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Research Note

Associations among student conflict management style and attitudes toward empathy

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ABSTRACT

Introduction: Pharmacy education standards include a focus on interprofessional education and communication skills, specifically naming conflict management and patient-centered communication as key areas. This study aimed to explore the association between conflict management style and attitudes toward empathy among first year pharmacy students (P1s) in professional encounters.

Methods: A cross-sectional design was implemented among two cohorts of P1s who completed an online survey including the Thomas–Kilmann Conflict Mode Instrument professional version (TKCI-P) and the Kiersma–Chen Empathy Scale (KCES).

Results: Those scoring higher on the competing mode reported significantly lower attitudes toward empathy ($p < 0.05$). Those scoring higher on the accommodating mode reported significantly higher attitudes toward empathy ($p < 0.05$). Some student characteristics, including gender and race, were significantly associated with KCES score and/or TKCI-P mode.

Conclusions: These results suggest that awareness and training in empathy and conflict management should be incorporated in curricular content to support the likelihood of future pharmacists to be effective in their future patient and interprofessional interactions.

Introduction

The Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes 2013[1] and the Accreditation Council for Pharmacy Education (ACPE) 2016 Accreditation Standards,[2] incorporate a focus on patient-centered and interprofessional communication for pharmacy students. The ACPE Interprofessional Education Standard includes a communication skills component that outlines patient-centered communication and conflict management as key skill areas needed to be prepared for future practice contexts that include advanced care services and interprofessional care teams.[2,3]

Within patient-centered communication, empathy is an essential component in building trust and relationships between patients and providers.[4,5] While empathy is an ambiguous concept that has multiple recognized definitions, a generally accepted definition is the ability to see the world as others see it, understand another's current feelings, be non-judgmental, and communicate understanding.[6–10] Empathy results in stronger patient–provider relationships and has been shown to significantly improve adherence to recommendations,[11–15] patient satisfaction,[16,17] and clinical outcomes.[18] Empathic communication has also led to more accurate diagnosis,[19,20] fewer medical errors,[21] and greater provider well-being.[22]

Research has shown that as students gain experience and interact with patients, their empathy toward others can be triggered and

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their ability to respond empathically can either increase or decrease.[23] A number of strategies to help develop empathic responding have been employed among pharmacy students as well as students of other health professions.[21,24–29] For some students, the level of empathy will decline as they progress through their training.[6,23] This may be due to stress, development of stereotypes against particular groups of patients, or frustration with the healthcare system.[23] Thus, it is important to incorporate ongoing and integrated strategies to develop empathy throughout the pharmacy curriculum and to evaluate the impact of curricular activities on students' ability to respond empathically as they progress. Another important area of communication skills training is conflict management, which starts with awareness-raising of one's own conflict management style. As communication and collaboration between healthcare professionals is expanded alongside interprofessional education and care, the potential for conflict, as a natural part of human interactions, will also increase.[30] Conflict is defined as, "a state of emotional discord caused by the actual or perceived opposition of needs, values, and interests between two or more individuals."[31] With interprofessional collaboration becoming more commonplace, the potential for interpersonal conflict between pharmacists and other providers increases. Unaddressed conflict has been found to be detrimental to work environments, including reducing morale and job satisfaction, and increasing burnout.[32,33]

Identifying constructive behavioral and communication approaches for addressing conflict is essential for developing conflict competence, defined as "the ability to develop and use cognitive, emotional, and behavioral skills that enhance productive outcomes of conflict while reducing the likelihood of escalation of harm".[34] Developing awareness and competency in constructive conflict resolution methods, can be helpful in maintaining healthy working relationships between pharmacists and other providers, as well as patients.[30,35] In order to manage conflict effectively, pharmacy students must become familiar with their own personal style of managing conflict and recognize when this style may or may not be appropriate.

