papers) used quantitative survey methods; most of these papers (19 papers) were not clear on whether the included sample was representative of the whole student populations. Five papers used qualitative methods; all of these clearly reported the methods for data collection and analysis and reported findings that were adequately derived from data. The ten remaining papers used mixed methods approach; however only three papers provided sufficient description of the quantitative and qualitative methods used.

The majority of studies reported improvements in cultural competency following the intervention (n = 31) with one study reporting no difference in cultural competence awareness, knowledge, or application. Of the studies that assessed cultural competence, no studies reported interventions that decreased cultural competence; the remaining studies (n = 15) were not clear about the impact of their interventions on cultural competence. Although the focus of this review is not to consider the effectiveness of interventions in detail, nor to assess the suitability of the research methods to capture effectiveness, as positive findings appeared more readily in the included studies, there may be a reporting bias in the literature. Further work is needed to encourage researchers and publishers to disseminate findings transparently, including negative or neutral findings in relation to educational interventions to support the development of cultural competence.

The guideline for reporting evidence-based practice educational interventions and teaching (GREET) checklist (19) was used to evaluate the reporting quality of studies that reported educational interventions (see supplementary material 3). Seven studies were not assessed via GREET as they did not directly report an educational intervention. Studies that did not record any information about an aspect mentioned in an item of the checklist were considered as non-compliant with that item of the checklist. Included studies ranged from 70.6% compliant (20) to 23.5% (21), with an average 48.5% compliance. The studies described the interventions well but any necessary adaptations to the interventions and the success of the interventions were less well described.

Study characteristics

Forty studies assessed interventions to teach cultural competence and six papers aimed to understand or develop frameworks for teaching cultural competence in pharmacy programmes. Forty studies focused on pharmacy student only as research participants, whilst the remaining seven studies included students from multiple healthcare disciplines (including pharmacy). Most studies were conducted in the United States (n = 39), followed by Aotearoa New Zealand (n = 2), Canada (n = 2), Germany (n = 1), Qatar (n = 1), United Arab Emirates (n = 1) (Table 1).

Table 1
Characteristics of included studies

Author(s) and year of publication	Country	How intervention was delivered	Elective or compulsory course	Year(s) of study	Target student group	Focus	Delivery method	Duration of intervention	N st
Arif, Cryder (56) 2017	US	Integration in Health communications course	Part of compulsory course	3	Pharmacy only	Cross-cultural communication	Lectures and workshops Patient video vignettes	5 hours: 3 hours of lecture and 2 workshop hours	15
Arif, Wang (57) 2019	US	standalone course	Elective course	2,3	Pharmacy only	Influence of culture on disease states	Lectures, workshops, simulations, and community work	6 weeks; 1 hour lectures followed by half-hour workshops	31
Aspden, Sheridan (58) 2016	New Zealand	Intervention/ event	Compulsory	2	Pharmacy only	Perceptions of people living in poverty	Simulation exercise	3-hour exercise	79
Aspden, Heinrich (55) 2017	New Zealand	Conceptualisation	NA	All	Pharmacy only	Cultural competence in general	NA	NA	NA
Bailey, Kaarto (43) 2021	US	Standalone course	Elective course	1,2,3	Pharmacy only	Communicating with deaf and hard of hearing patients	Lectures and practice sessions	4 classes (90 minutes) and additional practice sessions	39
Boylan, Murzello (25) 2020	US	Integrated in non-prescription medication course	Compulsory for students enrolled in the course	1	Pharmacy only	Use of complementary and alternative medicine	Preparing 10 minute presentations by students	Students prepared presentation over 6 weeks	80
Butler, Chen (48) 2020	US	Activities integrated in different courses	Varied	1,2,3	Pharmacy only	Cultural competence in general	Classroom activities	one class per year	1,
Cailor and Chen (34) 2015	US	Integrated in 3 courses: Self-Care, Introduction to Pharmacy Practice, and Pharmacy Practice Lab (skills lab)	Compulsory	1	Pharmacy only	Cultural competence in general	Practical activities and discussion	One semester	53
Chen, Cailor (35) Addition to Cailor and Chen (34) 2020	US	Integrated in capstone course, practice experience and disease modules	Compulsory	All	Pharmacy only	Cultural competence in general	Practical activities and discussion	Year 1: 9 hours Year 2 and 3: more than 6 hours/year + 2 hours in capstone course Year 4: in practice experience	18
Chen, Armbruster (44) 2021	US and Canada	Survey on culture competency implementation	Varied	All	Pharmacy only	Cultural competence in general	NA	NA	NA
Clarke, Sedlacek (26) 2016	US	Activity as part of IPPE	Compulsory	2	Pharmacy only	Perceptions of people living in poverty	Simulation exercise	3 hours	10
Cooper, Vellurattil (59) 2014	US	Integrated in IPPE	Compulsory	4	Pharmacy only	Cultural competence in general	Lectures	6 hours	19
Crawford, Awé (37) 2016	US	Integrated in different courses	Compulsory	All	Pharmacy only	Culture awareness and culture sensitivity	Lectures, discussions, and workshops	Lectures were dispersed throughout curriculum	65
Diaz-Cruz and Hagan (49) 2020	US	Integrated in the orientation programme	Elective course	1	Pharmacy only	Cultural Proficiency Continuum Framework	Lecture and group discussion	90 minutes	10

