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ACADEMIC MOTIVATION: A COMPARATIVE STUDY OF ENTRY LEVEL
BACCALAUREATE NURSING STUDENTS

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**Academic Motivation: A Comparative Study of Entry Level
Baccalaureate Nursing Students**

Purpose: To examine academic motivation of students enrolled in an accelerated and a traditional baccalaureate nursing programs.

Design: A convenience sample of 30 (100%) respondents in an accelerated group and 37 (54%) respondents in a traditional group (54%) provided the data. A demographic survey and the Academic Motivation Scale (AMS C-28) were administered to both groups.

Methods: This was a quantitative, correlational study. Analysis quantified item frequencies within the AMS C-28, and a t-test was employed to evaluate the differences in intrinsic and extrinsic motivation and amotivation between the groups.

Findings: There was no statistical difference in any of the motivation results demonstrated by either group. Further, there was no correlation between either group's first semester grade point average (GPA) and the level of intrinsic motivation demonstrated on the AMS C-28.

Conclusion: Further study is recommended. As accelerated nursing programs proliferate, the composition of the groups and the differences in the academic motivation between participants in accelerated and traditional programs may become evident.

[Key words: academic motivation; nursing education; accelerated programs]

The nursing shortage, a recurring and increasing problem, (International Council of Nurses, 2004) offers the potential for numerous research and study opportunities. As economic upheaval forces many individuals to choose new careers, energies are often redirected toward health care. It is important to assist in identifying factors which will optimize success and support the motivation of those individuals who pursue nursing as a profession. The purpose of this study was to: (a) evaluate and correlate the intrinsic and extrinsic motivation, and amotivation of students enrolled in an accelerated and a traditional baccalaureate nursing programs, and (b) determine if intrinsic motivation is positively correlated with academic achievement as measured by entry level baccalaureate nursing students' first semester grade point average (GPA).

Background

According to the American Heritage Dictionary (1994), motivate is defined as “to move to action, to impel” (p. 544). A review of the literature indicates an individual's behavior is a reflection of a perceived need or desire, which is generally directed at achieving a specific goal. Deci and Vansteenkiste (2004) and Vansteenkiste, Lens, and Deci (2006) reviewed the concept of intrinsic motivation, acknowledging the personal satisfaction experienced from the actual completion of a task as the true reward. In contrast, extrinsic motivation is a behavior or action undertaken with the objective of receiving an external reward or result (Ryan & Deci, 2000a). Studies in the early 1970s which evaluated the effects of both intrinsic (satisfaction) motivation and extrinsic (tangible reward) motivation, revealed individuals would reduce the frequency with which they would engage in intrinsically motivated behavior if the extrinsic reward was eliminated (Sansome & Harackiewicz, 2000). These apparent negative attributes

associated with extrinsic motivation were not restricted to all rewards. Rather, the peculiarities exhibited by extrinsic motivators were linked to tangible rewards and other types of extrinsic constraints, e.g. deadlines, surveillance, and testing (Sansome & Harackiewicz, 2000; Enzle & Anderson, 1993; Vansteenkiste, Lens & Deci, 2006; Grolnick & Ryan, 1987; Deci & Ryan, 1987) frustrating an individual's intrinsic interest in a specific activity. Conversely, the use of intangible rewards, such as praise or positive feedback, increased the individual's motivation toward an intrinsically directed activity (Koestner, Zuckerman, & Koestner, 1987; Deci & Ryan, 1987; Deci, Koestner, & Ryan, 2001).

The Self-Determination Theory, developed by Ryan and Deci (2000a), focuses on the individual's inherent tendency to be intrinsically motivated (Ryan & Deci, 2000b; Deci & Vansteenkiste, 2004). When considering extrinsic motivation, Ryan and Deci identified four different types, each with varying degrees of "regulation." The first type of extrinsic motivation is identified as *external regulation*, and may be considered the classic extrinsic motivator utilized to reward or manage behavior. The second type, *introjected regulation*, remains controlling. However, the individual responds to pressure, to "save face" or to elude feelings of anxiety. Increasing autonomy is realized through the third type of regulated extrinsic motivation known as *identification*. For example, the undergraduate student accepts the regulation and understands the importance of completing an English Composition course to enhance writing skills for publication. This student understands the activity's relevance to writing, and the value placed upon it as a life goal. Lastly, *integrated regulation*, reflects a process of assimilation of the identified regulations to the individual. As the individual continues to

internalize more extrinsically motivated behaviors, the more the person's actions become self-determined (Kowal & Fortier, 1999; Ryan & Deci, 2000a; Ryan & Deci, 2000b; Deci & Vansteenkiste, 2004; Vansteenkiste, Lens, & Deci, 2006). The remaining element in the Self-Determination Theory is amotivation, which is exhibited by an individual's "absence of intention to act" (Ryan & Deci, 2000a, p. 61).

