FACTORS INFLUENCING THE LIKELIHOOD OF ATTRITION AMONG BACCALAUREATE NURSING STUDENTS AT ASSUMPTION UNIVERSITY OF THAILAND*

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Abstract: The current study investigated the factors hypothesized to influence the likelihood of attrition among baccalaureate nursing students at Assumption University of Thailand. The study employed path analysis to test the research hypotheses, based on participants' responses to a survey questionnaire. The sample consisted of 180 second, third, and fourth year nursing student participants obtained through convenience sampling. The study's findings showed that role discrepancy positive (self-in-role value is higher than perceived obligatory role value) had direct and indirect influences on the likelihood of attrition, being mediated by academic satisfaction. Moreover, clinical setting anxiety had an indirect influence on the likelihood of attrition, being mediated by academic satisfaction. Although the levels of role discrepancy negative, clinical setting anxiety, and burnout were high among the participants, there were no significant direct influences of these variables on the likelihood of attrition. Additionally, nursing student participants reported high levels of academic satisfaction and low levels of likelihood of attrition during their education and clinical training at Assumption University of Thailand.

Introduction

For all academic institutions concerned, nursing student attrition is considered an important problem that needs to be addressed urgently. According to Srisuphan et al. (1998), research dating back to 1993 in Thailand has demonstrated that there are many professional nursing positions in government institutions that are unfilled because of nursing shortage. The estimated shortage of nurses in Thailand is nearly 30,000 (Bureau of Health Policy, 1997). Preregistration nurse attrition in education is an issue that is causing international concern over many parts of the developed world including the United States, Australia, and Europe (Pryjmachuk, Easton, & Littlewood, 2008). Attrition suggests a waste of time, effort, and money invested by educators, parents, and students alike. The number of graduating nurses entering the workforce is directly reduced by student attrition rates (Wiens, 2010). Moreover, 31% of hospitals reported that registered nurses are most likely to quit the profession during the first year of employment following graduation (Schmidt, 1992).

Spouse (2000) emphasized that role discrepancy in nursing students creates conflict that either results in disappointment or withdrawal from nursing. According to Chung and Corbett (1998), burnout is a major reason for nurses to leave the profession. Pryjmachuk et al., (2008) explained that the issues of burnout and lack of academic satisfaction frequently arise in the likelihood of attrition. According to Day et al., (2004), low academic satisfaction and clinical setting anxiety are the reasons that make student nurses feel that they are not suited to nursing and withdraw.

The present research was designed to investigate whether the likelihood of student nurse attrition was due to their role discrepancy, burnout and clinical setting anxiety. Additionally, this study attempted to explore how these three variables may be related to the likelihood of attrition indirectly being mediated by their academic satisfaction.

Role Discrepancy

Corwin (1961) found that when baccalaureate degree students were compared to diploma nurses, not only were they not well-adjusted to the existing hospital situation but they were also less certain of their role conceptions. According to Smochek (1992), most nursing students enter nursing programs without really being aware of the realities of life which they are about to be intimately exposed to. Research had suggested that preregistered nurses have a very minimal idea of professional identity and a limited awareness of what nursing education requires (Harvey & McMurray, 1997). Therefore, dissonance between student ideals and actual practice create conflict that either results in disappointment or withdrawal from nursing (Spouse, 2000).

Clinical Setting Anxiety

The clinical setting becomes progressively more stressful for nursing students as advances in health care and technology continue to grow (Moscaritolo, 2009). Shipton (2002) illustrated that some nursing students tend to have a high level of stress in the clinical setting, compared to their stress in the

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classroom or lab setting. In addition, newly qualified nurses seem to experience high level of stress when they enter the clinical areas for the first time due to lack of confidence and exposure to unfamiliar situations (Chang & Hancock, 2003). Even among newly qualified nurses, psychological distress is higher initially, but that can be compared to the same level as nursing students experience over four years of training (Watson et al., 2008).

Burnout
The risk of burnout is high among caring professionals such as those in nursing and social work and it is an issue of concern (Dziegielewski et al., 2004). Research conducted by Rella, Windwood, and Lushington (2008) on 1,261 first, second, and third year nursing students revealed that, when nursing students reach the end of their university education, a significant portion of nursing students are in a dangerously fatigued state due to the combined stressors of education and emotional exhaustion from clinical preparation. Research by Tunc and Kutanis (2009) suggested that nurses experience the highest level of emotional exhaustion at the beginning of their professional life compared to those with more experience.

