


The Relationship Between Language Barrier in Non-Arabic Nurses and Anxiety in Cardiovascular Patients: A Cross-Sectional Descriptive Study

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Jassem Almuallem, BSN, RN¹ , Amal Darwish, PhD², and Ahmed AlFaraj, MD³ 

Abstract

Patients with cardiac conditions may suffer from anxiety related to prognosis and further rehabilitation. Anxiety could be exacerbated by different factors including miscommunication, which could be attributed to the linguistic barrier, that exists among health care providers. At Saud Al-Babtain Cardiac Center (SBCC), nurses who are non-native Arabic speakers could have difficulty communicating disease-related information at different stages of nursing care. Is it possible to identify the language barrier as a source of anxiety for admitted patients with cardiac diseases? In this cross-sectional, descriptive study, 50 patients were included following the diagnosis of cardiac disease and post-cardiac surgery. A questionnaire that measures anxiety level showed that patients who were handled by Arabic-speaking nurses reported less collective mean for the anxiety domain statements of (20.08) versus those who were handled by Non-Arabic-speaking nurses (28.55, P value = .041). Our finding indicates that anxiety levels increased when there was a language barrier between nurses and patients, which could affect the quality of care delivery at SBCC.

Keywords

communication, nursing, patient safety, clinician–patient relationship

Introduction

The linguistic barrier has long been recognized as a cause of miscommunication in the health sector. Ineffective communication issue is particularly relevant to high-risk environments, such as emergency departments and intensive care units. A linguistic barrier occurs when the health care provider speaks a different language than the patient. Miscommunication hinders the patients' understanding of the therapeutic plan, which imposes psychological stress, especially for hospitalized patients (1).

Nurses are among the health care professionals who provide patient-centered care in a variety of settings. The linguistic barrier between nurses and patients can affect nursing practices and patient outcomes and satisfaction (2). Although the new policy of Saudi Arabia subjects all sectors of companies to “Saudization” (Saudization is the Saudi nationalization scheme to increase the employment of Saudi nationals in all specialties), there is a shortage of Saudi nurses of both genders in government and private hospitals (3). Upon hiring, there is no special requirement regarding

Arabic language proficiency. Neither is there a set of education strategies at Saud Al-Babtain Cardiac Center (SBCC) to teach the Arabic language basics to employees. On the other hand, almost all patients and visitors are native Arabic speakers with limited English proficiency (LEP).

Communication challenges increase when patients and medical staff do not speak the same language. Language barriers have been associated with an increased risk of readmission, central line-associated bloodstream infections, falls, surgical site infections, and surgery delays (4). Moreover, difficulty obtaining patient history and informed

¹ Adult Cardiology, Saud Al-Babtain Cardiac Centre, Dammam, Saudi Arabia

² Optometry Department, King Saud University, Riyadh, Saudi Arabia

³ Anesthesia Department, King Fahad Specialist Hospital, Dammam, Saudi Arabia

Corresponding Author:

Jassem Almuallem, Adult Cardiology, Saud Al-Babtain Cardiac Centre, Dammam, Saudi Arabia.

Email: jassem.almuallem@yahoo.com



consent, nonadherence to medication, insufficient use of analgesia, and poor continuity of care are possible poor communication outcomes. This situation can result in patient dissatisfaction (5). A more recent report by Bowen discussed other consequences of poor communication due to language barriers. One example of these consequences is the nurses' poor management of chronic diseases, resulting in a higher readmission rate (6,7). This consequence explains why patients have difficulties understanding their conditions and the required treatments. Furthermore, language barriers cause challenges in elder and end-of-life care and present risks to the health care providers, such as increased malpractice claims (8). There is no doubt that patients with LEP represent a vulnerable group because they cannot comprehend all the information given to them about their conditions, which limits their ability to make well-thought-out decisions freely (9).

