

GENDER ROLE STEREOTYPES, PATRIARCHAL BELIEFS, AND SPIRITUALITY AS PREDICTORS OF MALE NURSING STUDENTS' MAJOR SATISFACTION: A CROSS-SECTIONAL STUDY

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ABSTRACT

Evaluating a male nursing student's satisfaction with their educational major is an effective preventive measure to prevent them from dropping out or transferring to another major. However, there is limited research that focuses on identifying major satisfaction risks among male nursing students. This study aims to investigate the major satisfaction of male nursing students, specifically focusing on gender role stereotypes, patriarchal beliefs, and spirituality. A cross-sectional study was conducted with male nursing students ($n = 113$). The researchers used the Gender Role Stereotypes Inventory, the Patriarchal Belief Scale, the Brief RCOPE, and the Academic Major Satisfaction Scale. The adjusted coefficients beta (coef. β) and 95% confidence interval (CI) were estimated using multiple linear regression, Pearson correlation and independent t-test were performed. This study demonstrated that gender role stereotypes ($\beta = -0.05$; -0.08 to -0.02), patriarchal beliefs ($\beta = -0.05$; -0.08 to -0.01), and spirituality ($\beta = 0.11$; 0.06 to 0.15) significantly correlated with major satisfaction. Spirituality was found to increase major satisfaction. Meanwhile, gender role stereotypes and patriarchal beliefs reduced the participants' major satisfaction. Future interventions should incorporate strategies to modify detrimental gender norms and patriarchal beliefs and enhance the spiritual resources of male nursing students to improve major satisfaction.

Keywords: *Gender role stereotypes; major satisfaction; male nursing students; patriarchal; spirituality*



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BACKGROUND

Major satisfaction refers to how students perceive their academic major as satisfying and aligns with their expectations (Cao et al., 2021; Wong & Chapman, 2023). Major satisfaction can be increased by thoroughly understanding the career path associated with the student's chosen specialization (Guerrero et al., 2022). Nursing students with high levels of major satisfaction are more likely to become nurses (Admi et al., 2018). Previous studies have also indicated a significant correlation between a high level of major satisfaction with future work intention (Akturan et al.,

2025; Ning et al., 2023; Rodríguez-García et al., 2021), a high level of career decision comfort, and certainty as a nursing professional among nursing students (Chen & Zhang, 2023). However, male nursing students reported lower satisfaction with their major compared to female nursing students (Cao et al., 2021; Cho & Jang, 2021), leading to a high number of dropouts or transfers to other majors among male nursing students. Unfortunately, there is a widespread perception that males are less suited to the nursing profession than females, and males who have chosen this profession are typically viewed as effeminate or homosexual (Antiporda et al., 2024; Cui et al., 2021; Lee & Seo, 2022).

Existing literature has demonstrated that male nursing students are affected by gender role stereotypes (Cao et al., 2021; Kaur et al., 2023). Gender role stereotypes are preconceived notions that men and women are naturally suited to fill specific societal roles (Gurung, 2025; Rabie et al., 2021). Nursing is still mostly seen as a female-dominated field, and institutionalized bias toward men in this field may make it difficult for them to accept their gender identity (Cho & Jang, 2021). However, no studies have investigated the relationship between gender role stereotypes and major satisfaction among male nursing students in Indonesia. Therefore, this research aims to fill this knowledge gap by exploring the effects of gender role stereotypes and major satisfaction among Indonesian male nursing students.

In the era of globalization, culture is still a valuable concept in nursing (Lokugamage et al., 2023; Tekkas et al., 2020). Patriarchal culture refers to a male-dominated social order in which men hold sway over all spheres of influence, including government, morality, social status, and property ownership (Kelkar & Nathan, 2020). Previous studies have shown that there is no significant correlation between patriarchal beliefs and major satisfaction among male and female nursing students. However, male students noted that they had been raised in a more patriarchal familial environment than female students (Cho & Jang, 2021). Thus, we need to investigate patriarchal and major satisfaction among male nursing students, especially in Indonesia.

