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Theory Based Factors Related to Perceptions of Professional Commitment among Pharmacy Students in west of Iran

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ABSTRACT

This cross-sectional study was conducted on 103 pharmacy students in Kermanshah University of medical sciences in the west of Iran, during 2014. Participants were randomly selected to participate voluntarily in the study. Participants filled out a self-administered questionnaire including the theory of planned behavior components. Data were analyzed by SPSS version 21 using bivariate correlations, t-test, and linear regression statistical tests at 95% significant level. The mean age of respondents was 22.3 years [95% CI: 21.9, 22.6], ranged from 20 to 28 years. The mean score of attitude, subjective norms, perceived behavioral control, and professional commitment were 53.27, 19.23, 18.69, and 33.80, respectively. The results showed that professional commitment was correlated with the positive attitude (r=0.506) and subjective norms (r=0.365), and perceived behavioral control (r=-0.213). Our findings showed the three predictor variables of (1) attitude, (2) subjective norms, and (3) perceived behavioral control accounted for 26% of the variation in professional commitment among pharmacy students. In addition, attitude toward professional commitment was the most influential predictor on perceptions of professional commitment.

Key words: Pharmacy, Professional Commitment, Attitude, Kermanshah

1. INTRODUCTION

Pharmacists have several responsibilities due to their professional role; according to the reports from American pharmacology universities, pharmacists are responsible for the quality of delivered medicines, making sure of the proper use of the medicine by the patient and training the patients about the medicine (1). It is very important that pharmacists believe in their responsibilities when they deliver medicine, though it is even more important to recognize that their responsibility is beyond medicine delivery; nowadays, pharmacology generally focuses on patient centered care. In this regard, pharmacists are considered as the most important part of health system who direct patients to use medicine correctly so they play an important role in patient's treatment (2). Therefore, valid standards were regularized by Accreditation Council for Pharmacy Education (ACPE) which focused on pharmacology department attempts to train pharmacists to create patients care; one of these commitments was training students with essential abilities to take care of patients visiting pharmacists, including medicine treatment management, improving pharmacy education and participation in society, pursuit research and other scientific activities. Professional pharmacy needs knowledgeable and proficient individuals to create medicine controls; on the other hand, medicine control requires students with high levels of commitment to the job

(1). Professional commitment is a mechanism which creates fixed and stable behavior in human (3). Chouh et al. defined professional commitment as a strong belief and acceptance of professional values. Having the tendency to be highly active to improve the profession and to be a professional (4). Nowadays, professional commitment in medical field has been considered important all around the world (5). Generally, it has been defined as a set of behaviors which create confidence and trust in interactions between doctors and patients (6). Making use of evaluation, educators could recognize the progress of professional commitment among college students and, also, make sure of their educational programs' success (7). It should be noted that having knowledge about on effective factors of professional commitment could help program planners to plan educational intervention to increase professional commitment among college students; furthermore, human behavior is the reflect of various factors and it seems essential to know the casual network to affect operative factors on behavior which has been investigated for years by behavior specialists; making use of theories could guide the specialists to recognize the effective factors on behavior (8). In this regards, theory of the planned behavior (TPB) is one of the theories which has been widely used in different studies (9-13). The aim of this study was to determined factors related to perceptions of professional commitment among pharmacy students in the Kermanshah University of medical sciences in the west of Iran and theory of planned behavior was applied as theoretical framework.

2. MATERIALS AND METHODS

2.1. Participants and Procedure

This cross-sectional study was conducted on 103 pharmacy students in Kermanshah University of medical sciences in the west of Iran, during 2014. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 103 was estimated. Participants were randomly enrolled into this study; and the volunteers were given the self-questionnaire. Furthermore, 93 participants (90.2%) of the 103 participants signed the consent form and voluntarily agreed to participate in the study.

2.2. Measure

Questionnaire comparised of 44 questions and included three sections:

Part one (background variables); included 9 questions: age (year), sex (male, female), live in dormitory (yes, no), marital status (single, married), father's and mother's educational level (primary school, secondary school, high school, academic education), economic status (very weak, weak, average, good, very good), have a family who is pharmacologist (yes, no), have a work history at pharmacy (yes, no). Part two (professional commitment items); Professional commitment was evaluated by 10-item standard scale (1). Each item was measured on an ordinal 5-point Likert-type scaling (1= strongly disagree, 5= strongly agree). Part three (TPB variables); TPB scale was designed based on a standard questionnaire (1) and included 25 items under three constructs including (a) attitude; (b) subjective norms; and (c) perceived behavioural control. In order to facilitate participants' responses to the items, all items were standardized to a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Table 1 shows some examples of the scale items in our study.

Table 1. Summary and Samples of Scale Items in our Questionnaire using the Cronbach's Alpha

Variable	Number of Items	Cronbach's Alpha in our study	Sample item
Attitude toward professional commitment	15	0.87	Will be able to identify expected outcomes of drug therapy.
Subjective Norm toward professional commitment	5	0.78	Will be expected to dispense medication.
Perceived behaviour control toward professional commitment	5	0.77	Can identify problems a patient has with medications.
Professional commitment	10	0.86	If I had to choose my major again, I would still choose pharmacy.

2.3. Data analysis

Data were analysed by SPSS version 21 using appropriate statistical tests including way bivariate correlations, t-test, and linear regression at 95% significant level.

3. RESULTS AND DISCUSSION

The mean age of respondents was 22.3 years [95% CI: 21.9, 22.6], ranged from 20 to 28 years. More details of demographic characteristics of the participants are shown in Table 2. Furthermore, 26.9% (25/93) of the participants were reported to have a family who is pharmacologist.

Almost, 14 % (13/93) of the participants were had a history work at pharmacy.