A relevant example of vulnerable groups is immigrants who have moved to the United States at different times as refugees or for other reasons. The immigrants' group includes nationalities like Arabs, Hispanics, Italians, and Spaniards (2). For the immigrants' group, not being to communicate is a serious issue in critical environments like emergency departments, where a language barrier compromises the quality of communication (10). Hence, effective communication establishes a vital relationship between nurses and immigrant patients during different stages of medical care (11). The quality of nursing care can be negatively affected by miscommunication and its negative consequences such as stress, loneliness, and failure to comply with instructions (12–14). To illustrate, immigrant patients with LEP were reported to have poorer health conditions compared to citizens without a language barrier. Miscommunication is attributed to stress-related conditions such as depression and anxiety (15). It has been reported that culturally diverse patients with LEP are more likely to have adverse effects and medical errors in different settings. To illustrate, medical errors from miscommunication can occur while discharging the patient, obtaining informed consent, giving care in the emergency room, and preparing patients prior to surgery (Betancourt and Carrillo, 2012) (4).

Up to our knowledge, there are limited pieces of literature that focus on language barriers for native Arabic patients and non-native health care providers in the Saudi hospitals. This study aims to investigate if the language barrier increases anxiety for patients diagnosed with heart diseases in the coronary care unit (CCU) and cardiac wards at SBCC who are being looked after by a non-Arabic nurse.

Methodology

This cross-sectional, descriptive study consists of 50 patients recruited from cardiac wards and the CCU over a period of 6 weeks. The research took place at SBCC, Saudi Arabia, Dammam. Saud Al-Babtain Cardiac Center serves cardiac patients in the Eastern province and has 54 beds capacity. Study investigators created a survey of 20 statements, which

was self-administered online via an iPad (Apple). The questionnaire was adopted from Şahin and was intended to assess hospitals' communication problems and was translated into the Arabic language (16). It had 4 major themes: the need for attention, fear and anxiety, concern and need to be informed, and communication-induced anxiety. All statements were rated by participants on a 5-point Likert scale. A total of 20 statements under those themes was included in which the participants have to rate their agreement level to each sentence on a scale of 5 points. The 5 points are strongly disagree, disagree, neither agree or not agree, agree, and strongly agree. The survey also contained patient demographic information and other language fluency. The full questionnaire can be found in Supplemental Appendix 1. All survey items were collected in Docs.google.com (2019).

Participants included in the study were stable, post-admission-related procedures, conscious, and non-sedated patients. Besides, the studied patients had a monolingual nurse during the admission and had a minimum length stay of 1 day. Patients who could speak English or the nurses' native language were excluded. Patients were assigned before their participation in the study to either Arabic or Non-Arabic-speaking nurses. The assignment of patients was purposeless and according to the staff availability. Importantly, the language of the assigned nurse remained the same throughout the admission period.

Data from the survey were categorized and summarized by frequency and percentage. Group differences between patients assigned to Arabic native staff versus the non-Arabic staff and the association between anxiety in diagnosed patients with cardiac diseases and the language barrier will be analyzed using the Mann-Whitney *U* test. All statistical analysis will be performed using IBM SPSS Version 23, and *P* values less than .05 will be considered statistically significant.

Results

Demographic Data

According to the hospital bed capacity and using Select Statistical Consultants, a sample size of 50 patients was estimated (17). Data analysis was carried out based on dividing the participants according to the nurse's language. Of those, 32 patients were assigned to a non-Arabic-speaking nurse, and 18 patients were assigned to an Arabic-speaking nurse. Non-native Arabic nurses constitute approximately 86% of the nurses in SBCC based on the ratio of non-Arabic-speaking nurses to Arabic-speaking nurses reflected in the studied sample. SPSS (IBM) was used to analyze the data. Only 4 patients were excluded due to their bilanguage fluency.

Background Characteristics of Study Participants

Table 1 shows the background characteristic of the studied participants. From the table, only 5 patients were females,

Table 1. The Background Characteristic of the Study Participant.

