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Satisfaction with Major in Nursing: Predictors, Mediational Role of Identification with Nursing, and Gender Difference in South Korea

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Abstract

Background: This study aimed to explore the predictors of major satisfaction of nursing students and the mediating role of group identification, including gender differences.

Methods: Data were collected from 270 students by questionnaire which included the scales of major satisfaction, group identification, perceived advantages and disadvantages due to gender, social support, experiences of supervision, Big Five factors, and self-esteem.

Results: Male nursing students believed they had more advantages (males, M=3.34, females, M=2.79), as well as disadvantages (males, M=2.34, females, M=1.58), than female nursing students. It revealed that self-esteem (males, β=0.30, females, β=0.23), conscientiousness (males, β=0.40, females, β=0.19) and group identification (males, β=0.59, females, β=0.50) showed significant effect on major satisfaction in both gender. In addition, the perceived advantages of males, and social support of females, influenced major satisfaction through group identification.

Conclusions: We found the powerful role of group identification in enhancing major satisfaction and key precursor of it differing based on gender. The higher the perceived advantages of male students in nursing area (i.e., scarcity), the stronger they tend to satisfy and stay. Otherwise, female students need social network which supports their academic achievement and career. Therefore gender-specific strategies should to be developed to improve major satisfaction and retention in nursing major.

Keywords: Major satisfaction; Group identification; Nursing students

Introduction

The number of male students attending a nursing school has more than doubled in South Korea during last decade [1]. However there remains a problem that the proportion of male students who do not complete their studies is relatively high. There is a similar problem in the United States [2] and United Kingdom [3]. In an effort to prevent male nursing students from discontinuing their studies, we have explored their satisfaction with their major and related factors. According to previous studies, mostly based on in-depth interviews, male nursing students think of themselves as a minority [4], experience difficulty in following the clinical training because of their gender identity [5], feel of being isolated or alienated [6,7], and confront gender-based barriers [8]. Another study has shown that it is considered less desirable for men to become nurses and that this attitude has been an obstacle to males choosing the profession [9].

Any feeling of being isolated or of psychological distress due to gender identity experienced by male nursing students would have a particularly strong impact in the Korean cultural context. Since the Korean and other Asian cultures are considered to be more collectivist than western cultures, social acceptance and a group-oriented perspective are treated as more important [10], and this would probably increase psychological distress in male nursing students. To our knowledge, however, there have been almost no quantitative studies examining these factors or directly comparing the predictors of major satisfaction in male versus female nursing students. Given the above background, we assessed the degree of satisfaction with their major of Korean male nursing students as compared with their female counterparts, and explored the predictors. We selected predictors associated with major satisfaction based on previous studies and these predictors fall into three categories. First, the personal characteristics of individuals played a key role in attrition of nursing students [11,12]. Based on previous research, to represent personal characteristics, we selected openness, conscientiousness, extraversion, agreeableness, neuroticism [13], and self-esteem [14]. Secondly, we also considered social support as one of the social or educational predictors that might affect satisfaction with the nursing major. This is based on previous research showing that social support from, and communication with, colleagues has a positive impact on satisfaction in the nursing profession [15,16]; social support from faculty members also has a marked effect on retention [17]; and social support promotes retention in Afro-American and male nursing students, who are minority groups in nursing schools [18]. However, social support is a general element not limited in its effect to majors and other academic activities. To assess the role of support relevant to majoring and clinical practice during nursing studies, we explored the experience of support in clinical practice and supervision in addition to general social support.

Thirdly, we tried to get at experiences related to gender difference. This is because a feeling of alienation or being isolated due to gender difference could affect major satisfaction. However, a qualitative study that was conducted in South Korea [6] showed that male nursing students expect that their male gender will be beneficial in promoting or differentiating them from their female counterparts even though it will have a negative effect on them. Therefore, we included both perceived advantages and disadvantages as predictors. We also considered that the feeling of identity as a nursing student would have a significant effect on major satisfaction in male nursing students. Group identity is defined as a feeling of belonging to the social world, and it is an essential source of self-esteem and pride [19]. Since the concept was first proposed, extensive studies have been concluded that group identity increases satisfaction with the group [20,21] and decreases the rate of change of occupation [22]. This has also been verified in studies of professional nurses [23].

