Bangladeshi Pharmacy students' Knowledge, Perception and Attitudes towards Traditional Medicine Usage

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Research Article

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Abstract

The practice of traditional medicine in Bangladesh has flourished tremendously in the recent years along with that of modern medicine. Different forms of Traditional medicines (TM) are being used in this country as an essential means of treatment of diseases and management of various health problems from time immemorial. The aim of this study is to evaluate the knowledge, attitude, perception and awareness on TM usage of pharmacy students of World University of Bangladesh (WUB). The study was done on 91 pharmacy students covering all year of study (year 1 - 4). The questionnaires (which were article related) were distributed accordingly among four different years of study. Finally 79 pharmacy students completed the survey form (questionnaires). Overall, the final year students responded well in all three sections of knowledge, perception and attitude and obtained the highest mean score in all the categories. Among the three sections, perception showed the highest overall mean (7.18) along with moderate mean for knowledge (5.47) and attitude (5.38).Into the bargain, 39.7% (agree) and 15.5% (strongly agree) of students are interested in taking TM course. Pharmacy students in WUB have a limited knowledge on TM but a positive approach on perception and attitude towards TM.

Introduction

Herbal or botanical medicines as a plant or a part of plant is used for its medicinal, aromatic or cookery qualities produced by subjecting herbal materials to extraction, fractionation, purification, concentration or other physical or biological process [3].The practice of Traditional medicine is deeply rooted in the cultural heritage of Bangladesh and constitutes an integral part of the culture of the people of this country. Different forms of Traditional medicines are being used in this country as an essential means of treatment of diseases and management of various health problems from time immemorial. The practice of traditional medicine in our country has flourished tremendously in the recent years along with that of modern medicine. The concept, practice, type and method of application of traditional medicine vary widely among the different ethnic groups living in different parts of the country according to their culture, living standard, economic status, religious belief and level of education. Thus traditional medicine practice in Bangladesh includes both the most primitive forms of folk medicine (based on cultural habits, superstitions, religious customs and spiritualism) as well as the highly modernized Unani and Ayurvedic systems (based on scientific knowledge and modern pharmaceutical methods and technology). The improved and modified form is based on the following two main traditional systems - the Unani-Tibb or the Graeco-Arab system and the Ayurvedic system which is the old Indian system based on the *Vedas*, the oldest scriptures of the Hindu saints of the Aryan age [4, 5].

Material and Method

This study was conducted among the pharmacy students of world University of Bangladesh. Four years Bachelor of Pharmacy curriculum in this university integrates evidence-based Pharmacognosy course. Which sufficiently support and motivate them to participate towards this aspect, the courses of pharmacognosy contain 'Plants in complimentary and traditional systems of medicine especially different types of alternative systems of treatments (e.g. Ayurvedic, Unani,

Homeopathic medicine), contribution of traditional drugs to modern medicines [7].

A questionnaire was designed to collect information on knowledge, perception, and attitude of WUB pharmacy students towards the use of TM. The survey questions consisted of four sections. The first section consisted of general demographic information. The second section focused on knowledge of the students on traditional medicine and contained a 3-point scale grading as follows: 1 (yes), 2 (no), 3 (not sure). The third section assessed the students' perception towards the use of traditional medicine and using likert scale whereby; 1(strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree). Similarly the fourth section also implemented the likert scale as to examine their attitude towards the traditional medicine. The questionnaires were distributed accordingly into four different years of study (year one to four) which consist of 50 questionnaires for each year. The questionnaire forms were supposed to be filled by total 91 students. However, a total of 79 pharmacy students who answered the survey form comprising of four groups: Year 1 (20 students), Year 2 (25 students), Year 3 (19 students) and Year 4 (15 students). Data collection was done within a 10 class days and the students that had attended the class on that particular day had answered the questionnaires. The data included demographic information and questions about knowledge and attitude of the pharmacy students regarding traditional medicine. The questionnaires were distributed among all the students in class during recess time. They were given enough time to answer the questionnaires related to their knowledge and attitude towards traditional medicine. The questionnaires were fully conducted in English and we explain them Bangla if did not understand properly.

Data analysis:

The data were tabulated using Microsoft Excel and analyzed using Statistical Package for Social Sciences SPSS 17 for Windows. Descriptive statistics such as the percentages and frequencies of demographic data were evaluated. In order to assess knowledge, perception and attitude scores were calculated for each student. Based on the normality test, it is indicated that the distribution was not normal. Chi-square Test also was used to find out the significant differences in the measurement of scores between the genders of students. P<0.05 was used to assess significant differences. The data was then quantified and all of the options given in the other category were identified and collated.