Author(s) and year of publication	Country	How intervention was delivered	Elective or compulsory course	Year(s) of study	Target student group	Focus	Delivery method	Duration of intervention	N st
Durand, Abel (60) 2012	US	standalone course	Elective course	not mentioned	Pharmacy only	Cultural competence in general	Lectures and Hands-on experiences	3hours/week for 10 weeks	12
Dushenkov, Rozaklis (27) 2020	US	Integrated in the capstone course	Compulsory	4	Pharmacy only	Cultural competence in general	Workshop	Workshop including lecture and videos	16
Echeverri and Dise (61) 2017	US	Assess student cultural competence profiles	NA	1,2	Pharmacy and medicine	Cultural competence in general	Lectures, group sessions, independent research, practical experiences, and online training	Year 1: 2x1-hour lectures, small group session, semester long experience year 2: 3-hour group session, 4 hours online training, participation in activities	53 ph
Gibson and White (47) 2019	US	Integrated in Pharmacotherapy course	elective activity	4	Pharmacy only	Culture sensitivity to special populations	Panel discussion	1 hour in 2016 2 hours in 2017	69 78
Haack and Phillips (62) 2012	US	Integrated in Pharmacy Skills and Application course series	Compulsory	All	Pharmacy only	Cultural competence in general	Lectures and laboratory activities	dispersed throughout the programme	20
Hasan, Tarazi (38) 2017	UAE	Integrated in communication skills and counselling course	not mentioned	3	Pharmacy only	Language training	Lecture, role play, pre-tutorial homework	13 weeks	72
Hawala-Druy and Hill (28) 2012	US	standalone course	Elective course	not mentioned	Pharmacy, Nursing and Allied Health Sciences	Cultural competence in general	Lectures, outside activity, and practical experience	3 hours/week for 14 weeks	10 ph
Heffernan, Segaran (50) 2013	US (Hawaii)	Standalone field trip	elective activity	All	Pharmacy only	cultural implications of Hansen disease in Hawaii	Independent research, field trip, and group discussions	One day trip	18
Johnson and Traynor (29) 2018	US	Explore required learning competencies to work in underserved populations	NA	NA	Pharmacy only	Working with underserved patients	NA	NA	N.
Knockel, Ray (20) 2019	US	Integrated in Applications of Pharmacy Practice I course	Compulsory	2	Pharmacy only	LGBTQ health	Lecture	One hour	10
Leach, Seung (41) 2019	US	Integrated in Endocrine, Women's Health, and Genitourinary	Compulsory	2	Pharmacy only	Transgender healthcare	Lecture	One hour	60
Liu, Poirier (39) 2015	US	CC and IPE sessions as part of required course that focused on cultural competency and health literacy	Compulsory	2	Pharmacy and nursing	Cultural competence and interprofessional work	Team-based discussions of videos and case studies	2 sessions	16 ph
Lucas, Aly (23) 2021	Australia	Insights about developing curriculum on cultural safety	NA	NA	Multiple health disciplines	Indigenous curriculum	NA	NA	N.

Author(s) and year of publication	Country	How intervention was delivered	Elective or compulsory course	Year(s) of study	Target student group	Focus	Delivery method	Duration of intervention	N st
McKennon, Schauerhamer (45) 2018	US	Standalone course on Herbal Medicines and Natural Product Drugs	Compulsory	3	Pharmacy only	Herbal medicine and natural drugs	Lectures Assignments Case studies	One semester	59
Min, Albon (24) 2020	Canada	Standalone course in indigenous health	Elective	3,4	Pharmacy only	Indigenous health	Lectures Video conference Practical experiences Case studies	One term	10
Minshew, Lee (46) 2021	US	Create a cultural competence framework	NA	NA	Pharmacy only	Cultural intelligence	NA	NA	N
Mueller (22) 2017	US	Standalone course on medical Spanish	Elective	3	Pharmacy only	Medical Spanish	Lectures Simulated patient activities Guest presentation	One semester	4 3
Nebergall, Dula (42) 2021	US	Embedded in Integrated Patient Care Laboratory	Compulsory	1,2,3	Pharmacy only	Underserved populations	Lectures Skills laboratory Practical experience	40 hours lectures and skills labs throughout semester One-week practical experience	1
Newsome, Chen (63) 2018	US	Integrated in Therapeutics of Special Populations course	Compulsory	3	Pharmacy only	Transgender healthcare	Active learning Patient cases Panel discussion	3 hours	15
Okoro, Odedina (32) 2015	US	Integrated in Professional Communications in Pharmacy Practice course	Compulsory	2	Pharmacy only	Cultural competence in general	Lectures	2 lectures (1.5 hours in total)	20 29 20 27 20 28
Ostroff, Ostroff (31) 2018	US	Integrated in special populations course	Compulsory	3	Pharmacy only	Transgender healthcare	Lecture Assignments Video screening	2 hours	72
Parkhill, Mathews (40) 2014	US	Integrated in the Introduction to Diversity Course	Compulsory	1	Pharmacy only	Transgender healthcare	Panel discussion	2 hours	N m
Prescott and Nobel (51) 2019	US	Integrated in Pharmaceutical care I course	Compulsory	1	Pharmacy only	Cultural competence in general	Lecture and practical session: discussion, video, counselling	110-minute lecture and 4-hour practicum	13
Rovers, Becker (21) 2020	US-trip to Dominican Republic	Included in global health experience	Elective	not mentioned	Multiple health disciplines	Cultural competence in general	International practical experience	One week	20 ph
Schellhase, Miller (64) 2013	US	Standalone course	Elective	3	Pharmacy only	Competencies for international experiences in Kenya	Lectures Case studies Discussions	15 weeks	20 20

