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Towards health justice: Implementing structural competency in women's healthcare education

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A R T I C L E I N F O

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Structural competency
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A B S T R A C T

Introduction: The World Health Organization advocates for preparing medical students to address health disparities experienced by minority groups. The persistent disparities in women's health outcomes, particularly among racial and ethnic minorities, highlight critical gaps in current medical education approaches. Despite strong consensus about the significance of structural competence training in medical education, most curricula struggle to develop, teach, and assess it effectively, particularly in addressing women's health disparities.
Objectives: This systematic review aims to: (1) evaluate structural competency's role in women's health disparities and (2) develop implementation strategies for women's healthcare education.
Methodology: A systematic literature review using Scopus, Google Scholar, and Web of Science databases (2010–2023) initially identified 905 articles. Following rigorous inclusion criteria focusing on structural competency, women's health disparities, and medical education, 40 articles were selected for final analysis.
Findings: The review presents (1) comprehensive evidence of health disparities in women's healthcare, particularly affecting racial and ethnic minorities; (2) the critical role of structural competency in addressing systemic barriers and discrimination in healthcare delivery; (3) effective teaching strategies including lecture-based, case-based, team-based, and simulation-based learning approaches; Findings indicate that successful implementation of structural competency requires multi-level interventions across individual, interpersonal, clinic, community, research, and policy domains.
Conclusion: This review establishes the importance of integrating structural competency into women's healthcare education. While implementation challenges exist, the framework developed provides practical guidance to address women's health disparities through structural competency training.

1. Introduction

The World Health Organization (WHO) advocates for preparing medical students to apply the social determinants of health in their practice to address health disparities experienced by minority groups (WHO, 2023). Social determinants of health (SDOH) are non-medical factors that include the conditions in which people are born, grow, work, live, and age, along with the wider set of forces and systems shaping daily life. Health disparities refer to differences in health outcomes between different groups of people (WHO, 2023). Structural competency, a framework developed by physician scholars in 2014, explicitly emphasizes the role of societal structures in shaping health outcomes. This framework encourages healthcare professionals to recognize, analyze, and intervene in structural factors that impact health across six levels: individual, interpersonal, clinic, community, research, and policy (Metzl & Hansen, 2014; Neff, Holmes et al., 2020). It has emerged as a comprehensive approach for training health professionals to evaluate not only cultural variables but also structural disparities and stigmas that influence patient symptoms and disease risks (Kyere et al., 2022). Despite strong consensus among academics about the significance of structural competence training in medical education programs, most curricula still struggle to develop, teach, and assess it (Melino et al., 2023; Neff et al., 2020).

Recent data consistently highlights the pronounced impact of health disparities on women's health (Bird, 2022; Rodríguez-García et al., 2023; Schubert et al., 2022). According to WHO (2021), these disparities

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arise from a combination of biological sex-based differences and social determinants affecting healthcare access and quality. Women's health encompasses a comprehensive range of healthcare needs beyond reproductive care, including cardiovascular health, mental health, chronic disease management, and preventive care (Miller et al., 2023). Research by Downey (2018) demonstrates that women of color and those with low incomes experience worse outcomes in prenatal care access, maternal mortality rates, cervical cancer mortality, sexually transmitted infections, and overall healthcare service access. While cultural competency training has become more common in medical education, research indicates that this approach alone fails to address the structural roots of health disparities (Melino et al., 2023).

Current literature identifies several critical gaps including limited understanding of how structural factors specifically impact women's health outcomes, Absence of comprehensive frameworks for teaching healthcare providers to address systemic barriers, Insufficient integration of gender-specific structural competencies in medical curricula, need for evidence-based approaches to teaching structural interventions in women's healthcare (Bird, 2022; Melino et al., 2023; Rodríguez-García et al., 2023; Schubert et al., 2022).The structural competency framework, developed by Metzl and Hansen (2014) and expanded by recent scholars (Harvey et al., 2022; Neff, 2020; Neff et al., 2022; Ruth, SturtzSreetharan, Brewis, & Wutich, 2020), offers a promising approach to addressing these gaps. while existing literature demonstrates the theoretical foundation of structural competency and its potential impact in general health disparity, there remains a significant gap in understanding the practical implementation and effectiveness of structural competency training in medical education to adress women's health disparities. This systematic review aims to: (1) evaluate structural competency's role in women's health disparities and (2) develop implementation strategies for women's healthcare education. This study addresses significant gaps in understanding the practical implementation and effectiveness of structural competency training in medical education for addressing women's health disparities. Specifically, it examines the limited empirical evidence on how structural competency training translates into improved health outcomes for women from marginalized communities and addresses the lack of standardized assessment tools to measure the impact of such training programs.

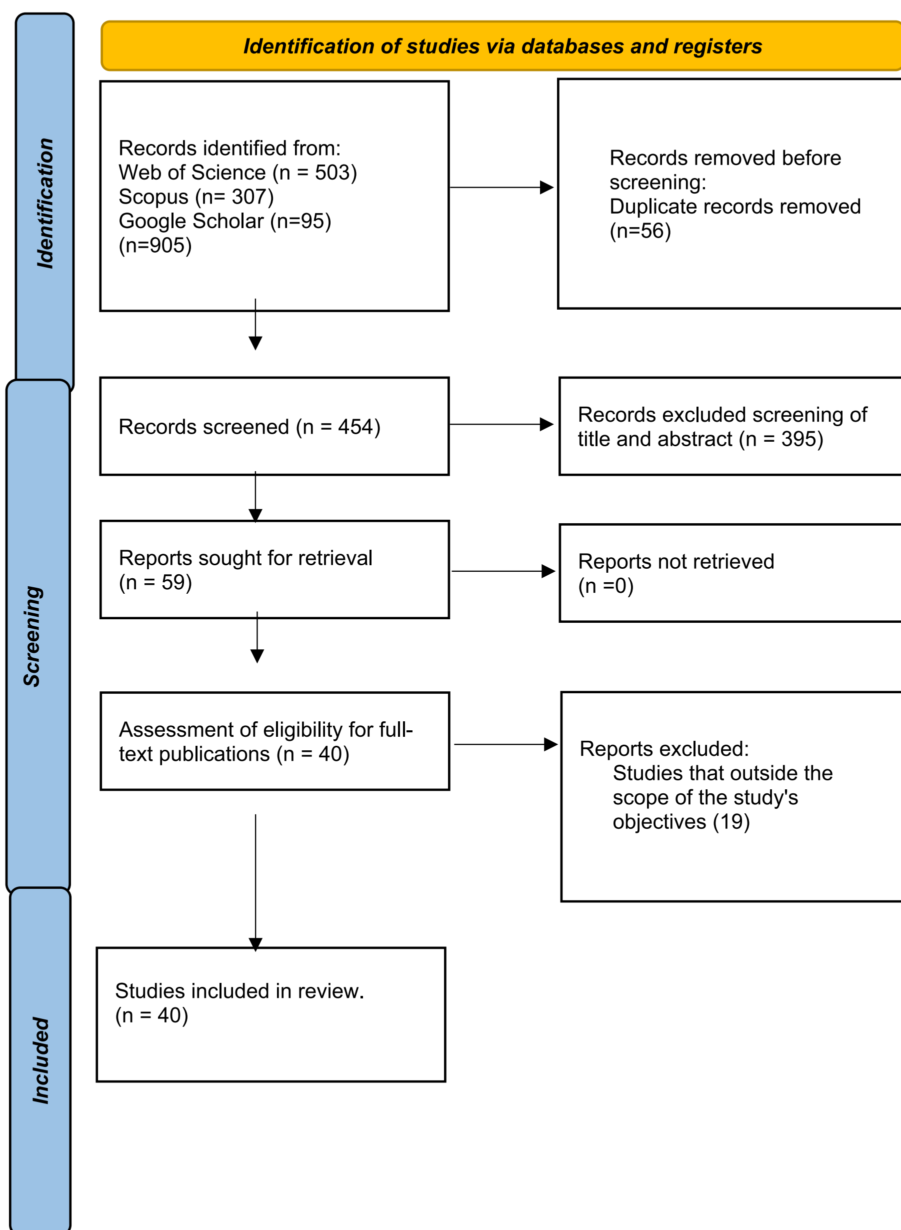

Fig. 1. Overview of paper identification, selection, and inclusion process.