According to studies based on self-reporting interviews conducted in the United Kingdom and Australia, a feeling of belonging is a prerequisite for clinical training [24]. Moreover, it can be supposed that group identity will be a more powerful factor affecting major satisfaction and the promotion of retention in Asian countries where social acceptance is of great concern. Given the above background, we speculated that the sense of identity as a nursing student would have a substantial effect on major satisfaction in Korean nursing students. Our hypotheses were as follows; first, openness, conscientiousness, extraversion, agreeableness, neuroticism, self-esteem, social support, perceived advantages and disadvantages are related to major satisfaction. Second, group identification with major are related to major satisfaction. Third, the predictors of first hypotheses will be associated with major satisfaction mediated by group identification. Additionally, we will explore whether there exists gender differences in effects of predictors and mediators.

Methods

Participants and procedure

The study was conducted in November 2011 on a convenient sample of 275 nursing students from 7 colleges in South Korea and 270 students (199 females and 71 males) completed the questionnaire. Therefore response rate was 98%. Korea has two types of nursing degrees, a 3-year associate degree (ADN) and a 4-year baccalaureate degree (BSN). The sample included students from two associate degree programs and five baccalaureate degree programs. There were no significant differences in results between colleges or programs. A blinded associate studying clinical psychology briefed students on the purpose of the study and provided assurance that all information would remain confidential.

Instruments

All participants were asked to indicate their gender, age and year of study. The questionnaire included the following scales, with the questions standardized for Koreans. Also, the mean scores of the items from each scale were used in statistical analyses. Major satisfaction was measured using a standardized Korean version of the Major Satisfaction Scale [25]. This consists of three items which participants rated on a 7-point scale ('1'='not at all' to '7'='very much'). The reliability coefficient (measured by Cronbach's alpha) of this scale was 0.85. The mean scores of the three items were used as a dependent variable. Group identification was measured using a standardized Korean version of the Group Identification Scale [26]. This consists of 10 items

which participants rated on a 5-point scale ('1'='not at all' to '5'='very much') and the Cronbach's alpha was 0.80. Self-esteem was measured using the Korean Rosenberg Self-Esteem Scale [27]. This consists of 10 items which participants rated on a 4-point scale ('1'='almost never' to '4'='always') and the Cronbach's alpha was 0.82. Five personality factors were measured using a Korean version of the Interpersonal Personality Item Pool [28]. It consists of 10 items on each of 5 subscales which participants rated on a 5-point scale. The Cronbach's alpha were 0.92 for openness, 0.85 for conscientiousness, 0.90 for extraversion, 0.85 for agreeableness, and 0.89 for neuroticism. Social support for majoring in nursing was measured using three items (e.g. my family encourages me to major in nursing) from a standardized Korean version of the Social Support Scale [29]. Participants rated items on a 5-point scale and the Cronbach's alpha was 0.85. Experiences of support during clinical practice and supervision were measured by Korean version of Process-Oriented Group Supervision Questionnaire [30,31] which consists of two subscales representing supportive supervision and educational supervision. The Cronbach's alpha for each 6 items were 0.92 for supportive supervision and 0.88 for educational supervision. Perceived advantages and disadvantages due to gender were measured using a standardized Korean version of the scale with 5-point scale [31]. Perceived advantages due to gender, consisting of three items (e.g. sometimes I feel discriminated against in my department because of my gender) and Cronbach's alpha was 0.91. Perceived disadvantages due to gender, consisting of four items (e.g. My gender has some advantages in nursing) and the Cronbach's alpha was 0.80.

Data analysis

The statistical package SPSS 18.0 was used for all statistical analyses. The reliability and validity of the measurements were tested using Cronbach's α, and exploratory factor analysis. Gender differences were analyzed using independent t-tests. Pearson correlation coefficients were calculated to assess the relationships between variables. A hierarchical regression analysis (performed separately for males and females) was used to test the effect of group identification and hypothesized predictors of major satisfaction. Specifically, in step 1, the effects of age and year of study were assessed. Personality traits were input in step 2 using the enter method, and social and gender related variables and group identification were input in step 3 using the stepwise method. Finally, the mediating role of group identification was tested as proposed by Baron and Kenny [32]. Specifically, after confirming a significant relation between group identification and major satisfaction, we identified the factors correlated significantly with group identification and major satisfaction. Finally, we performed hierarchical regression analyses with age and year of study at step 1, personality traits at step 2, group identification at step 3, and the identified variables at step 4, using the enter method.

Results

Gender differences

Table 1 gives the means and standard deviations of the variables measured in male and female nursing students, in addition to the results of statistical tests comparing males and females. Age differed significantly between genders; on average females were almost one year younger than males (t=3.69, P<0.001). With regard to personality traits, male students rated themselves more favorably than female students. In particular, male students rated themselves as more open to experiences (t=3.21, P<0.001) and less neurotic (t=5.13, P<0.001), and were found to have higher self-esteem (t=3.73, P<0.001). Interestingly, male nursing students believed that they had more advantages

than female students (t=4.17, P<0.001), but also that they had more disadvantages (t=6.01, P<0.001).

