

RESEARCH ARTICLES

Assessing Pharmacy Student Self-Reported Empathic Tendencies

John M. Lonie, MA, Rola Alemam, MS, Conrad Dhing, PhD, and David Mihm, PhD

Arnold & Marie Schwartz College of Pharmacy & Health Sciences, Long Island University

Submitted September 7, 2004; accepted October 8, 2004; published March 30, 2005.

Objectives. The objective of this study was to analyze pharmacy students' self-reported empathy scores before and after empathy training.

Methods. In a communication skills course, the La Monica Empathy Profile (LEP) was administered to a convenience sample of fourth-year pharmacy students before and after they received empathy education. Outcome measures in this study were changes in any of the 5 LEP modes of empathy. A control group was not used.

Results. Of the 92 students in the course, 83 (90.2%) completed the study. A significant increase in the LEP dimension of "perceiving feelings and listening" ($p = 0.019$), as well as "respect of self and others" ($p = 0.006$) was observed. There was a significant decrease in the dimension of "openness, honesty and flexibility" ($p = 0.002$).

Conclusions. There may be an association between empathy training and changes in pharmacy students' self-reported empathic attitudes and behaviors.

Keywords: empathy, communication, pharmacy students, education

INTRODUCTION

The concept of empathy has been the subject of considerable research. Scholars have attempted to define empathy in different ways. Empathy is often confused with other forms of caring such as sympathy or pity. However, in its most precise form, empathy is much more than all of those. It is a specific set of attitudes and behaviors that separates it from many other forms of "caring."^{1,2}

Empathy originated from the Greek word "empathia," which means to understand others by entering their world.¹ Carl Rogers defined empathy as the ability to perceive the client's world with unconditional positive regard and respect.² Scholars have also described empathy as "more than just an intellectual identification; empathy must be accompanied by feeling."³ Empathy has been defined as the ability to "see the world as others see it, be nonjudgmental, understand another's feelings and communicate the understanding."⁴ Despite the differences in the definition of the concept of empathy, many scholars²⁻⁷ agree that empathic skills development is an essential component of many helping relationships, including the pharmacist-patient relationship.

Based upon previous research,⁸⁻¹¹ 2 main research questions were of interest to the investigators: (1) are there significant differences in students self-reported empathy

profiles prior to and after empathy training? and (2) are there gender differences in empathic profiles prior to and after instruction in empathy training?

Prior scholarship in the area of communication skills education⁸⁻¹¹ led the investigators to hypothesize that there were statistically significant differences in 1 or more empathic dimensions (as assessed by the La Monica Empathy Profile) after empathy training. In addition, a hypothesis was formulated based on the assumption that the empathy profile scores of female students would be higher than those of male students, both prior to and after completing a module in empathy education.

Included in this section is educational research conducted by scholars in the fields of communication arts, pharmacy, and nursing that focuses on the teaching of empathy. While not exhaustive, it is representative of some of the research conducted to date.

Research¹² focusing on adult interpersonal skills, including empathy, has identified components that contribute to effective empathic behaviors. Based upon the Interpersonal Communication Inventory, several factors have been identified that play a role in the empathic learning process. The components are self-concept, listening, clarity of expression, coping with angry feelings, and self-disclosure. According to this research, the single most important factor affecting communication and an individual's empathic capacity is one's self-concept.

Berger¹³ identified *active listening* as another component of empathic learning and development. This type of lis-

Corresponding Author: John M. Lonie, M.A. Address: Assistant Professor of Social & Administrative Sciences Arnold & Marie Schwartz College of Pharmacy & Health Sciences, Long Island University, 75 Dekalb Avenue, Brooklyn, NY 11201. Tel: 718-488-1259. Fax: 718-488-3341. E-mail: jlonie@liu.edu

tening is characterized by discerning both the speaker's words and the underlying meanings associated with them. Active listening begins when the listener consciously sets his attention on listening. The underlying meaning of what one is trying to communicate is often called the latent content of a message.¹⁴ The active listener interacts with the speaker in creating the intended meaning and reaching understanding.