2. Methodology

The research employed a four-step method (Fig. 1): data collection, preliminary data examination, eligibility assessment, and data incorporation. The goal of compiling all of the information is to come up with fresh concepts and future research recommendations. This study conducted a comprehensive literature review to examine structural competency, health disparities in women's health, and medical education's role in addressing these issues. The search strategy utilized keywords related to structural competency, women's health disparities, and medical education curriculum across multiple academic databases. Analysis of the retrieved literature focused on identifying current knowledge gaps and classifying recent studies according to key themes (Moshood et al., 2021; Seuring & Müller, 2008). It is essential to adhere to these recommendations, as the ongoing study follows a systematic approach to data extraction and categorization through content analysis, while also identifying potential areas for future research (Tseng et al., 2019). To assemble findings, the researchers utilized the Scopus, Google Scholar, and Web of Science databases for both the metadata analysis and the classifications and insights, respectively (Malviya & Kant, 2015; Seuring & Müller, 2008; Tseng et al., 2019). A significant number of researchers believe that the Scopus database may be relied on. In addition, the Scopus database has been lauded by academics for the excellent quality of the indexing information it contains. It has served as a reliable and high-quality data source for a great deal of studies that came before it (Apriliyanti & Alon, 2017; Tseng et al., 2019).

2.1. *Identification of the data*

The information was compiled using Scopus-integrated databases, the search consists of all publications released between 2010 and 2023. Keywords like *structural competence*, *medical education, health disparities, or women's health* (Table1) are used at the beginning of the study. The first search criteria included only the title, abstract, and keywords. 905 papers were initially produced using four keyword combinations (Fig. 1).

2.2. *Screening initial data*

To refine the search results, several adjustments were made. Initially, the search encompassed various types of content, including articles, conference papers, books, and book chapters. However, in the final analysis, all these formats were excluded, leaving only articles in the search results. This was accomplished by limiting the search parameters to "article titles" and "keywords." By doing so, the aim was to decrease the inclusion of publications that fell into the categories of books, conference proceedings, and periodicals. As a direct result of this, following the initial round of refinement, 905 papers were retained. After removing any unnecessary copies, 463 publications were chosen for the metadata study. The final selection process was guided by clearly defined inclusion and exclusion criteria to ensure the selection of relevant, high-quality, and diverse articles for analysis.

Inclusion Criteria:

- Original research studies published between 2010–2023 that examine structural competence approaches in medical education addressing health inequalities in women's health
- Primary research articles presenting original data related to:
  o Health inequalities specifically affecting women's health
  o Medical education interventions and approaches
  o Structural competence frameworks and methodologies
- English-language publications only

Exclusion Criteria:

- Studies with inadequate or unclear methodologies that prevent conclusive assessment of structural competence approach impacts
- Studies falling outside the scope of the study's primary objectives
- Earlier editions or iterations of already included reports

The systematic application of these criteria resulted in a final selection of 40 articles for detailed analysis (Table 2). This selection represents high-quality research in women's health, which is defined as a comprehensive field encompassing physical, mental, social, and environmental factors affecting women's well-being across their entire lifespan (WHO, 2023; Ussher, 2023; Bird, 2022).

Table 1
Initial search results and results after refining the initial search.

Keywords	Results (No. of Articles)	Limit to	Document Type
Initial search result			
"Structural Competency" OR "Medical Education" AND "Health Disparities" AND "women's health"	**1000**	Title, abstract and the keywords	Conference papers, books, book chapters and articles
Keywords	Results (No. of Articles)	Limit to	Document Type
Limit-To Exact keyword			
"Structural Competency" OR "Medical Education" AND "Health Disparities" AND "Women's health"	**463**	Title, abstract and the keywords	Articles

3. Literature review

3.1. *Health disparities in women's health*

According to Braveman et al. (2022), health disparities encompass systematic differences in health status between populations with varying demographic, social, economic, and geographic attributes. These variations in health outcomes are influenced by multiple intersecting factors including race, ethnicity, socioeconomic status, and biological sex (Williams et al., 2019). The World Health Organization (2021) emphasizes that in women's healthcare, disparities arise from a combination of biological sex-based differences and social determinants affecting healthcare access and quality. Studies have documented significant underfunding in women's health research, with particularly notable gaps in addressing the needs of women of color and minorities (Bird, 2022; Schubert et al., 2022). Research indicates that access barriers frequently result in delayed treatment, leading to more severe health complications over time (Olusola et al., 2019). Socioeconomic factors significantly impact healthcare access, with evidence showing disproportionate effects on women living in poverty or lacking insurance (Flor et al., 2022). Socioeconomic factors and discrimination significantly impact healthcare access and outcomes among different subpopulations of women (Howell et al., 2022). Research demonstrates significant disparities among different populations of women, with race, ethnicity, and medical insurance status significantly impacting maternal health outcomes (Howell et al., 2020). Hospital quality and care delivery

Table 2
Distribution of articles by category.

Category	Number of articles	Percentage
Reproductive/Maternal Health	18	45 %
General Physical Health	8	20 %
Mental Health	5	12.5 %
Healthcare Access/Systems	5	12.5 %
Social Determinants	4	10 %
Total	40	100 %

patterns further contribute to disparities in maternal morbidity and mortality rates (Howell & Zeitlin, 2017). Structural racism continues to play a crucial role in maternal morbidity among Black women (Giurgescu & Misra, 2022), highlighting how systemic barriers create and perpetuate these health disparities within healthcare settings. Women from marginalized groups such as racial or ethnic minorities, LGBTQ+ individuals, and those with disabilities face disproportionate rates of discrimination in healthcare settings (Phillips et al., 2023), leading to decreased trust in healthcare providers and reluctance to seek necessary care (Hasson et al., 2022). Indigenous women face particular challenges related to healthcare access and data quality measurement (Wright et al., 2022). Disparate outcomes among women manifest in multiple ways. Research shows significant variations in chronic illness rates including diabetes, heart disease, and cancer between different subpopulations of women (Hasson et al., 2022). These disparate outcomes extend to mental health conditions such as depression and anxiety, with measurable impacts on work capacity and family care responsibilities. Women's health disparities, particularly maternal health, have gained unprecedented attention at the federal level. During Black Maternal Health Week 2022, Vice President Kamala Harris emphasized the administration's commitment to addressing disparate maternal health outcomes (Black Mamas Matter, 2022). This commitment is reflected in significant bipartisan legislative action through the Black Maternal Health Caucus, as evidenced by the Black Maternal Health Momnibus Act (Eichelberger et al., 2023; Taylor, Scott, & Williams, 2023; Black Maternal Health Momnibus Act, 2023). The Momnibus represents a comprehensive legislative package addressing various aspects of maternal health inequities, particularly focusing on racial disparities in maternal healthcare access and outcomes (Kaiser Family Foundation, 2023; Bridges, 2020). Additionally, President Biden's White House Initiative on Women's Health Research demonstrates elevated federal prioritization of women's health research and care delivery, aiming to close long-standing gender health gaps (U.S. Department of Health and Human Services, 2023). Addressing these systemic issues requires comprehensive reform integrating structural competency into healthcare systems (Melino et al., 2023). Key interventions include expanding healthcare coverage, increasing community health clinic funding, and enhancing provider training to address the specific needs of marginalized communities (Lowdermilk et al., 2019). Progress requires sustained commitment from policymakers and healthcare professionals to implement evidence-based solutions that address both access barriers and systemic discrimination (Chlebowski et al., 2020). To address these health disparities in minority groups, the application of the structural competence approach is vital. Structural competence acknowledges that these disparities are rooted in systemic issues, including cultural norms and societal expectations. By implementing structural competency in healthcare, providers can recognize the structural factors perpetuating these disparities and work towards eliminating them (Melino et al., 2023). This training can lead to more patient-centered care and improved communication, ultimately reducing health disparities. Additionally, advocating for policy changes that address the social determinants of health, such as poverty and education, can be a structural competency approach to create a more equitable healthcare system for minority women (Downey & Gómez, 2018; Phillips et al., 2023).

3.2. Structural competency approach to address disparities in health care

Healthcare disparities persist globally despite ongoing efforts to address them, particularly affecting racial and ethnic minorities (Neff et al., 2020). Structural competency has emerged as a framework for understanding and addressing these disparities by examining their underlying social, economic, and political determinants (Castillo et al., 2020). This approach recognizes that healthcare outcomes are shaped by broader systemic factors beyond individual provider-patient interactions (Hansen & Metzl, 2019). Rather than focusing solely on healthcare provider responsibility, structural competency acknowledges the role of systemic structures in perpetuating health disparities and emphasizes the importance of addressing root causes at a systemic level (Davis & O'Brien, 2020).