Results

In table-1: From 91 targeted respondents, only 79 (86.81%) students were respondents. A total of 38 (48%) female and 41 (52%) male students were questioned. Most of all of respondents were Bangladeshis (n=79, 100%) and originated from urban areas (n=53, 67%). The respondents involved, include pharmacy students of first year (n=20, 25.31%), second year (n=25, 31.64%), third year (n=19, 24%) and fourth year (n=15, 18.98%) from World University of Bangladesh (WUB). The percentage of respondents currently using traditional medicine is less than the percentage of respondents who had

used traditional medicine before (39.24%, n=31). Nevertheless, there is a huge difference between the percentage of respondents currently using traditional medicine (n=48, 60.7%) and the percentage of respondent's family using TM (n=70, 88.6%). Majority of the response showed that the reason for the respondent using TM is for treatment of ailment (n=33, 41.77%)

Assessment of Knowledge, Perception and Attitude of Pharmacy students on TM Usage:

Respondents were questioned on 10 statements related to knowledge, 10 statements related to perception and 8 statements related to attitude with regards to traditional medicine. In overall, the students had shown positive response on perception and attitude toward TM compared to knowledge where the students had shown slightly poor response. These results are summarized in Table 2,3 and 4, showing the percentage and frequency of responses of 4 groups of pharmacy students regarding knowledge, perception and attitude (item 1 - 28) on TM (n=79). Five-point Likert scores is used for perception and attitude whereas in case of knowledge the five-point is reduced to three-point Likert scale of yes, no and not sure. Likert score of 4 and 5 were combined to denote agreement, while score of 1 and 2 were combined as a measure of disagreement.

Overall, more than 60% of students (n=48) answer 'yes' to the (4) items related to knowledge question of TM. Items (7) some traditional medicine can reduce the bioavailability of conventional drug (n=48, 68.0%),(2) Neem 'is a traditional medicine with (n=71, 89.87%), Kalojira/black seed (*Nigella sativa*) widely used as a traditional medicine n=56, 70.88% respondent responded and (9) Garlic is an example of traditional medicine (n=64, 82%). (16) Traditional medicine involves the use of spirits for treatment purposes (n= 42, 33%), (17) Traditional medicines are mostly discovered by chance (n=30, 37.9%), (18) Traditional medicine should be the last resort only after modern medicine is not effective (n= 30,38%), (19) Female students are more positive on the use traditional medicine compared to male students (n= 51, 64.55%), (23) I will use for traditional medicine even if it is expensive (n=44, 56%), (27) I will use traditional medicines even without practitioner consultation (n=33, 42%), and (26) I will refer my patient to a traditional practitioner in the future (n= 31, 39%).Table 4 shows that, more than 46 respondents are interested in taking traditional medicine course and majority of them are second year student (n=23). Table 6 shows, in comparing between gender on the knowledge score, Chi-Square test shows not significant value (p>0.05). This shows that there was no different

between the levels of knowledge in TM between male and female. It can be determine from this

respondent answered agree on the questions of perception, Among the question were, question no.11,

Table 1: Respondent characteristics (n=79)

Information	Percentage n%	Information	Percentage n%
Gender		**Current usage**	
Male	41 (51.89%)	Yes	48 (60.7%)
Female	38 (48.1%)	No	31 (39.24%)
Age		**Family usage**	
≤20	37 (46.83%)	Yes	70 (88.6%)
21-23	31 (39.24%)	No	9 (11.%39)
≥24	11 (13.92%)		
Academic Year		**Residency**	
1	20 (25.31%)	Urban	53 (67%)
2	25 (31.64%)	Rural	26 (32.91%)
3	19 (24%)		
4	15 (18.98%)		
Race		**Reasons for using Traditional Medicine**	
Bangladeshi	79(100%)	Treatment of ailment	43(54.43%)
Muslim	66 (83.54%)	Prevention of ailment	15 (18.98%)
Hindus	13 (16.45%)	General well being	21 (26.58%)
Usage history		**Traditional Medicine usage**	
Yes	70 (88.6%)	Bangladeshi	79(100%)
No	9 (11.39%)		

research that the students who have history of using TM shows $p<0.05$ in knowledge and perception score. Only attitude shows p value less than 0.05 which mean that there was significant different between usage histories of TM on attitude. Respondents who have history of using TM had higher mean and median attitude's score (5.54, 5.00) than student who never take TM before (Table 8). In table 5: majority of respondent interested in taking traditional medicine course (item 21) among 79 respondents (n=46, 58.22%, CI: 55.56-63.1%) agreement with the items (21), whereas only (n=8, 1%, CI*:1.34-13.34%) were not. Items (21), it is completely correlated with family usage (n=70, 88.6%)