Individuals with strong conflict competence may also demonstrate an other-centered demeanor like that expressed through the concept of empathy, which may help facilitate deliberate movement between conflict styles when appropriate.[36] The relationship between attitudes toward empathy and conflict management has been explored extensively within the field of social psychology. This work suggests that lower levels of attitudes toward empathy are associated with more frequent conflict, while higher levels are associated with more effective conflict management.[37–40] The organizational model proposed by Davis[41] in 1994 suggests that the empathic abilities of an individual may influence their management of conflict and other relationship behaviors. However, there is limited research on the relationship between conflict management and attitudes toward empathy among pharmacy students. This warrants further investigation, particularly in preparing these students for future interprofessional encounters.

Rationale and objectives

Previous research suggests a relationship between attitudes toward empathy and successful conflict management. Because both empathy and conflict management are critical in productive interprofessional encounters, examining the association between pharmacy student attitudes toward empathy and conflict management style, as well as characteristics that are associated with these traits, may inform curricular content development.[3] Therefore, this study was conducted to explore the association between predisposition for conflict management style and attitudes toward empathy, or being other-centered, in healthcare encounters among first year pharmacy students not yet exposed to curricular content.

Methods

Study design and sample

This study used a cross-sectional survey design with doctor of pharmacy (PharmD) first-year students (P1s) in fall 2014 and fall 2015. The measures in this study were part of a larger, longitudinal study that was reviewed and approved by Auburn University's Institutional Review Board as expedited review. At the beginning of their first semester, students in the required Patient Centered Skills course were informed about the study; consent was obtained from those who wanted to participate. Students were assured that the data would not be examined until after the semester was over in order to reduce the risk of feeling coerced to respond to surveys within the course. Surveys were administered online via Qualtrics. Demographics, attitudes toward empathy, and conflict mode(s) were examined. Demographic and background variables included gender, race, age, marital status, and type of hometown setting (e.g., rural, urban).

Measures

Kiersma–Chen Empathy Scale

Empathy has been evaluated using a variety of tools among practicing healthcare professionals and students in health disciplines, categorized as self-report measures, observational measures, and physiological measures.[42–45] Self-report measures within the empathy realm typically measure from one of two perspectives; these include: (1) self-perception of actual empathic responding performance in a specified communication encounter and (2) perceptions and attitudes about the general role or value of empathy in an encounter and not actual empathic responding actions, and in fact these measures capture "attitudes toward empathy".[46–48] Studies have found evidence supporting a correlation between self-report scales measuring attitudes toward empathy and neuroscientific measures of empathic responding.[49,50] The Kiersma–Chen Empathy Scale (KCES) is a theory-based measure informed by the model of empathy proposed by Davis in 1994.[41,51] This measure is a previously validated and reliable instrument (Cronbach's alpha > 0.8) that has been studied in pharmacy and nursing students to measure attitudes toward the role of empathic responding in healthcare

Table 1
Thomas–Kilmann Conflict Modes.[a]

Mode	Definition	Description
Avoiding	Unassertive and uncooperative	Don't address the conflict by not pursuing their own or others' concerns regarding the issue. Often postpone discussions or evade the conversation altogether
Compromising	Intermediate in both assertiveness and cooperativeness	Seek out a solution that partially satisfies both parties involved
Accommodating	Unassertive but cooperative	Mitigate his/her own concerns to satisfy those of others
Competing	Assertive and uncooperative	Disregard the concerns of others to ensure that their own concerns are prioritized, much like a win-lose scenario
Collaborating	Assertive and cooperative	Work to find a solution that satisfies the concerns of all individuals involved

[a] Thomas–Kilman Conflict Mode Instrument developers note that there is no one preferred conflict management style that is best to use in all encounters. Instead, the circumstances of the conflict may be optimally resolved by a particular conflict mode.

encounters.[51] The KCES includes 15 items on a seven-point Likert-type scale ranging from perceptions of 'strongly disagree' to 'strongly agree' on statements describing necessity for healthcare practitioners to engage in views/activities related to empathic responding or perceptions of their own general attitudes about views/activities related to empathic responding but not specific to recalling actual empathic actions in an encounter. When scored, the values range from 15 to 105, with lower scores indicating more positive salience for empathic responding in healthcare encounters. The KCES includes two domains of empathy perceptions: a cognitive domain (to view and understand the perspective of another) and an affective domain (to relate to the feelings and experiences of another).[26]