The role of structural competency in addressing health disparities

Structural competency can be used to address health disparities in several ways. First, it encourages healthcare providers to recognize their own biases and assumptions about patients from different racial and ethnic backgrounds (Cogburn, 2019). By acknowledging these biases, providers can work to overcome them and provide more equitable care. Second, structural competency emphasizes the importance of cultural humility (Phillips et al., 2023). This means recognizing that patients from different backgrounds may have different beliefs, values, and experiences that influence their healthcare decisions (Crear-Perry et al., 2021). Providers who are culturally humble are better able to understand and respect these differences, which can lead to better communication and improved health outcomes. Finally, structural competency encourages healthcare providers to advocate for systemic change (Jaiswal, 2019). This may involve working with policymakers to address social determinants of health, such as poverty and access to education (Brottman et al., 2020). There are a number of examples of structural competency in action. One example is the use of community health workers (CHWs) to address health disparities in underserved communities (Doobay-Persaud et al., 2019; Phillips et al., 2023). CHWs are trained members of the community who work with patients to improve their health outcomes. They often have a deep understanding of the social and cultural factors that influence health in their community, which allows them to provide more effective care (Alvidrez et al., 2019). Another example is the use of electronic health records (EHRs) to collect data on patient demographics and health outcomes. By analyzing this data, healthcare providers can identify areas where disparities exist and work to address them (Amutah et al., 2021). For example, if data shows that patients from certain racial or ethnic backgrounds are more likely to experience complications after surgery, providers can develop targeted interventions to improve outcomes for these patients (Lavizzo-Mourey et al., 2021). Health disparities in women, particularly among minoritized populations are often exacerbated by cultural norms and expectations that limit their autonomy and influence their decision-making (Downey & Gómez, 2018; Khan & Ali). Data shows that in many communities, women's sexual and reproductive health choices are subject to unspeakable norms that dictate what is considered acceptable behaviour. Indeed these norms not only affect women's autonomy but are profoundly shaped by their spousal and family relationships (Katara) 2018. Studies have shown, for instance, that women may have little control over decisions about access to reproductive health care, sexual activity, contraception, HIV and other sexually transmitted diseases prevention, and sexual activity (katara, 2018; Khan & Ali 2015; Fougang & Tekbaş, 2023). This lack of agency can lead to disparities in health outcomes, including maternal mortality and inadequate access to qualified health professionals.

Challenges to implementing structural competency

(Avant & Gillespie, 2019). Many providers may not be familiar with the concept of structural competency or may not understand how it applies to their practice. Another challenge is the lack of resources available to support structural competency initiatives (Hansen & Metzl, 2019). Addressing health disparities often requires significant changes at the systemic level, which can be difficult to achieve without adequate funding and support. Finally, there may be resistance to implementing a structural competency approach among some providers or policymakers (Willging et al., 2019). This may be due to a lack of understanding about the root causes of health disparities or a belief that addressing these disparities is not within the scope of health care. Despite these challenges, there is growing interested in using a structural competency approach to address health disparities (Sawatsky et al., 2020). In addition, there are a number of initiatives underway to promote structural competency at the policy level (Hall et al., 2020). For example, the

Affordable Care Act (2010) includes provisions aimed at reducing health disparities among racial and ethnic minorities (Tejedor et al., 2019). Similarly, the National Institutes of Health has launched a program aimed at promoting research on health disparities and developing interventions to address them. A structural competency is a promising approach for addressing health disparities among minorities (Ismail & Hassan, 2019). While medical education has increasingly incorporated structural competency frameworks, and women's health disparities are well-documented, three critical gaps persist in the literature.

- Integration Gap: Current structural competency frameworks largely treat healthcare disparities as gender-neutral, failing to address the unique structural barriers that women face in accessing healthcare. While studies have examined general healthcare barriers (Smith et al., 2021; Jones, 2022), few have specifically analyzed how structural competency education can address gender-specific healthcare challenges.
- Pedagogical Gap: Despite evidence supporting the importance of structural approaches in medical education (Hansen & Metzl, 2019; Avant & Gillespie, 2019), there is limited research on effective methods for teaching structural competency specifically related to women's health. Existing studies focus primarily on general cultural competency (Wilson, 2022) or isolated clinical skills (Davis & O'Brien, 2020), rather than comprehensive structural approaches to women's healthcare.
- Assessment Gap: While various tools exist for evaluating structural competency (Ruth et al., 2020; Neff et al., 2020), there is a notable absence of validated assessment methods for measuring how effectively medical students apply structural competency principles to women's health scenarios. This gap hampers our ability to evaluate the effectiveness of educational interventions in this crucial area.

3.3. Potential impact of structural competency and medical education on service quality of women health

Historically, women's health has suffered from neglect within a healthcare system primarily tailored to men's needs, a deficit that has been significantly alleviated with the introduction of structural competency and medical education (Hansen & Metzl, 2019; Melino et al., 2023). Medical education emerges as a vital force in this paradigm shift, empowering healthcare providers with insights into the unique healthcare requirements of women, with a distinct emphasis on reproductive health (Harvey et al., 2022). By applying the principles of structural competency, healthcare professionals gain the ability to recognize the underlying structures governing clinical interactions, including legal, financial, and market-driven factors, thereby better understanding the constraints and opportunities within the healthcare landscape (Melino et al., 2023). This understanding extends to developing an extra-clinical language of structure, enabling healthcare providers to incorporate social, political, and economic concepts into healthcare discussions, thereby addressing the broader societal influences on patients' choices (Downey & Gómez, 2018). Additionally, the healthcare community learns to rearticulate "cultural" presentations in structural terms, confronting and dispelling stereotypes that affect patient care and outcomes (Jetty et al., 2022). Moreover, through observing and imagining structural intervention, healthcare professionals expand their horizons beyond individual patient cases, grasping the significance of systemic interventions that go beyond the clinical realm and reaching into movements and collaborative efforts that address the social determinants of health disparities (Downey & Gómez, 2018).

Finally, in developing structural humility, healthcare professionals embrace their role as participants in dismantling oppressive structures, rather than solitary agents of change, fostering a greater awareness of how these structures impact both themselves and their patients. Throughout this transformation, advocacy remains a pivotal force, raising awareness of women's health issues and advocating for policies that address social determinants to achieve equitable and sustainable improvements in women's health outcomes (Greer Jr et al., 2018; Downey & Gómez, 2018; Varas-Díaz et al., 2019.) Advocacy plays a crucial role in improving women's health outcomes through medical education and healthcare delivery (Fatima et al., 2019). Healthcare providers and educators can advocate for the integration of structural competency training in medical education, increased funding for women's health programs (Metzel & Hansen, 2018; Neff et al., 2020). In healthcare delivery, healthcare professionals can advocate for implementing evidence-based protocols that address women's health disparities and create strong community partnerships (Greer Jr et al., 2018). Through coordinated advocacy focused on both education and policy, healthcare professionals can work to address systemic barriers affecting women's health outcomes (Metzel & Hansen, 2018; Neff et al., 2020). By recognizing how social, economic, and political factors specifically impact women's health outcomes, providers can work toward more equitable care delivery and advocate for systemic changes. While implementation challenges exist, growing interest in structural competency throughout women's healthcare suggests potential for meaningful transformation. With sustained commitment, this approach can help create a more equitable healthcare system that addresses women's health disparities and ultimately improves health outcomes across all populations (Metzl & Hansen, 2018).The Table 3 analyzes the application of structural competency across six critical domains of women's healthcare, and Table 4 highlights implementation strengths, weaknesses, and supporting evidence from current literature.

3.4. Implementing structural competency in medical education to address health disparities in women's health

The current status of medical education reveals significant gaps in women's health training, given these significant gaps in medical education regarding women's health, implementing structural competency becomes crucial for systematic change. Structural competency provides a framework for understanding and addressing both educational content gaps and the broader systemic barriers affecting women's healthcare delivery and outcomes. Table 5 presents comprehensive teaching strategies for implementing structural competency in women's health education (Thomas et al., 2022), while Table 6 outlines implementation strategies ranging from curriculum integration to policy advocacy, each designed to transform how medical education addresses women's health disparities.

