

A Study on the Correlation between Gender Role Types of Male Nursing Undergraduates and Their Sense of Professional Efficacy Vocational Calling and Professional Commitment

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Abstract: This study aims to explore the relationship between gender role types and occupational efficacy, career mission, and job commitment among undergraduate male nursing students. Employing a cross-sectional study design with convenience and cluster sampling, data were collected using various scales. Results reveal that gender role types are significantly correlated with students' occupational psychological indicators. Biphillic male nursing students outperform others in occupational efficacy, career mission, and professional commitment. Multiple regression analysis shows that professional mission, commitment, and masculine, feminine, and biphillic gender role types jointly explain 53% of the variance in occupational efficacy. Based on these findings, it is recommended that educators implement customized education for male nursing students according to different gender roles to cultivate their diverse characteristics, thus enhancing the theoretical framework of nursing education and facilitating male nursing talent cultivation.

Keywords: male nursing undergraduates, gender role types, professional efficacy, professional mission, professional commitment

Introduction

The development of gender role theory has undergone a paradigm shift from physiological determinism to psychological constructivism. Constantinople^[1] pioneered the biphillic theory, breaking through the traditional binary framework, but it overemphasized biological factors. Bem^[2] established a four-dimensional model (biphillic/masculine/feminine/undifferentiated), which confirmed that biphillic individuals have significant advantages in emotional stability^[3], social adaptability^[4], and interpersonal competence^[5], making them an ideal personality paradigm. The nursing field has long been constrained by gender stereotypes, with male practitioners facing clinical practice limitations^[6]. However, as industry needs evolve, the proportion of male nursing students continues to rise, and the mechanisms by which their gender role characteristics influence career development need to be explored.

Occupational psychology research reveals the intrinsic connections among three core concepts: ① In terms of occupational efficacy, individuals with high trait scores exhibit stronger decision-making efficiency^[7] and problem prediction abilities^[8], and biphillic nurses have better occupational adaptability compared to other types^[9]; ② The sense of mission in the workplace has evolved from religious^[10] origins to multiple dimensions, with modern studies forming a consensus on self-social interaction, value realization orientation, and altruistic tendencies^{[11][12]}. The psychological

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resilience of biphallie individuals makes their perceived mission strength superior to that of monofallic groups; ③Research on professional commitment shows a significant positive correlation between commitment level and work resilience among nursing staff, which can effectively reduce turnover rates^[13]. Cross-cultural evidence indicates that biphallie individuals have significant advantages in clinical decision response speed^[14], duration of professional engagement^[15], and stress tolerance thresholds^[16].

Existing literature often focuses on univariate relationships, failing to systematically reveal the interactive mechanisms between gender role types and career efficacy, mission, and professional commitment^[17]. This study aims to construct a structural equation model, addressing three core questions: (1) How do biphallie traits mediate the development of career efficacy among male nursing students; (2) The mediating effect of career mission between gender role and professional commitment. The findings will enhance the theoretical framework of nursing education and provide empirical evidence for the cultivation of male nursing talent.

Research design

1.1 Study Design

This study is a cross-sectional study.

1.2 Subjects

Convenience sampling was used to select 2-3 undergraduate colleges and universities in Zhejiang province with nursing majors, and cluster sampling was used to select male undergraduate nursing students who met the inclusion criteria as the research objects.

1.3 Research tools

The tools used in this study included general information questionnaire, occupational efficacy scale, occupational mission scale, professional commitment questionnaire and Bem gender role scale.

1.3.1 General information questionnaire

The general situation questionnaire includes seven items: gender, grade, school, place of residence, whether it is the first choice, the main reason for studying nursing, and the average academic performance per semester.

1.3.2 Job Performance Scale

The Job Self-Efficacy Scale (Occupational Self-efficacy Scale)^[18] was developed by Betz et al. Based on the original version, Jiang and Guo et al. created a new scale tailored for Chinese people. The new scale includes two subscales: educational requirements and job responsibilities. The Cronbach coefficient of the revised new scale is 0.93, making it a practical measurement tool.

1.3.3 Career Mission Scale

Using two projects developed by Dik and Steger^[19] as part of the Brief Calling Scale (BCS). In Diks study by Sargent & Steger^[20], participants responses to the two projects had a correlation $r=0.78$, with higher scores indicating greater alignment with statements confirming the existence of a mission.

1.3.4 Professional Commitment Questionnaire

The College Student Professional Commitment Survey Scale is a new scale revised by Lian Rong et al. based on Meyer and Allens scale^[21].

1.3.5 Bem Gender Role Scale

The Bem Sex Role Inventory (BSRI) is developed by Bem. The scale includes a male trait subscale, a female trait subscale, and a neutral subscale, totaling 60 items, scored on a 7-point scale. Based on the scores from the male trait subscale and the female trait subscale, participants are categorized into four different gender role types using the median of their two subscale scores.