Thomas–Kilmann Conflict Mode Instrument

Blake and Mouton[52] first introduced conflict mode classification in 1964, which was later restructured by Thomas[53,54] in 1976. These individual styles can be assessed by self-report of typical conflict response performance ("I am usually….") across five distinct modes identified within the Thomas–Kilmann Instrument (TKI).[55] See Table 1 for TKI conflict mode descriptions. The TKI was developed in 1977 as a forced-choice measure of conflict management behavior.[55] This instrument assesses predominant conflict management mode(s) and includes 30-paired statements of usual conflict response for which respondents must choose one item from each pair that most represents what they usually do in conflict situations.[55]

Scores are calculated across the five modes, with the maximum possible for each mode being 12. TKI modes include avoiding, compromising, accommodating, competing, and collaborating.[55] Most individuals will score highly on two modes with fewer scoring across three modes. This instrument attempts to control for social desirability bias and was found to reduce such bias when compared to three other conflict instruments that were being used at the time.[55] The TKI has been found to be reliable (Cronbach's alpha = 0.60) and has previously been used within healthcare in a number of studies over the past 30 years, particularly in nurses,[56–62] physicians,[63] residents,[63,64] social workers,[65] and medical students whose conflict management mode was associated with overall course grades.[66] Students who predominantly used certain styles, such as collaborating and compromising, were more likely to perform well in courses with communication and counseling components. Constructive conflict management style was also positively associated with assessments of knowledge, communication skills, problem-based learning, and professionalism.[64] However, the TKI has been described as a measure not specific to a single environment that can be perceived to deal with work-based or personal conflict.

To address variable context perceptions of personal or professional conflict during completion, the TKI was revised to specify a focus on conflict in professional environments (TKCI-P). The TKCI-P retained the validated TKI items and structure with minor edits to items to remove reference to personal situations. Additionally, the instructions were edited to inform the respondent that self-report should be in the context of "professional/work-related conflict or confrontation encounters."

Data analysis

All data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 21.0.[67] Descriptive statistics were used to report students' demographics and in relation to KCES score and TKCI-P mode. Spearman correlation was used to examine associations between attitudes toward empathy and conflict management mode(s). Finally, ANOVA was used to assess statistical significance of differences in mean KCES score across TKCI-P mode(s). Results were considered to be significant at $p < 0.05$.

Results

In this study, 129 and 134 students consented to participate in fall 2014 (response rate = 86.6%) and fall 2015 (response rate = 90.5%), respectively, for a total sample of 263 students. Most were female (67.9%), white (82.2%), 22–25 years of age (55.3%), single (84.9%), and from a suburban hometown setting (47.8%). See Table 2 for a summary and mean KCES score across these characteristics.

The overall mean KCES score in this sample was 37.19 (standard deviation [SD] = 9.5); the mean score on the cognitive domain was 19.88 (SD = 6.2), while the mean score on the affective domain was 17.25 (SD = 4.2), with no statistically significant differences between cognitive and affective domains which is consistent with results reported by Kiersma and Chen.[51] Females were found to have significantly more positive attitudes toward empathy (lower KCES score) than males (Spearman's rank correlation

Table 2
Mean (SD) KCES[a] score and participant demographic characteristics (n = 253).

Characteristics	n (%)	KCES score[b] Mean (SD)
All students	253	37.19 (9.5)
Gender		
Male	81 (32.02)	39.69 (8.2)
Female	172 (67.98)	35.91 (9.8)
Race (n = 252)		
White/Caucasian	208 (82.21)	37.64 (9.2)
Black/African American	17 (6.72)	33.18 (8.7)
Hispanic	4 (1.58)	34.50 (10.2)
Asian	22 (8.70)	37.41 (10.1)
Other	1 (0.40)	21.0
Age (years)		
≤21	81 (32.02)	37.36 (9.1)
22–25	140 (55.34)	37.24 (8.7)
> 25	32 (12.64)	35.97 (13.1)
Marital status		
Single	215 (84.98)	37.29 (9.2)
Married	38 (15.02)	36.16 (10.8)
Hometown setting (n = 251)		
Rural	95 (37.55)	38.26 (10.3)
Urban	35 (13.83)	35.46 (8.4)
Suburban	121 (47.83)	36.71 (8.9)

SD = standard deviation.
[a] Kiersma–Chen Empathy Scale (KCES).
[b] KCES scores range from 15 to 105 with higher scores indicating less salience for empathy.

test = −0.230). No other demographic characteristics demonstrated significant differences in KCES. There were also no statistically significant differences in mean KCES score between the two classes.

