Abstract

**Background:** Positive interpersonal relationships between nursing lecturers and their students form a very important part of the learning environment creating motivation for students to learn. This study was designed to determine the types of interpersonal relationships that existed between nursing students and lecturers at an urban Jamaican nursing school and their effect on learning outcomes.

**Method:** A correlational study of 192 students enrolled in a 3-year undergraduate nursing program in urban Jamaica was conducted. Participants completed a 38-item questionnaire on their interpersonal relationships with nursing lecturers and their perceptions of the effects on students’ grades, grade point averages (GPAs) and the development of critical thinking skills. Analysis of Variance (ANOVA) was used to compare mean scores given for interpersonal relationships with lecturers among the groups across the 3 years. Pearson’s correlation coefficient was used to determine the associations between interpersonal relationship scores and students’ learning outcomes.

**Results:** Respondents (n=176) were between the ages of 18 to 41 years (mean age 23.15±4.48 years) and 99% was female. Equal proportions of students (41%) assigned low scores (below 20) and moderate scores (20 to 24) to their rating of their interpersonal relationships with nursing lecturers while 18% assigned high scores (25 to 30). An association was noted between the students ratings of interpersonal relationships with lecturers and their reported use of critical thinking skills (r=0.360, p<0.01). Year One students who rated the relationship as high, achieved grades B and above; however, this trend did not hold for Year Two or Year Three students.

**Conclusion:** The rating of interpersonal relationships between students and lecturers was associated with learning outcomes in Year One but not in Years Two and Three. Among all year groups, the quality of interpersonal relationships shared with lecturers was associated with the student’s perception of his/her increased critical thinking skills.
nursing schools to improve students’ learning experiences by strengthening the IPR shared with the faculty.

**Background**

Nursing students in Canada reported that positive IPR with teachers resulted in better learning outcomes (Gillespie, 2002). Students believed they learned more from teachers who corrected them without embarrassment, who were empathetic, warm, caring, and who were considered approachable (Gillespie, 2005; Goodboy & Bolkan, 2009). The relationships shared between students and lecturers are important because the number one characteristic of ineffective teachers – as identified by Taiwanese nursing students – was poor IPR (Tang, Chou, & Chiang, 2005).

University students in Hong Kong were of the view that positive IPR between students and lecturers, as evidenced by effective communication, aided in lifelong learning (Kember, Leung, & Ma, 2007). Similar findings have been reported among Australian students; where positive student teacher relationships were shown to contribute to reduced incidents of crime and suicide among students and improved academic achievement (Zhan, 2004). In support of these findings, Martin and Dowson (2009) pointed out that humans are social beings who thrive on the formation and maintenance of healthy relationships. It is possible that the Australian students felt comfortable approaching their teachers and discussing issues with them.

**Theoretical Framework**

Hildegard Peplau (1952) developed an Interpersonal Relations Model which addressed nurse-patient relationships (Chestnutt & Everhart, 2007). The model stated that the relationship is between two individuals with different experiences and perceptions which are made up by their thoughts, feelings, desires, assumptions, and mutual expectations. In applying this model to the student-lecturer relationship, both individuals have different experiences and perceptions which form the foundation and the expectations of their IPR. The theory is especially applicable to the clinical setting where the nature of interactions with preceptors influences development of clinical competencies. In the same fashion, each nursing student should be afforded the necessary support to achieve his/her academic goals through the facilitation of good student-lecturer IPR.

**Methods**

A correlational study was carried out among all students enrolled in a 3-year baccalaureate nursing program. The undergraduate student population at the nursing school located in urban Jamaica was 382, where Year One accounted for 22% (83), Year Two 40% (153), and Year Three 38% (146). A sample size of 192 was calculated utilizing the Raosoft Software (2004) with a 5% margin of error, 95% precision, and a response distribution of 50%. Study participants were selected using the stratified random sampling method with the stratification factor being the nursing students’ year of enrollment. Using a table of random numbers, a sample proportionate to size according to the year of enrollment was selected. The sample consisted of 42, 77, and 73 students for Years One, Two and Three, respectively, selected from the students’ register.