Furthermore, despite the importance of spirituality in nursing, few studies have been conducted to determine how nursing students perceive and implement spirituality and how it affects them (Al Qadire et al., 2024; Maglione & Neville, 2021). Moreover, a high level of spirituality was found to significantly improve job satisfaction among nurses (Lee & Yu, 2023). Another study showed that male nursing students have lower spirituality scores than female nursing students in Saudi Arabia (Cruz et al., 2017). However, no study has investigated spirituality and major satisfaction among Indonesian male nursing students. Therefore, this study aims to fill this gap in the literature.

Considering the inevitable influence of gender role stereotypes and patriarchal culture on male nursing students and the significant impact of spirituality on their major satisfaction within the field, it is crucial to acknowledge the connection between these factors and their relevance to nursing students. Therefore, this study aims to investigate the major satisfaction of male nursing students, specifically focusing on gender role stereotypes, patriarchal beliefs, and spirituality in Indonesia.

METHOD

Study design

A cross-sectional study was conducted between July 07 and September 12, 2023 in East Java, Indonesia.

Sample

The researchers used the stratified multistage cluster sampling method to select the participants. We selected East Java, a province in Indonesia, for our sampling and divided the province into 38 regions. In the second stage, four regions were selected from the 38 regions. In the final stage, nine nursing schools were randomly selected from the four regions for data collection. Four of the selected nursing schools declined our invitation to conduct research. Therefore, a total of five nursing schools were included in our study. The inclusion criteria included (1) Indonesian male nursing students, (2) willingness to participate in the study, and (3)

ability to communicate in Indonesian. Participants who (1) were first-year students, and (2) were inactive or had left the institution, were excluded from the study. This research used G-Power 3.1 with a F-test family, a two-tailed test, an alpha level of 0.05, an effect size of 0.15 (Faul et al., 2009), and a power value of 0.8. We calculated a sample size of 99 participants. After considering an estimated dropout rate of 14%, the sample size was increased to 113 total participants.

Instruments

Major satisfaction. The Academic Major Satisfaction Scale (AMSS) was used to measure the students' satisfaction with their academic majors and consists of six items with Likert-type scales ranging from 1 to 5. The total possible score can range between 6 and 30 (Nauta, 2007). Higher scores indicate higher levels of major satisfaction. In this investigation, the Cronbach's alpha reliability was 0.82, and the correlation coefficient (r) was 0.537-0.689.

Gender role stereotypes. We estimated gender role stereotypes using the Gender Role Stereotypes Inventory, which consists of 12 items with a Likert scale ranging from 1 to 5. The total possible score can range between 12 and 60 (Jinks & Bradley, 2004). A higher score indicates a greater endorsement of gender role stereotypes. In this study, the Cronbach's alpha value was 0.76, and the correlation coefficient (r) was 0.602-0.765.

Spirituality coping. The Brief RCOPE, a 14-item instrument, was used to evaluate spirituality coping with a Likert scale ranging from 1 to 5. The Brief Spiritual COPE measures the frequency with which participants have employed spirituality coping. The total possible score can range between 14 and 70. A higher score indicates good levels of spirituality coping (Pargament et al., 2000). In this study, the Cronbach's alpha value was 0.86, and the correlation coefficient (r) was 0.431-0.672.

Patriarchal beliefs. The Patriarchal Belief Scale is a 35-item instrument with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The total possible score can range between 35 and 245. A higher score indicates a greater endorsement of patriarchal beliefs (Yoon et al., 2015). In this study, the Cronbach's alpha value was 0.76, and the correlation coefficient (r) was 0.531-0.601.

Depression, anxiety, and stress. We estimated the participants' levels of depression, anxiety, and stress by using the Depression, Anxiety, and Stress Scale-21 (DASS-21) items after adjusting for confounding factors. The DASS-21 is widely used to measure three domains: depression, anxiety, and stress. It consists of 21 items. The total possible score can range between 0 and 63. A higher score indicates more depression, anxiety, and stress. The Cronbach's alpha values for the Indonesian version are 0.87, 0.85, and 0.72 for the depression, anxiety, and stress subscales, respectively (Oei et al., 2013). In this study, the Cronbach's alpha values were 0.92, 0.81, and 0.77 for anxiety, depression, and stress, respectively.

