INSTRUCTIONAL DESIGN AND ASSESSMENT

Enhancing Student Communication Skills Through Arabic Language Competency and Simulated Patient Assessments

Sanah Hasan, PharmD, PhD,[a] Hamadeh (M. Khier) Tarazi, MSc,[b] Dana Abdel Halim Hilal, BPharm[b]

[a] Ajman University of Science and Technology, College of Pharmacy and Health Science, Ajman, United Arab Emirates
[b] College of Pharmacy, Sharjah University, Sharjah, United Arab Emirates

Objective. To assess student communication and patient management skill with introduction of Arabic and use of simulated patient assessments to a communication and counseling course.

Design. Five, 3-hour tutorials (clinical skill laboratory) were added to the course covering: listening and empathic responding, non-verbal communications, interviewing skills, assertiveness, counseling in special situations: conflict, anger, worry or rushed situations, and professional decision making. Arabic content was introduced to the course to enhance Arabic communications and competence among students. Simulated patient assessment was used to evaluate student skills. Students' feedback about course changes was evaluated.

Assessment. The course now covers a wider content and Arabic language. Students' scores were similar in the assessment and other assessments within the course and between Arabic and English groups. Students favorably rated the changes in the course and provided constructive feedback on content usefulness and adequacy.

Conclusion. Expanding the course to include Arabic language and content and simulated patient assessments enhanced student communication skills.

Keywords: communication skills, language, simulated patient, competence, assessment

INTRODUCTION

The World Health Organization (WHO) report entitled *Preparing the Pharmacist of the Future: Curricular Development* was released in 1997 discussing seven roles for pharmacists, one of which was the role of the "communicator."[1] Both the Accreditation Council for Pharmacy Education (ACPE) and the American Association of Colleges of Pharmacy's Center for the Advancement of Pharmacy Education (CAPE) recommend that training of pharmacy students includes acquiring the skills needed to communicate effectively with patients, caregivers and other health care professionals.[2,3] More specifically, the Social and Administrative Sciences Supplemental Educational Outcomes Based on CAPE 2004 report asked pharmacists to provide culturally and linguistically appropriate pharmaceutical care services to diverse patient populations.[3] Studies examining specific interactions between pharmacists and patients report occasions of communication failure due to poor communication skills.[4] Pharmacist communication skills can be improved by education and training.[5] Guidelines on what should be integrated into pharmacy education may be affected by the different definitions of what "communication skills" are, challenges associated with communication skills development and different professional careers for pharmacists.[6] For example, in the United States, the required elements for pharmacy communication courses are well defined in ACPE standards.[2] These elements include: training in effective verbal and written interpersonal communication; communicating with diverse patients; interviewing techniques; active listening and empathy; strategies for handling difficult situations; assertiveness and problem-solving techniques; and cultural influences on communication.[2] In Finland, new components of the communications curriculum in Finnish bachelor of pharmacy programs, for example, include patient education and counseling, interaction and communication, general communication skills, foreign language, and second national language.[7] Language skills and communication skills are not the same; communication skills imply the effective use of language to convey information and ideas.[8] Language "competency" has surfaced as an important element of communication in the same way as cultural competency.

Corresponding Author: Sanah Hasan, Ajman University of Science and Technology, College of Pharmacy and Health Science, Ajman, UAE. Tel: +97150-3608206. Fax: +9716-5585812. E-mail: sanahenayah@gmail.com

While culturally competent care has been associated with improved health outcomes and elimination of health disparities,[9] only a few studies have focused on the effect of health professional language competence on patient health outcomes. Both patients and health care providers may feel helpless if they cannot communicate with each other.[10] In the United States, it has been reported in one study that non-English speaking patients are at risk for medication errors in the absence of interpreter services.[11] However, enhanced communication skills and better interactions among health care team members and the patient through proper use and understanding of language, along with traditional pharmacotherapeutic interventions could significantly help to improve patient outcomes and reduce medication errors.[12] Clearly, knowledge of language is vital to provision of health care through effective communication. It is vital then that pharmacy education not only train future pharmacists to provide culturally competent care, but also prepare them to provide linguistically appropriate care.[10,13]

DESIGN

This study was approved by the Research and Ethics Committee at the University of Sharjah.

At the University of Sharjah, College of Pharmacy, communication skills and counseling is an independent course delivered to third-year bachelor of pharmacy (BPharm) students and is the third course in the pharmacy practice course series that covers a wide range of topics, including health promotion and public health, literature evaluation, economics, social pharmacy and others.

The course consists of five, three-hour tutorial (clinical skill laboratory) sessions that cover principles of communication and their application in health care. The tutorials were originally designed to meet the following objectives: illustrate concepts and practice of communications using verbal and non-verbal methods; observe and practice aspects of communications required in a typical pharmaceutical setting; introduce the concept of professional decision making; acquire practical knowledge of the following commonly prescribed antibiotics: amoxycillin, erythromycin, co-trimoxazole, doxycycline, trimethoprim & ciprofloxacin, and to practice communication skills within the knowledge and application of these antibiotics; acquire practical knowledge of asthma as a disease state and its treatment including commonly prescribed medications, and to practice communication skills within the knowledge and application of the medications in the treatment of asthma; acquire practical knowledge of commonly prescribed antihypertensive medications, and to practice communication skills within the knowledge and application of the medications in the treatment of hypertension.