Academic Satisfaction
It had been pointed out that while attending college or university, the satisfaction of students in higher education is an undergraduate's total experience. Undergraduate students are less likely to persist, adversely affecting future enrollments if they are not satisfied with their college or university experiences (Elliott & Shin, 2002). Following the foregoing argument, it can, therefore, be said that if an individual is to remain within the college environment, he or she must be fulfilling the requirements of that environment (performing satisfactorily) and the college environment must be meeting the needs of the student (leading to satisfaction). Hence, if an individual gets achievement from this correspondence, the probability that the individual will remain in the environment will increase (Starr et al., 1972).

Interrelationships between role discrepancy, clinical setting anxiety, burnout, academic satisfaction and likelihood of attrition
According to Deary et al. (2003), there is evidence to state that when nursing students realized the nursing program was not what they expected, the role discrepancy led to academic failure which had an impact on their academic satisfaction. The research also showed that lowered academic satisfaction can lead to the likelihood of attrition. Clinical setting anxiety has been acknowledged to result in student nurse attrition from the nursing profession due to unsatisfactory academic achievement (Morgan, 2001). Apart from its motivator and performance enhancer assets can jeopardize the success of students and cause premature departure in the nursing program if performance is negatively influenced. Deary et al. (2003) stated that when nursing students experience burnout, increase in psychological morbidity and using more negative coping mechanisms to deal with academic demands can negatively impact on satisfaction with academic achievements. Pryjmachuk et al. (2008) evidenced that the issues of burnout and lack of academic satisfaction frequently arise in the discussion of attrition. According to Hopking (2008), the problem of lower satisfaction with academic experience and higher attrition rates among nursing students has been a growing concern for higher education administrators.

Figure 1 presents the conceptual framework representing the hypothesized relationships between the exogenous variables of role discrepancy, clinical setting anxiety, and burnout; the mediator variable of
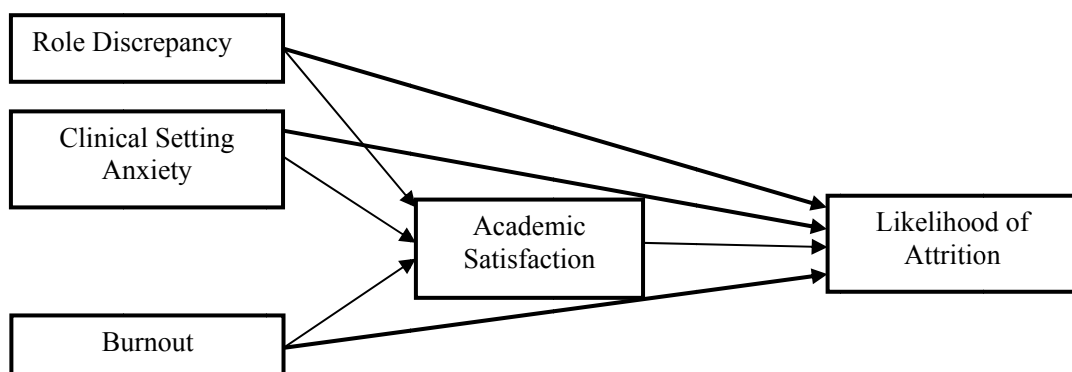

Figure 1: Path Model of the Direct and Indirect Relationships between Role Discrepancy, Clinical Setting Anxiety, and Burnout, Being Mediated By the Variable of Academic Satisfaction, With the Likelihood of Attrition

academic satisfaction, and the criterion variable of likelihood of attrition.

Research Questions

From the conceptual framework, the following research questions were drawn:

(1) Is there a direct influence of role discrepancy, clinical setting anxiety, burnout, and academic satisfaction on the likelihood of attrition in baccalaureate nursing students at Assumption University, Thailand?

(2) Is there an indirect influence of role discrepancy, clinical setting anxiety, and burnout on the likelihood of attrition in baccalaureate nursing students at Assumption University, Thailand, being mediated by academic satisfaction?

Method

Participants

The participants of this study consisted of 180 second year, third year, and fourth year baccalaureate nursing students at Assumption University of Thailand studying during the semester 1/ 2012.

Material

The study employed a self-report questionnaire comprising of six parts. Part I consisted of items written to tap the respondents' demographic characteristics of gender, age, nationality, year level, and cumulative GPA.