Author(s) and year of publication	Country	How intervention was delivered	Elective or compulsory course	Year(s) of study	Target student group	Focus	Delivery method	Duration of intervention	N st
Scott, Naughton (65) 2019	US	Included in global health experience	Elective	All	Pharmacy only	Cultural competence in general	Study abroad: seminars, lectures, practical experience, and culture events	3 weeks	13
Sheu, Lai (66) 2012	US	Standalone practice experience	Elective	1	medical, nursing, and pharmacy students	Health disparities and CC	Student-run clinics: didactic sessions and volunteering	Various	35 (p no sp
Steeb, Miller (67) 2020	US	Standalone practice experience	Elective	4	Pharmacy only	Global health	international advanced pharmacy practice experience (APPE)	4–8 weeks	N m
Strelow, Bahadır (33) 2021	Germany	Integrated in a seminar series	Elective	2,3	Medicine, pharmacy, and translation	Communities who speak different languages	Lectures, discussions, and practical training days	one joint day and two practical days	1 pl
Thomason, Elmore (68) 2013	US	Part of practice experiences	Compulsory	4	Pharmacy only	Underserved populations	Practice experience	one month or more	12
Werremeyer and Skoy (69) 2012	US-trip to Guatemala	Standalone practice experience	Elective	3	Pharmacy only	Cultural competence in general	Practice experience	5 weeks	4 st 2 ar 20
Wietholter, Coetzee (36) 2014	US-experience in South Africa	Standalone practice experience	Elective	All	Pharmacy only	Cultural competence in general	Practice experience	4 weeks	3- st pe
Wilby, Taylor (70) 2015	Canada and Qatar	Integrated in different courses	Elective	Canada: 2 Qatar: final	Pharmacy only	Cultural competence in general	Discussion via videoconference	2 hours	22 Ca ar Q

INSERT Table 1.

Conceptualisation Of Cultural Competency In Pharmacy Education

The terms and models in the literature to describe cultural competence and their application were varied. Although cultural competence was the most used term (n = 22), several alternative terms appeared in the included studies, including culture sensitivity, culture humility, culture intelligence, and culture proficiency. These terms were either used interchangeably with cultural competence or were chosen by some authors to emphasise a certain aspect of wider spectrum.

Theme 1) Knowing how to be culturally competent

This theme focused on knowledge about specific cultures, such as language for Spanish-speakers, slang for Aboriginal Australians, historical events for First Nation Canadian, or complementary and alternative medicines used in certain cultures (22–25). This proposition focused on differences in constructs between cultures at an individual, familial and community level. As students became aware of different ways of thinking, speaking, and living, they would be able to recall and recognise specific cultures. The focus was not adapting one's own behaviours but recognising the cultural needs of another and knowing how to meet those needs, for example, by using an interpreter or recognising the importance of non-verbal communication.

In these studies the cognitive conceptualisation of cultural competence drew on other knowledge-based aspects of the curriculum, such as the Social Determinants of Health model (26–31), Patient Safety parameters (32, 33), decision making process (34–36) and principles of patient-centred care (33, 36–40). Improving patient outcomes and reducing health disparities were also aspects considered by several studies (26, 28, 29, 32, 33, 38, 41, 42).

Theme 2) Showing how to be culturally competent

Cultural sensitivity was another commonly used term; several studies referred to culture sensitivity as a standard in Centre for the Advancement of Pharmaceutical Education (CAPE) and Accreditation Council for Pharmacy Education (ACPE) (26, 27, 32, 42–46). In some instances, cultural sensitivity was not defined or compared with the concept of cultural competence. When a definition was provided, it indicated that cultural sensitivity entails the recognition of social determinants of health, adaptability to patients' cultural beliefs without stereotyping, and providing a healthcare plan that considers patients' own culture while being able to communicate effectively (27, 47). While it seems that cultural sensitivity might be synonymous with cultural competence, some

studies indicated that there is a difference and cultural sensitivity could be a part of becoming culturally competent (33, 48, 49). We suggest that these studies demonstrate cultural sensitivity as an action, which creates opportunity for students to 'show how' they can be culturally sensitive and are working towards being culturally competent.

Theme 3) Being culturally competent

Studies also referred to models that conceptualised cultural competence as a continuum from cognitive factors, for example knowing about other cultures, languages and what is important to people from a given culture, to behavioural factors, such as asking patients about their individual, familial or community cultural needs within everyday practice (27, 28, 37, 39). This conceptualisation reflects, both the 'know how' knowledge of and about cultures, the 'show how' demonstrations of behaviours and a broader transformational awareness, which adapts through processes and perceptions. Diaz-Cruz and Hagan (49) used the term 'cultural proficiency' and described this as an adaptation to differences in values and practices requiring personal transformation; the authors described that pharmacists can only strive for the goal of becoming culturally proficient, as this is a never-ending process of learning about and with cultures, where full competence cannot be achieved (49).

Characteristics Of Culture Competency Interventions

Theme 1) What is done?