Each tutorial started with a 20-minute introductory lecture about the subject of the day followed by a few pre-developed cases on patient-pharmacist interactions that students role played in class. Students role played as patients and pharmacists to learn the appropriate interaction between a pharmacist and a patient with specific characteristics or needs. Students received feedback from the course instructor and peer review from their classmates. Students were required to complete and submit pre-tutorial homework designed to give them basic background information needed for role play during that tutorial.

As with all courses taught within the pharmacy curriculum, the language of instruction and assessment is English. Most students (90% to 95%) enrolled in the program are native Arabic speakers from the UAE and other Arab countries such as Syria, Iraq, Palestine, Egypt and Jordan. Standard methods of assessment such as multiple-choice and short-answer examinations, quizzes and assignments are commonly used to evaluate student learning but newer teaching and assessment methodologies have also been introduced recently.[14,15] Similarly, prior to introducing the use of Arabic language to this communication course, assessment only included multiple-choice and short-answer quizzes and exams; no oral assessment of student communication skills was implemented.

The course instructor saw an opportunity to expand the course from its original five-week to a full 13-week schedule and to include an oral assessment of student communication skills. This expansion would allow a deeper, more enhanced coverage of communication skills training and the introduction of the oral assessment. Students who took the course before expressed a desire to get trained on communicating in Arabic, as they felt this would help them better interact with Arabs in the future. Notably, several studies from the UAE have pointed out shortcomings in pharmacist interactions with patients, especially those related to Arabic speaking.[16,17] Practicing oral language skills in a pharmacy context will help students understand and communicate better with Arab-speaking patients; it will train students on how to communicate using medical information within their everyday language.

The objectives of this expanded course were to enhance the communication skills course by expanding its current content; introduce Arabic content within the course; assess students' communication skills and language competence in English and Arabic using simulated

patient methodology; explore students' perspectives of the new material including the Arabic content, the simulated patient assessment, and their experience with the course tutorials including usefulness and adequacy of the material.

In the fall 2014 semester, the course was modified and expanded to cover five areas: listening and empathic responding, non-verbal communications, interviewing skills, assertiveness, counseling in special situations: conflict, anger, worry or rushed situations, and the existing area of professional decision making in infectious disease, asthma and hypertension.

Additionally, to enhance communication skills of pharmacy students in the Arabic language, Arabic content was introduced; new and existing English tutorial content and related application cases were translated and modified to the Arabic language and context. The course instructor initiated the modifications and translations and shared all materials with members of the project team for feedback. This new content led to the addition of five, three-hour tutorials to the existing five tutorials. The course still followed the previous format of 20-minute initial introductory lecture and student role play of application case scenarios. New course content and application cases were adapted from popular communications in pharmacy textbooks and resources.[18,19]

The third change introduced during the same semester was the introduction of a simulated patient assessment to evaluate students' verbal and non-verbal communication skills in handling patients presenting with a prescription refill for chronic disease (asthma and hypertension). Three additional sessions were dedicated to conducting these assessments at the end of the semester leading to the course being expanded over a 13-week period.

In the fall 2014 semester, 72 students enrolled in the communication skills and counseling course. As the assessments were carried out on different days, a total of four case scenarios were developed. The cases were constructed with similar difficulty covering a patient requesting a prescription refill for his/her chronic disease of either asthma or hypertension. The course instructor developed the cases with the help of two practicing pharmacists – a community pharmacist and a hospital-based clinical pharmacist. The external pharmacists checked the clarity, content, difficulty and depth of judgment that students needed to undertake in each case. Several deliberations among the course instructor and the pharmacists were convened to produce the final versions of the cases.

Additionally, the course instructor and the practicing pharmacists had good mastery of Arabic and English languages, so, the cases were first translated by the course instructor to Arabic, but were exchanged back and forth between the pharmacists and the instructor to produce the final translated "equivalent" versions.

During a student-simulated patient encounter, students introduced themselves, assessed the simulated patient's allergies and level of knowledge about the condition and its therapy, assessed patient's adherence and level of control of their condition, assess appropriateness of therapy, delivered information about the disease, the medications and devices needed for treatment, and suggested referral to a physician as needed. Verbal and nonverbal communications such as maintaining eye contact, facing the patient directly, and standing with an open body posture with no distracting gestures were assessed throughout the interaction. Students were also graded on their pace, tone and volume of their voice and whether they communicated clearly.

