THE EMPATHY ENIGMA: AN EMPIRICAL STUDY OF DECLINE IN EMPATHY AMONG UNDERGRADUATE NURSING STUDENTS

JULIA WARD, PhD, RN,* JULIANNE CODY, MSN, RN, BA,† MARY SCHAAH, EDD, RN,‡ AND MOHAMMADREZA HOJAT, PhD, §,∥

An empathic relationship between caregiver and patient not only defines the quality of the patient’s experience as a recipient of care, it also contributes to patient outcomes. This longitudinal study was designed to examine changes in empathy during an academic year among undergraduate nursing students. Participants were 214 undergraduate nursing students who completed the Jefferson Scale of Empathy at the beginning and at the end of 2006-2007 academic year. Statistical analyses showed a statistically significant decline of empathy for nursing students who were exposed more than others to patient encounters during study period (F(2, 211)= 4.2, p < 0.01). Findings are consistent with those found among medical students in that nursing students’ encounters with patients which ironically are supposed to strengthen empathic engagement have shown a decline in student empathy. Suggestions for improving empathic behaviors in nursing students are discussed. (Index words: Empathy; Clinical experience; Nurse–patient relationship; Nursing students) J Prof Nurs 28:34–40, 2012. © 2012 Elsevier Inc. All rights reserved.

THE RELATIONSHIP BETWEEN caregiver and patient is fundamental to the science and art of healing. The nature of the interpersonal interactions between caregiver and patient not only defines the quality of the patient’s experience as a recipient of care but also actually helps determine patient outcomes. Empathic interactions—those that involve an understanding of the experiences, concerns, and perspectives of another person, combined with the capacity to communicate this understanding, almost always lead to positive patient outcomes, including greater patient satisfaction and compliance (Alligood, 1992; Hojat, 2007).

Background and Literature Review

Although the value of empathy in patient care has been acknowledged by physicians for years (Hojat, 2007; Spiro, McCrea Curnen, Peschel, & St. James, 1993), its significance in nursing is virtually synonymous with the profession itself, and as old. Peplau, one of the first nursing theorists to explore communication between nurse and patient, describes human connectedness as essential to health, and the nurse–patient relationship as human connectedness that transpires nursing practice (Smith & Leir, 2008). Within this relationship, empathy is considered one of the skills of greatest importance (McCarty & Russell, 2009).

In the context of the nurse–patient relationship, the authors have defined empathy as a predominantly cognitive (rather than an emotional) attribute that involves the ability to understand (rather than feel) experiences, concerns, and perspectives of the patient, combined with a capacity to communicate this understanding (Hojat, 2007). An intention to help is another feature of empathy in the context of patient care (Hojat et al., 2009). Four key terms in the definition are italicized to underscore their significance in the construct of empathy in the context of the nurse–patient relationship. This definition is consistent with Peplau’s view that the nurse–patient relationship is predicated upon the
communication by the nurse of knowledge (cognitive) and understanding to promote a therapeutic bond with patients. Empathy in the context of caring for patients in the clinical setting affords human connectedness, which is essential for the health and well-being of patients (Peplau, 1997) and their care providers (Olsen, 2001).

Regardless of the dictates of the current paradigm of health care organization and delivery, which often seem to emphasize curing over caring (Kelly, 2007), efficiency over excellence, and technological prowess over personal technique, empathy must be at the heart of all nurse–patient encounters. Yet it seems to be more difficult than ever to ensure that this is the case. Today’s nursing students face a unique blend of complex challenges. In addition to managing their didactic responsibilities, they must navigate their clinical experiences, developing their “sea legs” on the clinical floor and mastering evidence-based, patient care interventions while striving to keep the humanistic needs of their patients in mind. According to Sheldon, Barrett, and Ellington (2008), nurses who are new to the profession develop a social role, unlike other roles in their lives, which includes new social scripts, rules, and schemata. Job performance and effective communication that may affect patient outcomes are dependent upon the development of this “social knowledge.”