The Cognitive Evaluation Theory (CET) is a subtheory of the Self-Determination Theory (Ryan & Deci, 2000b). This subtheory emphasized the individual's basic needs of "competence and autonomy" and supported the "social-contextual events e.g. feedback, rewards" (Ryan & Deci, 2000b, p. 70); thus, promoting perceptions of efficacy that may increase intrinsically directed activity. Autonomy has particular impact in the educational environment, because it allows students to demonstrate initiative and more easily grasp complex, conceptual information (Benware & Deci, 1984).

Intrinsically motivated students value education for the inherent satisfaction, enjoyment, and challenge of learning. These autonomously motivated individuals often invest a greater energy and attention into the activity, to realize the perceived learning outcome. Individuals who are intrinsically motivated are often cognitive learners. Awareness of the intrinsic, extrinsic, and amotivation of students, the needs of the cognitive learner, enables the educator to identify optimal teaching strategies for students.

Methods

The target population for this study consisted of baccalaureate nursing students enrolled in the third semester of courses; 30 students were enrolled in an accelerated

option and 68 students were enrolled in a traditional option of the program. Participation in the study was voluntary. After approval by the university's Institutional Review Board (IRB), the study was introduced and discussed with both groups of students in the same 7 day period. The investigator returned within 10 days to administer the Academic Motivation Scale (AMS) C-28 (Vallerand et al., 1992-1993) and a demographic survey. A total of 67 students participated; 30 (100%) students were from the accelerated group, and 37 (54%) students were from the traditional group.

Based upon the Self-Determination Theory developed by Ryan and Deci (1985), the Academic Motivation Scale (AMS) (Vallerand et al., 1992-1993) "measures motivation toward education" (p. 159). This instrument effectively evaluates intrinsic motivation, extrinsic motivation and amotivation. The College Version of the AMS is comprised of 28 questions, which are further divided into scales. Each scale consists of seven subscales, each consisting of four items. Three of the subscales represent Intrinsic Motivation-To Know, Intrinsic Motivation-To Accomplish, and Intrinsic Motivation-To Experience Stimulation. Further, three of the subscales represent Extrinsic Motivation-External Regulation, Extrinsic Motivation-Introjected Regulation, and Extrinsic Motivation-Identified Regulation, and the seventh subscale is Amotivation. The subscales utilize a 7-point (1 - "does not correspond at all," to 4 - "moderately," to 7 - "corresponds exactly") format in response to the question: "Why do you go to college?" (Vallerand et al, 1992, pp. 1003-1008).

Previous evaluation of the AMS instrument indicated appropriate internal consistency (mean alpha value = .81) and a stable mean test-retest correlation (.79). Analysis also verified the "seven-factor structure" of the AMS, confirming validity and

reliability, therefore, substantiating its application in research on motivation (Vallerand et al., 1992). The concurrent and construct validity of the AMS was further demonstrated in other studies (Cokley, Bernard, Cunningham & Motoike, 2001; Vallerand et al., 1993). Demographic information, consisting of seven questions, was requested from all participants. The demographic data included gender, age, ethnicity or cultural group, self-reported GPA, previous degrees with designation of specialty area/field, history of volunteer work in health care and previous experience working in health care.

Following student agreement to participate in the study, data collection was facilitated by the formatting of both surveys (AMS and demographic) on a scantron-like grid. This process promoted completion of the AMS by minimizing time requirements, and simplified data entry for statistical analysis. Demographic data requiring short answers or narrative responses relating to student's history of volunteer work in health care or previous experience working in health care yielded incomplete responses. Therefore, these data were dropped from the analysis.

In accordance with the analysis guidelines identified for the Academic Motivation Scale C-28 (Vallerand et al., 1992-1993), the seven subscales, three for Intrinsic Motivation (To Know, Toward Accomplishment, and To Experience Stimulation), three for Extrinsic Motivation (Identified, Introjected, and External Regulation), and one for Amotivation, were calculated to determine individual academic motivation. The results were then grouped by accelerated program and traditional program. Subsequently, the results of the seven subscales compared or correlated the intrinsic, extrinsic, and amotivation of students in the accelerated program to students in the traditional program.

Findings

The findings indicate there was no statistical difference between the intrinsic motivation, extrinsic motivation, or amotivation of the students enrolled in the accelerated baccalaureate nursing program and the traditional baccalaureate nursing program. Analyses of the data using a *t*-test with a two-tailed significance, $df=65$ revealed the following results:

1. Intrinsic Motivation–To Know: $t=1.743, P = 0.086$
2. Intrinsic Motivation–Toward Accomplishment: $t = 1.429, P = 0.158$
3. Intrinsic Motivation–To Experience Stimulation: $t = 1.988, P = 0.051$
4. Extrinsic Motivation–Identified Regulation: $t = 1.512, P = 0.135$
5. Extrinsic Motivation–Introjected Regulation: $t = -0.564, P = 0.575$
6. Extrinsic Motivation–External Regulation: $t = -0.074, P = 0.941$
7. Amotivation: $t = -0.840, P = 0.404$

An examination of Extrinsic Motivation–Introjected and Extrinsic Motivation–External Regulation results from both groups revealed that both groups were quite similar in responses. Although the accelerated group demonstrated slightly lower Amotivation responses, the responses from both groups were again quite similar.