An assessment rubric to evaluate student performance was adapted from a previously developed rubric,[20] and it incorporated items relating to the seven criteria rated face validity and reliable for assessing the communication skills of pharmacy students.[21] Items on the rubric included student assessment of patient's allergies, level of knowledge of their condition and the medications that treat it, adherence and control of their condition, counseling on the medications and devices, and referral to a physician if needed (Table 1). All items on the evaluation rubric contributed equally to the total assessment grade. Students were graded from 1=poor to 10=excellent. The specific activities that the students performed were defined by the instructor and external pharmacists. Students were given full marks for performing all activities, partial marks for performing part of the activities and no marks for omitting an activity. The instructor explained the evaluation form and scheme to the students before starting the assessments. The course instructor evaluated all students.

For the purpose of the assessments, non-Arabic speaking students were assigned to an English assessment while bilingual students were randomly and equally divided to participate in either an English or Arabic assessment by systematically going down the class roster and assigning the first student listed to Arabic, the next one to English, the next one to Arabic, and so forth. Arabic and English assessments were scheduled and conducted separately.

All assessments were carried out in the model pharmacy, a room that resembles a community pharmacy. Before their encounter with the simulated patient, students were given a copy of the case scenario and were given a few minutes to prepare themselves before they

Table 1. Mean Item Scores of Simulated Patient Assessment in Arabic and English, N=72

Counseling Item	Group	N[a]	Mean (SD)	*p*-value (2-tailed)
Proper identification of self and purpose of the session	Arabic	36	9.1 (0.2)	
	English	36	9.3 (0.2)	.48
Assessed patient's prior knowledge of the disease and treatment	Arabic	36	8.4 (0.3)	
	English	36	8.5 (0.3)	.65
Assessed patient's drug and food allergies	Arabic	36	8.3 (0.5)	
	English	36	7.6 (0.6)	.39
Assessed appropriateness of present therapy, need for change and pharmacist action: educate or refer to doctor	Arabic	36	6.8 (0.5)	
	English	36	5.1 (0.6)	.03
Delivered patient education about condition and general treatment	Arabic	36	8.2 (0.2)	
	English	36	7.8 (0.4)	.28
Maintained eye contact, faced patient directly, open body posture and no distracting gestures	Arabic	36	9.5 (0.1)	
	English	36	9.6 (0.1)	.88
Pace, tone, volume appropriate enough to communicate clearly	Arabic	36	8.1 (0.2)	
	English	36	8.5 (0.2)	.21
Conveyed complete and accurate information to the patient: Name, strength, dosage form Dosage and administration schedule Intended use/action Precautions, side effects What to do for side effects Drug-drug, drug disease, drug food interactions	Arabic English	36 36	7.3 (0.3) 6.5 (0.3)	.06
Conveyed complete and accurate information to the patient: About self-monitoring About refills and missed doses Storage Instructions on device use Instructions on device cleaning, checking remaining doses	Arabic English	36 36	6.9 (0.4) 6.5 (0.4)	.43
Summarized and/or verified patient knowledge, understanding/ concerns where appropriate	Arabic	36	6.6 (0.3)	
	English	36	6.8 (0.4)	.77

[a]N = number of participating students

can start the interaction. The students were allowed to use learning resources that are available in the model pharmacy while they prepared. These resources consisted of recent versions of the British National Formulary (BNF), Drug Information Handbook (by Lexicomp), *Australian Medicines Handbook*, and Lexicomp. Total testing time, including the preparation phase, was 12 minutes.

Two trained research assistants role played as simulated patients during the assessments. Prior to the assessments, the research assistants received detailed training on their roles as patients, but also practiced the role of a pharmacist handling the patient. The course instructor and research assistants exchanged roles of pharmacist and patient and discussed possible questions that the pharmacist or simulated patient may ask during the assessments. Four pilot sessions were conducted prior to the start date

of the assessments. These sessions gave additional feedback into case content, role play, the grading scheme and the amount of time considered to be adequate for a student to conduct a complete interview with the patient. During the assessments, the two research assistants exchanged roles of role play, coordination of timing, and flow of assessments.

Students use three new evaluation forms to evaluate different aspects of this course. First, using a Likert-type scale (1=Strongly Disagree to 5=Strongly Agree), students evaluated tutorial content, delivery and assessments. They evaluated if the objectives of the course were clearly defined, if the presentation of material and delivery techniques were appropriate, if other assignments reinforced concepts introduced in the course, if the Arabic material introduced in the course helped enhance students' Arabic

Table 2. Comparisons of Assessments in Arabic and English

Assessed Item	Group	N[a]	Mean (SD)	*p*-value (2-tailed)
Simulated Assessment Score	Arabic	36	80.4 (1.7)	
	English	36	77.5 (1.9)	.25
Non-simulated Assessment Score	Arabic	36	77.9 (1.9)	
	English	36	78.1 (1.7)	.96
Arabic	Simulated assessment	36	80.4 (1.7)	
Speaking	Non-simulated assessments	36	77.9 (1.9)	.33
English	Simulated assessment	36	77.5 (1.9)	
Speaking	Non-simulated assessments	36	78.1 (1.7)	.83
Time Taken (min)	Arabic	35	6.8 (0.24)	
	English	35	7.0 (0.27)	.53

[a]N=no. of students undergoing an assessment

communication skills and if more Arabic content was needed to prepare students for their assessments, and for future practice. Additionally, students gave an overall evaluation score for the course, and additional comments.