The use of empathy has also been assessed as a communicative strategy in pharmacy practice. Researchers evaluated an educational intervention consisting of a 20-hour continuing education course on empathy.¹⁵ The course was aimed at improving the level of empathy in a sample of 75 staff pharmacists. The participants completed questionnaires before and after the course. Interactions between staff and patients were video-recorded before and after training in one community pharmacy. The researchers define empathy as the ability to behave in a caring manner toward a patient while demonstrating to the patient that his feelings are understood. This was assessed cognitively through questionnaires and behaviorally through the use of videotapes. Pharmacists were observed on videotape by several trained researchers and various behavioral criteria were used to assess empathy. The results from both questionnaires and videos indicated that after the course there were small increases in both the pharmacist's capacity to show empathy and in some aspects of the empathic behaviors displayed.

Researchers¹⁶ have also attempted to illustrate the effect of instruction on empathic learning. Their purpose was twofold: (1) to measure empathy skills before and after a communications course and (2) to compare the applicability of 2 reliable instruments used to measure empathy in pharmacy students. At the beginning of the semester, 100 students enrolled in a communications course completed 2 paper tests recognized through psychometric data as being reliable measurements of cognitive and emotional aspects of empathy, the Interpersonal Reactivity Index (IRI) and the Balanced Emotional Empathy Scale (BEES). Two tests were used to determine whether one test offered any advantages over the other. At the end of the semester, the tests were again administered to determine differences between the pretest and posttest scores. Dependent *t* tests were used to assess whether there were any significant changes in the pretest and posttest BEES and IRI scores. There was no significant change in the pretest or posttest BEES scores ($p = 0.156$). However, students, scored higher on the posttest IRI administered following the educational intervention ($p = 0.014$).

The impact of training on empathic communication in nurses was also studied using a quasi-experimental design investigating the purpose of measuring the effectiveness

of training on teaching nurses empathy for their interactions with patients.¹⁷ Only the nurses (150) working in medical and surgical units, outpatient clinics, operating rooms, obstetric units, and the psychiatric unit were included. The nurses were distributed randomly into either an intervention group or control group and given a 3-part pretest questionnaire. The first section of the questionnaire asked for background characteristics. The second section presented sample cases common in surgery and medical units that were determined to be appropriate for nurses. The third section of the questionnaire asked questions based on the Empathic Tendency Scale. The intervention group was then educated about empathic communication. Afterward, the same questionnaire was administered to both the intervention and control groups. The results showed that empathic skills were developed in the intervention group as a result of empathy training.

Can empathy be taught? As previously discussed, the issue of teaching empathy has undergone considerable debate. While some scholars have viewed empathy as a personality trait that cannot be taught,⁶ many others have thought of empathy as a communication skill that can be developed through training and education.^{5,7} This study focused on the premise that empathy, viewed from its component behaviors and attitudes, is a teachable skill. However, the assumption that empathy is a teachable skill does not discount the importance of the manner in which the education is delivered. The purpose of this pilot study was to analyze pharmacy students' self-report scores on the La Monica Empathy Profile¹⁷ before and after empathy training.

In order for the patient counseling process to be effective, pharmacists should possess good communication skills. Empathy is often the cornerstone of this communication interaction.¹⁸ The concept of empathy has become more significant in the era of pharmaceutical care, which focuses on patient-centered therapy. The notion of caring can be communicated via understanding the patient's concerns⁹ and "understanding implies empathizing with a patient and focusing on individual patient characteristics in a non-judgmental way."¹⁹ Taking the patient's concerns into consideration leads to the building of a trusting relationship. Moreover, there is indication that highly empathic healthcare practitioners have more satisfied patients than practitioners with lower empathic attitudes and behaviors.⁵

METHODS

Study Sample

A convenience sample of fourth-year doctor of pharmacy students, who were enrolled in a required Communication Skills course at a private college of pharmacy in the northeastern United States during the fall 2003

Table 1. Paired Sample *t* Tests Showing Changes in the Five Dimensions of Empathy* After Empathy Training

Paired Pretest and Posttest	Dimension of Empathy	Mean Change (SD)	Standard Error Mean	<i>P</i>
Pair 1	Nonverbal behavior	0.11 (2.33)	0.25	0.674
Pair 2	Perceiving feelings and listening	-0.65 (2.51)	0.27	0.019
Pair 3	Responding verbally	0.25 (2.26)	0.25	0.314
Pair 4	Respect of self and others	-0.65 (2.13)	0.23	0.006
Pair 5	Openness, honesty and flexibility	0.93 (2.66)	0.29	0.002

*As determined by the La Monica Empathy Profile (LEP)

semester was used. Prior to data collection, the researchers' sought and received approval from the institution's research review board. All students enrolled in the course during one semester were invited to participate in the study on the condition that they provided informed consent.