Table 2. Distribution of the demographic characteristics among the participants

Variables	*Number*	*Percent*
Sex		
Male	31	33.3
Female	61	65.6
Unanswered	1	1.1
Marital Status		
Married	6	6.5
Single	86	92.5
Unanswered	1	1.1
Living in Dormitory		
Yes	51	54.8
No	42	45.2
Father's educational level		
Primary School (5 Grades)	10	10.8
Secondary School (8 Grades)	11	11.8
High School (12 Grades)	28	30.1
Academic Education	42	45.2
Unanswered	2	2.2
Mother's Educational Level		
Primary School (5 Grades)	16	17.2
Secondary School (8 Grades)	15	16.7
High School (12 Grades)	38	40.9
Academic Education	21	22.6
Unanswered	3	3.2
Economic Status		
Weak	2	2.2
Average	38	40.9
Good	40	43
Very Good	10	10.8
Unanswered	3	3.2

Table 3 shows bivariate associations among the predictor variables, which were all statistically significant at either 0.05 or 0.01 level.

Table 3. Predictor Variables Correlation Matrix

Variables	Scores Range	Mean(SD)	X1	X2	X3
X1. Attitude	15-75	53.27 (9.41)	1		
X2. Subjective Norms	5-25	19.23 (3.63)	0.591**	1	
X3. Perceived Behavioural Control	5-25	18.69 (3.30)	0.301**	0.556**	1
X4. Professional Commitment	10-50	33.80 (7.88)	0.506**	0.365**	0.213*

*P < 0.05 & **P< 0.01

A linear multiple regression analysis was performed to explain the variation in professional commitment, by the attitude, subjective norms and perceived behavior control. As can be seen in Table 4, the three variables were accounted for 26% of the variation in professional commitment among pharmacology students.

Table 4. Predictors of the professional commitment among the participants

Variable	ß	SE ß	ß	T	P-value
Step 1					
Attitude	0.375	0.095	0.448	3.972	0.001
Subjective Norm	0.176	0.281	0.081	0.628	0.532
Perceived Behavioural Control	0.079	0.262	0.033	0.303	0.762
Step 2					
Attitude	0.374	0.094	0.447	3.983	0.001
Subjective Norm	0.218	0.243	0.101	0.897	0.372
Step 3					
Attitude	0.424	0.076	0.506	5.600	0.001
Adjusted R2 = 0.26, F = 31.355, p <0.001					

In Table 5, have been been showed the mean scores accrued of the attitude, subjective norms, perceived behavioral control, and professional commitment among women and men college students.

Table 5. The mean scores accrued of the attitude, subjective norms, perceived behavioral control, and professional commitment among women and men college students

Variables	*Women*	*Men*	***t***	***P-value***
	Mean (SD)	Mean (SD)		
Attitude	54.13 (9.27)	51.83 (9.72)	1.102	0.273
Subjective Norms	19.19 (3.88)	19.45 (3.10)	-0.317	0.752
Perceived Behavioural Control	18.49 (3.28)	19.16 (3.37)	-0.914	0.363
Professional Commitment	34.67 (8.01)	32.35 (7.52)	1.337	0.184

Professional commitment refers to professional worries and concerns, honesty, allegiance, loyalty, communication, beliefs, behaviors, inner satisfaction and professional progress (4). Results from the present study showed that participants mean score for professional commitment was 33.8, which suggested that students under study gained %67.6 of maximum score of professional commitment among pharmacists. Professional commitment roots from individual amenability and interest to the profession. In this regard, Wang et al. reported the direct relationship between professional commitment and continuing the profession (14). Considering the importance of professional commitment, Bishop et al. suggested that improving professional commitment level among medical care personnel associated to improve communication with the patients, taking care of them and to have higher rate of more rate of satisfaction among patients (15). As mentioned earlier, pharmacists, who play a vital role in improving patients, are an important part of health care system. Low professional commitment levels among pharmacists could results in deficiency in health care system and, as the result, hurt patients caring and treatment, which are considered as the most important aim of health care system. Therefore, it is necessary to invite the pharmacy collages to carefully consider the issue and plan to offer efficient functions to improve professional commitment. Furthermore, our findings showed the three predictor variables of (1) attitude, (2) subjective norms,

and (3) perceived behavioral control accounted for 26% of the variation in the outcome measure of the perceptions of professional commitment among participants. In addition, our results of the present study indicated that attitude was the most influential predictor on perceptions of professional commitment among pharmacy students in the west of Iran. In this regards, attitude has been defined as beliefs about the likely outcomes of the behavior and the evaluations of these outcomes (9). Several study reported that attitude plays an important role in predicting (1, 11, 12, 16). Therefore, it is suggested that pharmacists' attitudes to their professional commitment should be considered while planning educational programs to improve professional commitment among pharmacists.

Finally, the findings was showed no significant difference between women and men college students in attitude, subjective norms, perceived behavioral control, and professional commitment; which it indicated the training program must be design for both male and female college students. The present study has several strengths including theory-based planning and also gathering useful information on the field of professional commitment among pharmacy students in Iran. Considering the lack of information about effective factors of professional commitment among pharmacy students in Iran, the present study could be helpful to plan relative educational programs. Though, our study had a few limitations. First, data collection was based on self-reporting, which is usually prone to recall bias. Second, data was collected in only one pharmacy school in the west of Iran, which made it inefficient to generalize the results to other pharmacy students in Iran.

4. CONCLUSION

Overall, our findings showed the attitude was the most influential predictor on perceptions of professional commitment among pharmacy students in the west of Iran. It seems that designing training program to promote positive attitude toward professional commitment among pharmacy students could be usefulness result could be useful in increasing professional commitment among them.

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AUTHORS CONTRIBUTION

This work was carried out in collaboration among all authors.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

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