	Language		P value
	Non-Arabic	Non-Arabic	
Gender			
Female	2	3	.241
Male	30	15	
Marital status			
Divorced	1	0	.123
Married	31	16	
Single	0	2	
Education			
Not educated	2	2	.831
Secondary school	21	12	
Bachelor	8	3	
Higher education	1	1	
Was the patient transferred to critical area?			
No	28	16	.631
Yes	4	2	
Was the patient transferred to another unit?			
No	28	15	.495
Yes	4	3	
Age	54.31	54.11	.955
Length of admission	5.47	2.17	.157

while 45 were males. The participants were between the ages of 23 and 81 years, and the mean age was 54. Most patients were married, but there were 1 divorced patient and 2 singles. Moreover, 66% of the participants had only a high school education, while 22% had a Bachelor's degree. The mean length of the stay was 4.28 days \pm 7.8. The majority of the patients were not transferred to another unit or to a critical care bed.

The percentages of non-transferred to another unit or to a critical care bed are 86% and 88%, respectively. There was no significant difference between the 2 groups' characteristics.

Findings/Results

Main Outcome

The questionnaire was evaluated using Cronbach's α test with a high-reliability value of 0.703. The Kruskal-Wallis sample test in terms of mean ranking, and the *P* value was used to measure all the items and the collective mean of each of them in the questionnaire. Table 2 shows the mean ranking and the *P* value for each questionnaire item according to the nurse's language.

Secondary Outcome

Statement 7 (Q7): "I am anxious about what is going to happen to me" collected a mean of 28.58 for the Non-Arabic-speaking group and 20.03 for the Arabic-speaking group

(*P* = .032). Statement 8 (Q8): "I am anxious about whether my health will improve or not" collected a mean of 28.45 for the Non-Arabic-speaking group and 20.25 for the Arabic-speaking group (*P* = .041). Statement 9 (Q9): "Medical practices scare me because I do not understand them" collected a mean of 28.08 for the Non-Arabic-speaking group and 20.92 for the Arabic-speaking group (*P* = .08). Statement 10 (Q10): "I am afraid of losing my life" collected a mean of 29.23 for the Non-Arabic-speaking group and 18.86 for the Arabic-speaking group (*P* = .009). The collective mean for the anxiety domain statements was 28.55 for the Non-Arabic-speaking group and 20.08 for the Arabic-speaking group (*P* = .041).

The Non-Arabic group expresses a stronger agreement, which reflects a higher level of anxiety in the anxiety assessment statements with a significant *P* value for all items. The association test showed significantly less anxiety in Arabic-speaking group by 49.4%, 47.6%, 37.1%, 61.4%, and 43.4% for the questions Q7, Q8, Q9, Q10, and anxiety mean, respectively.

Discussion

There is limited literature that focuses on language barriers for native Arabic patients and non-native health care providers in Saudi hospitals. To the author's knowledge, this is the first study to explore the correlation between anxiety level and nurses' language. The study conducted a survey on admitted patients undergoing a procedure, which included Arabic-speaking patients who do not speak English or the nurse's language. All the participants took the survey post-procedure after their conditions were stabilized, and they were planned to be discharged. There was a significant increase of anxiety in the patients who were treated by non-Arabic-speaking nurses, according to the assessment questionnaire. The ratio of non-Arabic-speaking nurses is higher than the Arabic-speaking nurses compared to the percentage of non-Arabic-speaking employees, which is 86%. The participants' responses significantly show that language barriers cause anxiety about their condition and cause fear of losing their life. The patients didn't report any difference in the language barrier, which reflects the lack of association between the knowledge of individual health status and the nurses' language. However, this finding reinforces that anxiety is related on a larger scale to the different languages used between nurses and patients rather than other domains of the questionnaire.

Understanding the patient's language by nurses in health care is vital because miscommunication may lead to negative outcomes, including increased stress and anxiety to the patient. The study's implication is about the importance of planning an excellent education of teaching Arabic for nurses so that they get able to communicate with patients and understand their needs.

Table 2. The Mean Ranking and P Value for Each Questionnaire Item According to the Nurse's Language.