Despite the very real need to put this social knowledge into practice, the risk is that student nurses may become fixated on tasks and technology at the expense of communicating empathically toward the patient (Neto, Shalof, & Costello, 2006). It is suggested that this could be, in part, a defense mechanism against human suffering (Kelly, 2007) or a casualty of an increasingly competitive professional environment in which nurses focus—not on patient relationships—but on the acquisition of technical and procedural skills and knowledge that will further their careers. Whatever the reasons, given the shortened time frame for interactions between student nurses and patients, the quality of their relationship is critical, which makes the conveyance of empathy that much more important (Ward et al., 2009).

Fostering empathic behaviors and other therapeutic communication techniques in nursing students is clearly an extant element of nursing education (Pike, 1990). However, although nurse educators agree that empathy is a critical component of the caring curriculum revolution introduced in the early 1990s, schools of higher education accredited by the Collegiate Commission on Nursing Education (CCNE) have been asked to add to their curricula competencies and content related to a host of other topics, such as genetics, caring for older adults and vulnerable populations, community health, bioterrorism, economics, cultural competencies, health policy, and computer competencies (Tanner, 2007). More recently, the Quality and Safety Education for Nurses national initiative challenge faculty to structure teaching to the knowledge, skills, and attitudes that are delineated as learning objectives for the six quality and safety competencies (Cronenwett, Sherwood, and Gelmon, 2009). The demand for inclusion of this content and their associated competencies and clinical learning experiences creates a huge dilemma for nursing faculty and clinical faculty alike. How, in the face of these mounting curricular demands, can faculty rationalize the time necessary to integrate and foster the development of humanistic qualities such as empathy when the practice setting and certification examination emphasize more technical knowledge and procedural skills?

Despite the consensus of professional nursing organizations and nurse educators on the importance of empathy in nursing education and in nursing practice, a review of the literature indicates that studies on the development and magnitude of empathy are limited. In fact, no empirical studies on empathy have addressed the issue of changes in empathy during undergraduate nursing education using a psychometrically sound empathy measuring instrument. Consequently, sufficient attention has not been directed toward the development of empathic skills for student nurses.

**Purpose**

The purpose of this study was to examine changes in empathy of student nurses during one academic year in undergraduate nursing education. In particular, we designed this longitudinal study to follow a cohort of undergraduate nursing students to examine the magnitude of changes in empathy during an academic year in different groups of students with varied clinical encounters involving patients. The following questions were addressed: Are there significant changes in empathy over time in undergraduate nursing students? Does the extent of exposure to clinical experiences affect changes in empathy among undergraduate nursing students?

**Methods**

**Participants**

Study participants in this longitudinal study included 214 undergraduate nursing students at the Jefferson School of Nursing, Thomas Jefferson University for whom completed pretest–posttest data were available. This sample represents 64% of the cohort who completed the pretest \( n = 333 \). Of the total participants with complete pretest–posttest data, 84% \( n = 179 \) were women (2 students did not specify their gender), 74% \( n = 159 \) were White/Caucasian, 10% \( n = 21 \) were African American, and 8% \( n = 18 \) were Asian/Oriental. The remaining subjects \( n = 16, 7\% \) did not specify their ethnicity. Of those who specified their previous undergraduate majors \( n = 83 \), 29% \( n = 24 \) hold a degree in the humanities, 59% \( n = 49 \) in the sciences, and 12% \( n = 10 \) in business-related fields.

The participants were from three undergraduate nursing programs: (a) associate degree (ADN, \( n = 120 \), Group 1) first- and second-year students; (b) bachelor degree (BSN, \( n = 60 \), Group 2) third- and fourth-year students; and (c) Facilitated Academic Coursework Track (FACT) students \( n = 34 \), Group 3. Students admitted to the FACT program have had earned a previous degree from another discipline. Students in the first-year ADN and third-year BSN...
programs were relatively new to clinical experience as nursing students, whereas students in the second-year ADN and fourth-year BSN programs had a year of clinical experience as nursing students. FACT students are in an accelerated program and have had approximately 6 months of clinical experiences of their 13-month program.