4. Discussion

a) Health Disparities in Women's Health

Women's health is a multifaceted field encompassing sex, gender, and racial dimensions. Research highlights persistent disparities across multiple domains including cardiovascular care, cancer treatment, mental healthcare, and chronic disease management, extending beyond reproductive health as emphasized by WHO (2021).These disparities, rooted in factors like healthcare access, socioeconomic status, and systemic discrimination, yield severe consequences for women's overall health outcomes (Flor et al., 2022; Chlebowski et al., 2020). The disparities manifest differently across health domains. In cardiovascular care, women often receive delayed diagnoses due to overlooked sex-specific symptoms. Studies by Flor et al. (2022) and Chlebowski et al. (2020) highlight how healthcare provider discrimination affects breast cancer and menopausal health outcomes. Downey's (2018) research reveals consistently worse outcomes for women of color and low-income women across reproductive health domains. Black maternal health statistics particularly demonstrate these racial disparities, with Black mothers experiencing higher rates of pregnancy-related deaths, hypertension, and chronic stress-related weathering (Barlow & Johnson, 2021; Nguyen et al., 2022). In marginalized communities, women face limited access to prenatal care, higher maternal mortality rates, and

Table 3
Analysis of health disparities in women's healthcare: a structural competency framework.

Area of disparity	Key evidence	Specific findings	Impact	Structural barriers	Current interventions	Recommended solutions
Reproductive Health	Melino et al. (2023); Katara (2018); Fougang & Tekbaş (2023); Downey & Gómez (2018)	1) Limited reproductive autonomy in decision-making; 2) Restricted access to family planning services; 3) Inadequate maternal care access; 4) STI prevention and treatment gaps; 5) Cultural restrictions on reproductive choices	1) Unmet family planning needs; 2) Poor maternal health outcomes; 3) Higher rates of pregnancy complications; 4) Increased STI prevalence; 5) Limited preventive care access	1) Cultural and religious norms; 2) Family influence on healthcare decisions; 3) Limited healthcare provider access; 4) Insurance coverage gaps; 5) Geographic barriers to specialized care	1) Comprehensive family planning services; 2) Maternal health programs; 3) STI prevention initiatives; 4) Cultural sensitivity training; 5) Community education programs	1) Rights-based reproductive care; 2) Cultural competency integration; 3) Family-centered approach; 4) Provider education enhancement; 5) Community engagement strategies
Healthcare Access	Bird (2022); Schubert et al. (2022); Olusola et al. (2019); Lowdermilk et al. (2019)	1) Consistent underfunding of women's health research; 2) Limited quality healthcare access in rural areas; 3) Unequal resource distribution across communities; 4) Higher uninsured rates among women of color; 5) Geographic barriers to specialty care	1) Untreated chronic conditions; 2) Delayed diagnoses leading to complications; 3) Worsening health outcomes in preventable conditions; 4) Higher mortality rates in treatable conditions; 5) Increased reliance on emergency care	1) Economic barriers including lack of insurance; 2) Geographic limitations in rural areas; 3) Transportation issues for low-income women; 4) Complex healthcare system navigation; 5) Uneven distribution of healthcare resources	) Community health clinics establishment; 2) Mobile health services in rural areas; 3) Insurance expansion programs; 4) Transportation assistance services; 5) Telemedicine initiatives	1) Comprehensive healthcare coverage policy reform; 2) Strategic distribution of healthcare facilities; 3) Integrated transportation support systems; 4) Simplified healthcare navigation; 5) Equitable resource allocation
Racial/Ethnic Disparities	Barlow & Johnson (2021); Nguyen et al. (2022); Downey (2018); Crear-Perry et al. (2021)1) Higher maternal mortality in women of color;	1) Higher maternal mortality in women of color; 2) Increased pregnancy complications; 3) Limited access to prenatal care; 4) Cultural and language barriers; 5) Discriminatory treatment experiences	1) Adverse pregnancy outcomes; 2) Poor maternal health indicators; 3) Chronic health conditions; 4) Reduced preventive care utilization; 5) Mistrust in healthcare system	1) Systemic racism in healthcare delivery; 2) Provider implicit bias; 3) Cultural misunderstanding; 4) Language barriers; 5) Institutional discrimination	1) Cultural competency training programs; 2) Interpreter services availability; 3) Community health worker programs; 4) Diverse provider recruitment; 5) Patient navigation services	1) Systematic bias elimination programs; 2) Mandatory cultural competency standards; 3) Diverse workforce development; 4) Comprehensive language support; 5) Community-based care models
Mental Health	Hasson et al. (2022); Flor et al. (2022)	1) Higher depression rates; 2) Increased anxiety; 3) Limited mental health access; 4) Stigma barriers; 5) Treatment gaps	1) Reduced quality of life; 2) Work limitations; 3) Family impact; 4) Social isolation; 5) Chronic stress	1) Mental health stigma; 2) Limited resources; 3) Cultural barriers; 4) Cost factors; 5) Access issues	1) Mental health screening; 2) Support programs; 3) Cultural counseling; 4) Community support; 5) Integrated care	1) Comprehensive mental health; 2) Stigma reduction; 3) Cultural support; 4) Access improvement; 5) Resource allocation
Healthcare Quality	Hansen & Metzl (2019); Davis & O'Brien (2020)	1)Variable care quality; 2) Provider bias impact; 3) Communication issues; 4) Cultural gaps; 5) System navigation challenges	1) Suboptimal care; 2) Poor outcomes; 3) Patient dissatisfaction; 4) Trust erosion; 5) Care fragmentation	1) Quality standards gaps; 2) Provider training needs; 3) Cultural competency lacks; 4) System complexity; 5) Resource limitations	1) Quality metrics implementation; 2) Provider education; 3) Cultural training; 4) System navigation support; 5) Resource optimization	1) Quality improvement programs; 2) Provider development; 3) Cultural integration; 4) System simplification; 5) Resource enhancement
System Navigation	Flor et al. (2022); Lavizzo-Mourey et al. (2021)	1) Complex healthcare systems; 2) Information barriers; 3) Coordination gaps; 4) Administrative burdens; 5) Service fragmentation	1) Care delays; 2) Missed appointments; 3) Incomplete care; 4) Patient frustration; 5) Poor outcomes	1) System complexity; 2) Information gaps; 3) Coordination challenges; 4) Resource limitations; 5) Communication barriers	1) Navigation support services; 2) Information systems; 3) Care coordination; 4) Administrative assistance; 5) Communication tools	1) System simplification; 2) Integration improvement; 3) Coordination enhancement; 4) Resource allocation; 5) Communication optimization
Cultural Barriers	Hansen & Metzl (2019); Crear-Perry et al. (2021)	1) Language differences; 2) Cultural beliefs conflicts; 3) Traditional practices; 4) Religious considerations; 5) Social norms	1) Communication gaps; 2) Trust issues; 3) Care avoidance; 4) Treatment non-compliance; 5) Poor outcomes	1) Limited cultural understanding; 2) Language barriers; 3) Provider bias; 4) System inflexibility; 5) Resource constraints	1) Interpreter services; 2) Cultural training; 3) Community liaison; 4) Provider education; 5) Resource development	1) Comprehensive cultural competency; 2) Language access; 3) Cultural integration; 4) Provider diversity; 5) Community engagement

scarce family planning services (Olusola et al., 2019; Crear-Perry et al., 2021). Recognizing the unique needs of women from these marginalized communities is vital. The studies presented by Alvidrez et al. (2019), Amutah et al. (2021) and Lavizzo-Mourey et al. (2021) offer compelling evidence in support of this claim.

Health inequities among women emerge from interconnected systems of structural inequality operating through race, socioeconomic status, disability status, sexual orientation, and geographic location (Association of American Medical Colleges, 2023). Women from culturally marginalized communities face compounded challenges due to the convergence of cultural barriers, systemic discrimination, and limited culturally appropriate healthcare resources (Flor et al., 2022; Chlebowski et al., 2020). The intersecting structural and cultural factors create multiplicative rather than merely additive barriers,

Table 4
Comprehensive Analysis of Structural Competency Strengths and Weaknesses in Women's Healthcare.