In Table 3, mean TKCI-P scores are reported and compared by demographic characteristics. Females were found to have higher scores than males in both the compromising (Spearman's rank correlation test = 0.170) and accommodating modes (Spearman's rank correlation test = 0.137) and lower scores than males in the competing mode (Spearman's rank correlation test = −0.213). African Americans were found to have significantly higher scores in the collaborating mode than persons reporting other racial/ethnic groups (Spearman's rank correlation test = 0.156). In regard to hometown type, students from suburban areas were more likely to have

Table 3
Mean (SD) TKCI-P[a] mode score[b] per participant demographic characteristic.

	n	Avoiding mode[a] Mean (SD)	Compromising mode[a] Mean (SD)	Accommodating mode[a] Mean (SD)	Competing mode[a] Mean (SD)	Collaborating mode[a] Mean (SD)
All students	263	5.94 (2.4)	8.04 (2.3)	6.26 (2.5)	3.93 (2.6)	5.59 (2.3)
Gender						
Male	86	5.88 (2.5)	7.42 (2.5)	5.74 (2.6)	4.78 (2.9)	5.44 (2.4)
Female	175	5.97 (2.3)	8.33 (2.1)	6.53 (2.4)	3.49 (2.3)	5.67 (2.3)
Race						
White	214	5.97 (2.3)	7.99 (2.3)	6.36 (2.5)	4.05 (2.6)	5.43 (2.3)
Black	18	5.72 (2.4)	8.33 (1.9)	4.78 (1.7)	4.22 (1.9)	6.83 (2.0)
Hispanic	4	5.00 (2.2)	9.00 (2.7)	6.00 (3.5)	5.25 (2.8)	5.25 (1.3)
Asian	23	5.74 (2.8)	8.09 (2.6)	6.44 (2.7)	2.39 (2.1)	6.48 (2.8)
Other	1	10.00	9.00	7.00	3.00	2.00
Age (years)						
≤21	82	6.16 (2.3)	8.13 (2.1)	6.49 (2.6)	3.79 (2.5)	5.44 (2.1)
22-25	146	6.06 (2.3)	7.86 (2.2)	6.27 (2.4)	3.90 (2.6)	5.80 (2.3)
> 25	33	4.88 (2.6)	8.52 (2.9)	5.70 (2.5)	4.30 (2.7)	5.12 (2.7)
Marital status						
Single	220	5.42 (2.5)	8.78 (2.5)	6.20 (2.7)	3.63 (2.5)	5.73 (2.5)
Married	41	6.04 (2.4)	7.89 (2.2)	6.28 (2.5)	3.97 (2.6)	5.57 (2.3)
Hometown						
Rural	99	5.63 (2.5)	7.80 (2.5)	6.23 (2.5)	4.00 (2.6)	5.78 (2.3)
Urban	37	5.38 (2.2)	8.43 (2.6)	6.19 (2.7)	3.65 (2.3)	5.87 (2.2)
Suburban	123	6.37 (2.3)	8.11 (2.0)	6.31 (2.5)	3.94 (2.7	5.34 (2.3)

SD = standard deviation.
[a] Thomas–Kilman Conflict Mode Instrument professional version (TKCI-P).
[b] TKCI-P scores range from 0 to 12 for each mode.

Table 4
Spearman correlations among KCES[a] score and TKCI-P[b] mode.