**Instruments**

The research instruments consisted of a survey containing questions on demographics, academic background future career plans, and the Jefferson Scale of Empathy (XSE), which was used to measure empathy among nursing students. This scale was adapted for nursing students (Ward et al., 2009) from the Jefferson Scale of Physician Empathy, which was originally developed to measure empathy among medical students and physicians (Hojat et al., 2001) and is a brief self-report scale (20 items, each answered on a 7-point Likert-type format, from 1 = strongly disagree to 7 = strongly agree) that can be completed in approximately 10 minutes.

Psychometric data in support of construct and criterion-related validity have been reported among medical students and physicians and for undergraduate nursing students. The coefficient alpha reliability for the scale ranged from .77 to .89 for samples of medical students, residents (Hojat et al., 2001), physicians (Hojat et al., 2001), nurse practitioners (Hojat, Fields, & Gonnella, 2003), and nursing students (Ward et al., 2009). The XSE scores can range from a minimum of 20 to a maximum of 140. Higher scores indicate a more empathic orientation.

**Procedure**

Subsequent to obtaining approval from the Institutional Review Board of Thomas Jefferson University, the principal investigator distributed the survey to nursing students during class time at the beginning of the 2006–2007 academic year. The XSE was readministered to the same cohort during class time at the end of the academic year.

**Statistical Analyses**

Using a chi-square test, comparisons were made on demographic variables between students with complete pretest–posttest data and the balance of the cohort who did not complete the survey. In addition, t test for a correlated group and analysis of variance for repeated measure design were used to test the statistical significance of changes in empathy during the study period. In addition, we calculated the pretest–posttest differences in empathy scores in terms of standard deviation units (effect size estimates) by using the following formula: \[(\text{posttest} - \text{pretest}) / \text{pretest standard deviation}\]. To judge the clinical (practical) significance of the changes,

**Table 1. Change in Empathy Among Different Groups of Nursing Students During One Academic Year**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pretest</th>
<th>Posttest</th>
<th>(d^*)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
<td>(M)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women ((n = 179))</td>
<td>115.6</td>
<td>11.7</td>
<td>113.7</td>
</tr>
<tr>
<td>Men ((n = 33))</td>
<td>109.0</td>
<td>11.3</td>
<td>108.6</td>
</tr>
<tr>
<td>Ethnicity (^\dagger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White ((n = 159))</td>
<td>114.5</td>
<td>11.9</td>
<td>112.8</td>
</tr>
<tr>
<td>Black ((n = 21))</td>
<td>115.2</td>
<td>14.6</td>
<td>114.9</td>
</tr>
<tr>
<td>Asian/Oriental ((n = 18))</td>
<td>114.4</td>
<td>9.0</td>
<td>108.8</td>
</tr>
<tr>
<td>Others ((n = 16))</td>
<td>114.9</td>
<td>10.9</td>
<td>114.3</td>
</tr>
<tr>
<td>Previous undergraduate academic major (^\ddagger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities ((n = 24))</td>
<td>118.2</td>
<td>9.5</td>
<td>117.2</td>
</tr>
<tr>
<td>Sciences ((n = 49))</td>
<td>116.2</td>
<td>10.4</td>
<td>111.4</td>
</tr>
<tr>
<td>Business ((n = 10))</td>
<td>118.8</td>
<td>4.1</td>
<td>113.2</td>
</tr>
<tr>
<td>Exposure to clinical experiences during academic year (^\ddagger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADN first year; BSN junior year ((n = 120, limited clinical exposure))</td>
<td>114.2</td>
<td>12.2</td>
<td>114.7</td>
</tr>
<tr>
<td>ADN second year; BSN senior year ((n = 60, considerable clinical exposure))</td>
<td>113.3</td>
<td>13.1</td>
<td>107.9</td>
</tr>
<tr>
<td>FACT ((n = 34, considerable clinical exposure))</td>
<td>117.9</td>
<td>6.6</td>
<td>114.7</td>
</tr>
<tr>
<td>Work experience prior to nursing school (^\dagger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked in clinical setting ((n = 69))</td>
<td>115.8</td>
<td>10.6</td>
<td>109.8</td>
</tr>
<tr>
<td>Administration/other nonclinical setting ((n = 145))</td>
<td>114.0</td>
<td>12.3</td>
<td>114.2</td>
</tr>
<tr>
<td>Total ((n = 214))</td>
<td>114.6</td>
<td>11.8</td>
<td>112.7</td>
</tr>
</tbody>
</table>