Part II consisted of The Clinical Experience Assessment Form (CEAF) which is used to measure the level of anxiety experienced by nursing students when exposed to known stressors during clinical practice (Kleehammer et al., 1990). The 16-item questionnaire asks respondents to rate their responses on a 5-point Likert scale from 1 = *Strongly Disagree* to 5 = *Strongly Agree*, with higher scores indicating higher levels of anxiety. Questions are related to interaction with faculty members and unit staff, communication with patients and physicians, patient teaching, clinical skills, and clinical preparation. The reliability coefficient of the CEAF was reported to be 0.86 which indicates a high level of internal consistency and compares favorably with 0.88 in a study by Kim (1997, 2003), and 0.82 in a study by Kleehammer et al. (1990).

Part III consisted of Nurse Role-Identity Attributes scale to measure role discrepancy. Scores are assessed by asking respondents what role meaning attributes they think are most important for being a nurse (Brennan, 2009). Thirty (30) role attributes are specified in the survey. These role attributes were selected based on qualitative research findings in the nursing literature (Arthur, 1992; 1995; Cutcliffe & Bassett, 1997; Demarco & Aroian, 2003; Fagermoen,

1997; Kelly, 1998; MacIntosh, 2003; Spouse, 1998; Wilson & Startup, 1991). Respondents are also given the opportunity to identify additional role attributes that are included in the questionnaire.

For each attribute, respondents are asked the following two questions: (a) On a scale of 1-10, where 1 = *Not at all* and 10 = *Very much,* rate how important you think each attribute is for being a nurse IN GENERAL; and (b) On a scale of 1-10, where 1 = *Not at all* and 10 = *Very much,* rate how well YOU embody each of these attributes as a nurse. Discrepancy scores for each attribute are calculated by subtracting the respondent's perceived obligatory role score from the self-in-role score given to the attribute. If the respondent's self-in-role score is less than the obligatory score, he or she receives a *role discrepancy negative* score for the role meaning attribute. If the respondent's self-in-role score is higher than the obligatory score, he or she receives a *role discrepancy positive* score for the role meaning attribute. Respondents with role discrepancy negative are of particular interest because they are expected to lead to feelings of dissatisfaction related to not living up to the obligation of the role and results in possible role exit.

Part IV consisted of the 22-item Maslach Burnout Inventory (MBI: Maslach & Jackson, 1996) which measures emotional exhaustion, depersonalization, and personal accomplishment. The scale items ask the participants to rate how often they experienced different job-related feelings on a 6-point scale ranging from 1 = *Never* (experiencing) to 6 = *Everyday* (experiencing those feelings).

Part V consisted of The College Persistence Questionnaire (CPQ) which is used to predict student attrition (Davidson, Beck, & Milligan, 2009). The questionnaire consists of 10 close-ended items, answered on a 5-point Likert scale testing institutional and degree commitment variables which play a crucial role in contemporary causal models of retention (Braxton, Sullivan, & Johnson, 1997). A sixth option, "not applicable" was included for students who felt that an item did not pertain to them. Verbal labels for the response scales depend on the wording of the question. For example, a question that asks "how much" students liked something is answered with end pegs of "very much" and "very little". Depending on the content of the question, answers were later converted to 5-point "favorability" scores based on whether the response indicates something positive or negative about the student's college experience (-2 = *Very unfavorable,* -1 = *Somewhat unfavorable,* 0 = *Neutral,* +1 = *Somewhat favorable,* +2 = *Very favorable*). Item number 1,2,3,4,5,6,7,9,10 use normal scoring (+2, +1, 0, -1, -2) and item number 8 use reversed scoring (-2, -1, 0, +1,

+2). Students with the lowest positive or most negative score would be at the greater risk. A study done by Davidson, Beck and Milligan (2009) on 2,022 undergraduate college students indicated that the scores were fairly stable across time: Institutional Commitment, r = 0.78, *p* < .0001; Degree Commitment, r = 0.67, p < .0001.

Part VI consisted of The Undergraduate Nursing Students' Academic Satisfaction Scale (UNSASS) that is specifically designed to assess satisfaction of undergraduate nursing students with their academic