Median score for knowledge, perception and attitude between academic years:

Standard statistical analysis showed significant difference $(p<0.05)$ amongst the four groups of pharmacy students (Table 7) for item 1 – 20 (Table 2 and 3) indicating that there was significant difference in knowledge and perception between academic year of pharmacy students related to TM. However, this analysis showed that, there was no significant difference $(p>0.05)$ amongst the four groups of WUB pharmacy students but for items 21 – 28 (Table 4) indicating that there was no significant difference in attitude between academic year of pharmacy students related to TM.

Discussion

Our research's results shows that the reason of the respondent in using TM is for the treatment purposes (n= 43, 54.43%) rather than for the general wellbeing (n= 21, 26.54%) and prevention (n= 15, 18.9%).This reason can also be correlated with the frequency and the percentage of

Traditional medicine are known to be effective in treating disease since long time ago, (year 1, n=13, 16.4%) (Year 2, n=23, 29.1%) (Year 3, n=28, 36%) (Year 4, n=24, 30.37%), question no.15, Traditional medicine can be used as an option and still be considered safe for medication, (year 1, n=16, 21%) (Year 2, n=29, 64.4%) (Year 3, n=17, 21.51%) (Year 4, n=19, 46.3%), question no. 20, Traditional medicine are useful as alternative therapies to conventional medicine, (year 1, n=30, 60%) (Year 2, n=22, 48.9%) (Year 3, n=29, 60.4%) (Year 4, n=12, 15.18%) In reference to the questions from perception section; (13) people believe that traditional medicines are less harmful than conventional medicines and (15) Traditional medicines can be used as an option and still be considered safe for medication, either the students are TM users or not, most of them have positive perception on the safety and efficacies of TM for general health of patients. Majority of all years agree with the (2) Neem 'is a traditional medicine with (n=17, 21.5%) from year 1, n=21, 26.58% from year 2, n=14, 17.9% from year 3, and n=19, 24.1% from year 4. Neem oil is not used only for cooking purposes. In Bangladesh, it is used for preparing cosmetics (soap, hair products, body hygiene creams, hand creams) and in Ayurvedic, Unani and folklore traditional medicine, in the treatment of a wide range of afflictions.

Table 2: Knowledge of the pharmacy students towards TM (n=79)