The study was conducted between April and July 2011 after receiving ethical approval and permission to collect the data at the nursing school. Data were collected once through the use of a 38-item self-administered questionnaire. Following a detailed explanation of the study and signed informed consent, students completed the data collection tool at the end of a class session before the lunch period. Students were given the opportunity to decline from participating in the study. They were informed that their decision would have no influence on
their course grade. Those who decided to participate were reminded to refrain from writing their names on the questionnaire to maintain anonymity. Completed questionnaires were returned in a sealed envelope to the researchers.

The data collection tool was comprised of questions taken from the Indiana University based National Survey of Student Engagement 2010 (NSSE) (Indiana University, 2001 - 11) and questions developed by the researchers based on the literature review. The NSSE was initially released in 2001 and its validity and reliability (Cronbach alpha above 0.7) are well documented and supported by NSSE (Kuh, 2003). Face and expert validity were sought for the modified instrument. Pre-testing of the instrument was carried out in February 2011 with the assistance of postgraduate nursing students enrolled at the institution who were not included in the actual study. Using the data collected from the pre-test, a Cronbach alpha of 0.87 was obtained. All information was treated confidentially.

Completed questionnaires were entered, cleaned, and analyzed using the Statistical Package for the Social Sciences (SPSS®) version 17. Open-ended questions were coded and summarized into major themes and entered into SPSS®. Categories of scores for the rating of the nursing lecturers and the IPR were obtained by summing the scores assigned by the students in each category. Lecturers were rated on a 5-point scale according to seven attributes: compassion, trust, realness, respect, consideration, fairness, and reliability. The IPR was also rated on a 5-point scale according to six attributes: availability, helpfulness, flexibility, friendliness, supportiveness, and sense of belonging. The maximum scores that could be obtained were 35 for the lecturers and 30 for the IPR. Analysis of Variance (ANOVA) was used to determine if the mean scores given for IPR were different among the study participants by year. Pearson’s correlation coefficient was used to determine any associations between IPR and nursing students’ learning outcomes. The level of significance for the results identified in this study was (p≤0.05).

Results

A total of 176 (91.6%) students out of the sample of 192 returned completed questionnaires with 42/42 (100%) for Year One students, 64/77 (83%) for Year Two, and 70/73 (96%) for Year Three students. Participants were between the ages of 18 to 41 years with a mean age of 23.15±4.48 years; 99% was female.

Nursing students’ definition of a good interpersonal relationship

The majority of respondents (75.4%) selected the definition of positive IPR as “clear communication that engenders trust, support, respect, and mutual understanding between individuals”; 11% selected “caring, honest, motivating, and friendly relationship between individuals”; and 13.6% selected from among the other three definitions given. Students’ age, union status or year group did not influence their selection of definitions.

The interpersonal relationship between nursing students and lecturers

Study participants were asked to rate their lecturers (range 0 – 35) using a semantic differential scale according to seven characteristics: compassion, trust, realness, respect, consideration, fairness and reliability. They were also asked to rate the IPR (range 0-30) according to six attributes: availability, helpfulness, flexibility, friendliness, supportiveness, and sense of belonging. In rating their lecturers, the majority of the nursing students (70%) assigned moderate scores of 20 to 29 while 14% assigned low scores (< 20) and 16% high scores (>30). Collectively, 41% of the students assigned low scores (<20) to the rating
of IPR. A similar proportion (41%) assigned moderate IPR scores of 20 to 24 and 18% assigned high scores (> 25). The mean ratings were 24.2±5.3 for the lecturers and 20.8±4.3 for the IPR. Table 1 shows the mean rating scores and correlations according to the year groups. Both the rating of the lecturer and the rating of IPR decreased as students progressed from Year One to Year Three. Positive correlations between lecturers and IPR ratings were observed among each year group; however, the strength of the relationship varied with Year Two being the strongest (r=0.72).

| Table 1: Correlation between rating of lecturer and IPR by year group |
|---------------------|-----------------|-----------------|-----------------|
| Year Group        | Mean ±SD  | Pearson Correlation | Significance |
| Year 1 (n=42)   | Lecturers’ rating | 27.1±4.1 | 0.52 | 0.001 |
|                  | IPR rating       | 22.7±4.1 |              |            |
| Year 2 (n=64)   | Lecturers’ rating | 24.1±5.5 | 0.72 | 0.001 |
|                  | IPR rating       | 20.8±4.3 |              |            |
| Year 3 (n=70)   | Lecturers’ rating | 22.5±5.1 | 0.62 | 0.001 |
|                  | IPR rating       | 19.6±4.1 |              |            |
| All (n=176)     | Lecturers’ rating | 24.2±5.3 | 0.67 | 0.001 |
|                  | IPR rating       | 20.8±4.3 |              |            |

\[ f = 3.15, p = 0.001 \]