This theme described what interventions were being delivered and where. The topics of the interventions included different cultures, religions and disabilities. The locations of the institutions that hosted research activity were homogenous with work largely from the US (n = 39), there was more variation in the locations that hosted educational interventions. For example, interventions involving international placements in locations such as the Dominican Republic, Guatemala, Kenya, and South Africa (Table 2).

Table 2
Focused topics and cultures of interventions

Focused topics, if mentioned [a]	N
Cross-culture healthcare, sensitive language, interpreting	20
Diversity, cultural sensitivity, and awareness	18
Socioeconomic factors e.g., financial and housing instability, social determinants of health	14
Medication use e.g., drug abuse, overdose	8
Bias, Generalization, and stereotypes	4
Legal, ethical, insurance, professional obligations	4
Race/racial and ethnic disparities	3
Social identity	3
Use of herbal products in Latin America	3
Mental health	2
Disability	1
Family care givers	1
Inter-professional collaboration	1
Organ donation	1
Focused culture if mentioned [a]	
Region/culture specific	
Latin American/Latino culture	2
Cultures of the Asian/Pacific Islands	1
Bosnian culture	1
Dominican culture	1
French Canadian	1
German culture	1
Ghanian culture	1
Guatemalan Communities	1
Hawaiian culture	1
Igbo culture (Nigerian region)	1
Indigenous communities	1
Italian culture	1
Kenyan culture	1
Maori culture	1
Nigerian culture	1
North American and Irish	1
Southeastern Americans	1
Spanish speakers	1
Religion	
Christianity	1
Judaism	1
Patient groups	
LGBTQ+	5
Special/vulnerable populations e.g., South African patients with HIV	5

[a] Categorisation is not mutually exclusive

Focused topics, if mentioned [a]	N
Underserved populations	5
Hard of hearing and visually impaired patients	3
People who smoke	1
[a] Categorisation is not mutually exclusive	

The studies used varied outcome measures to assess the impact of their interventions (Table 3). The chosen outcomes also reflected the varied designs and learning outcomes of the interventions. 'Attitude' was most used as an outcome measure (n = 23), followed by 'knowledge' (n = 22), and 'skills' (n = 18).

Table 3
Intended learning outcomes

Outcomes assessed*	N
Attitude	23
Knowledge	22
Skills	18
No. of Encounters	10
Awareness	9
Overall cultural competence	7
Desire	5
Confidence	3
Practice	1

[a] Categorisation is not mutually exclusive

Theme 2) How is it done?

This theme describes the mode of delivery and duration of educational interventions. Several approaches to deliver teaching were reported that drew on multiple modes, such as lectures, workshops, group activities and placements (Table 4). Most studies (n = 35) used didactic modes of teaching, either independently or combined with other activities, such as discussion groups, field trips, or experiential learning placements. The duration of the cultural competence interventions varied across studies. Most (n = 24) reported interventions lasting longer than one week, with the remaining studies reporting contact time of interventions of less than one day (n = 14) or between two and seven days (n = 2).

Most studies reported an integrated approach to delivering cultural competence curricula (n = 25), where content was delivered as an element within a wider module e.g., modules concerning disease pathophysiology, therapeutics or wider aspects of public health, global health experience, pharmacy practice or communication skills. Some studies (n = 14) reported delivery of cultural competence content within stand-a-lone modules which focused specifically, explicitly, and exclusively on cultural competence curricula.

Additionally, approximately half of the studies (n = 21) reported that cultural competence curricula was compulsory or part of a compulsory module, whilst a similar number of studies (n = 18) reported the content was covered within elective modules. One study reported that cultural competence content was delivered as part of compulsory and/or elective modules (48). The study by Hasan, Tarazi (38) described cultural competence was part of the communications skills and counselling, but did not specify whether participation was compulsory.

Table 4
Delivery of interventions

Mode of intervention [a]	N
Didactic	35
Field trips and experiential training e.g., community immersion and patient engagement	32
Discussion-based e.g., case-based learning, team-based learning	24
In-person simulation	12
Assessment	6
Online learning activity (including online simulation)	5
Inter-professional work	2
Contact time of intervention	
≤ 8 hours or 1 day	14
2–7 days	2
> 1 week	24

[a] Categorisation is not mutually exclusive

Discussion

There was heterogenous conceptualisations of cultural competence in the included studies; different terms were used to talk about cultural competence related issues. The focus of cultural competence in each study also varied; some studies focused on knowledge about different cultures as means for improving cultural competence skills; some considered the ability to care for patients from different cultures without stereotyping; other emphasised that cultural competence should combine the aspects of know-how and show how.

Although most studies used the term cultural competence to guide their interventions, problems with the concept itself have led several authors to use alternative terms, for example cultural humility as a guiding term (24, 46, 50, 51). Cultural intelligence and cultural proficiency as alternative terms may overcome the shortcomings of cultural competence, as the focus shifts from attaining an 'end point' of competence to the ability to adapt to different cultures which recognises cultural competence cannot be achieved (46, 49, 52). Despite variations in terminology, a key construct of all conceptualisations is an openness to patients' different cultures and a willingness to learn from patients about their culture, within the context of one's own, through reflexivity (10).

The findings of this systematic review present a step-wise approach to becoming culturally competent - as a journey. This aligns to Millers' triangle of education which maps development from 'knows' to 'does' and is commonly used in pharmacy education and pharmacy practice standards. Mapping our findings with Millers triangle (53), Campinha-Bacote's (8) and Well's model of cultural competence (54), provides a model of conceptualisation of cultural competence in pharmacy education (See Fig. 2).