Second, using a Likert-type scale (1=Strongly Disagree to 5=Strongly Agree), students evaluated different aspects of the simulated patient assessment such as the cases used, assessment of communication skills, and technical aspects concerning the conduct of assessments. Students undertaking the Arabic assessment also evaluated if the Arabic assessment required more preparation or was

more stressful in comparison to other assessments within the course. Students may also add any other comments about the simulated patient assessment.

Third, for the six general topics covered in the tutorial, students ranked the topics according to their usefulness, the adequacy of content materials covered during the course, and what aspects needed more coverage in future offerings. Students were given space to comment in a free-text format.

Both quantitative and qualitative data were collected in evaluating student performance and perceptions of

Table 3. Students' Evaluation of Communication Skill Tutorial (N=72)

Item	Strongly disagree n[a] (%)[b]	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
The Arabic material introduced in the course was successful in helping enhance student Arabic communications.	1 (1)	2 (3)	9 (13)	33 (46)	28 (39)
Arabic scenarios and content are needed to help prepare students for assessments.	1 (1)	6 (8)	17 (24)	31 (43)	17 (28)
Arabic scenarios and content are needed to help prepare students for future practice.	1 (1)	2 (3)	10 (14)	30 (42)	31 (43)
The objectives and organization of this course were defined clearly at the beginning of the semester.	0 (0)	4 (6)	14 (19)	28 (39)	27 (38)
Appropriate presentation and delivery techniques are used in this course.	1 (1)	4 (6)	9 (13)	29 (40)	29 (40)
The material in this course is presented clearly.	0 (0)	5 (7)	10 (14)	26 (36)	30 (42)
Assignments and/or other exercises are useful in reinforcing different concepts introduced in this course.	0 (0)	4 (6)	15 (21)	27 (38)	25 (35)
Evaluation methods in this course are appropriate in assessing student learning.	1 (1)	3 (4)	17 (24)	30 (42)	20 (28)
What is your assessment of the overall quality of this course?[c]			Average=4.1		

[a]n=number of respondents completing the item
[b](%)=percentage of respondents
[c]1=poor 5=excellent

Table 4. Students' Comments Regarding Tutorial Content, Delivery and Overall Assessments

Theme	Students' Comments
Fun and interesting	I like how fun this course was. This course was amazing! No boredom. Very enjoyable tutorial.
More practice; practice in real life	More practice about empathy. Extra focus on the real life communication between the pharmacist & patient, but in general, it was good, we need more creativity. More practice in pharmacy or like we do some trips. Expose the students to a real area or with real workers environment that makes it reliable more. I think individual students' participation would be really helpful, if it's applied more & more. The material should be explained more because it's the 1st course to deal with medications' use in disease.
Tutorial is long	Making the time shorter like 2 hours not 3, so students can concentrate more. Reduce the duration of the lab. The course was a bit too long and near the end I couldn't focus as much as the beginning of the course, if it was an hour & 45 minutes, it would be better.
Useful, good learning	Honestly, I felt like I was practicing pharmacy, I enjoyed it and found it very helpful! I love how the course allowed us students, sometimes, create scenarios & use our imagination, my favorite part of the course. Very good content and application.
More background material	More clear handouts, & better classrooms. We can improve by doing more visual aided scenarios & more information about the drugs.
More Arabic content and scenarios	We do need to introduce more Arabic material to help students prepare for future practice, focus more on the Arabic terminology. I want to practice more, because I'm Arab student & I face difficulty in explaining my info about the medication to anyone who asks me. More Arabic scenarios & more practice on hypertension.

their experience with the expanded course. Simulated patient assessments contributed 50% of the overall 13-week tutorial grade. Multiple choice and short essay quizzes, and a comprehensive final examination at the end of semester constituted the other 50%.

Data were entered into Microsoft Office Excel 2007 and analyzed using SPSS version 22 (IBM, Armonk, NY). Student performance in each item of the simulated patient evaluation form and student overall mean assessment score were calculated and compared for English and Arabic groups using an independent Student t-test. A paired Student t-test was used to compare student scores in the oral assessment to other assessments in the tutorial. A p value of .05, 2-tailed was considered significant. Percentage scores were calculated for student responses to the evaluation of the overall tutorial experience. Fisher's exact test was used to find differences in student responses in evaluating the simulated patient assessment between students taking the Arabic and English assessments. Percentage, average and median scores were calculated for ranking of usefulness and adequacy of content material covered during the course. Students' text comments provided qualitative data on the simulated patient assessment, tutorial content, delivery and overall assessments, and their perceptions of usefulness,

adequacy of content coverage and enhanced future coverage of material.