conducted. The analysis involved (1) regressing the dependent variable of 'likelihood of attrition' on the predictor variables of role discrepancy positive, role discrepancy negative, clinical setting anxiety, burnout, and academic satisfaction; and (2) regressing the mediator variable of academic satisfaction on the predictor variables of role discrepancy positive, role discrepancy negative, clinical setting anxiety, and burnout. The results of this path analysis are presented in Figure 2.
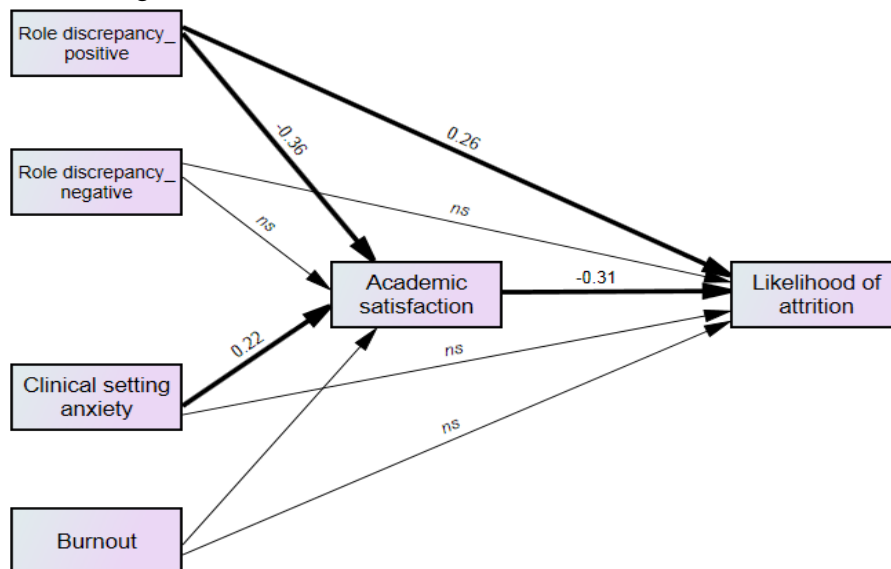

Figure 2: Path model of nursing students' likelihood of attrition as a function of the direct and indirect influences (being mediated by their academic satisfaction) of their levels of role discrepancy positive, role discrepancy negative, clinical setting anxiety, and burnout
[Note: ns = non-significant]

programs (Dennison, 2010). It is a 37-item questionnaire assessing undergraduate students' satisfaction with their academic program in three domains: (1) satisfaction with clinical teaching, (2) satisfaction with in-class teaching, (3) satisfaction with the program. A 5-point Likert scale was used with options ranging from 1 = *strongly agree* to 5 = *strongly disagree*. Items on the scale are designed to carry equal weight. A total composite score of the UNSASS is performed by summing the responses to each item. Given the multidimensional nature of the UNSASS, each of the three subscales can be used as a stand-alone measure of its respective concept. For this research, only the summed total scores were employed.

Procedure

Results
In order to test the hypothesized direct and indirect relationships represented by the path model presented in Figure 1, path analysis via regression analysis was

The results showed that for the study's nursing respondents, their reported '*role discrepancy positive*' (their self-in-role score is *higher* than their perceived obligatory score) has both direct and indirect significant influences on their reported likelihood of attrition. Thus, for the direct influence, the more positive their perceived role discrepancy, the higher their reported likelihood of attrition (Beta=.26). For the indirect influence, the more positive their perceived role discrepancy, the lower their reported level of academic satisfaction (Beta=-.36); the lower their reported level of academic satisfaction, the higher their reported likelihood of attrition (Beta=-.31). The respondents' reported '*role discrepancy negative*' (their self-in-role score is *lower* than their perceived obligatory score) was not found to have any significant influence (either direct or indirect) on their reported likelihood of attrition (*p*>.05). Similarly, the results showed that the nursing respondents' reported level of burnout did not exert any significant influence (either direct or indirect) on their reported likelihood of attrition (*p*>.05).

The results showed that the nursing respondents' reported level of clinical setting anxiety has no significant direct influence on their reported likelihood of attrition. Rather, the influence is indirect, being mediated by their reported level of academic satisfaction. Thus, the more anxiety they experienced in clinical settings, the higher their reported level of academic satisfaction (=.22); the higher their reported level of academic satisfaction, the lower their reported likelihood of attrition (= -.31).

Discussion

The findings of the path analysis showed that, for the nursing student participants, their reported role discrepancy positive (self-in-role score is higher than perceived obligatory score) has both direct and indirect significant influences on their reported likelihood of attrition. In terms of direct influence, the more positive their perceived role discrepancy, the higher their reported likelihood of attrition. This finding is not supported by previous research which showed that role discrepancy negative is expected to lead to feelings of dissatisfaction due to not living up to the obligation of the role, resulting in possible role exit (Brennan, 2009). A possible explanation of the current finding is that when nursing student participants with high level of role values enter the clinical area and witness some nurses misusing or abusing their role values during practice, the neophytes may feel disillusioned and/or feel they should move to another setting where people take their roles seriously. In terms of indirect influence, it was found that the more positive the participants' perceived role discrepancy, the lower their reported level of academic satisfaction; and the lower their reported level of academic satisfaction, the higher the likelihood of attrition. On the other hand, prior research had demonstrated that role discrepancy negative can lead to academic failure which has an impact on academic satisfaction; thus, lower academic satisfaction can lead to the likelihood of attrition (Deary et al., 2003). A reason for the present study's findings may rest with nursing student respondents with high role values thinking that the current quality of education does not seem challenging enough to derive satisfaction and may think about getting an education abroad or looking for more challenging courses. A past study had demonstrated that if students perceive their educational program as not living up to their competence level or are not challenging enough, they would lose interest and feel dissatisfied with their overall educational experience (Pintrich, 2003).