Correlations between variables

Table 2 gives the Pearson correlations between the measured variables. In males, there was a strong positive correlation between major satisfaction and group identification (r=.74, P<0.001). Major satisfaction was positively correlated with perceived advantages due to gender (r=.33, P<0.01), social support (r=.43, P<0.001), supportive supervision (r=.32, P<0.01), educational supervision (r=.25, P<0.05), conscientiousness (r=.53, P<0.001), extraversion (r=.30, P<0.05), agreeableness (r=.49, P<0.001), and self-esteem (r=.48, P<0.001). It was negatively correlated with neuroticism (r=.28, P<0.05). In females, as in males, there was a positive correlation between major satisfaction and group identification (r=.58, P<0.001). Major satisfaction was positively correlated with social support (r=.37, P<0.001), supportive supervision (r=.39, P<0.001), educational supervision (r=.36, P<0.001), openness (r=.22, P<0.01), conscientiousness (r=.30, P<0.001), extraversion (r=.19, P<0.01), agreeableness (r =.26, P<0.001), and self-esteem (r=.32, P<0.001). It was negatively correlated with perceived disadvantages due to gender (r=-.17, P<0.05).

Predictors of major satisfaction

The final hypothesized regression models were significant in males (F(9, 61)=6.99, P<0.001) and females (F(10, 188)=9.19, P<0.001). Explained variances, beta coefficients, t values and p values from the analyses are shown in Table 3. After controlling for the effects of age and year of study, conscientiousness (β=0.40, P<0.001), agreeableness (β=0.37, P<0.05), and self-esteem (β=0.30, P<0.05) were found to predict major satisfaction in males. In addition, after controlling for demographic and personality variables, group identification remained a powerful predictor of major satisfaction (β=0.59, P<0.001).

In females, after controlling for the effects of age and year of study, conscientiousness (β=0.19, P<0.05) and self-esteem (β=0.23, P<0.05) were found to predict major satisfaction. Group identification (β=0.50, P<0.001) and supportive supervision (β=0.19, P<0.01) were also predictors of major satisfaction.

Mediating role of group identification

We hypothesized that group identification would be a significant and proxy predictor of major satisfaction. Therefore we performed regression analyses to test its meditational effect, as discussed in the Methods section, and explored the factors among gender-related and social variables that might be mediated by group identification. Additional regression analyses, which included group identification at step 3, showed that group identification played a mediating role in both males and females. Specifically, perceived advantages due to gender (β=0.10, t=1.20, P>0.05) in males, and social support (β=0.08, t=1.02, P>0.05) in females, were no longer significant once the effect of group identification was partialled out. Therefore, we concluded that group identification fully mediated the effect of perceived advantages due to gender on major satisfaction in males (see Figure 1), and the effect of social support on major satisfaction in females (Figure 2). In addition, since supportive supervision was still significant in females after partialling out the effect of group identification (β=0.20, t=2.99, P<0.01), we concluded that supportive supervision can influence the major satisfaction of female nursing students directly as well as indirectly via group identification.

Discussion

The number of male students choosing nursing as their major has increased substantially in line with recent global trends, but the retention rates of male nursing students and their career development in the nursing profession remain poor in South Korea. This study started from this perspective and measured major satisfaction in nursing, and identification with the group of nursing students among males and females. We then explored predictors of satisfaction and identification, and analyzed gender differences. We found that male students saw themselves as experiencing more advantages (t=4.17) as well as more disadvantages (t=6.01) than female students. The perception by males of more disadvantages was consistent with previous research [4-9,33], but their reporting of more advantages was interesting. If perceived advantages of male students are representing benefits from profession after graduation, it is plausible that their expectation is based on reality, since previous research reported that male nurses have faster rate of promotion [34] and more representative of leadership position [35]. It is also consistent with qualitative research in South Korea [6] showing that male nursing students expect some advantage from their scarcity. We concluded that male nursing students are sensitive to the consequences of gender and at the same time, they perceive themselves as isolated, discriminated against and disadvantaged. Other variables related to gender difference were personality traits. Specifically, male students evaluated themselves more favorably than female students since they showed higher self-esteem (t=3.73), and as more open to experiences (t=3.21) and emotionally stable (t=5.13).