2. Research results

2.2.1 Correlation between gender role type, vocational efficacy, vocational mission and professional commitment of male undergraduate nursing students

These results confirm that gender role types are significantly associated with students occupational efficacy, career mission, and job commitment, with biphallc role type students performing optimally across all aspects. The data analysis is shown in Table 1 , Table 2 and Table3.

Table 1 Correlation between gender role type and vocational efficacy, vocational mission and professional commitment of male nursing students in undergraduate

Item	Masculine	Feminine	Androgynous	Undifferentiated	F	P	LSD
Occupational Efficacy	15.90±3.41	15.37±3.36	16.68±3.01	13.04±3.58	22.22	< 0.001	1, 2, 3>4
Sense of Mission	7.52±1.75	7.59±1.25	8.51±1.45	6.73±1.60	22.32	< 0.001	1, 2, 3>4
Professional Commitment	18.14±3.89	15.56±3.67	20.87±3.70	16.89±3.64	19.87	< 0.001	3> 1, 4

The results showed that there was a significant correlation between the gender role types of male undergraduate nursing students and their occupational psychological indicators: the occupational efficacy, mission and professional commitment of bisexual individuals were significantly better than other types.

Table 2 Correlation analysis between professional efficiency, professional mission and professional commitment

	1	2	3
1. Job efficacy	1		
2. Professional mission	0 .66*	1	
3. Professional commitment	0 .69*	0 .80*	1

Note: *, p <0.001

The study found that job efficacy was significantly related to professional mission, and job efficacy was significantly related to professional commitment; similarly, professional mission was significantly related to professional commitment (Table 3).

Professional mission drives occupational engagement by reinforcing individual value beliefs^[22], which in turn promotes the formation of professional commitment. Research indicates that job self-efficacy is significantly positively correlated with work satisfaction and commitment levels. The mechanism may stem from the intrinsic motivational effect of mission on efficacy ^[23]. This also suggests that there may be a significant positive correlation between occupational efficacy, professional mission, and professional commitment.

2.2 Multiple regression analysis of vocational efficacy of male nursing students in undergraduate education

Table 3 Multiple Regression Analysis of Vocational Efficacy among Male Nursing Undergraduates

Variable	B	SE	Beta	t value	P
Constant	2.23	0.74	/	3.02	<0.01
Vocational Mission	0.53	0.15	0.24	3.65	<0.001
Professional Commitment	0.43	0.06	0.45	6.87	<0.001

Masculine	1.91	0.52	0.15	3.65	<0.001
Feminine	1.16	0.54	0.09	2.15	0.03
Androgynous	0.99	0.41	0.11	2.45	0.02

Note: R=0.73, R²=0.54, Adjusted R²=0.53, F=69.28

The results of the regression analysis show that the equation fits well. Ultimately, five independent variables—professional mission, commitment to the profession, masculine, feminine, and bisexual gender role types—entered the regression equation. The obtained regression equation is: undergraduate male nursing students job performance score $Y=2.23+0.53* \text{professional mission} + 0.43* \text{commitment to the profession} + 1.91* \text{masculine} + 1.16* \text{feminine} + 0.99* \text{bisexual}$. Statistical results indicate that this regression equation is statistically significant ($F=69.28$, $P<0.05$), with all variables explaining 53% of the total variance.

3. Discussion

3.1 Analysis of the current situation of gender role types of male nursing undergraduates:

Research shows that undifferentiated types are detrimental to personal development and are often associated with poorer learning and adaptation skills, as well as inadequate stress tolerance. Therefore, during this critical developmental stage in college, institutions should enhance the cultivation of gender roles among male nursing students, transcending binary gender limitations, supporting diverse expressions of compassionate care, encouraging male nursing students to understand the essence of the nursing profession, and continuously improving their communication skills and meticulous qualities according to the gender role demands of the nursing profession, thereby reinforcing their professional and personal value.

3.2 Correlation analysis of gender role type, occupational efficacy, occupational mission and occupational commitment of male nursing undergraduates:

Analysis of variance and multiple comparisons show that the dual-sex male nursing students exhibit significantly higher job efficacy, professional mission, and commitment compared to single-sex groups. The integration of dual-sex traits, combining decisiveness with empathy, demonstrates optimal adaptability in complex clinical work scenarios. This indicates that educators can implement differentiated training strategies based on gender role characteristics, balancing individual strengths with the reinforcement of dual-sex traits.

3.3 Analysis of the factors affecting the professional efficacy of male nursing undergraduates:

This study used a multi-step regression analysis to examine the occupational efficacy of male nursing undergraduates. The results showed that occupational mission, professional commitment, male traits, female traits and gender traits together explained 53% of the variance in occupational efficacy scores, indicating that different gender roles can affect the occupational efficacy of male nursing students.

4. Conclusion

Gendered male nursing undergraduates have better occupational efficacy.

There is a correlation between professional efficacy, professional mission and professional commitment.

The factors influencing occupational efficacy include professional mission, professional commitment and gender roles of masculinity, femininity and neutrality.

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