Limitations of the evidence

An additional finding of this review is that almost half of studies were non-compliant to the GREET checklist for reporting educational interventional studies (19). Although most studies were conducted before the publication of the GREET checklist, poor reporting of methods to document educational interventions may limit transferability. Future work should report educational interventions in compliance with an accepted set of standards, to facilitate quality assessment, replicability and validity.

In addition, most studies evaluated the effect of interventions on a short-term basis. Studies that reviewed the longitudinal impact of interventions reported a reduction in cultural competence scores assessed after a lengthier gap. This highlights that cultural competence interventions designed in most studies cater to short-term competence needs of students and may not necessarily address the long-term learning needs or have a sustained impact on practice. Further research is needed into the longer-term implementation of interventions and the assessment of the effectiveness, especially given the heterogeneous outcomes currently measured.

Limitations of this review

A robust and systematic approach was used to search, identify, screen, and evaluate literature for this review in line with the PRISMA guidelines (15). Multiple authors were involved in data extraction, analysis and synthesis. However, a limitation was the inclusion of only papers written in English, which may therefore have inadvertently excluded relevant papers published in other languages. Additionally, grey literature was also excluded, which often used in the dissemination of pedagogical research and scholarship.

Conclusions

This systematic review aimed to explore cultural competence teaching and training in pre-qualification pharmacy education. There is variation in how cultural competence is taught in pharmacy education programmes, which could be a consequence of differences in how authors conceptualised cultural competence.

Therefore, further research is needed to develop a unified understanding of the meaning of cultural competence and how it should be taught to pharmacy students.

Declarations

a) Ethics approval and consent to participate: N/A. This study is a systematic review and does not include human participants.

b) Consent for publication: N/A

c) Availability of data and materials: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

d) Competing interests: The authors declare that they have no competing interests

e) Funding: Funding for this project was provided by the University Education Development Fund, Newcastle University

f) Authors' contributions: WML and RL conceived, designed and led the study. WML received funding to conduct this study. RJ conducted the systematic searches and data extraction with WML and RL. RJ, APR, AAN and CLR drafted the manuscript. All authors revised the manuscript critically for intellectual content, agreed and approved the final version to be published.

g) Acknowledgements: The authors would like to acknowledge the hard work of the authors of the original papers for their contribution to the published literature.

References

1. O'Connell MB, Korner EJ, Rickles NM, Sias JJ. Cultural competence in health care and its implications for pharmacy. Part 1. Overview of key concepts in multicultural health care. Pharmacotherapy. 2007;27(7):1062–79.
2. Henderson S, Horne M, Hills R, Kendall E. Cultural competence in healthcare in the community: A concept analysis. Health Soc Care Community. 2018;26(4):590–603.
3. Purnell L. The Purnell Model for Cultural Competence. J Transcult Nurs. 2002;13(3):193–6. discussion 200-1.
4. Lavizzo-Mourey R, Mackenzie ER. Cultural competence: essential measurements of quality for managed care organizations. Ann Intern Med. 1996;124(10):919–21.
5. Nazar M, Kendall K, Day L, Nazar H. Decolonising medical curricula through diversity education: lessons from students. Med Teach. 2015;37(4):385–93.
6. Shaya FT, Gbarayor CM. The case for cultural competence in health professions education. Am J Pharm Educ. 2006;70(6):124.
7. Cross TL. Towards a culturally competent system of care: A monograph on effective services for minority children who are severely emotionally disturbed. 1989.
8. Campinha-Bacote J. The Process of Cultural Competence in the Delivery of Healthcare Services: a model of care. J Transcult Nurs. 2002;13(3):181–4. discussion 200-1.
9. Education ACfP. Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree.Standards. 2011;2.0.
10. General Pharmaceutical Council. In practice: Guidance on religion, personal values and beliefs 2017 [Available from: https://www.pharmacyregulation.org/sites/default/files/in_practice-_guidance_on_religion_personal_values_and_beliefs.pdf.
11. U.S. Department of Health & Human Services. NATIONAL CULTURALLY AND LINGUISTICALLY APPROPRIATE SERVICES STANDARDS. 2022 [Available from: https://thinkculturalhealth.hhs.gov/clas/standards.
12. Canada TaRCo. Truth and Reconciliation Commission of Canada: Calls to Action [Available from: http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf.
13. Zealand PCoN. Competence standards for the pharmacy profession 2015 [Available from: https://pharmacycouncil.org.nz/wp-content/uploads/2021/04/CompStds2015Web.pdf.
14. Medina MS, Maerten-Rivera J, Zhao Y, Henson B. A Systematic Review of Assessment Tools Measuring Cultural Competence Outcomes Relevant to Pharmacy Education. Am J Pharm Educ. 2022;86(3):8672.
15. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372:n71.
16. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan — a web and mobile app for systematic reviews.Syst Rev. 2016;5(210).
17. Hong Q, Pluye P, Fàbregues S, Bartlett G, Boardman F, Cargo M et al. Mixed Methods Appraisal Tool (MMAT), version 2018.: Canadian Intellectual Property Office, Industry Canada; 2018 [Available from: http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/146002140/MMAT_2018_criteria-manual_2018-08-08c.pdf.
18. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Med Res Methodol. 2008;8:45.
19. Phillips AC, Lewis LK, McEvoy MP, Galipeau J, Glasziou P, Moher D, et al. Development and validation of the guideline for reporting evidence-based practice educational interventions and teaching (GREET). BMC Med Educ. 2016;16(1):237.