* Change in mean scores in standard deviation units. Negative value indicates a decline in empathy mean scores.
\(^\dagger\) \(F(1, 210) = 0.36, P = ns.\)
\(^\ddagger\) \(F(3, 210) = 0.62, P = ns.\)
\(^\ddagger\) \(F(2, 80) = 0.58, P = ns.\)
\(^\ddagger\) \(F(2, 211) = 4.2, P < .01\) (Duncan post hoc mean comparison test showed the following significant differences in the change of empathy mean scores: Group 3 = Group 2 > Group 1).
\(^\dagger\) \(F(1, 212) = 10.3, P < .01\) (Duncan post hoc mean comparison test showed the following significant differences in the change of empathy mean scores: Group 1 > Group 2).
\(^\ddagger\) \(t(212) = 1.97, P = .05\).
we considered an effect size estimate that was less than 0.20 as an indication of a negligible change, approximately 0.50 as a moderate change, and greater than 0.80 as a considerable change (Cohen, 1987).

**Results**

Descriptive statistics and summary results of statistical analyses for students in different groups and with varied exposure to patient encounters are reported in Table 1. As shown in Table 1, there was a decline in empathy in the total sample, which was statistically significant, \( t(212) = 1.97, P = .05 \), but it was not practically important as indicated by the effect size of \(-0.16\). However, examination of the magnitude of decline in standard deviation unit indicates that the decline was statistically significant and practically important for Asian Oriental students \( (d = -0.62) \) and for students with undergraduate degrees in business \( (d = -1.37) \) and in sciences \( (d = -0.46) \).

In addition, as depicted in Table 1, significant decline in empathy was observed among students with varied patient exposure and clinical experiences during nursing school, \( F(2, 211) = 4.2, P < .01 \). The decline was practically important for students with more clinical exposure \( \text{Group 2} \ [d = -0.041] \) and Group 3 \([d = -0.48]\) than for those with limited clinical experience \( \text{Group 1}, d = 0.04 \). In addition, we noticed that prior work experiences in clinical settings were associated with a significant decline in empathy, \( F(1, 212) = 10.3, P < .01 \). The decline in standard deviation unit was practically important for those with such prior clinical experiences \( (d = -0.57) \) than their counterparts without clinical experiences prior to entering the nursing education program \( (d = 0.02) \). We did not find a significant relationship between students' ages and scores on the XSE \( (r = .12 \text{ for pretest scores, and } r = .06 \text{ for posttest scores}) \).

**Discussion**

The results of this study showed a significant decline in mean empathy scores for particular groups of undergraduate nursing students during the period of the study. The decline was more pronounced among those students with more clinical encounters with patients during the pretest–posttest 1-year interval and among those with prior work experiences in health care settings. Nursing students in our sample who were in their first year of their respective nursing program \( \text{Group 1 in Table 1} \) spent a considerable amount of time learning fundamental clinical skills in the laboratory but less clinical time in clinical settings with lower acuity patients and a single patient assignment. In contrast, students who were in their last year of their respective program \( \text{Group 2 in Table 1} \) and those in the FACT program \( \text{Group 3 in Table 1} \) spent less time in the laboratory but more time in clinical experiences with patients, which included increased acuity and greater number of patients at one time. Nursing students in Groups 2 and 3 have more autonomy in patient encounters than those nursing students in Group 1 and less supervision by clinical faculty. The magnitude of decline in empathy was similar for nursing students in Groups 2 and 3, who were more exposed to patient encounters than their counterparts in Group 1. These results were consistent regardless of previous experience in health care or industry prior to entering the nursing program \( \text{Table 1} \).