Domain	Strengths	Weaknesses	Supporting evidence
Reproductive Health Care	Addresses systemic barriers in maternal health outcomes – Recognizes cultural birthing practices – Integrates family planning access – Promotes reproductive autonomy – Addresses maternal mortality disparities Limited access to quality healthcare services leads to untreated health problems – Disparities affect women of color and transgender individuals – Lack of adequate funding for women's health – Discrimination impacts marginalized groups' access to care – Social determinants affect reproductive health choices	Limited focus beyond pregnancy – Resource gaps in underserved areas – Cultural resistance to change – Complex coordination needs – Implementation barriers Resource constraints in providing comprehensive care – Limited funding affecting service delivery – Barriers to access for marginalized communities – Implementation challenges in traditional settings	Bird (2022): Documents persistent funding inadequacies Schubert et al. (2022): Evidence of health risks for women of color Olusola et al. (2019): Shows impact of limited healthcare access Phillips et al. (2023): Documents discrimination in healthcare Flor et al. (2022): Demonstrates impact of disparities Melino et al. (2023)Crear-Perry et al. (2021)Barlow & Johnson (2021)Flor et al. (2022)Bird (2022)Schubert et al. (2022)
Women's Mental Health	Recognition of impact on overall well-being Addresses gender-specific trauma – Recognizes intersectional barriers – Integrates cultural contexts – Considers life-cycle impacts – Promotes holistic care – Attention to chronic stress	Limited mental health resources – Stigma in many communities – Access barriers – Provider training gaps – Complex assessment needs	Hasson et al. (2022): Documents mental health impacts Flor et al. (2022): Shows discrimination effects Melino et al. (2023): Demonstrates systemic issues Crear-Perry et al. (2021): Discusses social determinants Phillips et al. (2023)Hasson et al. (2022) Downey & Gómez (2018) Bird (2022)
Cultural Integration	• Addresses intersectional needs – Recognizes cultural practices – Promotes respectful care – Integrates family dynamics – Supports community engagement	• Complex cultural variations – Limited provider training – Communication barriers – Resource constraints – Implementation challenges	Hansen & Metzl (2019)Melino et al. (2023) Davis & O'Brien (2020) | Harvey et al. (2022)Varas-Díaz et al. (2019)Ussher (2023)Lowdermilk et al. (2019)
Medical Education integration	–Comprehensive learning approach –Incorporates women's health perspectives – Addresses gender bias in medicine – Promotes inclusive care models –Enhances cultural competency – Develops advocacy skills – Supports professional development	Curriculum integration challenges – Faculty expertise gaps – Assessment complexity – Time constraints – Resource limitations – Resource limitations	Avant & Gillespie (2019)Thomas et al. (2022)Hansen et al. (2018) Neff et al. (2020)
Policy Advocacy	Promotes women's health equity – Addresses systemic barriers – Supports policy reform – Enhances access to care – Facilitates systemic change	Political resistance – Resource requirements – Implementation barriers – Slow change process – Complex coordination	Yearby (2020) Greer Jr et al. (2018) Nguyen et al. (2022) Oppong et al. (2021)
Clinical Implementation	Addresses root causes Addresses systemic barriers to care – Promotes culturally responsive care – Enhances patient-provider relationships – Supports comprehensive care delivery – Integrates social context in treatment	Patient- centered approach Resource-intensive implementation – Time constraints in clinical settings – Complex training requirements – Resistance to change – Limited standardization protocols	Harvey et al. (2022)Jetty et al. (2022)Hasson et al. (2022)Crear-Perry et al. (2021)Hansen & Metzl (2019)Olusola et al. (2019)Hasson et al. (2022) Lowdermilk et al. (2019)

fundamentally shaping healthcare access, quality of care, and health outcomes. Cultural beliefs, practices, and traditions significantly influence how different communities understand and approach health, yet these factors are often overlooked in mainstream healthcare delivery (Downey & Gómez, 2018).

Elevating the quality of care for all women requires increasing their access to high-quality healthcare services. This can be realized through the formulation of policies designed to expand healthcare coverage and augment funding for community health clinics. Simultaneously, it is paramount to train healthcare providers in recognizing and addressing the unique healthcare needs of women hailing from marginalized communities. In this study, incorporating structural competency within the realm of women's health emerges as a paramount consideration. Such integration can effectively equip healthcare providers with the tools and knowledge needed to promote health justice. Noteworthy studies by Avant & Gillespie (2019), Hansen & Metzl (2019), and Hansen et al. (2018) emphasize the importance of comprehending and acting upon the profound impact of social determinants of health and institutional racism. The development of cultural competence, coupled with a vigilant awareness of discrimination and bias, is instrumental in enhancing the quality of care provided to women, as reflected in research conducted by Harvey et al. (2022) and Oppong et al. (2021).

Advocacy, whether originating from within the healthcare system or pursued at the policy level, emerges as a lynchpin in the quest to tackle the foundational sources of these disparities. Studies cited, such as those by Varas-Díaz et al. (2019) and Hasson et al. (2022), firmly assert the transformative role advocacy efforts play in ushering in policy changes and spearheading initiatives aimed at curtailing health disparities among women. A comprehensive approach Fig. 2, informed by an understanding of the multifaceted dimensions of these disparities, is

Table 5
Comprehensive teaching strategies for implementing structural competency in women's health education.

Teaching strategy	Application in women's health	Implementation components	References
Lecture-based Teaching	Foundation for structural concepts	• Structured delivery of core concepts • Integration of health disparity data	Swanwick, 2018; Thomas et al., 2022
Case-based Learning	Real scenarios in women's healthcare	• Analysis of structural barriers • Social determinant examination • Root cause focus	Davis & O'Brien, 2020; Hansen & Metzl, 2019
Team-based Learning	Collaborative problem-solving	• Small group work • Diverse perspective integration • Leadership development	Hall et al., 2020
Simulation-based Learning	Practical application of concepts	• Controlled environment practice • Cultural competency training • Bias awareness scenarios	Downey & Gómez, 2018
Flipped Classroom	Active engagement with materials	• Pre-class preparation • Interactive discussions • Diverse learning accommodation	Thomas et al., 2022
Problem-based Learning	Critical analysis of disparities	• Scenario analysis • Solution development • Decision-making skills	Hansen & Metzl, 2019
Active Learning	Engaged learning approaches	• Group discussions • Hands-on experiences • Direct participation	Varas-Díaz et al., 2019
Online Learning	Flexible learning options	• Digital content delivery • Virtual case studies • Remote access	Neff et al., 2020

imperative. Advocacy, both within healthcare systems and at policy levels, is essential for addressing these disparities. Research by Varas-Díaz et al. (2019) and Hasson et al. (2022) demonstrates how advocacy efforts drive policy changes and initiatives to reduce health disparities among women. A comprehensive approach that considers all these factors is necessary for meaningful change.

The future of women's health urgently requires a dynamic integration of structural competency in medical education. These changes can provide the potential to reconfigure healthcare systems, fostering a more profound understanding and tailored approach to meet the distinctive needs of women. As health disparities are ameliorated and equitable access to quality care is championed, the future of women's health is positioned for transformation.

b) Structural Competency Approach in Women's Health

Cultural competency training specific to women's healthcare is pivotal for addressing health disparities, as highlighted by Lowdermilk et al. (2019) and Sawatsky et al. (2020). Women's health is deeply intertwined with complex social and structural factors, necessitating innovative approaches. Among these, structural competency has emerged as a promising paradigm that recognizes both the root causes of health disparities and broader social, economic, and political factors, while emphasizing the importance of addressing biases within healthcare provision (Davis & O'Brien, 2020; Hansen & Metzl, 2019).

Structural competency in women's health serves as a call to action,

Table 6
Implementation structural competency approach to address women's health disparities.