The results of path analysis showed that among the nursing student participants, role discrepancy negative (self-in-role score is lower than perceived obligatory score) was not found to have any significant direct and indirect influences on likelihood of attrition. This finding does not concur with previous research which had shown that role discrepancy negative may result in decrease in optimum professional development and be a motivating factor for attrition (Olsson & Gullberg, 1988). A possible reason for this may rest with nursing student participants' capability to keep up with role making processes where role modification is consciously pursued (Hardy & Conway, 1978). Furthermore, although involved individuals may not be aware of the ongoing process of role making, the interaction between student to student, student to faculty, and faculty to student are essential to the process. It is not unusual for nursing students to have negative role discrepancy while they are in the process of role making; eventually, they will be able to work out the issues as they become more mature and experienced at later stages of their education and training.

The results of path analysis also showed that the nursing student participants' reported level of burnout did not exert any significant influence (either direct or indirect) on the likelihood of attrition. These findings are contrary to those obtained from past studies which demonstrated that burnout is a major reason for nurses to leave the profession (Chung & Corbett, 1998). A possible reason why burnout in the present study failed to predict the likelihood of attrition may rest with the nursing students' strong intrinsic motivation towards their career choice. According to Seago, Wong, Keane, and Grumback (2008), nursing is a challenging and rewarding career. Past research has shown that, regardless of the various difficulties that nursing students may face throughout the program, students who believe that they can and will be successful are motivated in terms of persistence, behavior, and effort than those who believe that they will not succeed (Pintrich, 2003). Having set goals and meaningful work enhances nursing students' intrinsic motivations that engage students for their own sake (Linnenbrink & Pintrich, 2002).

Another finding from the path analysis indicated that the participants' reported level of clinical setting anxiety has no significant direct influence on their reported likelihood of attrition. Rather, the influence was indirect, being mediated by their level of academic satisfaction. Thus, the more anxiety they experienced in clinical settings, the higher their reported level of academic satisfaction, and the lower the likelihood of attrition. This particular finding partly contradicted a previous finding that clinical setting anxiety led to unsatisfactory academic achievement, resulting in attrition from the nursing profession (Morgan, 2001). A possible reason for the

current finding is that, while anxiety is generally considered to be debilitative and maladaptive, it has also been found to be a facilitative tool for an individual to perform effectively (Marx, Williams & Claridge, 1992). The authors explained that, as academic demands increase, anxiety also increases; thus, facilitative anxiety enhances more positive effort and is rewarded by an improvement in performance. Laschinger (1996) gave evidence to the effect that when students come across difficulties in their program, those with higher self-efficacy beliefs will make more effort to overcome the obstacles, tend to achieve higher academic satisfaction, and persist longer than those who doubt their capabilities.

Conclusion

Based on the findings of the current study, it can be concluded that, although the majority of participants reported to have high role discrepancy negative, this did not exert any significant influence on their likelihood of attrition from the nursing profession. Despite the fact that role discrepancy negative was evidenced to be a factor in likelihood of attrition in past studies, it is interesting to note the importance of role discrepancy positive in the present study. The ability to regulate one's sense of self-efficacy and motivation appear to be equally important aspects for the nursing students with role discrepancy positive to maintain satisfaction and persistence throughout the nursing program. There is the possibility that those with high role discrepancy positive could be overly confident about their own role values and skills in a pessimistic manner and prematurely judge the nursing profession as not challenging or not well suited for them.

Another main outcome of this study suggests that the higher the clinical setting anxiety, the higher the academic satisfaction, and the lower the likelihood of attrition. Thus, it can be concluded that nursing students have the ability to cope with increasing anxiety to achieve academic demands, possibly with the use of strong self-efficacy and intrinsic motivation. Furthermore, the findings that burnout has no significant direct or indirect influences over the likelihood of attrition may also indicate the possible effect of strong self-efficacy and intrinsic motivation. These findings imply that nursing students who strongly persist throughout the program, regardless of the emotional and physical challenges they face, are the ones with the genuine passion for a career in nursing than those who chose nursing based only on extrinsic motivation.

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