EVALUATION AND ASSESSMENT

Students were evenly split between Arabic and English assessments; 36 students attended the Arabic and 36 attended the English assessments.

The communications course was expanded to cover six areas of communications, new Arabic content, and a simulated patient assessment of communication skills in Arabic and English.

Table 1 shows that in both the Arabic and English assessments, students did very well in introducing themselves to the simulated patient, explaining the purpose of the interaction, assessing the patient's allergies and basic knowledge of the medications and condition, informing the patient about the disease, and interacting with the patient verbally (eg, voice volume, pace, tone) and non-verbally (eg, body posture, gestures, etc.). Students did not perform as well in assessing appropriateness of treatment, conveying complete and accurate information about the medications, and ending the interaction. Statistical difference in the Arabic and English groups was found for the items pertaining to assessing appropriateness of present therapy, need for change in therapy, and pharmacist action whether to educate the patient or refer to the physician.

Table 5. Students' Evaluation of Simulated Patient Assessment

Assessed Items	Type	Strongly Disagree n[a] (%)[b]	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	Total[c]	P-value
The cases used in the assessment reflected learned material.	Arabic	0 (0.0)	1 (2.8)	1 (2.8)	22 (61)	12 (33.3)	36	
	English	0 (0.0)	1 (3.3)	5 (16.7)	12 (40.0)	12 (40.0)	30	.77
The assessment measured application of communication skills required in pharmacy practice.	Arabic	0 (0.0)	1 (2.8)	3 (8.33)	20 (55.6)	12 (33.3)	36	.76
	English	0 (0.0)	2 (6.7)	2 (6.7)	17 (56.6)	9 (30.0)	30	
The assessment evaluated my communication skills well.	Arabic	0 (0.0)	4 (11.1)	7 (19.4)	14 (38.9)	11 (30.6)	36	
	English	0 (0.0)	4 (13.3)	5 (16.7)	13 (43.3)	8 (26.7)	30	.55
Performance on this assessment was an accurate reflection of my communication skills.	Arabic	0 (0.0)	3 (8.33)	13 (36.1)	16 (44.4)	4 (11.1)	36	
	English	2 (6.9)	3 (10.3)	5 (17.3)	12 (41.4)	7 (24.1)	29	.33
Prior to the assessment, I felt fully aware of the nature of the examination, enough direction was given to me.	Arabic	0 (0.0)	3 (8.33)	9 (25)	15 (41.7)	9 (25)	36	
	English	1 (3.3)	4 (13.4)	6 (20.0)	10 (33.3)	9 (30.0)	30	.50
Adequate time was allotted to complete patient encounter.	Arabic	0 (0.0)	3 (8.33)	10 (27.8)	17 (47.2)	6 (16.7)	36	
	English	1 (3.3)	1 (3.3)	11 (36.7)	8 (26.7)	9 (30.0)	30	.065
The assessment was more stressful than written examinations.	Arabic	0 (0.0)	5 (13.9)	5 (13.9)	12 (33.3)	14 (38.9)	36	
	English	4 (13.8)	3 (10.3)	4 (13.8)	3 (10.3)	15 (51.8)	29	.030
The assessment was more stressful than exercises in pharmacy practice tutorials.	Arabic	1 (2.8)	4 (11.1)	7 (19.4)	15 (41.7)	9 (25)	36	
	English	4 (13.3)	3 (10.0)	6 (20.0)	7 (23.3)	10 (33.3)	30	.30
The Arabic assessment required more preparation than other assessments within the course.	Arabic	1 (2.8)	9 (25)	6 (16.7)	10 (27.8)	10 (27.8)	36	
The Arabic assessment was more stressful than the other English assessment within the course.	Arabic	6 (16.7)	7 (23.3)	9 (25)	5 (13.9)	9 (25)	36	
The Arabic assessment assessed my Arabic vocabulary and medical fluency well.	Arabic	1 (2.8)	2 (5.5)	8 (22.2)	20 (55.6)	5 (13.9)	36	

[a]n=number of respondents completing the item
[b]%=percentage of respondents in each type of assessment
[c]Total=total number of respondents in each type of assessment

Table 2 shows the mean percentage scores of students' performance in different assessments within the course. Students averaged better in the overall Arabic (80.4%) (range 54% to 93%) compared to English (77.5%) (range 46% to 98%) assessments, but this was not statistically significant ($p=.25$). Students who participated in the Arabic assessments averaged 6.8 (0.24) minutes (range 4 to 10 minutes) while those who participated in the English assessment averaged 7.00 (0.27) minutes (range 4.5 to 12 minutes) to complete their assessments. The difference was not statistically significant ($p=.53$). Comparisons between student performance in the simulated patient assessment and other assessments in the course such as examinations did not reveal any significant difference. Likewise, performance of students who took the Arabic or English simulated patient assessment was not statistically different from other assessments in the course (Table 2).