**Distribution of nursing students’ grades**
Overall, the majority of students (72%) reported a B average grade whereas 11% reported an A average and 17% a C average. A higher proportion of Year Two students reported a B grade (77.8%) compared to 71% of Year Three, and 66.7% of Year One students. The mean cumulative grade point average (GPA) for the previous semester reported by the students was 2.99±0.6. When disaggregated among the year groups the mean GPA was 2.83±0.6 for Year One students, 3.09±0.6, and 3.00±0.6 for Years Two and Three students respectively.

**Nursing students’ perceptions of their development of critical thinking skills**
Students were asked to evaluate the contributions of nursing lecturers’ to the development of their knowledge and critical thinking skills in three areas: critical and analytical thinking, self-learning experiences, and solving complex problems. While 69% of students reported that lecturers contributed to the development of critical thinking skills, a significantly higher proportion of Year One students (95%) reported this phenomenon \( p=0.001 \) compared to Years Two (73%) and Three (50%) (Figure 1). Respondents (62%) reported that lecturers contributed to their self learning experiences. However, a general decline was observed as students progressed from Year One to Three \( p=0.003 \). Study participants (54%) reported that lecturers contributed to the development of their ability to solve complex problems; a similar trend with a decline across the three groups by year was observed \( p=0.04 \) (Figure 1). In comparing the three areas, a smaller proportion of students (54%) reported that teachers contributed to their development in solving complex problems versus self learning experiences (62%) and critical and analytical thinking skills (69%).
Effect of the interpersonal relationship (IPR) between nursing students and nursing lecturers on students’ learning outcomes

The study showed that overall the mean IPR scores were similar for students achieving self-reported grades of A (20.4 ±4.9), B (21±4.2), and C (19.9±4.6). However, when disaggregated by year group, results showed that among Year One students, those reporting grade B assigned higher IPR scores (23.6±3.0) than those achieving A (19.2±5.2) and C (22.4±5.2) (p=0.05). No differences were observed among the students in the other year groups. In addition, 61% of the Year One students said their grades improved and 51% reported working harder on assignments due to the positive IPR they shared with their lecturers. There were no significant differences among students who rated the IPR low or high. Students who rated the IPR as low, had a mean reported GPA of 3.05 compared to those who rated the relationship as being moderate (2.95) or high (2.96) [p=0.7].

Associations were observed between nursing students’ reports of lecturers’ contribution to their development of critical thinking skills and the scores assigned to the IPR shared with nursing lecturers. Students (84%) who rated the IPR as high, reported that lecturers contributed greatly to the development of their critical and analytical thinking skills compared to those who assigned moderate (79%) and low IPR scores (37%) (r=0.360, p<0.01). A similar trend was noted with the students’ report of lecturers’ contributions to their self-learning experiences and ability to solve complex problems. Students who assigned high IPR scores (84%) reported lecturers’ contributions to their development in solving complex problems compared to students who assigned moderate (57%) and low (37%) scores (p=0.001). Respondents (81%) who assigned high IPR scores reported that lecturers contributed to their self-learning experiences while only 66% and 49% of those who assigned moderate and low IPR scores respectively, reported this occurrence (p=0.001).

Discussion

This study examined the IPR between lecturers and students at an urban nursing school in Jamaica and its effect on learning outcomes (reported grades, reported GPA, and the

![Figure 1. Responses (%) to the contribution of nursing lecturers to students’ knowledge and skills in three areas of critical thinking.](image)
EFFECT OF INTERPERSONAL RELATIONSHIP ON LEARNING OUTCOMES

development of critical thinking skills). Most of the respondents believed that positive IPR is marked by clear communication between individuals and brings about trust, support, respect, and mutual understanding while others believed it is a relationship that is motivating, caring, honest, and friendly. The responses of the students were similar to those identified by Gillespie (2002) who stated that student-teacher relationships were comprised of personal and professional components to bring about a high level of connectedness between both parties. Furthermore, Hildergard Peplau’s Interpersonal Relations Model (1952) placed great importance on effective communication which facilitates a caring relationship that is built on trust (Chestnutt & Everhart, 2007).