Out of the 92 students who participated in the study, 83 (90%) completed all phases of the study. The phases included a pretest during week 1 of the semester, education regarding empathy during weeks 6 and 7, weekly communications laboratories throughout the semester, and a posttest conducted during the last week of the semester. The 9 students who did not respond were either absent during various phases of the study or withdrew from the course. The mean age of the students was 26 years, with an age range of 19 to 36 years. In addition, they were ethnically diverse. Thirty-seven percent of the students were white, 9% were African-American or black, 32% were Asian, and 22% were from other ethnic backgrounds.

Instrumentation

The LEP measures empathy along 5 modes: (1) nonverbal behavior, (2) perceiving feelings and listening, (3) responding verbally, (4) respect of self and others, and (5) openness, honesty, and flexibility. It is a self-administered forced-choice instrument consisting of 30 items (6 from each subscale). Each item contains a pair of behaviors. Respondents choose the alternative that is most typical of their interpersonal behavior when in a helping role. Scores ranged from 0 to 12 on each subscale.

La Monica²⁰ reported in her study that content validity of the LEP was pursued through the use of experts from the helping professions and industry. These experts separated the items into 5 modes and judged social desirability. Test-retest (1-week interval) reliability coefficients were computed based on the responses of 32 graduate students in helping professions; values for each subscale ranged from moderate (responding verbally, $r = 0.39$, $p < 0.05$) to high (perceiving feelings and listening, $r = 0.80$, $p < 0.001$).

Below is an example of one pair of choices used in the LEP:

A. *I rearrange my busy work schedule to talk with someone who is upset.*

B. *I encourage a person to explore options before reaching conclusions.*

The LEP was developed to meet the need for a refined instrument to ascertain the role of empathy on the outcomes of helping interventions. An additional goal was to specify how empathy might best be taught and maintained, thus making this instrument highly relevant to this study. The conceptual basis for the LEP was drawn primarily from the work of Rogers,^{2,9} with his emphasis on empathy as the heart of the helping process.

Prior to any formal instruction in the concept of empathy, students were given a pretest LEP during the first communication skills laboratory of the semester. This served as a baseline measure of empathic behavioral tendencies. Practice in subsequent communication skills laboratories of empathic responding was conducted by trained graduate teaching assistants and faculty members in the Division of Social and Administrative Sciences who role-played as standardized simulated patients. At the end of the course, having completed instruction (via lecture and class discussion) and weekly communications skills laboratories, students were given the LEP a second time (during a recitation session) as a posttest.

Data Analysis

Using *SPSS*, version 12.0, statistical analysis software, the outcome measures were assessed for overall differences between pretest and posttest scores using the paired *t* test, as well as for differences in student's performance using ANOVA.

RESULTS

The results of communication skills education on students' empathy levels according to the LEP varied. Paired sample *t* test was performed to detect any changes among the 5 dimensions of empathy, which were: (1) nonverbal behavior, (2) perceiving feelings and listening, (3) responding verbally, (4) respect of self and others, and (5) openness, honesty, and flexibility (Table 1).

Along the 5 dimensions of empathy, changes in the students' scores on 3 of the dimensions were significant. Significant improvement was found between the pretest

Table 2. Independent Sample *t* Test of Male and Female Students' Pretest Scores on the LEP

	Mean Difference	Standard Error	<i>P</i>
Nonverbal behavior	-0.32	0.46	0.491
Perceiving feelings and listening	-0.45	0.54	0.404
Responding verbally	0.48	0.42	0.256
Respect of self and others	1.07	0.42	0.014
Openness, honesty, and flexibility	-0.78	0.48	0.108

LEP = La Monica Empathy Profile

Equal variances were assumed for each test

and posttest scores in the LEP dimension of "perceiving feelings and listening" ($p = 0.019$). Students also scored significantly higher on the posttest in the LEP dimension of "respect self and others" ($p = 0.006$). However, a significant decrease was found in students' posttest scores on the LEP dimension of "openness, honesty and flexibility" ($p = 0.002$). The changes in the remaining 2 dimensions of empathy, "nonverbal behavior" and "responding verbally," were not statistically significant.