Student evaluations of the tutorial content, delivery and assessments were mostly in agreement with the evaluated items (Table 3). Most students agreed (85%) that the Arabic material introduced in the course was successful in helping enhance their Arabic communications, 70% agreed that Arabic content within the course was adequate to prepare them for their assessments, and 73% thought that Arabic content within the curriculum helped better prepare them for future practice. They gave an overall score of 4.1 on a scale of 1=poor to 5=excellent for the overall quality of the course.

Table 4 shows the themes generated from students' text comments.

Table 5 shows students' ratings of the simulated patient assessment. The responses reflected student overall satisfaction. Students thought that the assessments reflected learned material (A, 94%), the assessment measured application of communication skills required in pharmacy practice (A, 89%), the assessment measured communication skill (A, 69), and performance on the assessment was a reflection of their communication skills (A, 55%). Most students considered the simulated patient assessments more stressful than other types of assessments within this and other pharmacy practice courses. Although students who took the Arabic assessment thought that the assessment measured their Arabic vocabulary and medical fluency well, they also thought that the Arabic assessment was more stressful and required more preparation compared to other assessments within the course. Comparisons of the two groups of assessment found statistical significance in one item related to the Arabic assessment being more stressful than written examinations. The text comments that students provided generated several themes (Table 6).

For the six general topics covered in the tutorial, students ranked learning interviewing skills followed by counseling in difficult situations such as conflict, anger, worry, hurry, etc. as the most useful topics covered in class. Students considered the two topics: counseling in difficult situations and professional decision

Table 6. Students' Comments About the Simulated Patient Assessment

Theme	Students' Comments
Appraising Arabic assessment	It was good idea to have Arabic assessment, I learnt many Arabic medical words. We should do more practice in Arabic and try to improve vocabs. I learnt how to deal with patients of different languages including Arabic, my own language.
Stressful experience	I believe that the Arabic assessment was more stressful than the English assessment because a lot of the Arabic terminology was not mentioned during the tutorial, I think a lot of the students would have been more prepared if we practiced more in Arabic. Doing assessment for the first time made me nervous so I forgot most of the things needed which I guess won't happen in work especially after experience. I was stressed that it might have affected my performance…but it would be better if that was exercised every week to overcome some issues.
Value in scenario-based assessment	It was very useful compared to quizzes. Overall I like it more than having a final written exam. This was a great experience for me to act as real pharmacist as I have learned from my teacher. Even though the assessment was more stressful than written examination, I enjoyed the assessment so much. The assessment is a great idea, I learned more than if I was to be tested on paper, I really enjoyed it. The assessment was the best part of this course, It was all natural & reflected your personal knowledge and skill. Personally it should be employed not (only) in Pharmacy Practice but in other courses as well. Oral speaking skill is important for the current market not what you can write on a paper.

making for antibiotic therapy, asthma and hypertension being of least "adequate" coverage, hence, needing more emphasis in future offerings of the course (Table 7). Table 8 shows the text comments on usefulness and adequacy of material.

DISCUSSION

New course content including Arabic language and context has been added to an existing communication skills course. This initiative was implemented after students requested that Arabic content be added within the curriculum, and some research evidence of the need to improve pharmacist interactions with Arabs in the UAE. A new oral assessment consisting of a simulated patient interaction has also been introduced in the course.

Overall, students did very well in assessment items related to general patient interviewing but not in the decision making and assessment of appropriateness of therapy and delivery of information which could be related to being early in their program and their limited exposure to therapeutics and disease management. It was necessary to integrate assessment of verbal and non-verbal communication skills with professional

decision making as it would better train students in their professional practice. It has been suggested that assessments should be based on tasks that are "as authentic as possible,"[22] ie, students should be tested on their ability to do something they will actually do in the real world as professionals. To be valid, an assessment must include criteria related to "sociolinguistic appropriateness" (ie, correct tone of voice for the audience and context), language skills, and student ability to integrate tasks and content in a specific domain,[23] such as professional decision making or counseling. The need for better training in professional judgment of disease management was raised by students in their evaluation of the tutorial and is a matter of discussion and enhancement in future offerings of the course.

Student perceptions of the simulated patient assessment were generally good despite it being more stressful and requiring more preparation than other assessments within the course. Arabic assessment was significantly more stressful possibly due to Arabic being new, and the need for more practice in Arabic. Although the simulated assessment was new, and that students found it more stressful than other assessments because it required problem solving skills, there were no significant differences between the performances of