More than half of the study participants assigned moderate to high scores when rating the lecturers (20-29/35) and the IPR shared with nursing lecturers (20-29/30). A moderate to high rating was assigned to the IPR shared with lecturers in a previous study conducted among students from several faculties at a Midwestern public University in the United States (US) (Ullah & Wilson, 2007). Similarly, Taiwanese nursing students assigned moderate to high ratings to the IPR shared with faculty and the rating of the teachers Strong positive correlations were also observed between the ratings of both categories (Tang et al, 2005).

A downward trend was noted in the rating of the lecturers and IPR as the students advanced through the program. Students may have required less support as they progressed and became more independent learners, since anxiety levels and fear of the unknown are expected to gradually subside as students progress from freshman to senior year (Benor & Leviyof, 1997; Malik, 2000). This trend was reported among medical students at a British University where second year students were more likely to make contact with their lecturers than third year students (Malik, 2000). Similarly, nursing students in Israel placed less importance on IPR with lecturers as they progressed through the academic years (Benor & Leviyof, 1997).

In the light of evidence regarding students’ stressore, these findings highlight the importance of ensuring that nursing lecturers provide the requisite support for effective coping (Seyedfatemi, Tafreshi, & Hagani, 2007). The need to ensure adequate support in a new academic environment was supported by the fact that IPR in the current study had a significant effect on the grades of the first year students but not on the grades of second and third year students. First year students reported they worked harder on assignments due to the relationship that they shared with their lecturers, while this finding was not common to the other year groups. Similar findings were observed in previous studies where nursing students who were more advanced in their program of study placed less emphasis on their student assessments than those who had just started the program (Benor & Leviyof, 1997; Seyedfatemi, Tafreshi & Hagani, 2007). However, this observation was not congruent with previously conducted studies that showed positive associations between IPR shared with teachers and students’ reported grades (den Brok et al., 2010; Wubbels, Brekelmans, den Brok, & van Tortwijk, 2006).

It was interesting to note that the students’ reported GPA was not affected by the IPR that they shared with the nursing lecturers. Students who assigned low IPR scores had a better GPA than those who assigned high and moderate scores. This finding was not congruent with that of a previous study done at a Midwestern public University in the US where an affirmative change in the IPR shared with lecturers resulted in a positive change in the students’ GPA (Ullah & Wilson, 2007). Similarly, Dobransky and Frymier (2004) found that students; particularly females who shared positive relationships with their lecturers had
better learning outcomes than those who did not. In the current study it is possible that the sample size was not large enough to detect differences in reported GPA which has a narrow range of 1-4.

Similar to the ratings of the nursing lecturers and the IPR, a higher percentage of Year One students reported that nursing lecturers contributed to their development of critical thinking skills. Critical thinking is facilitated through assisting students in developing expertise in problem-solving skills as well as in identifying and learning from mistakes which is most evident in Year One as students adjust to the new experience of tertiary education (Robertson, 2011; Wagner, 2011). Nursing students who assigned high scores to the IPR rating were more likely to report that nursing lecturers contributed to their development of critical thinking skills. This observation was noted in a study carried out in Hong Kong among nursing students who reported that communication and interpersonal skills were vital in assisting them to acquire critical and creative thinking skills as well as the ability to solve problems that were ill-defined (Kember et al., 2007). Students are more creative and inclined to demonstrate intellectual curiosity and higher-level thinking when positive IPR is shared with lecturers (Cornelius-White, 2007). It appeared that maintaining good IPR with students facilitated learning and development accomplished through the social interaction with persons who were considered experts; thus providing the most appropriate framework for students to engage in learning at the higher levels of the cognitive domain (Meyers, 2009).

**Conclusion**

The IPR between nursing students and nursing lecturers was rated as moderate to highly positive by more than 80% students at the urban Jamaican nursing school. As students progressed through the nursing programme a downward trend in the ratings of the lecturers and IPR was noted. This may be related to expected growth in independence as the students advance through the nursing program. The IPR shared with lecturers was associated with critical thinking skills among all year groups at the learning institution studied. While only the reported grades of first year students were shown to be related to the IPR. Study participants were predominantly female (99%). This majority of female students may have affected the findings of the study: given that females place greater importance on communication and immediacy skills than males (Houser & Frymier, 2009).

**References**


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