Variables		Spearman correlation	Significance
KCES score with gender[c]		−0.230	0.000
TKCI-P mode with gender[d]	Compromising mode	0.170	0.006
	Accommodating mode	0.137	0.027
	Competing mode	−0.213	0.001
TKCI-P mode with race[e]	Collaborating mode	0.156	0.012
TKCI-P mode with hometown setting[f]	Avoiding mode	0.138	0.027
TKCI-P mode with marital status[g]	Compromising mode	−0.188	0.002
TKCI-P mode with KCES[h]	Compromising mode	−0.123	0.050
	Accommodating mode	−0.191	0.002
	Competing mode	0.267	0.000

[a] Kiersma–Chen Empathy Scale (KCES).
[b] Thomas–Kilman Conflict Mode Instrument professional version (TKCI-P).
[c] Females more likely to have higher salience for empathy than males.
[d] Females more likely to score higher than males in the compromising and accommodating modes and lower in the competing mode.
[e] African Americans more likely to score higher in the collaborating mode.
[f] Students from suburban settings more likely to score higher in the avoiding mode.
[g] Married students more likely to score higher in the compromising mode.
[h] Significant correlations between KCES and compromising, accommodating, and competing modes.

higher scores in the avoiding mode (Spearman's rank correlation test = 0.138). Finally, married students were more likely to score higher in the compromising mode than were single students (Spearman's rank correlation test = 0.188). There were no statistically significant differences in mean TKCI-P between the two classes.

Scores on the TKCI-P modes were categorized as high (9–12), intermediate (5–8), and low (0–4). Spearman correlation was used to examine associations among KCES score and TKCI-P mode; see Table 4 for specific Spearman rank correlations for each of the following reported results. Significant inverse correlations were found between the KCES score and the compromising mode, the accommodating mode, and a significant positive correlation was found between the KCES and the competing mode. Students who scored high in the accommodating mode and low in the competing mode were more likely to have positive attitudes toward empathy.

Between-groups ANOVA identified that those who scored high in the accommodating mode were significantly more likely to have positive attitudes toward empathy than those who scored low or intermediate in the accommodating mode ($p = 0.003$). Additionally, those who scored low in the competing mode had significantly more positive attitudes toward empathy than those who scored intermediate or high in the competing mode ($p < 0.001$; Table 5).

Discussion

This study revealed a relationship between attitudes toward empathy and predominant conflict mode used by students. Previous research has shown that as students gain experience, their ability to respond empathically can be improved. Likewise, conflict competence can be developed and used to move between constructive conflict management styles depending on the situation.[34,36] The empathy attitudes observed in this study were comparable to those reported in other studies among nursing and pharmacy students where mean scores ranged between the lower 30s and upper 30s.[25,51] The findings also revealed significant gender differences in empathy scores, which have also been demonstrated in past studies, suggesting that females possessed more positive attitudes about being patient-centered and empathic than did males.[68–71]

These gender differences between males and females with regard to empathy may be due to societal stereotypes and socialization.[72,73] Studies in psychology have pointed out that differences in empathy, especially when measured using self-report, may be due

Table 5
KCES[a] score and TKCI-P[b] mode between-groups ANOVA.

	F	Significance
Avoiding mode	1.973	0.141
Compromising mode	2.465	0.087
Accommodating mode	5.892	0.003[c]
Competing mode	8.571	0.000[d]
Collaborating mode	0.014	0.986

[a] Kiersma–Chen Empathy Scale (KCES).
[b] Thomas–Kilman Conflict Mode Instrument professional version (TKCI-P).
[c] Those who scored high in accommodating mode reported significantly higher salience for empathy than those who scored low or intermediate.
[d] Those who scored low in competing mode reported significantly higher salience for empathy than those who scored intermediate or high.

to differences in how empathic males and females would like to appear.[72,73] Females may be more likely to wish to appear empathic while males may have been socialized to project a masculine, independent image. Acknowledging, and covering in course content, that males may have been socialized to perceive that empathy is of less importance and then employing instructional methods to help them discard this influence will be important in engaging males in empathic, patient-centered communication. This might be accomplished by introducing recordings and/or guest speakers who represent examples of men who have a strong salience for empathy so that male students have positive role models to emulate.[74,75]

Significant differences also emerged between student characteristics and conflict mode. The findings suggest that the compromising mode, which is intermediate in assertiveness and cooperativeness, as well as the accommodating mode, which is low in assertiveness and high in cooperativeness, is more likely to be exhibited by females than males. In contrast, the competing mode, which is high in assertiveness and low in cooperativeness, the opposite of the accommodating mode, is more likely to be exhibited by males. These results are consistent with previous findings, which found women to score significantly higher in the avoiding, compromising, and accommodating modes and lower in the competing mode than their male counterparts.[64,76] Similar to the differences in males and females related to empathy, these differences in assertiveness and cooperativeness may also relate to perceived stereotypical roles. Females are generally perceived as more communal and males are perceived as being more agentic.[77] Additionally, the finding that students from suburban hometowns were more likely to use the avoiding mode suggests there could be an environmental influence on conflict management style. Further research is warranted.