20. Knockel L, Ray M, Miller M. Incorporating LGBTQ health into the curriculum: Assessment of student pharmacists' knowledge and comfort level in caring for transgender patients. Currents in pharmacy teaching & learning. 2019;11(9):928–35.
21. Rovers J, Becker M, Andreski M, Gray J. Short-term Experiences in Global Health: What is the Cost of Cultural Competence? Med Sci Educ. 2020;30(2):927–32.
22. Mueller R. Development and evaluation of an intermediate-level elective course on medical Spanish for pharmacy students. Currents in pharmacy teaching & learning. 2017;9(2):288–95.
23. Lucas C, Aly M, Power TAI. Clinical partners' reflections on Indigenous curricula in health education and the development of a pre-clinical placement student toolkit. Reflective Pract. 2021;22(2):263–77.
24. Min J, Albon S, Leung L, Clarke A. Creating a pharmacy elective course in Indigenous health. Currents in pharmacy teaching & learning. 2020;12(8):1004–13.
25. Boylan P, Murzello A, Parmar J, Chow N. Integration of Latin American Complementary and Alternative Medicine Topics Into a Doctor of Pharmacy Curriculum and Survey of Student Attitudes and Behaviors. J Med Educ Curric Dev. 2020;7:2382120520904121.
26. Clarke C, Sedlacek RK, Watson SB. Impact of a Simulation Exercise on Pharmacy Student Attitude toward Poverty. Am J Pharm Educ. 2016;80(2):21.
27. Dushenkov A, Rozaklis L, Kalabalik-Hoganson J, Kim D. Insights from a capstone workshop: An investigation of soon-to-be pharmacists' readiness to provide culturally competent pharmaceutical care. Currents in Pharmacy Teaching and Learning. 2020;12(7):834–42.
28. Hawala-Druy S, Hill M, Interdisciplinary. Cultural competency and culturally congruent education for millennials in health professions. Nurse Educ Today. 2012;32(7):772–8.
29. Johnson C, Traynor A. Identifying student learning competencies for urban underserved practice using a Delphi process. Currents in pharmacy teaching & learning. 2018;10(6):687–94.
30. Okoro ON, Odedina FT, Reams RR, Smith WT. Clinical cultural competency and knowledge of health disparities among pharmacy students. Am J Pharm Educ. 2012;76(3):40.
31. Ostroff J, Ostroff M, Billings S, Nemec EC. Integration of transgender care into a pharmacy therapeutics curriculum. Currents in pharmacy teaching & learning. 2018;10(4):463–8.
32. Okoro O, Odedina F, Smith W. Determining the Sufficiency of Cultural Competence Instruction in Pharmacy School Curriculum. Am J Pharm Educ. 2015;79(4):50.
33. Strelow K, Bahadır Ş, Stollhof B, Heeb R, Buggenhagen H. Patient interviews in interprofessional and intercultural contexts (PinKo) - project report on interdisciplinary competence development in students of medicine, pharmacy, and community interpreting. GMS J Med Educ. 2021;38(3):Doc67.
34. Cailor SM, Chen AMH. Immediate and longitudinal effects of incorporating health literacy and cultural competency into a yearlong pharmacy curriculum. Currents in Pharmacy Teaching and Learning. 2015;7(3):292–301.
35. Chen A, Cailor S, Wicker E, Harper N, Franz T, Pahl B. Integrating Health Literacy and Cultural Competency Concepts Across the Doctor of Pharmacy Curriculum. Am J Pharm Educ. 2020;84(10):ajpe7764.
36. Wietholter JP, Coetzee R, McCartney J, Gegg J, Schwinghammer TL. Development of an international advanced pharmacy practice experience (APPE) and lessons learned after implementation. Currents in Pharmacy Teaching and Learning. 2014;6(2):304–12.
37. Crawford S, Awé C, Tawk R, Pickard AS. A Cross Sectional and Longitudinal Study of Pharmacy Student Perceptions of Readiness to Serve Diverse Populations. Am J Pharm Educ. 2016;80(4):62.
38. Hasan S, Tarazi HMK, Hilal HDA. Enhancing Student Communication Skills Through Arabic Language Competency and Simulated Patient Assessments. Am J Pharm Educ. 2017;81(4):76.
39. Liu M, Poirier T, Butler L, Comrie R, Pailden J. Design and evaluation of interprofessional cross-cultural communication sessions. J Interprof Care. 2015;29(6):622–7.
40. Parkhill A, Mathews J, Fearing S, Gainsburg J. A transgender health care panel discussion in a required diversity course. Am J Pharm Educ. 2014;78(4):81.
41. Leach C, Seung H, Layson-Wolf C. Student pharmacists' perceptions of transgender health management. Currents in pharmacy teaching & learning. 2019;11(12):1254–8.
42. Nebergall S, Dula CAC, King SA, Matthews DE, Haas-Gehres A, Li JN. Educating Pharmacy Students About Underserved Populations Using Patient Speakers and Simulation Activities. Am J Pharm Educ. 2021;85(7):571–9.
43. Bailey N, Kaarto P, Burkey J, Bright D, Sohn M. Evaluation of an American Sign Language co-curricular training for pharmacy students. Currents in pharmacy teaching & learning. 2021;13(1):68–72.
44. Chen A, Armbruster A, Buckley B, Campbell J, Dang D, Devraj R, et al. Inclusion of Health Disparities, Cultural Competence, and Health Literacy Content in US and Canadian Pharmacy Curriculums. Am J Pharm Educ. 2021;85(1):8200.
45. McKennon SA, Schauerhamer MB, Fudin HR, Babin JL, Shane-McWhorter L. Assessing pharmacy student confidence to answer patient questions regarding herbal medicines and natural product drugs. Curr Pharm Teach Learn. 2018;10(5):643–50.
46. Minshew LM, Lee D, White CY, McLaughlin JE, McClurg M. Cultural Intelligence in Pharmacy Education: Understanding Student Experiences.American journal of pharmaceutical education. 2021:8580.
47. Gibson C, White A. Patients as Teachers of Cultural Sensitivity in Pharmacy Education. 2019;10(4).
48. Butler L, Chen A, Borja-Hart N, Arif S, Armbruster A, Petry N, et al. Assessment of a multi-institution integration of cultural competency activities. Currents in pharmacy teaching & learning. 2020;12(5):517–23.

