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The Impact of Gender Equality-Based Learning Programs on Character Building in Undergraduate Midwifery Students: A Cross-Sectional Study in DKI Jakarta

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ABSTRACT

Background: Gender inequality significantly affects women's reproductive health and overall well-being. Midwives play a crucial role in addressing these issues through gender-equitable practices.

Purpose: This study aims to evaluate the effectiveness of gender equality-based learning programs in shaping the character of undergraduate midwifery students.

Methods: A cross-sectional study involving 298 midwifery students in DKI Jakarta was conducted. Data collection used sequential sampling and a validated questionnaire distributed via Google Forms. Logistic regression analyzed associations between students' characteristics and gender-equitable character.

Results: Students with poor gender knowledge were 30 times more likely to exhibit gender-inequity characters (OR=30.18, 95% CI=11.40-79.91). Negative attitudes towards gender concepts increased the risk of gender-inequity characters by 44% (OR=1.44, 95% CI=1.05-1.98). A learning environment lacking gender equity doubled this risk (OR=2.83, 95% CI=1.98-4.04).

Conclusion: Incorporating gender-equitable concepts and practices into midwifery curricula is essential for developing gender-equitable midwives. This integration could reduce gender disparities and improve health outcomes.

Keywords: *Gender equality-based learning; Character building; Midwifery education; Gender equity curriculum; Reproductive health disparities*

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BACKGROUND

Gender disparities and issues, particularly those experienced by women, persist in many societies and are deeply rooted in socio-cultural norms. These issues affect access to, participation in, and benefits derived from health development, particularly in the area of reproductive health. The inability of the health sector to address these disparities contributes to significant health problems, including high maternal and child mortality rates and an increasing prevalence of sexually transmitted infections, such as HIV/AIDS (Gupta et al., 2019). Gender inequality exposes girls and women to a heightened risk of poor sexual and reproductive health outcomes and limits their ability to fulfill their sexual and reproductive health rights, particularly in the Pacific and South Asian countries (Kennedy et al., 2020).

Midwives, as professional health workers, hold a vital and strategic role in addressing these challenges. Their ability to deliver services grounded in gender equity is essential for improving sexual and reproductive health outcomes in women and children. Beyond clinical expertise, midwives are expected to critically analyze and address the societal inequalities affecting reproductive health, making their role both technical and transformative (Ichwan et al., 2022; Maryanah et al., 2021).

The role of midwifery education is to prepare future midwives who are not only competent in providing midwifery care but also skilled in identifying and addressing gender inequality. Midwifery education institutions are thus tasked with equipping students with the knowledge and competencies needed to detect and address gender disparities. Integrating gender equity into the educational curriculum has been shown to significantly improve students' awareness and attitudes toward gender justice. For example, research in South Africa and Turkey highlighted that gender-equity-focused education enhances students' understanding of gender roles, reduces negative attitudes, and fosters sensitivity to domestic violence (Madlala et al., 2021; Yilmaz, 2018).

Additionally, educational reforms that incorporate gender equity into health professional training have proven effective in promoting gender awareness and reducing gender bias (Newman et al., 2016). A study in Turkey demonstrated that a curriculum emphasizing gender equity provided students with critical insights into gender justice, empowering them to incorporate these principles into their professional practices (Erdol & Gözütok, 2018). Such reforms are crucial for addressing the structural issues of gender inequality and fostering transformative learning experiences among students (Binfa et al., 2011).

Creating midwives with gender-equitable characteristics is essential for reducing reproductive health disparities in women. The education process must be guided by a robust and standardized curriculum that prioritizes gender equity to ensure the development of midwives who are not only technically skilled but also socially responsive (Hyde & Mezulis, 2020; Sakurai et al., 2016). While studies have been conducted in other countries to evaluate the impact of gender equity in education, there

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is limited research in Indonesia on this topic. This study seeks to fill this gap by assessing the relationship between midwifery students' characteristics and their gender-equitable character as a result of their educational experiences.

