Design a Valid and Reliable Survey for the Communication Skills Assessment of the Pharmacists and Pharmacy Students in Iran

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ARTICLE INFO

ABSTRACT

Background: Several essential roles defined for pharmacists which the important skills must possess in support of their roles. One of them is the essential ability, knowledge, and confident for the interactive and appropriate communication with other health professionals and the public. According to the importance of communication skills, there is a need to evaluation this ability in the pharmacist, and pharmacy students.

Methods: The criteria of the communication skills assessment extracted from the "communication skills in pharmacy practice" book and the health professional educations and investigations with the focus on communication skills in pharmacy practice. Then the content validity ration (CVR) and the content validity index (CVI) were evaluated for assessing the necessity, relevancy, clarity, and simplicity. In addition, the reliability analysis was carried out for assessing of the internal consistency by the calculation of Cronbach's alpha. The data were analyzed by using the Statistical Package for Social Sciences (SPSS) version 16.

Results: The finally valid and reliable survey of the communication skills assessment of the pharmacist and pharmacy students have 15 items, which include the verbal and non-verbal skills such as greeting with patients, speaking clearly, listening to what patient had to say, the professional appearance, and clear writing medication orders.

Conclusion: Communication skills in pharmacy practice can be a critical ability for the development of the dealing with patients, physicians, and other health care professionals and lead to improvement of the quality health care delivery.

J Pharm Care 2017; 5(1-2): 7-10.

Introduction

Several essential roles defined for pharmacists and they should have special skills and competencies to support their role in society (1, 2). One of them is the essential

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ability, knowledge, and confident for the interactive and appropriate communication with others (3). Communication skill is a critical practice for pharmacist for the improving the dealing with patients, physicians, and other health care professionals (3, 4). The elements of communication skills include verbal and none-verbal components. Several studies described none-verbal components is more important and powerful than verbal in the interpersonal communication (1-3). Non-verbal

communication has several important elements, which include kinesics, proxemics, environmental and distracting factors. The component of verbal communication includes oral communication, listening, and writing skills (2, 5).

The effective communication can improve significantly transferring the meaning of messages between pharmacist and others, and lead to improve drug therapy monitoring, and information transmission to the patients (2, 6, 7). On the other hand, several barriers in the communication process cause the plague in the communication, therefore we should become more aware these barriers and manage them (2, 8).

Considering the importance of communication skills, there is a need to evaluation this capability in the pharmacist, and pharmacy students and it can be helpful for education and professional practice evaluation. (9-12). Since the different countries have different culture, each country should define the specific criteria for assessing the behavior and practice.

Finally, we decided to design the questionnaire as the standard tool for the assessment of communication skills based on the communication skills criteria, culture, conditions and available facilities in Iran, which this questionnaire includes verbal and non-verbal components of communication skills.

Methods

The list of potential assessment criteria was collected from the elements of communication skills based on "communication skills in pharmacy practice" book and literature review of the health professional education with the focus on communication skills (2, 8, 13). These criteria involve all of the elements of verbal and non-verbal skills.

The initial assessment instrument was prepared as the 28-item questionnaire. The validity and reliability of survey were asses by specific tests. Ratings of the criteria were made on a 5-point equal-interval rating scale, ranging from 1= Not, 2=Fair, 3= Moderate, 4= Good, 5= Perfect, based on the Likert scale. We initially decided to use the 7- point Likert scale or 9-point RAND method (13), but these criteria design on the practical function and very high point for several items such as eye contact were happened together with the negative point (2), and it causes errors in the analyzing results.

The validity of survey was asses by Content validity ratio (CVR) and Content validity index (CVI) using a sample consist of 21 randomly selected professors who were actively involved in the teaching and assessment of communication skills (8, 9). CVR was calculated for indication of the relevancy by the analyzing the response of professors. These respond defined as "essential," "useful, but not essential," or "not necessary". For measuring CVI Members were asked to rate each item involve relevancy, clarity, and simplicity, which these were on a Likert scale from 1 to 4, for example, "it's simple",

"Relatively simple", "It is simple but requires correction", and "It's not simple" (9, 14, 15). The reliability test of survey involves assessing the communication skills with the same instruments to the same groups of including 40 students who they were passing the clerkship course's session, on two different times with two- four week intervals. Cronbach's alpha was used for assessing the internal consistency reliability (14, 15).

Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 16. The 0.49 level of CVR was used as a satisfactory cutoff measure for statistical significance, and the acceptable lower limit for CVI value The significant lower limit of Cronbach's alpha was defined 0.79 and 0.7, respectively (16).