Gender and Empathy

The pretest scores, which represented the students' baseline, showed some variations between male and female students. The difference between male and female students' scores was not significant except for the dimension of "respect of self and others" ($p = 0.014$). This difference was in the opposite direction from what investigators had originally hypothesized; that is, males scored higher than females.

There was no other statistically significant change in male and female students' scores on the LEP dimensions of empathy except for that of "respect of self and others." Even though the scores of some male and female students changed, the absolute value of the changes was approximately the same except for the change in scores on respect of self and others (Tables 2, 3, and 4). That change was statistically significant ($p = 0.033$).

DISCUSSION

Results of the self-report test (LEP) have shown statistically significant changes in 2 dimensions of empathy: (1) perceiving feelings and listening, and (2) respect of self and others. The results suggest there could be a relationship between communication skills education and the key findings. The increase in the LEP mode of perceiving feelings and listening aspect of empathy could be attributed to communication skills education, which focuses on paying special attention to the manifest

Table 3. Empathy Scores of Male and Female Students Using the LEP

	Gender	N	Mean	Standard Error Mean
Pretest				
Nonverbal behavior	male	30	5.3 (1.7)	0.3
	female	60	5.6 (2.1)	0.3
Perceiving feelings and listening	male	30	5.8 (2.5)	0.5
	female	60	6.3 (2.3)	0.3
Responding verbally	male	30	6.2 (1.8)	0.3
	female	60	5.7 (1.9)	0.2
Respect of self and others	male	30	6.4 (2.0)	0.4
	female	60	5.3 (1.8)	0.2
Openness, honesty, and flexibility	male	30	6.2 (1.9)	0.4
	female	60	7.0 (2.2)	0.3
Posttest				
Nonverbal behavior	male	26	5.1 (1.9)	0.4
	female	57	5.6 (2.0)	0.3
Perceiving feelings and listening	male	26	7.12 (1.58)	0.3
	female	57	6.79 (1.94)	0.3
Responding verbally	male	26	5.54 (1.50)	0.3
	female	57	5.60 (1.80)	0.2
Respect of self and others	male	26	6.38 (1.50)	0.3
	female	57	6.19 (1.74)	0.2
Openness, honesty and flexibility	male	26	5.77 (1.70)	0.3
	female	57	5.86 (1.77)	0.2

LEP = La Monica Empathy Profile

as well as the latent content of words that are conveyed by the sender.

In addition, through education on proper patient counseling, active listening was particularly stressed as an important step in the empathic intervention process. Students seemed to understand these concepts and were inclined to use them in practice recitations, thereby causing a shift in attitudes as reflected by the positive change in the LEP.

Likewise, education may have had an impact on the increase in respect of self and others. As mentioned earlier, empathy involves seeing the perspective of another in a positive, nonjudgmental way.^{2,4} Throughout the communication skills course, emphasis was placed on the importance of learning to accept and respect others regardless of their differences. Respect for one's self and one's own principles and views could be reflected by the acceptance of the personal views and differences of others. Therefore, educating students on how to take the perspective of another may be the reason behind the apparent increase in

Table 4. Changes in Empathy Scores of Male and Female Students in the LEP

	Gender	N	Mean	Standard Deviation	Standard Error Mean
Change in nonverbal behavior	male	26	-0.08	1.85	0.36
	female	57	0.16	2.53	0.3356
Change in perceiving feelings and listening	male	26	-10.1154	2.5507	0.5002
	female	57	-0.4561	2.5076	0.3321
Change in responding verbally	male	26	0.6154	1.8778	0.3683
	female	57	0.09	2.4296	0.3218
Change in respect of self and others	male	26	0.05	1.9391	0.3803
	female	57	-0.9298	2.1783	0.2885
Change in openness, honesty and flexibility	male	26	0.5769	2.0430	0.4007
	female	57	1.1053	2.9135	0.3859

LEP = La Monica Empathy Profile

the “respect of self and others” dimension of empathy. Future experimental research can be conducted to prove causal relationships between education and the different modes of empathic behaviors.