Strategy	Key Components	Expected Outcomes	References
Curriculum Integration	• Integration at multiple training levels • Focus on social, economic, political factors • Identification of structural determinants • Emphasis on root causes vs. symptoms	Enhanced understanding of systemic barriers in women's health	Davis & O'Brien, 2020; Ussher, 2023
Faculty Training	• Professional development programs • Specialized faculty recruitment • Structural competency expertise development	Improved quality of structural competency education	Varas-Díaz et al., 2019
Case-Based Learning	• Real-world scenarios • Analysis of structural factors • Focus on social determinants • Beyond symptom management	Applied understanding of structural barriers	Hansen & Metzl, 2019
Interprofessional Education	• Multi-disciplinary collaboration • Holistic healthcare approach • Team-based learning	Enhanced cross-disciplinary understanding	Downey & Gómez, 2018
Community Engagement	• Partnerships with local organizations • Clinical experience with disparities • Emphasis on structural determinants	Practical experience with structural barriers	Neff et al., 2020
Electives/ Specializations	• Specialized tracks in women's health • In-depth knowledge development • Research opportunities	Focused expertise development	Avant & Gillespie, 2019
Assessment/ Evaluation	• Competency testing • Practical application focus • Beyond symptom-based assessment	Measured learning outcomes	Hansen et al., 2018; Ruth et al., 2020
Diversity/ Inclusion	• Diverse faculty/ student recruitment • Cultural competence development • Structural bias addressing	Enhanced cultural sensitivity	Greer Jr et al., 2018; Nguyen et al., 2022
Continuing Education	• Ongoing professional development • Latest research integration	Sustained competency development	Fatima et al., 2019

(continued on next page)

Table 6 (*continued*)

Strategy	Key Components	Expected Outcomes	References
Research Opportunities	• Structural solution focus • Structural/ feminist approaches • Health disparities focus • Student mentorship	Evidence-based solution development	Barlow & Johnson, 2021; Hasson et al., 2022
Policy Advocacy	• System-level change trainingPolicy engagement skills • Healthcare equity focus	Systemic change promotion	Harvey et al., 2022; Nguyen et al., 2022

driving policy reforms that address core health disparities (Varas-Díaz et al., 2019; Hasson et al., 2022). Hansen and Metzl (2019) emphasize how social determinants broadly impact women's health, including healthcare accessibility, socioeconomic disparities, racial and ethnic variances, and systemic prejudices. Avant and Gillespie (2019) provide valuable insights into integrating structural competency within healthcare education, demonstrating how this approach equips professionals to address the unique challenges faced by women, particularly those from marginalized communities. It encourages healthcare providers to weigh the influence of structural racism, gender bias, and socioeconomic conditions when devising treatment strategies and administering care to women. Structural competency in women's health mandates a transition from a focus on individual care to an encompassing view of the structural determinants that significantly shape the well-being of women.

The feminist movement has significantly influenced this framework, contributing to policies that incorporate anti-racism training, as seen in New Zealand's public sector (Wepa, 2020). The feminist women's health movement has been crucial in challenging paternalistic healthcare

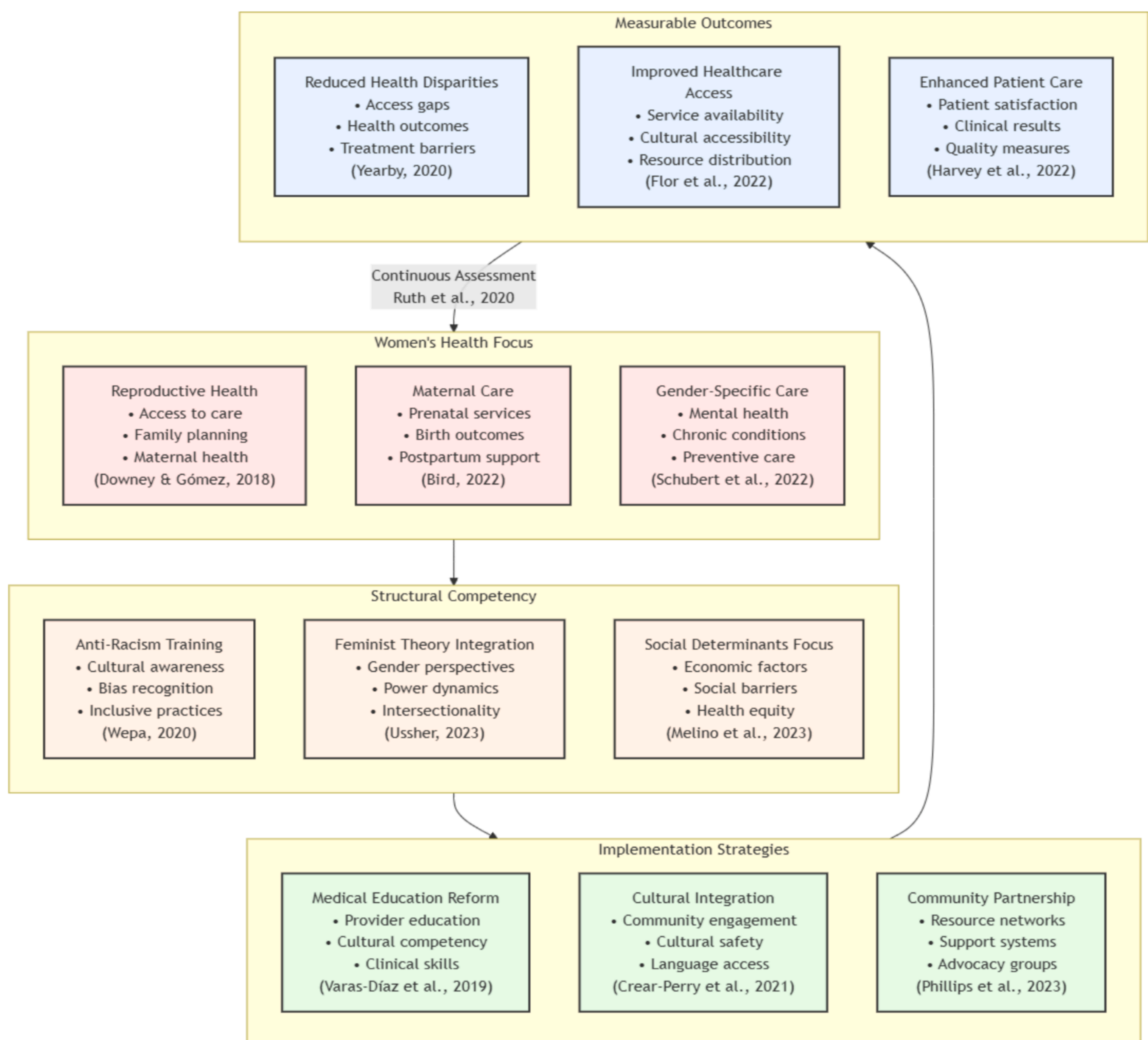

Fig. 2. Structural competency framework for women's healthcare education.

practices (Ussher, 2023), while the Black Lives Matter movement highlights gender-related violence and racial discrimination (Shai et al., 2021). Bell Hooks' (1989) work on intersectionality and Black feminist theory provides insights into how social structures impact Black women's health, particularly at the intersection of race and gender. The Bardach Eightfold Path (Bardach & Patashnik, 2019), though commonly used in policy analysis, has been criticized for inherent biases affecting Black women's health policy implementation. The feminist lens in healthcare examines how gender-based power structures and systemic inequities influence health outcomes through three key principles (Clow et al., 2009): analyzing healthcare power dynamics, understanding gender's intersection with other social determinants, and recognizing how these intersections affect disparities. Fundamentally, the feminist healthcare perspective highlights that women's health is shaped not just by biological factors, but also by pervasive social, economic, and political inequities (Hankivsky, 2012). The integration of feminist principles with structural competency allows healthcare professionals to better understand Black women's unique challenges, fostering a more compassionate and equitable healthcare system. However, implementing structural competency faces significant challenges, including inadequate provider training and resource constraints (Neff et al., 2020). Despite these obstacles, growing interest in integrating structural competency into medical curricula and healthcare policies suggests progress in addressing health disparities (Greer Jr et al., 2018).

5. Conclusion

This systematic review highlights the critical intersection of structural competency, medical education, and women's health disparities. The findings demonstrate that addressing health disparities in women's healthcare requires a comprehensive approach that goes beyond traditional medical education models. The findings underscore the need for multi-level interventions across individual, interpersonal, clinic, community, research, and policy domains Fig. 2. While significant implementation challenges remain, including resource constraints and institutional barriers, the growing interest and initiatives to incorporate structural competency into medical education and healthcare policies provide hope for a more equitable healthcare system, especially for women from marginalized communities. Future research is required to develop standardized assessment tools for measuring structural competency effectiveness and to conduct longitudinal studies evaluating the impact of structural competency training on women's health outcomes.

CRediT authorship contribution statement

Daina Charnelle Fougang: Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Charles Mpofu:** Writing – review & editing, Supervision. **Dianne Wepa:** Writing – review & editing, Supervision.

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References

Alvidrez, J., Castille, D., Laude-Sharp, M., Rosario, A., & Tabor, D. (2019). The national institute on minority health and health disparities research framework. *American Journal of Public Health, 109*(S1), S16–S20.

Amutah, C., Greenidge, K., Mante, A., Munyikwa, M., Surya, S. L., Higginbotham, E., Jones, D. S., Lavizzo-Mourey, R., Roberts, D., & Tsai, J. (2021). Misrepresenting race—the role of medical schools in propagating physician bias. In *New England Journal of Medicine* (Vol. 384, Issue 9, pp. 872–878). Mass Medical Soc.