The findings of this study are consistent with several research studies that have found similar differences in decline of empathy among medical students, particularly those studies that reported a significant erosion of empathy in the third year of medical school when students start their formal clinical training with real patients (Bellini & Shea, 2005; Benbassat & Baumal, 2004; Hojat et al., 2009). This empathy enigma needs further scrutiny because of its unfortunate effect on the humanistic dimension of patient care.

Why did the magnitude of empathy decline over time in undergraduate nursing students in Groups 2 and 3 as clinical experiences and patient exposures increased? What are the underlying factors that could possibly impact the students in the clinical setting to affect this decline? Why is student empathy not affected in Group 1? A recent study with medical students suggested several reasons for this such as lack of appropriate role models; negative attitudes from clinical faculty, attending, and residents; an intimidating educational environment; perception of belittleness; heavy educational assignment or clinical duties; and patients’ negativity contributing to the erosion of empathy in medical school \( \text{(Hojat et al., 2009)} \).

Similarly, changes in the magnitude of nurses’ empathy levels were identified in several studies. Watson, Garfinkel, Gallop, Steven, and Steiner (2000) identified higher empathic scores in nurses who were young, new in the job, and more educated. Ward et al. (2009) identified the influence of education as a possible factor contributing to high empathic scores in students enrolled in an accelerated nursing program who held a previous degree. Several authors described factors that impeded nurses’ empathic behaviors, which included lack of time, lack of support from unsympathetic colleagues, personality style, and anxiety toward patients \( \text{(Price & Archbold, 1997; Reynolds & Scott, 2000; Richendoller & Weaver, 1994)} \). Coulmas (2006) found that the expression of empathy by RNs for their patients in the clinical setting was not affected by length of service itself but by the accumulated affect of time restrictions on the nurse–patient interaction. The author attributed this in part to the worsening situation brought about by managed care.

In contrast, Ponte (1992) found that as age and years of experience of nurses increased, verbal response and the ability to listen to patients decreased. The author attributed this to nurses expanding roles in planning patient care while acquiring additional technical skills. This may explain why empathy levels declined for students in Groups 2 and 3, who were in clinical rotations that fostered expansion of the student role in planning patient care with increased technical competencies. Their clinical rotations were based upon a preceptor model where the students...
may not have been exposed to professional nursing role models who practiced empathically students may not have developed the interpersonal relationships needed to communicate empathically with patients (Peplau, 1997). Therefore, had the students been exposed to more empathic professional nursing role models, students would be more likely to emulate empathic behaviors. Limited time frame with patients in the clinical setting has not been proven to be a deterrent in establishing interpersonal relationships. In fact, proponents of Peplau’s Interpersonal theory contend that time frame is not a deterrent in establishing interpersonal relationships with patients (McCamant, 2006).

Schools of nursing have supported teaching methods that facilitate the acquisition of fundamental to advanced knowledge in nursing using technology-driven models such as distance education, where students may never meet faculty face to face; self-directed computerized learning; and clinical simulations that take the place of real-life patient encounters. However, many of these teaching methods favor efficiency over the fostering of human connectedness. Empathic behaviors are difficult to learn when students have no relatable experiences. Other impediments that inhibit the development of empathy may be found in the clinical setting. Difficult patient assignments, exposure to negative staff, pressure to complete tasks within a limited time frame, and fear of making mistakes may combine to be detrimental to students’ development of empathy.

Concerns about the decline in empathy in undergraduate nursing students is further heightened by the awareness that the clear emergence of managed care in the 1990s changed the way curricula were delivered, exposing students to nontraditional clinical settings populated by culturally diverse, disadvantaged individuals who are in dire need of the empathic understanding of well-trained student nurses (Mannix, Faga, Beale, & Jackson, 2006). This and other rippling effects of health care reform on CCNE-accredited, baccalaureate nursing programs in the United States may have imposed potential barriers to creating engaging, student-centered learning environments that foster empathy (Tanner, 2007). We need to address these issue in future empirical research on changes in humanistic aspects of patient care in all health care professions.