For the remaining questionnaire domains, there was no significant difference between both groups			
	Language	Mean rank	P value
q1	Non-Arabic	26.44	.243
	Arabic	23.83	
q2	Non-Arabic	25.63	.876
	Arabic	25.28	
q3	Non-Arabic	26.44	.243
	Arabic	23.83	
q4	Non-Arabic	26.44	.243
	Arabic	23.83	
q5	Non-Arabic	26.44	.243
	Arabic	23.83	
q6	Non-Arabic	25.63	.876
	Arabic	25.28	
Attention mean	Non-Arabic	25.97	.615
	Arabic	24.67	
q7	Non-Arabic	28.58	.032
	Arabic	20.03	
q8	Non-Arabic	28.45	.041
	Arabic	20.25	
q9	Non-Arabic	28.08	.08
	Arabic	20.92	
q10	Non-Arabic	29.23	.009
	Arabic	18.86	
Anxiety mean	Non-Arabic	28.55	.041
	Arabic	20.08	
q11	Non-Arabic	26.16	.451
	Arabic	24.33	
q12	Non-Arabic	26.44	.341
	Arabic	23.83	
q13	Non-Arabic	26.20	.420
	Arabic	24.25	
Informed mean	Non-Arabic	26.20	.420
	Arabic	24.25	
q14	Non-Arabic	26.11	.598
	Arabic	24.42	
q15	Non-Arabic	26.77	.240
	Arabic	23.25	
q16	Non-Arabic	25.66	.846
	Arabic	25.22	
q17	Non-Arabic	25.03	.615
	Arabic	26.33	
q18	Non-Arabic	26.05	.707
	Arabic	24.53	
q19	Non-Arabic	25.67	.861
	Arabic	25.19	
q20	Non-Arabic	27.08	.232
	Arabic	22.69	
Barrier mean	Non-Arabic	27.56	.074
	Arabic	21.83	

Conclusion

The communication between nurses and patients is part of the quality health care. However, the results of this study have shown that anxiety increases when there is a language barrier from nurses, which could affect the quality of care

delivery at SBCC. More randomized controlled studies are needed to reach a reliable conclusion before the authorities at SBCC impose removing language barriers to promote effective therapeutic communication.

Authors' Note

Ethical approval was obtained from the ethical committee at Saud Al-Babtain Cardiac Centre (SBCC) in March 11, 2019, IRB reference number: IRB-2019-02. The research was conducted in accordance with the Helsinki Declaration. There is no harm attributed to participation in this study as well as no direct benefit or financial compensation. Selected participants was conscious, oriented, non-sedated, and able to read the research information. The informed consent was obtained from each patient where the purpose of the study was explained in a simple language. The right to withdrawn from participation was guaranteed at any stage of the study. The author confirm that he have read and understood the information about the project as provided in the Participant Information Sheet dated. The author confirm that that he have had the opportunity to ask questions and the researcher has answered any questions about the study to my satisfaction. The author understand that my participation is voluntary and that he am free to withdraw from the project at any time, without having to give a reason and without any consequences. The author understand that he can withdraw my data from the study at any time. The author understand that any information recorded in the investigation will remain confidential and no information that identifies me will be made publicly available. The author consent to use of the data in research, publications, sharing and archiving as explained in the Participant Information Sheet.


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ORCID iDs

Jassem Almuallem  <https://orcid.org/0000-0003-1765-074X>

Ahmed AlFaraj  <https://orcid.org/0000-0001-8799-1633>

Supplemental Material

Supplemental material for this article is available online.

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Author Biographies

Jassem Almualem is a senior nurse at Cardiac Surgery Intensive Care Unit, Saud Albabtain, Dammam, Saudi Arabia.

Amal Darwish is an assistant professor in Optometry Department at the King Saud University, Riyadh, Saudi Arabia.

Ahmed Alfaraj is an anesthesia senior registrar in Anesthesia department at the King Fahad specialist Hospital, Dammam, Saudi Arabia.