antitumoral and antioxidant features [1].(10)Turmeric

No.	Questions	Year	Yes	No	Not sure
1	People often take herbal supplements to improve their health or to help them stay healthy	1	6 (7.59%)	3 (3.80%)	11 (13.9%)
		2	1 (1.27%)	3 (3.80%)	21 (26.6%)
		3	4 (5.06%)	5 (6.33%)	10 (12.7%)
		4	4 (5.06%)	4 (5.06%)	7 (8.86%)
2	Neem.(*Azadirachta indica*)can be categorized as traditional medicine	1	16 (20.3%)	3 (3.80%)	1 (1.27%)
		2	18 (22.8%)	3 (3.80%)	4 (5.06%)
		3	18 (22.8%)	1 (1.27%)	0 (0.0%)
		4	13 (16.5%)	1 (1.27%)	1 (1.27%)
3	Kalojira/black seed (*Nigella sativa*)wide used as a traditional medicine	1	17 (21.5%)	1 (1.27%)	2 (2.53%)
		2	14 (17.7%)	0 (0.0%)	11 (13.9%)
		3	9 (11.4%)	3 (3.80%)	7 (8.86%)
		4	9 (11.4%)	2 (2.53%)	4 (5.06%)
4	Some of the Chinese herbs (traditional medicine) can cause chronic renal failure.	1	13 (16.5%)	3 (3.80%)	4 (5.06%)
		2	9 (11.4%)	0 (0%)	16 (20.3%)
		3	10 (12.7%)	2 (2.53%)	3 (3.80%)
		4	9 (11.4%)	1 (1.27%)	5 (6.33%)
5	Diabetic patient is encouraged to take alternative medicine concomitantly with the conventional medicine.	1	9 (11.4%)	1 (1.27%)	10 (12.7%)
		2	10 (12.7%)	1 (1.27%)	14 (17.7%)
		3	10 (12.7%)	1 (1.27%)	8 (10.1%)
		4	7 (8.86%)	1 (1.27%)	7 (8.86%)
6	Some traditional medicine can reduce the bioavailability of conventional drug.	1	7 (8.86%)	3 (3.80%)	10 (12.7%)
		2	10 (12.7%)	1 (1.27%)	14 (17.7%)
		3	12 (15.2%)	0 (0%)	7 (8.86%)
		4	18 (22.8%)	0 (0%)	2 (2.53%)
7	TM is used because it is safe and has few side effects.	1	5 (6.33%)	5 (6.33%)	10 (12.7%)
		2	1 (1.27%)	2 (2.53%)	22 (27.8%)
		3	9 (11.4%)	3 (3.80%)	7 (8.86%)
		4	9 (11.4%)	2 (2.53%)	4 (5.04%)
8	Traditional medicine can be used for all ages safely.	1	17 (21.5%)	1 (1.27%)	2 (2.53%)
		2	14 (17.7%)	0(0.0%)	11 (13.9%)
		3	9 (11.4%)	3 (3.80%)	7 (8.86%)
		4	9 (11.4%)	2 (2.53%)	4 (5.06%)
9	Garlic (*Allium Sativum*) is widely used as a TM In Bangladesh	1	9(11.4%)	6(7.59%)	5(6.33%)
		2	1(1.27%)	5(6.33%)	19(24.1%)
		3	9(11.4%)	1(1.27%)	9(11.4%)
		4	13(16.5%)	1(1.27%)	1(1.27%)
10.	Turmeric(*curcuma longa*) is also widely used as a TM	1	8 (10%)	3(4%)	9 (12%)
		2	15 (18.98%)	1(1.26%)	9 (9%)
		3	10 12.65(%)	1(1.26%)	8 (10.1%)
		4	12 (15.18%)	1(1.26%)	2 (2.53%)

The most frequently reported indications in ancient Ayurvedic writings are skin diseases, inflammations and fevers, and more recently rheumatic disorders, insect repellent and insecticide effects [6]. A high although varying percentage of students thought that (9) garlic(curcuma longa) is used as a traditional medicine. The highest score was from final year students (92.7%), followed by third year (81.2%), second year (77.8%) and first year (76%). Garlic has been extensively used worldwide for centuries, especially in the Far East. Garlic's medicinal characteristics are prevention of cardiovascular diseases, regulating blood pressure, lowering blood sugar and cholesterol levels, effective against bacterial, viral, fungal and parasitic infections, enhancing the immune system and having

is also widely used as a TM (Turmeric-western medicine),in Unani medicine, turmeric has been used for conditions such as liver obstruction and jaundice and has been applied externally for ulcers and inflammation. Roasted turmeric has been used as an ingredient of a preparation used for dysentery [8]. Turmeric has also been used in tooth powder or paste. Kalojira/black seed (Nigella sativa) widely used as a traditional medicine n=56, 70.88% respondent responded. Because the Black Seed is an excellent herb with many benefits and uses, especially when it comes to maintaining a strong and healthy immune system [2].

Table 3: Perception of the pharmacy students towards TM (n=79)