OBJECTIVE

This study aims to evaluate the relationship between the characteristics of undergraduate midwifery students and their gender-equitable character, developed through gender equality-based learning programs. Specifically, it seeks to assess how knowledge, attitudes, and learning environments influence the formation of gender-equitable character in midwifery students in DKI Jakarta.

METHODS

This study employed a quantitative analytic design with a cross-sectional approach, conducted among 298 undergraduate midwifery students in the DKI Jakarta area in 2023-2024. The study aimed to determine the association between respondent characteristics and gender-equitable character formation.

The sample size of 298 was determined using a prevalence estimation formula with different precision levels and a 95% confidence interval (Pourhoseingholi et al., 2013). The consecutive sampling technique was applied to recruit participants who met the inclusion criteria (active second-year midwifery undergraduate students) while excluding those with inactive student status.

The research instrument consisted of a questionnaire developed by the researchers, based on evidence related to gender concepts, forms of gender inequality, and factors influencing learning success. The questionnaire was distributed online using Google Forms. To ensure the instrument's accuracy and consistency, both validity and reliability tests were conducted. The validity of the questionnaire was assessed using the Content Validity Index (CVI), with input from three experts in gender studies and midwifery education. The CVI score was 0.85, indicating strong content relevance and adequacy. For reliability testing, a pilot study involving 30 midwifery students was carried out. The internal consistency of the questionnaire was evaluated using Cronbach's Alpha, resulting in a coefficient of 0.82, which reflects high reliability.

The assessed characteristics of the respondents included residence (outside the national capital, national capital), exposure to gender concepts (not exposed, exposed), the main source of information on gender concepts (media information, educational learning), knowledge of gender concepts (poor, good), attitudes towards gender concepts (negative, positive), and learning environment conditions (not based on gender justice, based on gender justice). The outcome variable was gender-equitable character (not gender-fair, gender-fair).

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Data analysis included univariate analysis to determine the proportion of each variable studied and multivariable logistic regression analysis to measure the association between respondent characteristics and gender-equitable character. Odds ratios (OR) with 95% confidence intervals (CI) were calculated, and the p-value for trends was used to determine statistical significance. All data were analyzed using SPSS 21 software (SPSS Inc., Chicago, USA).

All participants received detailed information about the study and provided informed consent before participation. This study was approved by the Ethics Committee for Human Research at Universitas Respati Indonesia, under ethical clearance number EC-2023-4668980.

RESULTS

Table 1 Respondents Characteristic

No.	Variables	Frequency (n)	Percentage (%)
1.	Place of residence		
	1. Outside national capital	117	39.3
	2. National capital	181	60.7
2.	Exposure to gender concepts		
	1. Not exposed	12	4.0
	2. Exposed	286	96.0
3.	Main source of gender information		
	1. Media	98	32.9
	2. Educational institutions	200	67.1
5.	Knowledge of gender concepts		
	1. Poor	132	44.3
	2. Good	166	55.7
4.	Attitude toward gender concepts		
	1. Negative	97	32.6
	2. Positive	201	67.4
5.	Learning environment condition		
	1. Not based on gender justice	131	44
	2. Based on gender justice	167	56
6.	Character of gender justice		
	1. Not gender fair	100	33.6
	2. Gender fair	198	66.4

Table 1 summarizes the demographic and educational characteristics of the 298 undergraduate midwifery students who participated in the study. The majority of respondents were residents of the national capital, Jakarta (60.7%), while 39.3% resided

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outside the capital. Most respondents (96.0%) reported prior exposure to gender concepts, with educational institutions serving as the primary source of information (67.1%) compared to media (32.9%).

Regarding knowledge of gender concepts, more than half of the respondents (55.7%) demonstrated good knowledge, while 44.3% had poor knowledge. Positive attitudes toward gender concepts were observed in 67.4% of respondents, whereas 32.6% exhibited negative attitudes. A gender-equitable learning environment was reported by 56.0% of respondents, while 44.0% stated that their learning environment was not based on gender justice.