Apriliyanti, I. D., & Alon, I. (2017). Bibliometric analysis of absorptive capacity. *International Business Review, 26*(5), 896–907.

Association of American Medical Colleges. (2023). Bridging the Gender Gap in Healthcare: Addressing Disparities in Education.

Avant, N. D., & Gillespie, G. L. (2019). Pushing for health equity through structural competency and implicit bias education: A qualitative evaluation of a racial/ethnic health disparities elective course for pharmacy learners. *Currents in Pharmacy Teaching and Learning, 11*(4), 382–393.

Barlow, J. N., & Johnson, B. M. (2021). Listen to black women: Do black feminist and womanist health policy analyses. *Women's Health Issues, 31*(2), 91–95. https://doi.org/10.1016/j.whi.2020.11.001

Bird, C. E. (2022). Underfunding of Research in Women's Health Issues Is the Biggest Missed Opportunity in Health Care. *Rand. org, February, 11*.

Black Maternal Health Momnibus Act, H.R. 1385, 118th Congress. (2023). https://www.congress.gov/bill/118th-congress/house-bill/1385.

Black Mamas Matter, Alliance. (2022). *Black maternal health week 2022: Building for liberation*. BMMA Report Series.

Braveman, P. A., Arkin, E., Proctor, D., Kauh, T., & Holm, N. (2022). Systemic and structural racism: Definitions, examples, health damages, and approaches to dismantling. *Health Affairs, 41*(2), 171–178. https://doi.org/10.1377/hlthaff.2021.01394

Bridges, K. M. (2020). Racial disparities in maternal mortality. *New York University Law Review, 95*(5), 1229–1318.

Brottman, M. R., Char, D. M., Hattori, R. A., Heeb, R., & Taff, S. D. (2020). Toward cultural competency in health care: A scoping review of the diversity and inclusion education literature. *Academic Medicine, 95*(5), 803–813.

Castillo, E. G., Isom, J., DeBonis, K. L., Jordan, A., Braslow, J. T., & Rohrbaugh, R. (2020). Reconsidering systems-based practice: Advancing structural competency, health equity, and social responsibility in graduate medical education. *Academic Medicine: Journal of the Association of American Medical Colleges, 95*(12), 1817.

Chlebowski, R. T., Anderson, G. L., Aragaki, A. K., Manson, J. E., Stefanick, M. L., Pan, K., Barrington, W., Kuller, L. H., Simon, M. S., & Lane, D. (2020). Association of menopausal hormone therapy with breast cancer incidence and mortality during long-term follow-up of the women's health initiative randomized clinical trials. *JAMA, 324*(4), 369–380.

Clow, B., Pederson, A., Haworth-Brockman, M., & Bernier, J. (2009). *Rising to the challenge: Sex-and gender-based analysis for health planning, policy and research in Canada*. Halifax: NS: Atlantic Centre of Excellence for Women's Health.

Cogburn, C. D. (2019). Culture, race, and health: Implications for racial inequities and population health. *The Milbank Quarterly, 97*(3), 736–761.

Crear-Perry, J., Correa-de-Araujo, R., Lewis Johnson, T., McLemore, M. R., Neilson, E., & Wallace, M. (2021). Social and structural determinants of health inequities in maternal health. *Journal of Women's Health, 30*(2), 230–235.

Davis, S., & O'Brien, A.-M. (2020). Let's Talk About Racism: Strategies for Building Structural Competency in Nursing. Academic Medicine, 95(12S), S58-S65. https://doi.org/10.1097/ACM.0000000000003696.

Doobay-Persaud, A., Adler, M. D., Bartell, T. R., Sheneman, N. E., Martinez, M. D., Mangold, K. A., Smith, P., & Sheehan, K. M. (2019). Teaching the social determinants of health in undergraduate medical education: A scoping review. *Journal of General Internal Medicine, 34*, 720–730.

Downey, M. M., & Gómez, A. M. (2018). Structural competency and reproductive health. *AMA Journal of Ethics, 20*(3), 211–223.

Eichelberger, K. Y., et al. (2023). The Black maternal health momnibus act: A policy statement from the society for maternal-fetal medicine. *American Journal of Obstetrics & Gynecology MFM*. https://doi.org/10.1016/j.ajogmf.2023.100948

Fatima, I., Humayun, A., Iqbal, U., & Shafiq, M. (2019). Dimensions of service quality in healthcare: A systematic review of literature. *International Journal for Quality in Health Care, 31*(1), 11–29.

Fougang, D.C., & Tekbaş, S. (2023, May 14). Knowledge, Behaviours and Affecting Factors About Human Papilloma Virus and Vaccination Among University Students. Ordu Üniversitesi Hemşirelik Çalışmaları Dergisi. https://doi.org/10.38108/ouhcd.1170908.

Flor, L. S., Friedman, J., Spencer, C. N., Cagney, J., Arrieta, A., Herbert, M. E., Stein, C., Mullany, E. C., Hon, J., & Patwardhan, V. (2022). Quantifying the effects of the COVID-19 pandemic on gender equality on health, social, and economic indicators: A comprehensive review of data from March, 2020, to September, 2021. *The Lancet, 399*(10344), 2381–2397.

Giurgescu, C., & Misra, D. P. (2022). Structural racism and Black women's health: Understanding the role of social determinants of health and healthcare inequities. *Clinical Obstetrics and Gynecology, 65*(1), 42–56. https://doi.org/10.1097/GRF.0000000000000679.

Greer, P. J., Jr, Brown, D. R., Brewster, L. G., Lage, O. G., Esposito, K. F., Whisenant, E. B., Anderson, F. W., Castellanos, N. K., Stefano, T. A., & Rock, J. A. (2018). Socially accountable medical education: An innovative approach at Florida International University Herbert Wertheim College of Medicine. *Academic Medicine, 93*(1), 60.

Hall, A. K., Rich, J., Dagnone, J. D., Weersink, K., Caudle, J., Sherbino, J., Frank, J. R., Bandiera, G., & Van Melle, E. (2020). It'sa marathon, not a sprint: Rapid evaluation of competency-based medical education program implementation. *Academic Medicine, 95*(5), 786–793.

Hankivsky, O. (2012). Women's health, men's health, and gender and health: Implications of intersectionality. *Social Science & Medicine, 74*(11), 1712–1720.

Hansen, H., Braslow, J., & Rohrbaugh, R. M. (2018). From cultural to structural competency—training psychiatry residents to act on social determinants of health and institutional racism. *JAMA Psychiatry, 75*(2), 117–118.

Hansen, H., & Metzl, J. M. (2019). *Structural competency in mental health and medicine: A case-based approach to treating the social determinants of health*. Springer.

Harvey, M., Neff, J., Knight, K. R., Mukherjee, J. S., Shamasunder, S., Le, P. V., … Holmes, S. M. (2022). Structural competency and global health education. *Global public health, 17*(3), 341–362.

Hasson, R., Sallis, J. F., Coleman, N., Kaushal, N., Nocera, V. G., & Keith, N. (2022). COVID-19: Implications for physical activity, health disparities, and health equity. *American Journal of Lifestyle Medicine, 16*(4), 420–433.

Hooks, B. (1989). In *Feminist politicization: A comment* (pp. 105–111). Boston: South End Press.

Howell, E. A., Egorova, N. N., Balbierz, A., Zeitlin, J., & Hebert, P. L. (2022). Site of care and racial and ethnic disparities in severe maternal morbidity. *American Journal of Obstetrics and Gynecology, 226*(2), 255–e1.

Howell, E. A., & Zeitlin, J. (2017). Quality of care and disparities in obstetrics. *Obstetrics and Gynecology Clinics, 44*(1), 13–25.

Katara, S. Reproductive Health: Concept and Determining Factors. National Development, 84.

Kaiser Family Foundation. (2023). Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them. https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/.

Khan, N. A., & Ali, M. Q. A. WOMeN eMPOWeRMeNT & RePRODUCTIVe HeAlTH: ISSUeS AND PeRSPeCTIVeS. International Journal of Society and Humanities, 66.

Ismail, A. A., & Hassan, R. (2019). Technical competencies in digital technology towards industrial revolution 4.0. *Journal of Technical Education and Training, 11*(3).

Jaiswal, J. (2019). Whose responsibility is it to dismantle medical mistrust? Future directions for researchers and health care providers. *Behavioral Medicine, 45*(2), 188–196.