Data collection

Data was gathered via an online questionnaire. The researchers informed the participants of the survey's purpose and objectives, and that by completing the questionnaire, they agreed to voluntarily participate in the study. The online survey was distributed via WhatsApp, Instagram, Facebook, and Twitter — the most prominent and accessible social media platforms in Indonesia — using a Google Form link. This data collection process requires relying on the technical

and personal networks of the researchers, as well as engaging with and sharing the survey through class leaders and the head of research programs.

Data analysis

The distributions of demographic characteristics and determinant factors between groups were determined as frequency (n) and percentages (%). Continuous variables are expressed as means with standard deviations (SD) and were evaluated using an independent t-test, Pearson's correlation, or Spearman's rank correlation, where appropriate. Z-scores for skewness and kurtosis were used to assess the normality of data, and Z-scores <3.29 were considered to have normal distributions (Kim, 2013). Adjusted β coefficients and 95% confidence intervals (CIs) were obtained by performing a multiple linear regression for QoL in relation to exposures of interest after adjusting for potential confounding variables. Multicollinearity was assessed using a variance inflation factor (VIF) of <10 (García et al., 2015). Our study had a maximum VIF of 3.32, indicating that our data had low multicollinearity. Statistical analyses were performed using SPSS version 25.0 (Chicago, IL, USA), with a p-value of <0.05 considered statistically significant.

Ethical consideration

The study protocol was reviewed and approved by the Institutional Review Board of Institut Ilmu Kesehatan STRADA Indonesia Ethics Committee (IRB: 000269/EC/KEPK/II/07/2023) and conformed to the provisions of the Helsinki Declaration. Informed written consent was obtained from each individual after receiving both verbal and written information about the research.

RESULT

The participants' demographic characteristics are presented in Table 1. Overall, most of the participants had a bachelor's degree and were from a study program with very good accreditation at 68.1% and 87.6%, respectively. Most participants had a high household monthly income (62.8%), and selected their majors voluntarily (52.2%). Table 1 shows that there are no significant differences in the major satisfaction score based on age, grade point average, level of study program, accreditation study program, household monthly income, motive for major selection, grade, and type of residence.

Table 1. Relationship between the participants' demographic characteristics with major satisfaction among male nursing students (n=113)

Characteristics	Total participants	Major satisfaction	
	n (%)	Mean (SD)/r	p value
Age (years) ^a	113 (100)	0.119	0.211
GPA ^a	113 (100)	0.048	0.614
Levels of study program ^b			0.246
Diploma	36 (31.9)	14.08 (5.63)	
Bachelor	77 (68.1)	15.29 (4.92)	
Accreditation study program ^b			0.623
Superior	14 (12.4)	14.07 (6.91)	
Very good	99 (87.6)	15.03 (4.90)	
Household monthly income (IDR) ^b			0.567
< Regional minimum wage	42 (37.2)	14.54 (5.02)	
≥ Regional minimum wage	71 (62.8)	15.12 (5.27)	
Motive for major selection ^b			0.347
Voluntary decision	59 (52.2)	14.47 (5.47)	
Recommendation from others	54 (47.8)	15.38 (4.81)	
Grade (years) ^c			0.410
2	34 (30.1)	15.58 (4.41)	
3	25 (22.1)	14.52 (4.01)	
4	36 (31.9)	15.63 (6.42)	
Ners program	18 (15.9)	15.50 (4.39)	
Type of the residence ^b			0.977
Boarding house	59 (52.2)	14.89 (5.00)	
Stay with family	54 (47.8)	14.92 (5.38)	

Note: GPA, grade point average; SD, standard deviation; IDR, Indonesian Rupiah rate. Grade (Year) 4 and Ners program are specifically applicable to Bachelor's programs. Diploma data is restricted to the third year. Data were presented as mean $\pm$ SD, frequency and percentage, r and p-values were calculated using ^a Person correlation, ^b independent sample t-test, ^c one-way ANOVA. A p value of <0.05 indicates statistical significance.