Correlational analyses showed that almost of the assumed predictors had significant association with major satisfaction. This result might be resulted from the covariance among the independent variables. Therefore we focused on the results of regression analyses. It revealed that self-esteem was associated with major satisfaction, irrespective of gender (males, β=0.30, females, β=0.23). This agrees with previous research [11,12] that showed positive self-image was a prerequisite of adjustment or attrition. Based on related research on Big-Five personality factors [36-38], we assumed that major satisfaction of nursing students would be associated with conscientiousness and extraversion. Conscientiousness showed significant effect in both gender (males, β=0.40, females, β=0.19), but not that of extraversion. To achieve academic goals and satisfy with group, motivation, perfectionism, and self-organization, which are usually represent the concept of conscientiousness, may be needed since it is related to [39]. It may be also due to the fact that conscientiousness can be helpful in accepting group goals and conforming to organizational rules in a collectivist culture such as that of Korea. It is not clear why extraversion failed to predict major satisfaction. Extraversion usually mean orienting outward, expressing themselves, being sociable. Therefore, our result might have been influenced by the collectivist culture of Korea. However, those findings need to be replicated and the explanation tested. We performed regression analyses to each gender to test whether the predictive power of some factors differed according to gender. The agreeableness of male students was associated with major satisfaction (β=0.37), which was plausible, since successful nursing is usually considered to involve being agreeable to others and sensitive to their needs. It implies that, among male nursing students, those who interact or communicate with others in less traditional and stereotyped ways tend to be satisfied with their major and career. This possibility does not contradict the result of previous research which showed that the attrition rate was associated with gender-typed attitudes [9]. The predictive power of supportive supervision was significant only in females (β=0.19). On the other hand, in previous research, support

from staff and family, which was similar concept to supportive supervision of this study, was found to be important for non-traditional students and minorities [15-18]. Considering that the zero-correlations between supportive supervision and major satisfaction were significant in both genders (males, r=0.32, females, r=0.39), it is not reasonable to conclude that supportive supervision was not associated with major satisfaction. The non-significant effects of social support or supportive supervision of male students in regression analysis may be due to its lesser power in predicting satisfaction than gender-related variables, such as perceived advantage. As described before, identification is a feeling of belongingness, self-esteem, and pride related to a group [19]. Given the collectivist culture to which the nursing students in this study belong [10], we expected that identification with their group would play a key role as predictor and mediator to major satisfaction. Consistent our hypotheses, group identification had the most powerful impact in both males (β=0.59) and females (β=0.50) in regression analyses. This means that the feeling of belonging to a group or being connected with others plays an important role in major satisfaction of nursing students in collectivist cultures such as Korea irrespective of gender which was expected from previous research [20-23]. It is also noteworthy that the mediating process from predictors to satisfaction operated differently in the genders (Figure1 and Figure 2). The findings showed that social support and supervision can improve major satisfaction and group identification in female nursing students. In contrast, male nursing students felt greater satisfaction and group identification because they believed they could expect substantial profit as a minority. The results of this study could be useful in nursing education. First, to ensure that nursing students are satisfied with their major and complete their course a strategy is required to help them feel proud of their major and a sense of belonging to the group. Second, to increase male students' satisfaction with their major and help them develop their academic and professional careers, intervention or consulting programs are needed that focus on reconstructing gender stereotypes, and distorted cognition or outcomes of gender. Third, our finding highlights the importance of focusing on clinical supervision in nursing education. In particular, supervision during clinical placements has been shown to play an important role in major satisfaction.

Limitation and Future Directions

Even though this study has important implications, it has several limitations. First, the students sampled were from only 7 universities. This may limit the extent to which the results can be generalized to other populations. Second, the self-reporting method employed may be less reliable than interview methods. Third, the study was of cross-sectional rather than longitudinal design and therefore has inherent limitations in determining causal relationships. Finally, major satisfaction was the only dependent variable analyzed. Although a negative correlation between major satisfaction and turnover is supported in the literature, other factors may influence or represent retention rates. Therefore, future studies should examine the relationship between major satisfaction and retention of male nursing students, and explore other variables influencing retention rates.

Conclusions

Gender difference did not exist in the level of major satisfaction and group identification and group identification predicted major satisfaction strongly in both males and females in collectivist cultures such as Korea. In addition, the perceived advantages of males, and social support among females, influenced major satisfaction through group identification. Therefore, to increase major satisfaction and

thus retention of male nursing students, strategies for improving their identification with the nursing group need to be developed. In addition, gender-specific tactics or programs for intervening gender-related cognitions should be implemented. Specifically, male nursing students needs to believe that they might get advantages as well as disadvantages, otherwise, females needs to support their academic achievement and career from significant others.

Human Subjects Approval Statement

The institutional review board of the Hanyang University Guri Hospital approved this analysis.

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