A statistically significant decrease was found in the use of openness, honesty, and flexibility. La Monica listed a number of uses for each of the 5 modes of empathy.¹⁷ The low score the students had on openness, honesty, and flexibility meant that students tended to use other modes of empathy more frequently than this particular mode.

Within the scores interpretation section of the LEP, a few important points were mentioned. One or more of the different modes of empathy might be used in a given situation. Each individual might use some modes more than others due to his or her personality, practice, or profession. Therefore, the empathy behaviors elicited were a result of both personal predispositions and the situation itself. The LEP measured the mixture of empathy modes used by an individual. The LEP stated that prior success using a mixture of modes insured their continued use. Thus, a low score on a particular LEP mode means that an individual tends to use other modes more frequently.

Another possible explanation to the decrease in the dimension of “openness, honesty and flexibility” might be attributed to the occurrence of cognitive dissonance. Cognitive dissonance is an uncomfortable intra-psychic state resulting from the inconsistency among an individual’s cognitions.¹⁰ In the communications skills course, assertiveness was taught just prior to the concept of empathy. Assertiveness requires determination in standing up for one’s rights in a way that respects the rights of others. However, assertiveness can be confused with aggressiveness, which lacks the important factor of respect of the other person, which the concept of assertiveness emphasizes. Therefore, upon the introduction of the concept of empathy, which requires individuals to be caring, considerate, and altruistic, intrapersonal confusion is not unex-

pected. As mentioned earlier, cognitive dissonance is an aversive state of psychological discomfort that motivates people to seek ways to reduce the dissonance.¹⁰ One of the ways in which the students might have attempted to alleviate this discomfort was to become assertive. However, they might have had the common misconception that assertiveness means being aggressive. This decision might have resulted in the apparent decrease in openness, honesty, and flexibility.

The results of the analysis of the effect of gender on empathy level were not all as expected. Previous research has shown that women tend to express higher empathy levels than men.¹¹ However, the pretest of our sample showed no difference between male and female students’ scores on 4 out of 5 modes of empathy. This means the male students used these 4 modes of empathy as much as the female students did. Furthermore, the male students in this study reported exhibiting a fifth mode of empathy, respect of self and others, more than did female students. According to the LEP, a possible explanation is that female students placed the wishes and desires of others above their own. Acknowledging or respecting one’s own wishes is a prerequisite to the acknowledgement and respect of others.²¹ Females tend to show more affective involvement in social interactions.²¹ Therefore, this involvement and the desire to fulfill the wishes of another person, especially in a helping situation, may lead to prioritizing the wishes of others over their own desires and beliefs of what should be done. However, after communication skills education, female students’ scores on respect of self and others increased, resulting in a gap closure between genders. The difference in this aspect of empathy relative to gender was no longer statistically significant.

Limitations

The sample used in this study was a convenience sample. All fourth-year pharmacy students enrolled in the

communication skills course during 1 semester were invited to participate in the study. There was also no control group to compare our findings against. Furthermore, the study used an instrument with a forced-choice format, in which students were forced to choose between only 2 choices representing 2 modes of empathy. Research currently underway, comparing students' scores in the LEP to their actual performance in videotaped pharmacist-patient role-play scenarios can add more validity to the results of this preliminary study.

CONCLUSIONS

Establishing patient-centered therapeutic alliance requires pharmacists to seek ways to develop strong relationships with their patients. A cornerstone of such helping relationships lies in empathy. Therefore, empathy represents an important criterion in the provision of pharmaceutical care.

There may be an association between empathy training and changes in pharmacy students' self-reported empathic attitudes and behaviors. Pharmacy educators are encouraged to consider expanding communications skills education in pharmacy schools. Such education may be taught over a period of 2 semesters, for example, rather than compressed into the current 1-semester course. This would allow for more focused and extensive education on empathy as well as on other communication skills.