The correlations of major satisfaction among male nursing students with this study's variables are shown in Table 2. The results revealed a significant relationship between major satisfaction and gender role stereotypes (r = -0.518),

patriarchal beliefs (r = -0.656), and spirituality (r = 0.650). Moreover, stress, anxiety, and depression were strongly correlated with major satisfaction among male nursing students.

Table 2. The correlations of this study's variables

Variables	1	2	3	4	5	6	7
Major satisfaction	1						
Stress	-0.731**	1					
Anxiety	-0.698**	0.760**	1				
Depression	-0.643**	0.560**	0.501**	1			
Gender role stereotypes	-0.518**	0.416**	0.330**	0.270**	1		
Patriarchal beliefs	-0.656**	0.441**	0.428**	0.530**	0.455**	1	

Variables	1	2	3	4	5	6	7
Spirituality	0.650**	-0.476**	-0.440**	-0.452**	-0.298**	-0.470**	1

Note: * $p < 0.05$; ** $p < 0.01$

The adjusted β coefficients and 95% CIs of gender role stereotypes, patriarchal beliefs, and spirituality toward major satisfaction are presented in Table 3. Participants with high scores in gender role stereotypes showed a significant correlation with major satisfaction ($\beta = -0.05$, 95% CI = -0.08 to -0.02), indicating that stronger adherence to gender role stereotypes will reduce major satisfaction. Patriarchal beliefs showed a significant correlation with major satisfaction ($\beta = -0.05$, 95% CI = -0.08 to -0.01). Spirituality was also significantly correlated with major satisfaction ($\beta = 0.11$, 95% CI = 0.06 to 0.15). Consequently, the findings revealed a significant relationship between gender role stereotypes, patriarchal beliefs, and spirituality with major satisfaction after controlling for confounding factors, i.e., age, grade point average, level of study program, accreditation study program, household monthly income, motive for major selection, grade, type of residence, stress, anxiety, and depression.

Table 3. Adjusted β Coefficients and 95% Confidence Intervals (CIs) of gender role stereotypes, patriarchal beliefs, and spirituality on major satisfaction among male nursing students

Variables	Unadjusted β Coefficients (95% CI)	Adjusted β Coefficients (95% CI)
Gender role stereotypes	-0.16 (-0.21; -0.11)**	-0.05 (-0.08; -0.02)*
Patriarchal beliefs	-0.18 (-0.21; -0.14)**	-0.05 (-0.08; -0.01)*
Spirituality	0.28 (0.22; 0.34)**	0.11 (0.06; 0.15)**

Note: Adjusted β coefficients and 95% CI were estimated using multiple linear regression after adjusting for age, GPA, level of study program, accreditation study program, household monthly income, motive for major selection, grade, type of the residence, stress, anxiety, and depression.

DISCUSSION

This study provided empirical evidence that gender role stereotypes, patriarchal beliefs, and spirituality are associated with major satisfaction among male nursing students. Our results revealed that strong adherence to gender role stereotypes and strong patriarchal beliefs reduced major satisfaction. However, spirituality improved major satisfaction among male nursing students. To the best of our knowledge, studies on major satisfaction among male nursing students are limited. As the literature suggests, there is a need to explore major satisfaction and the factors that affect it (Cho & Jang, 2021; Kim & Kim, 2023). This study also found that male students who obtained high gender stereotyping scores were found to have been raised in a familial environment that adhered more strongly to patriarchal beliefs.

Previous research in Korea found that male nursing students were less satisfied with their major when exposed to gender role stereotypes (Cho & Jang, 2021). Meanwhile, other studies revealed a significant negative link between gender role stereotypes and major satisfaction among male nursing students (Amin et al., 2025; Cao et al., 2021). The limitations on gender role norms may result in conflicts about gender roles, which can have detrimental outcomes (Noor et al., 2024; O'neil, 2015; Santoniccolo et al., 2023). Gender role stereotypes were also found to have a significantly negative correlation with job satisfaction among male nurses

(Alghamdi et al., 2018; Cho & Jang, 2021). Moreover, negative repercussions may result from role conflicts between men and women if such stereotypes are rigidly enforced (O'Lynn et al., 2020). A stereotype is an established, simplistic perspective on a social group that can negatively affect an individual's ability to think critically and succeed in school (Igbo et al., 2015). Thus, gender role stereotypes may discourage male nursing students from continuing their nursing course, which causes them to drop out, transfer to another major, and pursue other careers.