In terms of gender-equitable character, 66.4% of respondents were categorized as gender-fair, while 33.6% were not. These findings provide insights into the baseline characteristics of the respondents and highlight the variability in knowledge, attitudes, and environmental conditions related to gender equity.

Table 2. The association between the characteristics of respondents and the character of gender equity

No.	Variables	Character of gender equity						P value
		Not gender fair			Gender fair			
		n	%	OR (95% CI)	n	%	OR (95% CI)	
	Number of cases	100			198			
1.	Place of residence							
	1. Outside national capital	40	34.2	1.03 (0.75-1.42)	77	65.8	0.98 (0.83-1.16)	0.900
	2. National capital	60	33.1	1.00	121	66.9	1.00	
2.	Exposure to gender concepts							
	1. Not exposed	2		0.48 (0.14-1.74)	10		1.27 (0.97-1.66)	0.17
	2. Exposed	98		1.00	188		1.00	
3.	Main source of information on gender							
	1. Information media	28	28.6	0.79 (0.55-1.14)	70	71.4	1.16 (0.94-1.31)	0.240
	2. Educational institutions	72	36.0	1.00	128	64.0	1.00	
4.	Knowledge of the concept of gender							

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1. Poor	96	72.7	30.18 (11.40-79.91)	36	27.3	0.28 (0.21-0.37)	< 0.001
2. Good	4	2.4	1.00	162	97.6	1.00	
5. Attitude toward gender concepts							0.036
1. Negative	41	42.3	1.44 (1.05-1.98)	56	57.7	0.81 (0.67-0.99)	
2. Positive	59	29.4	1.00	142	70.6	1.00	
6. Condition of learning environment							< 0.001
1. Not based on gender justice	69	52.7	2.83 (1.98-4.04)	62	47.3	0.58 (0.47-0.71)	
2. Based on gender justice	31	18.6	1.00	136	81.4	1.00	

Table 2 demonstrates a significant association between knowledge of the concept of gender, attitudes toward applying gender concepts, and the conditions of the learning environment based on gender equity, with the development of gender-equitable character. Respondents with poor knowledge of gender concepts were found to be 30 times more likely to exhibit gender-inequity characteristics compared to those with good knowledge (OR = 30.18, 95% CI = 11.40–79.91). Additionally, they had a 72% reduced likelihood of developing gender-equitable characteristics (OR = 0.28, 95% CI = 0.21–0.37; p-value < 0.01).

Furthermore, students with negative attitudes toward applying gender concepts showed a 44% increased risk of developing gender-inequity characteristics (OR = 1.44, 95% CI = 1.05–1.98) and a 19% reduced likelihood of exhibiting gender-equitable characteristics (OR = 0.81, 95% CI = 0.67–0.99) compared to students with positive attitudes toward gender equality (p-value = 0.03).

The table also reveals that learning environments not based on gender equity more than doubled the risk of developing gender-inequity characteristics (OR = 2.83, 95% CI = 1.98–4.04) and reduced the likelihood of exhibiting gender-equitable characteristics by 42% (OR = 0.58, 95% CI = 0.47–0.71) compared to learning environments based on gender equity (p-value < 0.001).

In contrast, no significant associations were observed between respondents' place of residence, exposure to gender concepts, or the main source of gender-related information and the development of gender-equitable characteristics among midwifery education students.

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DISCUSSION

This study identified a significant association between knowledge of the concept of gender, attitudes in applying the concept of gender, and the conditions of the learning environment based on gender equity with the development of gender-equitable character. Poor knowledge of gender concepts increases the risk of developing gender-inequity characteristics and reduces the likelihood of exhibiting gender-equitable character. Conversely, a good understanding of gender concepts enables individuals to behave fairly and apply gender-equity principles in their everyday lives (Young & Scherrer, 2010).