Table 7. Students' Ranking of Usefulness and Adequacy of Material

		(1) %	(2) %	(3) %	(4) %	(5) %	(6) %	*n*	Median	Mean
Listening & empathic responding	Usefulness	42.8	21.5	15.7	5.8	4.2	10.0	70	2	2.3
	Coverage within course	59.1	15.5	7.1	12.7	2.8	2.8	71	1	1.9
	Do More	30.4	29.0	13.1	10.1	8.7	8.7	69	2	2.5
Non-verbal communication	Usefulness	30.6	29.1	16.7	8.3	5.6	9.7	72	2	2.6
	Coverage within course	31.4	27.1	20.0	7.2	5.7	8.6	70	2	2.5
	Do More	29.0	29.0	20.1	7.3	7.3	7.3	69	2	2.4
Interviewing skills	Usefulness	52.1	16.9	22.6	1.4	2.8	4.2	71	1	2.0
	Coverage within course	44.3	22.9	14.2	10.0	2.9	5.7	70	2	2.2
	Do More	43.5	27.5	4.3	7.3	10.1	7.3	69	2	2.2
Assertiveness	Usefulness	33.8	31.0	15.5	8.4	7.1	4.2	71	2	2.3
	Coverage within course	30.4	36.2	13.2	10.1	5.8	4.3	69	2	2.3
	Do More	24.7	29.0	23.2	13.0	5.8	4.3	69	2	2.4
Counseling in special situations	Usefulness	57.1	21.4	2.8	10.0	8.7	0.0	70	1	1.9
	Coverage within course	37.7	13.0	17.4	8.7	8.7	14.5	69	2	2.7
	Do More	58.0	21.8	5.8	1.4	8.7	4.3	69	1	1.9
Professional decision making & ensuring best patient outcomes	Usefulness	46.3	20.3	13.1	14.5	1.5	4.3	69	2	2.1
	Coverage within course	34.8	11.6	17.4	14.5	7.2	14.5	69	3	2.8
	Do More	57.1	14.2	11.3	4.4	4.4	8.6	70	1	2.0

1=most useful
6=least useful

Table 8. Students' Comments Regarding Usefulness and Adequacy of Material

Theme	Students' Comments
Usefulness	Overall, we focused mainly on communication skills and how to handle different situation, this is good when working with people in pharmacies; Interviewing skills was most important I think which is needed to prepare for the future; Learned how to work under stressful condition and how to deal with patients of different languages professionally.
Additional topic coverage needed	More cases with combined hypertension & asthma will be good; More of the antibiotics & hypertension should be covered, I think; I believe that decision making & dealing with special situation is what we need the most to get ready for real practical experience; I would suggest more time for explaining hypertension & antibiotics; We emphasized on counselling normal people which is the right thing to learn since we are beginners, nevertheless, counselling more complicated issues like anger, dissatisfied...etc, is very much important; We have to focus more on a situational role, where there's anger, sadness to give the students more experience for the future.

students in the simulated assessment or other assessments in the course. This proves that the new assessment was successful and that students prepared well and understood the value of the assessment in preparing them for practice as evidenced by some of their comments.

Overall, students were satisfied with the tutorial content, delivery and assessments (Table 3); text comments raised the need for better background information coverage in class before role play, more practice scenarios or practical experience in the real world, and more Arabic content and practice as this would help them talk in Arabic correctly and professionally. Even if students speak Arabic with their family and friends, the informal nature of their conversations would not provide proficient oral practice for the formal, professional style a health professional needs to converse in.[22]

Culturally competent patient care has the potential to improve communication between the health care provider and patient, increase patient satisfaction with the provider and the encounter, increase patient cooperation with drug therapy plans, and improve the quality of care and enhance patient health.[24]

It is unknown if linguistically competent patient care would have similar benefits on patient health outcomes. The literature on the effect of studying in an English-only pharmacy curriculum on pharmacist provision of care in another language remains scant. There is a need for pharmacy curricula to enhance language competence. In situations where communications between pharmacists and the public are suboptimal, a question to ask is: would introducing "local" language into, at least, key areas of the curriculum improve the training of future pharmacists to provide better communication and hence, better patient care? In this study, we investigated adding locally suited language-specific areas covering communications, patient education, and chronic disease management. However, for this endeavor to have real impact on future pharmacists, it needs to be applied more widely to other key areas and disease states within the curriculum. Key local language-competency needs must be discussed and established by those responsible for designing pharmacy curricula without compromising original English language competency. Further research should explore the effect of local language competency of students studying within English-only curricula on their future practice and skill in dealing with non-English speaking patients.

Using different cases to assess student skills is a limitation. Due to the large number of students enrolled in the course and the limited number of faculty teaching it, the assessment was carried out over several days. A comparison of student group performance in each case could have given an indirect measurement of case difficulty and/or variability. This comparison was not carried out here; however, validation of the cases by the instructor and external pharmacists might have helped minimize case variability. The course instructor did all of the evaluations of student performance during simulated patient assessments. This was necessary because of the weight given to the assessment.

SUMMARY

Five 3-hour tutorials were added to a communications and counseling course in English and Arabic to cover: listening and empathic responding, non-verbal communications, interviewing skills, assertiveness, counseling in difficult situations: conflict, anger, worry or hurry situations; and professional decision making. Simulated patient assessment was used to evaluate students' communications skills and patient management in chronic disease. Students achieved similar scores in the assessment and other assessments within the course and between Arabic and English groups. Students were satisfied with the modifications in

the course and gave helpful comments on the usefulness and adequacy of content coverage.