An alternate method of teaching empathy is to separate the concepts of empathy and assertiveness within the course. That is, it may be useful to allow a period of time between presenting such concepts in order to allow students to cognitively assimilate such concepts. This is particularly significant when presenting teaching topics that require behavior change in the student. Such topics often require considerable time and effort to be understood, implemented, and subsequently internalized.²² Social science courses such as communications skills are inherently different from the technically rational scientific nature of many other courses taught to students in most professional schools. That is, many of the concepts, theories, and models used in teaching the content of such courses require learners to reflect on the concepts, link new concepts to previous knowledge, and then integrate the new information into their knowledge base.²² For example, empathy training might precede assertiveness training, with empathy being taught at the beginning of the semester and assertiveness taught toward the end of the semester, allowing time for reflection on and integration of one concept before presenting another. This may reduce the possibility of cognitive dissonance in students who are required to learn 2 seemingly opposite concepts.

Moreover, empathy and assertiveness and similar communicative concepts, models, and theories could be presented within several different courses throughout the pharmacy curriculum.

REFERENCES

1. Chung R, Bemak F. The relationship of culture and empathy in cross-cultural counseling (practice and theory). *J Counseling Dev.* 2002;80:154-6.
2. Rogers C. *Client-Centered Therapy*. Boston, Mass: Houghton Mifflin Co.; 1951:23-43.
3. Spiro H, Mc Crea Curnen M, Peschel E, St. James D. *Empathy and the Practice of Medicine*. New Haven, Conn: Yale University Press; 1993: 10-23.
4. Wiseman T. A concept analysis of empathy. *J Adv Nurs.* 1996;23:1162-7.
5. Oz F. Impact of training on empathic communication skills and tendency of nurses. *Clin Excellence Nurse Pract.* 2001;5:44-51.
6. Davis C. What is empathy, and can empathy be taught? *Phys Ther.* 1990;70:707-15.
7. La Monica E, Wolf R, Madea A, Oberst M. Empathy and nursing care outcomes. *Scholarly Inquiry Nurs Pract.* 1987;1:197-213.
8. Wright S. Selecting students with personal characteristics relevant to pharmaceutical care. *Am J Pharm Educ.* 1999;63:132-8.
9. Rogers C. *The Therapeutic Relationship: Recent Theory and Research*. New York: Mc Graw Hill; 1967: 2-31.
10. Festinger L. *A Theory of Cognitive Dissonance*. Stanford, Calif: Stanford University Press; 1957: 8-25.
11. Mehrabian A, Epstein N. A measure of emotional empathy. *J Personality.* 1972;40:525-43.
12. Bienvenu B. The Interpersonal Communication Index. *J Comm Sci.* 1971; 63, 112-7.
13. Berger B. Communication Skills for Pharmacists: Building Relationships, Improving Patient Care. Presented at the Annual Meeting of the American Pharmaceutical Association. Washington, DC: 2002.
14. Tindall W, Beardsley R, Kimberlin C. *Communication Skills in Pharmacy Practice*, 3rd ed. New York: Lippincott Williams & Wilkins; 1994: 3-80.
15. Lilja J, Larsson S. Empathy as a communication strategy in the pharmacy: A study based on cognitive behavioral analysis. *Int J Pharm Pract.* 2000; 8, 176-87.
16. Monahan M, Edmunds C. Measuring empathy skills in pharmacy students. Presented at the American Association of Colleges of Pharmacy Annual Meeting. San Diego, Calif: 2000.
17. La Monica E. *The La Monica Empathy Profile*. Tuxedo, NY; 1986: XICOM.
18. Berger B. Building an effective therapeutic alliance: competence, trustworthiness, and caring. *Am J Hosp Pharm.* 1993; 50:2399-2403.
19. Fjortoft N, Zgarrick D. An assessment of pharmacists' caring ability. *J Am Pharm Assoc.* 2003;43:483-7.
20. La Monica E. Construct validity of an empathy instrument. *Res Nurs Health.* 1981;4: 389-400.
21. Roter D, Hall J, Aoki, Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA.* 2002;288:756-840.
22. Boud D, Keogh R, Walker D. Promoting reflection in learning: a model. In: R Richards, A Hanson, P Raggatt, eds. *Boundaries of Adult Learning*. New York: Routledge; 1996. 23-46.