The literature has reported several studies correlating achievement (GPA) with academic motivation (Vansteenkiste, Lens, & Deci, 2006; Cokley et al., 2001; Conti, 2000; Deci, Koestner, & Ryan, 2001; Hyde & Kling, 2001; Pajares, 2001). For the two groups, each of the three intrinsic subscales was correlated with the overall GPA (student reported) achieved during the first semester of the nursing program. Although a slightly higher range of GPA was reported in the accelerated group, analysis did not demonstrate

any correlation between intrinsic motivation and GPA in either group. When analyzing data, the following results were obtained for the accelerated group:

Accelerated Group: N = 29

1. AMS1: Intrinsic Motivation–To Know, $r = - 0.040$, $P = 0.836$
2. AMS2: Intrinsic Motivation–Toward Accomplishment, $r = - 0.155$, $P = 0.422$
3. AMS3: Intrinsic Motivation–To Experience Stimulation, $r = 0.046$, $P = 0.814$

The traditional group exhibited these additional results when intrinsic motivation was correlated to the first semester GPA:

Traditional Group: N = 35

1. AMS1: Intrinsic Motivation–To Know, $r = - 0.104$, $P = 0.553$
2. AMS2: Intrinsic Motivation–Toward Accomplishment, $r = - 0.314$, $P = 0.066$
3. AMS3: Intrinsic Motivation–To Experience Stimulation, $r = - 0.159$, $P = 0.363$

Demographic data reflected an ethnically diverse population in both the accelerated and traditional groups. A greater number of Asian students were represented in the accelerated group (9, 31%), than the traditional group (7, 18.9%). Further, fewer Filipino students were enrolled in the accelerated program (5, 17.2%) than the traditional program (9, 24.3%). Other ethnic populations, African-American, Hispanic, White, Pacific Islander, and Other, were rather equally distributed between the groups.

Interestingly, significantly more male students were enrolled in the accelerated program (8, 26.7%) than were enrolled in the traditional program (4, 10.8%). A review of the age range of students enrolled in both programs indicated 13 students or 43.3% enrolled in the accelerated program were over 30 years of age. In contrast, only 5 students or 13.5% enrolled in the traditional program were over 30 years of age. Missing data prevented

analysis of previously earned degrees. Further, variance in demographic data represented in the traditional nursing group may be attributed to the participation rate of only 37 (54%).

Discussion

Studies have indicated “perceived academic competence and perceived academic self-determination positively influence autonomous academic motivation” (Fortier, Vallerand, & Guay, 1995, p. 257). Despite evidence of a significant presence of intrinsic motivation in both groups, there was no statistical difference between the level of academic motivation in the accelerated and traditional baccalaureate nursing group. The explanation for this phenomena is that members who comprise the accelerated group were selected from the larger traditional baccalaureate nursing group. Accordingly, original admission criteria to the nursing program were identical. However, individuals in the accelerated program have been funded by future employers with a work payback commitment, have been requested not to work during the nursing program, and generally experienced a more varied and intensive academic schedule.

Condon (1996) addresses “self-reported factors” which affect the academic success of baccalaureate nursing students from culturally diverse backgrounds (African-American/Black, Anglo-American-White, Asian-American/Pacific Islander, Hispanic/Latino American and Native American), and further determine elements which predict success e.g. GPA in nursing students from culturally diverse backgrounds. The top five elements identified which increase academic success included: (a) family support, (b) internal motivation, (c) peer-academic support, (d) social/emotional support, and (e) personal commitment to complete nursing program.

In another study by Conti (2000), results obtained from college generated questionnaires and the “Work Preference Inventory” indicated that students who chose independent goals possessed a high degree of both intrinsic and extrinsic motivation. This “autonomy” became a “predictor” of GPA and “high intrinsic motivation” (p.189) Supporting the Self-Determination Theory, Conti’s study provides additional evidence for the implied “predictability” of certain behaviors, e.g. GPA, enabling future researchers to explore and substantiate similar behaviors.

Limited research is available concerning accelerated nursing program. However, recent articles by Seldomridge and DiBartolo (2005) and Cangelosi (2005) review student profiles, program overview, educational strategies, and recommendations. The message is nevertheless clear. Motivated students require innovative, supportive, and uniquely challenging methods of instruction.

Conclusion

This comparative study of accelerated and traditional progression, entry level baccalaureate nursing students presented academic motivation data and demographic information of a convenience sample. The absence of clear, definitive admission criteria for the accelerated group may have blurred the characteristics of the group, preventing statistically significant differences between groups to be evident. Although the results of the Academic Motivation Scale (Vallerand et al., 1992-1993) for each group were positive, the absence of a significant statistical difference between the groups prompts the need for further study.

Academic motivation and the conceptual framework illustrated by the Self-

Determination Theory have meaningful implications for education. Positive, supportive, teacher-student interaction is of paramount importance in promoting student autonomy and competence. By empowering the individual, the student is able to initiate and increase intrinsically motivated activities. The end result reveals the potential for an academically successful student.

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