Results

In response to e-mail surveys to 21 selected professors who involved in teaching communication skills we received, 16 surveys have been answered. Then, we analyzed CVR and CVI content via the acceptable lower limit 0.49 and 0.79, respectively. In addition, respondents mentioned the suggestion for improvement of the assessment tools of the communication skills and described concerns about a lack of consent of criteria for assessing communication skills across different times. The results of data analysis for CVI and CVR demonstrated in table 1. The obtained survey includes 19 questions with the verbal and non-verbal skills based on the professors' suggestions. Consensus for reliability was also achieved with the evaluation of data was collected from assessing the pharmacy students in two- four week intervals. After analysis with SPSS and the calculation of Cronbach's alpha for questions, numbers 19, 20, 23 and 24 based on Table 1, eliminated. Finally, the valid and reliable tool for communication skills assessment of the pharmacists and pharmacy students design as a 15-item survey (Table 2).

Discussion

Effective communication skills are essential for improvement of the quality health care delivery in pharmacy; therefore pharmacist can increase the communication skills with patients, physicians, and other health care professionals. Several studies described the patient simulation is one of the important method for improvement this practice, therefore focus on the behavior of practicing pharmacists is more important than the theoretical educations (3, 5, 17). In the other words, the evaluation of pharmacists' practice in pharmacies is essential and lecture-based education and theoretical discussions aren't efficient for corrective feedback in shaping communication behavior of pharmacists. Carole and colleagues described the conference convening for both teaching and assessment of communication skills in pharmacy education can use as the guide for the development of the pharmacists' behavior and practice (8).

Table 1. The results of data analysis for Content validity index and Content validity ratio.

No.		CVR	CVI
1	Did the pharmacist introduce yourself to the patient?	0.125	0.81
2	Did the pharmacist salute the patient?	0.6875	0.875
3	Did the pharmacist read the patient's name and call them with their name?	0.625	0.875
4	Did the pharmacist establish eye contact with the patient?	0.81	0.81
5	Did the pharmacist explain the goal of conversation and process?	0.06	0.75
6	Did the pharmacist speak clearly?	1	0.87
7	Did the pharmacist use words that the patients could understand?	0.87	1
8	Did the pharmacist treat the patients with courtesy and respect?	1	1
9	Did the pharmacist observe the confidentiality to protect the patient's secrets?	0.3125	0.75
10	Did the pharmacist check whether the patient understood what had been told?	1	1
11	Did the pharmacist describe the causes of discontinuing drugs for patients?	0.5	0.62
12	Did the pharmacist give the patient the opportunity to talk and question?	0.75	1
13	Did the pharmacist interrupt the patient's talk?	0.68	1
14	Did the pharmacist listen to what patient had to say?	1	1
15	Did the pharmacist check the history of drug allergy?	0.5	0.62
16	Did the pharmacist answer patient's questions satisfactorily?	0.56	0.87
17	Did the pharmacist convince patients by creating feelings and fears in the event of failure?	0.18	0.62
18	Did the pharmacist's questions have illegal problems?	0.37	0.62
19	Did the pharmacist explain recommendation for all of the drugs?	0.56	1
20	Did the pharmacist talk a lot of time with the patients?	0.56	0.87
21	Did the pharmacist have a desire to hear the problems' patients?	0.12	0.687
22	Did the pharmacist appear confident whilst conducting the discussion?	0.5	1
23	Did the pharmacist observe the required distance with the patient?	0.5	1
24	Did the pharmacist write the same things while presenting recommendations?	0.5	0.87
25	Did the pharmacist write the legible and clear labels on medications?	0.56	1
26	Did the pharmacist have the introducer label for attachment to his (her) clothes?	0.12	1
27	Did the pharmacist have the professional appearance?	1	1
28	How do you assess the communication skills' pharmacist with the patient?	0.62	1

Table 2. The valid and reliable survey for assessing the communication skills of pharmacists and pharmacy students.

1.	Did the pharmacist salute the patient?
2.	Did the pharmacist read the patient's name and call them with their name?
3.	Did the pharmacist establish eye contact with the patient?
4.	Did the pharmacist speak clearly?
5.	Did the pharmacist use words that the patients could understand?
6.	Did the pharmacist treat the patients with courtesy and respect?
7.	Did the pharmacist check whether the patient understood what had been told?
8.	Did the pharmacist give the patient the opportunity to talk and question?
9.	Did the pharmacist interrupt the patient's talk?
10.	Did the pharmacist listen to what patient had to say?
11.	Did the pharmacist answer patient's questions satisfactorily?
12.	Did the pharmacist appear confident whilst conducting the discussion?
13.	Did the pharmacist write the legible and clear labels on medications?
14.	Did the pharmacist have the professional appearance?
15.	How do you assess the communication skills' pharmacist with the patient?

Considering the different culture between countries, each country should define the specific criteria for assessing the behavior and practice. The current investigation provided the valid and reliable survey based on the communication skills criteria and with considering the culture, conditions and available facilities in Iran.

Finally, we suggest the assessment programs should be held in the different cities in Iran in order to the need assessment of practical education for pharmacists and pharmacy students.

In conclusion, communication skills in pharmacy practice can be a critical ability for the development of the dealing with patients, physicians, and other health care professionals and lead to more effective health care services for patients.

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