Limitations of the Study
This study was conducted at a single academic institution in the Mid-Atlantic region. Therefore, findings may lack generalizability to undergraduate nursing students across the country. It may have been beneficial to have asked open-ended questions soliciting student examples of experiences in which they expressed empathic behaviors and those in which they did not. The qualitative data may have provided insight as to why empathy declined in Groups 2 and 3.

Implications for Nursing Education
“How do we leverage the nursing curricula to foster and develop empathy in undergraduate nursing students?” The question is important and timely considering the empirical findings of a decline in empathy among undergraduate nursing students and radical changes in the market-driven health care system. The literature mentions a variety of strategies on how to improve empathy in nursing education. We advocate, along with several authors cited in the literature, including a variety of them in undergraduate didactic and clinical environments (Ancel, 2006; Chant, Jenkinson, Randle, & Russell, 2002; Cooper, Taft, & Thelen, 2005; Hojat, 2009).

To this end, the following 10 strategies are designed to enhance empathy in nursing education: increasing the acquisition of student interpersonal skills by providing training that directs the student to recognize an “empathic opportunity” when communicating with patients; analyzing audio-or video-taped patient encounters with students to help them identify positive and negative interviewing factors; exposing students to positive role models to improve students’ capacity for empathy; role-playing with students using standardized patients and low-fidelity simulations to increase student understanding and sensitivity to the physical and psychosocial problems of older adults; enabling students to shadow a patient whereby students (with the patient’s permission) spend a day with the patient as a way of learning to see them as a person, not as a number or disease; making it possible for students to experience pseudohospitalization to better understand patient problems when they are hospitalized; encouraging the studying of literature and the arts that would provide students with a rich source of knowledge and insight about human experiences; and helping students improve their narrative skills by giving them the opportunity to listen attentively to patients’ narratives of their illness rather than trying to complete a clinical assignment.

Although these strategies are not new, their combined integration and application will enhance the understanding of undergraduate nursing students about their patients’ perspectives, experiences, and feelings, and perhaps equally as important, improve their ability to convey this understanding to the patients in their care and in turn foster positive patient outcomes.

Academic and clinical faculty must model empathic behaviors with their learners. The didactic learning environment must provide the necessary tools to develop and foster empathy. By incorporating teaching strategies in the classroom that enhance empathy, students will be readily able to link concepts learned in the classroom when responding to, and connecting with, patients in the clinical setting (Ironside, Diekelmann, & Hirschmann, 2005).

The clinical learning environment must be one in which students can witness, experience, and cultivate empathic communication and behaviors. Clinical faculty must select preceptors who are ready, willing, and able to be role models in this regard; they must make patient assignments with equal care. Student exposure to individuals who do not practice empathic communications and behaviors must be minimized as much as
possible. Furthermore, ensuring that empathic behaviors are recognized as criteria for successful clinical performance and rewarded as such will help to drive the integration of empathy in the students’ practice in the appropriate direction. Nurse educators are positioned to prepare professional learners to meet the needs of the public (Cooper et al., 2005; Rosetti & Fox, 2009). Essential to this preparation is the inclusion of the patients’ need for empathic care that must be imparted during clinical encounters.

Conclusion

To our knowledge, no studies have been found that specifically measure empathy over time in a clinical setting among undergraduate nursing students. The results of this study raise questions as to why empathy declined in undergraduate nursing students during the course of their program. It has been reported that empathic encounters in the clinical environment lead to greater patient satisfaction and, in turn, nurse satisfaction (Olson, 1995). Further research is necessary to identify whether these findings are consistent among undergraduate nursing students in programs nationwide. Given that lower empathy scores have been associated with professional burnout of medical students and nurses (Bellini & Shea, 2005), future research is warranted to identify whether the findings from this study impact on patient outcomes and nursing students who eventually become practicing nurses.

Nursing is an art and a science. By promoting scientific inquiry into empathy and translating it into evidence-based practice, we leverage the science of nursing to substantiate the art of nursing and ultimately elevate its practice.

References