49. Diaz-Cruz E, Hagan A. Developing a Co-Curricular Activity to Introduce Student Pharmacists to the Cultural Proficiency Continuum Framework.Innovations in pharmacy. 2020;11(1).
50. Heffernan L, Segaran P, Fisher E, Kalvaitis D. The cross-cultural field excursion initiative: An educational approach to promote cultural competency in student pharmacists. Currents in Pharmacy Teaching and Learning. 2013;5(3):155–66.
51. Prescott GM, Nobel A. A Multimodal Approach to Teaching Cultural Competency in the Doctor of Pharmacy Curriculum. Am J Pharm Educ. 2019;83(4):537–43.
52. Lekas HM, Pahl K, Fuller Lewis C. Rethinking Cultural Competence: Shifting to Cultural Humility. Health Serv Insights. 2020;13:1178632920970580.
53. Miller GE. The assessment of clinical skills/competence/performance. Acad Med. 1990;65(9 Suppl):63–7.
54. Wells MI. Beyond cultural competence: a model for individual and institutional cultural development. J Community Health Nurs. 2000;17(4):189–99.
55. Aspden T, Heinrich F, Sheridan J, Butler R, Harwood M. Identifying key elements of cultural competence to incorporate into a New Zealand undergraduate pharmacy curriculum. Pharm Educ. 2017;17(1):43–54.
56. Arif S, Cryder B, Mazan J, Quiñones-Boex A, Cyganska A. Using Patient Case Video Vignettes to Improve Students' Understanding of Cross-cultural Communication. Am J Pharm Educ. 2017;81(3):56.
57. Arif S, Wang S, Lakada I, Lee J. An Elective Course to Train Student Pharmacists to Provide Culturally Sensitive Health Care. Am J Pharm Educ. 2019;83(8):7027.
58. Aspden T, Sheridan J, Harrison J. “Talking and thinking”: Impact of a simulation on pharmacy undergraduates beliefs and attitudes about living in poverty. Currents in Pharmacy Teaching and Learning. 2016;8(4):447–57.
59. Cooper LA, Vellurattil RP, Quinones-Boex A. Pharmacy students' perceptions of cultural competence encounters during practice experiences. Am J Pharm Educ. 2014;78(2):31.
60. Durand C, Abel C, Silva M, Desilets A. An elective course in cultural competence. Currents in Pharmacy Teaching and Learning. 2012;4(2):102–8.
61. Echeverri M, Dise T. Racial Dynamics and Cultural Competence Training in Medical and Pharmacy Education. J Health Care Poor Underserved. 2017;28(1):266–78.
62. Haack S, Phillips C. Teaching cultural competency through a pharmacy skills and applications course series. Am J Pharm Educ. 2012;76(2):27.
63. Newsome C, Chen L, Conklin J. Addition of Care for Transgender-Related Patient Care into Doctorate of Pharmacy Curriculum: Implementation and Preliminary Evaluation. Pharmacy (Basel, Switzerland). 2018;6(4).
64. Schellhase E, Miller M, Ogallo W, Pastakia S. An elective pharmaceutical care course to prepare students for an advanced pharmacy practice experience in Kenya. Am J Pharm Educ. 2013;77(3):60.
65. Scott D, Naughton C, Haugen K, Friesner D. Study Abroad Course for Pre-pharmacy and Pharmacy Students to Learn About Global Health. Am J Pharm Educ. 2019;83(8):6866.
66. Sheu L, Lai C, Coelho A, Lin L, Zheng P, Hom P, et al. Impact of student-run clinics on preclinical sociocultural and interprofessional attitudes: a prospective cohort analysis. J Health Care Poor Underserved. 2012;23(3):1058–72.
67. Steeb DR, Miller ML, Schellhase EM, Malhotra JV, McLaughlin JE, Dascanio SA, et al. Global Health Learning Outcomes in Pharmacy Students Completing International Advanced Pharmacy Practice Experiences. Volume 84. AMERICAN JOURNAL OF PHARMACEUTICAL EDUCATION; 2020. 3.
68. Thomason AR, Elmore LK, Naro PB, Huddleston TW. Pharmacy students’ attitudes toward the underserved population: The role of experiential education. Currents in Pharmacy Teaching and Learning. 2013;5(5):444–9.
69. Werremeyer A, Skoy E. A medical mission to Guatemala as an advanced pharmacy practice experience. Am J Pharm Educ. 2012;76(8):156.
70. Wilby K, Taylor J, Khalifa S, Jorgenson D. A course-based cross-cultural interaction among pharmacy students in Qatar and Canada2015.26p.