A cultural influence may also be somewhat implicated in the findings because African American students scored statistically significantly higher in the collaborating mode. Previous research in medical residents has suggested that when compared to non-Hispanic whites, minorities were found to have lower collaborating and accommodating scores, inconsistent with the results of this study.[64] Additionally, married students in this study were more likely to use the compromising mode, characterized by attempting to find a solution that at least partially satisfies everyone involved. This difference may be attributed to the need for compromising in the constructive navigation of relationships. As married students may have more compromising experience in their relationships, this constructive method of managing conflict may transfer to their professional interactions. Overcoming these cultural and gender-based differences in empathy and conflict mode may require careful consideration of ways to influence individual awareness of these differences and how course materials can be designed and assessed to avoid biases.[78] Instructors may first need to recognize their own biases and stereotypes related to empathy and conflict management and mindfully reflect on and monitor their actions in class regarding impressions made or examples set. Implicit measures of attitudes and biases, such as the Implicit Association Test, have been developed that may be used to recognize one's own biases and stereotypes.[79] It is recommended that instructors should be self-aware and avoid recognizing students from one prevalent group (e.g., calling only on females during discussions). Additionally, instructors should create an inclusive curriculum with examples, scenarios, and readings reflecting diverse groups rather than conveying prevalent experiences as norms.

Implications and future research

Given these findings, incorporating team-based learning may help create familiarity and awareness of mindful, targeted use of conflict mode(s), and may enhance attitudes toward empathy. Collaborative learning in which students are randomly grouped for activities, assignments, or projects may also help students develop acceptance for diversity. Familiarity with diverse viewpoints may help students to gain a greater understanding of others' perspectives, thereby increasing their ability to be more empathic and use constructive conflict resolution methods. Role-play with feedback can also expand one's ability to comprehend others' feelings and points of view, potentially increasing awareness of the need to respond empathically, while also raising awareness about communication habits that may represent areas for improvement. Studies have reported that pharmacists' and pharmacy students' simulation activities and role-playing can enhance ability to develop empathy and to respond empathically.[24–29] Patient-centered communication skills experts have suggested that at least two rounds of role play with feedback are the minimum requirement for communication skills training.[80] The labor-intensive nature of this process may be prohibitive to many schools of pharmacy, which may not have the facilities, personnel, or space to incorporate a resource-intensive process such as this. Further research should be conducted to examine these attitudes and communication skills training options in additional samples and settings.

Limitations

The limitations of this study should be considered while interpreting these findings. First, this is a cross-sectional study limited to survey at one point in time; causal relationships between variables cannot be assessed. Future research should explore these questions across the curriculum and through experiential rotations. All data were collected through self-report and may be subject to social-desirability bias. Given the sample in one school of pharmacy, this study does have limited generalizability; future research should seek to explore these relationships in more diverse samples. Additionally, The TKI was adapted to the professional version (the TKCI-P), which has not yet been psychometrically tested.

Conclusion

Pharmacy students using more constructive conflict management styles may be more successful in navigating patient and interprofessional interactions. Attitudes toward empathy may be a contributing factor in conflict management that includes cooperativeness. Training in empathic responding should be emphasized not only for patient encounters, but also for collaborations

with other professionals/providers and for management of personnel in pharmacy practice settings. These results suggest that awareness and training in empathy and conflict management should be emphasized in curricular content to support the likelihood of effective professional interactions.

Conflict of interest

Hastings: None. Ekong: None. Kavookjian: Merck Speakers Bureau for Non-branded Medical Education.

Disclosures

None.

Disclaimer

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