ACKNOWLEDGMENTS

REFERENCES

1. WHO. The role of the pharmacist in the health care system: preparing the future pharmacist: curricular development: report of a third WHO consultative group on the role of the pharmacist, Vancouver, Canada, August 27-29, 1997. http://apps.who.int/iris/bitstream/10665/63817/1/WHO_PHARM_97_599.pdf.

2. Accreditation Council for Pharmacy Education. Accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree. https://www.acpe-accredit.org/pdf/S2007Guidelines2.0_ChangesIdentifiedInRed.pdf. Accessed June 13, 2016.

3. Center for Advancement of Pharmaceutical Education. Educational Outcomes 2004. http://www.aacp.org/resources/education/Documents/CAPE2004.pdf. Accessed August 8, 2016.

4. Parkhurst C. Assessing and improving students' verbal communication abilities in pharmacy courses. *Am J Pharm Educ*. 1994;58(1):50-55.

5. Kimberlin CL. Communicating with patients: skills assessment in US colleges of pharmacy. *Am J Pharm Educ*. 2006;70(3):Article 67.

6. Wallman A, Vaudan C, Sporrong SK. Communications training in pharmacy education, 1995-2010. *Am J Pharm Educ*. 2013;77(2):Article 36.

7. Katajavuori N, Hakkarainen K, Kuosa T, Airaksinen M, Hirvonen J, Holm Y. Curriculum reform in Finnish pharmacy education. *Am J Pharm Educ*. 2009;73(8):Article 151.

8. Stupans I, March GJ, Elliot EE. Pharmacy students' English language skill development: are we heading in the right direction? *Pharm Educ*. 2009;9(1):6-10.

9. O'Connell MB, Korner EJ, Rickles NM, Sias JJ. Cultural competence in health care and its implications for pharmacy. Part 1. Overview of key concepts in multicultural health care. *Pharmacotherapy*. 2007;27(7):1062-1079.

10. Vyas D, Caligiuri FJ. Reinforcing cultural competency concepts during introductory pharmacy practice experiences. *Am J Pharm Educ*. 2010;74(7):Article 129.

11. The Access Project. Heller School for Social Policy and Management at Brandeis University. What a difference an interpreter can make. Health care experiences of uninsured with limited English proficiency. 2002. http://www.hablamosjuntos.org/pdf_files/What_a_Difference.pdf. Accessed August 16, 2016.

12. Benjamin DM. Reducing medication errors and increasing patient safety: case studies in clinical pharmacology. *J Clin Pharmacol*. 2003;43(7):768-783.

13. Assemi M, Cullander C, Hudmon KS. Implementation and evaluation of cultural competency training for pharmacy students. *Ann Pharmacother*. 2004;38(5):781-786.

14. Hasan S. A tool to teach communication skills to pharmacy students. *Am J Pharm Educ*. 2008;72(3):Article 67.

15. Hasan, S. Teaching ethics to pharmacy students using a team-based learning approach. *Pharm Educ*. 2011;11(1):99-106.

16. Hasan S, Suleiman H, Stewart K, Chapman CB, Kong DC. Patient expectations of and willingness to use primary care pharmacy services in the United Arab Emirates. *Int J Pharm Pract*. 2015;23(5):340-348.

17. Hasan S, Suleiman H, Stewart K, Chapman CB, Hasan MY, Kong DC. Assessing patient satisfaction with community pharmacy in the UAE using a newly-validated tool. *Res Social Adm Pharm*. 2013;9(6):841-850.

18. Beardsley R, Kimberlin CL, Tindall WN. *Communication Skills in Pharmacy Practice: A Practical Guide for Students and Practitioners*. 6th ed. Baltimore, MD: Lippincott Williams & Wilkins; 2011.

19. Rantucci MJ. *Pharmacists Talking with Patients: A Guide to Patient Counseling*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 2007.

20. Hasan S, Al Sabbagh R, Al Humaidi R, Al Mallah M, Khan F. Objective Structured Clinical Examination (OSCE) in assessing pharmacy students' Arabic language competence in asthma management. *Pharm Educ*. 2016;16(1):156-163.

21. Mackellar A, Ashcroft DM, Bell D, James DH, Marriott J. Identifying criteria for the assessment of pharmacy students' communication skills with patients. *Am J Pharm Educ*. 2007;71(3):Article 50

22. Parkhurst C. A communication course for a linguistically diverse student population. *Am J Pharm Educ*. 2007;71(2):Article 36.

23. Brown HD. *Teaching by Principles: An Interactive Approach to Language Pedagogy*. London and New York: Longman; 2001.

24. Brown CM, English GN. Dealing with patient diversity in pharmacy practice. Drug Topics. https://www.questia.com/magazine/1P3-57446798/dealing-with-patient-diversity-in-pharmacy-practice. Accessed August 20, 2016.