Figures

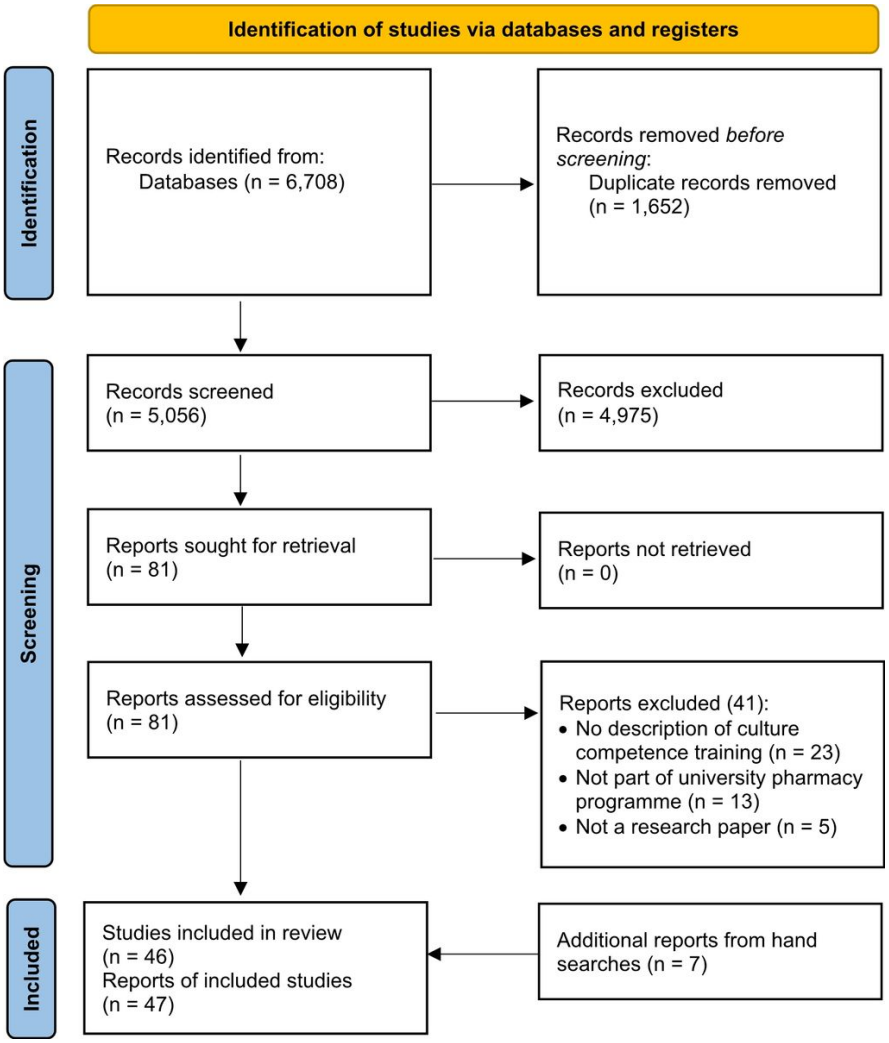

Figure 1

PRISMA Diagram

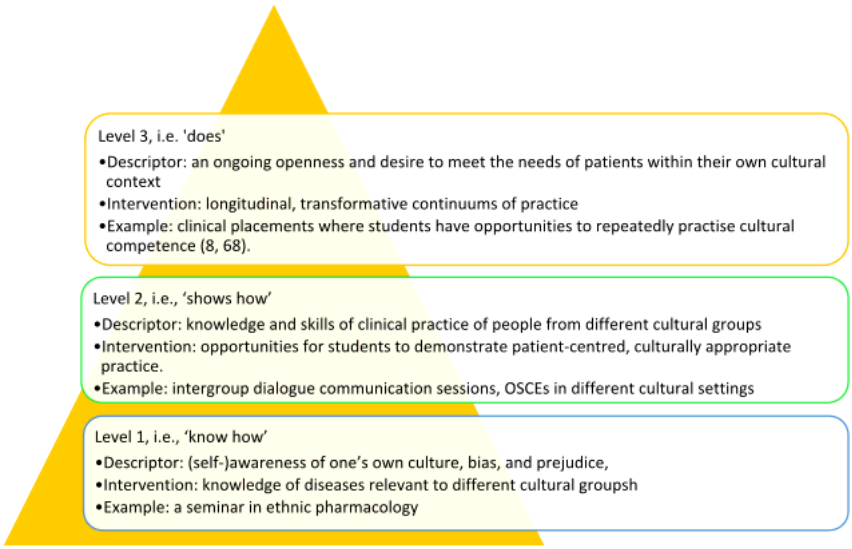

Figure 2

Conceptual model of cultural competence in pharmacy education

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Supplementarymaterial1dataextractionform.docx
- Supplementarymaterial2MMATresults.docx
- Supplementarymaterial3GREETchecklistresults.docx