Furthermore, patriarchal culture can exacerbate gender role conflict (O'neil, 2015; Simon & Hasan, 2025), which is detrimental to major satisfaction. A previous study in Turkey and Korea with patriarchal cultures (Tekkas et al., 2020) has shown that male nursing students exhibited more discriminatory attitudes than their female nursing students. Our study also demonstrated that adherence to patriarchal culture reduced major satisfaction. There are several possible explanations for how patriarchal culture reduces major satisfaction among male nursing students. First, nursing is still perceived as a role for women, and there is a gender bias that places male nursing students in a position that promotes gender identity issues (Cho & Jang, 2021). Second, patriarchal cultural values, such as support for traditional gender roles of male dominance and female powerlessness (Mensah, 2023; Ngulube, 2018), causing the public to view nursing as effeminate, as it is a female-dominated field.

A previous study found that engagement in spiritual practices resulted in enhanced levels of satisfaction in students' social life on campus, more positive interactions, greater overall contentment with their college life, and achieving higher grade point averages (The University of California, Los Angeles Higher Education Research Institute, 2020). Other studies have also demonstrated that spirituality could significantly increase satisfaction among nursing students (Felicilda-Reynaldo et al., 2019; Rabiei et al., 2025). Spirituality among nursing students was also significantly correlated with clinical clerkship satisfaction (Rezapour-Mirsaleh & Aghabagheri, 2020). The spiritual values that have influenced the task values of Iranian nursing students have also led to an increase in their satisfaction with clinical practice (Seylani et al., 2016). Several investigations conducted among Muslim students revealed that females are more spiritual than males (Khan et al., 2015; Ramadan, 2022). These observations support the current findings that spirituality among male students needs improvement and should be further investigated (Cruz et al., 2017). Overall, spirituality has a positive correlation with major satisfaction among male nursing students.

The study's results have several significant implications for nursing education. Firstly, the persistent influence of sociocultural norms on male students in traditionally female-dominated disciplines is emphasized by the substantial negative correlation between major satisfaction and gender role stereotypes and patriarchal beliefs. Therefore, educational institutions should consider integrating mentorship programs, inclusive curricula, and gender sensitivity training to challenge and reduce stereotypical beliefs among faculty members and students. Moreover, the positive impact of spirituality on academic major satisfaction suggests that cultivating a supportive environment for

spiritual well-being, such as through counselling services, peer support groups, or spirituality-friendly spaces, could be a protective factor against dissatisfaction and potential dropouts. In contexts such as Indonesia, where traditional gender roles may be profoundly embedded, these insights inform the academic experiences of male nursing students. Future interventions should incorporate strategies to modify detrimental gender norms and enhance the spiritual resources of male nursing students to improve retention and engagement.

The limitations of this study include its cross-sectional approach, and the relationships uncovered are insufficient to demonstrate cause and effect. Additionally, the participants were selected from only five nursing schools in East Java Province, resulting in a total sample size of 133 participants. For more generalizable results, future studies should use a larger sample size. Further research may also employ a qualitative approach to produce more in-depth data on nursing students' major satisfaction.

CONCLUSION

This study contributes to the existing literature by highlighting the importance of major satisfaction among male nursing students. These findings imply that gender role stereotypes and patriarchal beliefs reduce major satisfaction. Additionally, spirituality increased major satisfaction among male nursing students. This study explored how gender role stereotypes, patriarchal beliefs, and spirituality affect the major satisfaction of male nursing students. Interventions that incorporate strategies to modify detrimental gender norms and patriarchal beliefs, while enhancing the spiritual resources of male nursing students, may improve their major satisfaction, retention, and engagement.

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