A qualitative study conducted in Chile found that midwifery students demonstrated increased knowledge of women's needs, focusing more on psychosocial aspects, including gender issues. This is crucial, as some students still exhibit negative and disrespectful attitudes toward immigrant women and women experiencing psychosocial challenges (Binfa et al., 2011). The same study emphasized the importance of understanding gender issues related to the power structures in human relations, which should be explicitly addressed in midwifery education, training, and practice. Enhancing knowledge in this area raises awareness of gender issues and fosters greater respect for women's roles in society (Binfa et al., 2011; Verdonk et al., 2009).

Research also indicates that a negative attitude toward applying the concept of gender increases the risk of developing gender-inequity characteristics while decreasing the likelihood of gender-equitable behavior. This finding is closely tied to individuals' understanding of gender concepts and roles within society. For healthcare workers, awareness of gender is strongly linked to their attitudes toward gender sensitivity and their knowledge of gender issues (Communications, 2019; Riwu et al., 2018). Enhancing awareness of gender roles and justice is deeply connected to attitudes and knowledge regarding gender (Newman et al., 2016). The inclusion of gender concepts in health education has been shown to have a significant impact on improving students' knowledge and fostering positive attitudes toward gender equity, which is directly related to health and disease outcomes (Hamberg & Johansson, 2016).

This study also revealed that a conducive learning environment fosters a gender-equitable atmosphere, which plays a vital role in shaping students' gender-equitable character. This positive outcome is closely linked to increased knowledge and positive attitudes toward gender equity gained through educational institutions. An experimental pre-post-test study conducted with 64 midwifery students in Turkey demonstrated that integrating gender-equity concepts and practices into the midwifery curriculum significantly improved students' attitudes (Yilmaz, 2018). Additionally, other educational facilities, such as student practice sites in hospitals or midwifery clinics, should also be prepared to be more gender-sensitive. Qualitative exploratory research highlights the importance of ensuring that midwifery practice sites are gender-sensitive and respectful of all women,

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as this further accelerates the development of gender-equitable character among midwifery students (Madlala et al., 2021).

This research serves as an essential tool for evaluating learning processes and midwifery education curricula. The inclusion of gender concepts and gender-equitable practices in courses related to midwifery practice is vital (Communications, 2019; Supradewi & Rajab, 2013). However, this study has some limitations. As a cross-sectional study, it captures relationships at a single point in time, making it difficult to establish causality (Goodman & Mahmood., 2019). Additionally, there was no direct observation of gender-equity characteristics among midwifery students, which may limit the depth of insights provided by the study.

CONCLUSION

This study highlights the significant impact of gender equality-based learning programs on shaping the character of undergraduate midwifery students. A strong understanding of gender equity concepts, positive attitudes toward gender principles, and a supportive learning environment are critical in fostering gender-equitable behaviors among future midwives. Students with limited knowledge and negative attitudes toward gender concepts were significantly more likely to exhibit gender-inequity behaviors. Furthermore, the absence of gender-equitable practices in the learning environment doubled the risk of developing gender-inequity characteristics.

Integrating gender-equitable concepts and practices into midwifery education is essential not only for producing competent midwives but also for cultivating professionals who can address and reduce gender disparities in reproductive health. These findings underscore the importance of curriculum reforms that incorporate gender equity, ensuring that midwifery graduates are well-equipped to promote gender justice in healthcare settings.

Future research should consider longitudinal studies to assess the long-term impact of gender-equity education on professional practices and patient outcomes. Additionally, expanding the study to include a broader geographic area could provide more comprehensive insights into the role of gender-equity education in diverse cultural contexts.

ACKNOWLEDGMENTS

The authors would like to express their gratitude to all the midwifery undergraduate students who participated in this study and contributed their valuable time and insights. We also extend our sincere appreciation to the institutions and faculty members who facilitated this research by providing support and resources throughout the study. Lastly,

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we acknowledge the contributions of our colleagues and reviewers whose feedback and suggestions have significantly improved the quality of this research.

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