Jetty, A., Jabbarpour, Y., Pollack, J., Huerto, R., Woo, S., & Petterson, S. (2022). Patient-physician racial concordance associated with improved healthcare use and lower healthcare expenditures in minority populations. *Journal of Racial and Ethnic Health Disparities*, 1–14.

Kyere, E., S. Boddie, and J. Lee, Euna, *Visualizing structural competency: moving beyond cultural competence/humility toward eliminating racism.* Journal of Ethnic & Cultural Diversity in Social Work, 2022. **31**(3-5): p. 212-224.

Lavizzo-Mourey, R. J., Besser, R. E., & Williams, D. R. (2021). Understanding and mitigating health inequities—past, current, and future directions. *New England Journal of Medicine, 384*(18), 1681–1684.

Lowdermilk, D. L., Cashion, M. C., Perry, S. E., Alden, K. R., & Olshansky, E. (2019). *Maternity and women's health care E-book*. Elsevier Health Sciences.

Malviya, R. K., & Kant, R. (2015). Green supply chain management (GSCM): A structured literature review and research implications. *Benchmarking: an International Journal, 22*(7), 1360–1394.

Melino, K., Olson, J., & Hilario, C. (2023). A concept analysis of structural competency. *ANS: Advances in Nursing Science, 46*(2), 188–198. https://doi.org/10.1097/ans.0000000000000442

Metzl, J. M., & Hansen, H. (2014). Structural competency: Theorizing a new medical engagement with stigma and inequality. *Social Science & Medicine, 1982*(103), 126–133. https://doi.org/10.1016/j.socscimed.2013.06.032

Metzl, J. M., & Hansen, H. (2018). Structural competency and psychiatry. *JAMA Psychiatry*, *75*(2), 115–116. Malviya, R. K., & Kant, R. (2015). Green supply chain management (GSCM): a structured literature review and research implications. Benchmarking: An international journal, 22(7), 1360-1394.

Miller, J., Smith, K., & Johnson, L. (2023). Gender bias in medical education: Historical perspectives and current challenges. *Journal of Medical Education Research, 45*(2), 123–135.

Moshood, T. D., Nawanir, G., & Mahmud, F. (2021). Microalgae biofuels production: A systematic review on socioeconomic prospects of microalgae biofuels and policy implications. *Environmental Challenges, 5*, Article 100207.

Neff, J., et al. (2020). *Structural competency: curriculum for medical students, residents, and interprofessional teams on the structural factors that produce health disparities*. *MedEdPORTAL, 16*, 10888.

Neff, J., Holmes, S. M., Knight, K. R., Strong, S., Thompson-Lastad, A., McGuinness, C., Duncan, L., Nguyen, B. M., Guh, J., & Freeman, B. (2022). Black Lives Matter: Moving from passion to action in academic medical institutions. *Journal of the National Medical Association, 114*(2), 193–198. https://doi.org/10.1016/j.jnma.2021.12.009

Nguyen, B. M., Guh, J., & Freeman, B. (2022). Black Lives Matter: Moving from passion to action in academic medical institutions. *Journal of the National Medical Association, 114*(2), 193–198.

Olusola, P., Banerjee, H. N., Philley, J. V., & Dasgupta, S. (2019). Human papilloma virus-associated cervical cancer and health disparities. *Cells, 8*(6), 622.

Oppong, E., Hinson, R. E., Adeola, O., Muritala, O., & Kosiba, J. P. (2021). The effect of mobile health service quality on user satisfaction and continual usage. *Total Quality Management & Business Excellence, 32*(1–2), 177–198.

Phillips, T. R., Chow, E. P., & Coombe, J. (2023). Emerging sexual and reproductive health in Australia and New Zealand: gaps, challenges and solutions. In: CSIRO Publishing.

Rodríguez-García, M. C., Martos-López, I. M., Casas-López, G., Márquez-Hernández, V. V., Aguilera- Manrique, G., & Gutiérrez-Puertas, L. (2023). Exploring the relationship between midwives' work environment, women's safety culture, and intent to stay. *Women and Birth, 36*(1), Article e10-e16.

Ruth, A., SturtzSreetharan, C., Brewis, A., & Wutich, A. (2020). Structural competency of pre-health students: Can a single course lead to meaningful change? *Medical Science Educator, 30*(1), 331–337. https://doi.org/10.1007/s40670-019-00909-9

Sawatsky, A. P., Huffman, B. M., & Hafferty, F. W. (2020). Coaching versus competency to facilitate professional identity formation. *Academic Medicine, 95*(10), 1511–1514.

Schubert, K. G., Bird, C. E., Kozhimmanil, K., & Wood, S. F. (2022). To address women's health inequity, it must first be measured. *Health Equity, 6*(1), 881–886. https://doi.org/10.1089/heq.2022.0107

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production, 16*(15), 1699–1710.

Shai, A., Koffler, S., & Hashiloni-Dolev, Y. (2021). Feminism, gender medicine and beyond: A feminist analysis of "gender medicine". *International Journal for Equity in Health, 20*, 1–11.

Swanwick, T. (2018). Understanding medical education. *Understanding Medical Education: Evidence, Theory, and Practice*, 1–6.

Taylor, J. K., Scott, K. A., & Williams, D. R. (2023). Federal policy responses to Black maternal health inequities. *Annual Review of Public Health, 44*, 143–157.

Tejedor, G., Segalàs, J., Barrón, Á., Fernández-Morilla, M., Fuertes, M. T., Ruiz-Morales, J., Gutiérrez, I., García-González, E., Aramburuzabala, P., & Hernández, À. (2019). Didactic strategies to promote competencies in sustainability. *Sustainability, 11*(7), 2086.

Thomas, P. A., Kern, D. E., Hughes, M. T., Tackett, S. A., & Chen, B. Y. (2022). *Curriculum development for medical education: A six-step approach*. JHU Press.

Tseng, M.-L., Islam, M. S., Karia, N., Fauzi, F. A., & Afrin, S. (2019). A literature review on green supply chain management: Trends and future challenges. *Resources, Conservation and Recycling, 141*, 145–162.

U.S. Department of Health and Human Services. (2023). *White House Initiative on Women's Health Research: Strategic framework 2023-2025*. HHS Publication.

Ussher, J. M. (2023). Embracing a feminist approach to women's reproductive health. *Women's Reproductive Health, 10*(1), 1–5. https://doi.org/10.1080/23293691.2023.2184755

Varas-Díaz, N., Rivera-Segarra, E., Neilands, T. B., Pedrogo, Y., Carminelli-Corretjer, P., Tollinchi, N., Torres, E., Soto Del Valle, Y., Rivera Diaz, M., & Ortiz, N. (2019). HIV/AIDS and intersectional stigmas: Examining stigma related behaviours among medical students during service delivery. *Global Public Health, 14*(11), 1598–1611.

Willging, C., Gunderson, L., Shattuck, D., Sturm, R., Lawyer, A., & Crandall, C. (2019). Structural competency in emergency medicine services for transgender and gender non-conforming patients. *Social Science & Medicine, 222*, 67–75.

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annual Review of Public Health, 40*, 105–125. https://doi.org/10.1146/annurev-publhealth-040218-043750

Wepa, D. (2020). Intercultural Perspectives. In H. Kohlen, & J. McCarthy (Eds.), *Nursing Ethics: Feminist Perspectives* (pp. 83–92). Springer International Publishing. https://doi.org/10.1007/978-3-030-49104-8_5.

World Health Organization. Reproductive health. 2023. Available at https://www.who.int/westernpacific/health-topics/reproductive-health.

World Health Organization. (2021). Women's health and well-being: challenges and opportunities [Technical report]. World Health Organization. https://www.who.int/publications/i/item/9789240025554.

Wilson, D., Moloney, E., Parr, J. M., Aspinall, C., & Slark, J. (2021). Creating an Indigenous Māori-centred model of relational health: A literature review of Māori models of health. *Journal of clinical nursing, 30*(23–24), 3539–3555.

Wright, A. L., Ballantyne, M., & Smylie, J. (2022). Indigenous women's access to maternal healthcare: A systematic review of barriers and interventions. *International Journal of Indigenous Health, 17*(1), 158–179.

Yearby, R. (2020). Structural racism and health disparities: Reconfiguring the social determinants of health framework to include the root cause. *Journal of Law, Medicine & Ethics, 48*(3), 518–526.