No.	Questions	Year	Frequency (percentage)				
			Strongly disagree	Disagree	Neutral	Agree	Strongly agree
11	Traditional medicines are known to be effective in treating many diseases since long time ago.	1	0	1(1.27%)	1 (1.27%)	10 (12.7%)	8 (10.1%)
		2		0(0%)	1 (1.27%)	14 (17.7%)	10 (12.7%)
		3		1(1.27%)	10 (12.7%)	7 (8.86%)	1 (1.27%)
		4		0(0%)	5 (6.33%)	8 (10.1%)	2 (2.53%)
12	Local people tend to use traditional medicines because of belief rather than its effectiveness.	1	0	5(6.33%)	5 (6.33%)	5 (6.33%)	5 (6.33%)
		2		3(3.80%)	8(10.1%)	9 (11.4%)	5 (6.33%)
		3		1(1.27%)	4 (5.06%)	11 (13.9%)	3 (3.80%)
		4		0(0%)	7 (8.86%)	6 (7.59%)	12 (15.2%)
13	People believe that traditional medicines are less harmful than conventional medicine.	1	2 (2.53%)	3(3.80%)	3 (3.80%)	6 (7.59%)	6 (7.59%)
		2	0 (0%)	2(2.53%)	5 (6.33%)	10 (12.7%)	8 (10.1%)
		3	1 (1.27%)	2(2.53%)	5 (6.33%)	10 (12.7%)	3 (3.80%)
		4	0 (0%)	2(2.53%)	3 (3.80%)	5 (6.33%)	5 (6.33%)
14	Traditional medicines are no longer important in this modern era due to the development of modern medicine.	1	0	1(1.27%)	1 (1.27%)	10 (12.7%)	(27.8%)
		2		0(0%)	1 (1.27%)	14 (17.7%)	10 (12.7%)
		3		1(1.27%)	10 (12.7%)	7 (8.86%)	1 (1.27%)
		4		0(0%)	5 (6.33%)	8 (10.1%)	2 (2.53%)
15	Traditional medicine can be used as an option and still be considered safe for medication.	1	2 (2.53%)	3(3.80%)	3 (3.80%)	6 (7.59%)	6 (7.59%)
		2	0 (0%)	2(2.53%)	5 (6.33%)	10 (12.7%)	8 (10.1%)
		3	1 (1.27%)	2(2.53%)	5 (6.33%)	10 (12.7%)	3 (3.80%)
		4	0 (0%)	2(2.53%)	3 (3.80%)	5 (6.33%)	5 (6.33%)
16	Traditional medicine involves the use of spirits for treatment purposes.	1	4 (5.06%)	7(8.86%)	5 (6.33%)	4 (5.06%)	0 (0%)
		2	5 (6.33%)	7 (8.86%)	10 (12.7%)	2 (2.53%)	1 (1.27%)
		3	4 (5.06%)	6 (7.59%)	5 (6.33%)	4 (5.06%)	0 (0%)
		4	8 (10.1%)	2 (2.53%)	3 (3.80%)	2 (2.53%)	0 (0%)
17	Traditional medicines are mostly discovered by chance	1	0	5(6.33%)	5 (6.33%)	5 (6.33%)	5 (6.33%)
		2		3(3.80%)	8(10.1%)	9 (11.4%)	5 (6.33%)
		3		1(1.27%)	4 (5.06%)	11 (13.9%)	3 (3.80%)
		4		0(0%)	7 (8.86%)	6 (7.59%)	12 (15.2%)
18	Traditional medicine should be the last resort only after modern medicine is not effective.	1	4 (5.06%)	7(8.86%)	5 (6.33%)	4 (5.06%)	0 (0%)
		2	5 (6.33%)	7 (8.86%)	10 (12.7%)	2 (12.7%)	1 (1.27%)
		3	4 (5.06%)	6 (7.59%)	5 (6.33%)	4 (5.06%)	0 (0%)
		4	8 (10.1%)	2 (2.53%)	3 (3.80%)	2 (2.53%)	0 (0%)
19	Female students are more positive on the use traditional medicine compared to male students.	1	1 (1.27%)	4 (5.06%)	7(8.86%)	7 (8.86%)	1 (1.27%)
		2	0 (0%)	4 (5.06%)	10 (12.7%)	9 (11.4%)	2 (2.53%)
		3	1 (1.27%)	5 (6.33%)	8 (10.1%)	5 (6.33%)	1 (1.27%)
		4	0 (0%)	1 (1.27%)	7 (8.86%)	6 (7.59%)	1 (1.27%)
20	Traditional medicines are useful as alternative therapies to conventional medicine.	1	0 (0%)	1 (1.27%)	6 (7.59%)	10 (12.7%)	3 (3.80%)
		2	0 (0%)	2 (2.53%)	10 (12.7%)	10 (12.7%)	3 (3.80%)
		3	1 (1.27%)	2 (2.53%)	4 (5.06%)	10 (12.7%)	2(2.53%)
		4	0(0%)	2 (2.53%)	5 (6.33%)	8 (10.1%)	0(0%)

Table 5: Frequency and percentage of student who are interested in taking TM course (item 21).

	Frequency	Percentage (%) *CI
Strongly disagree	1	31.26 0-7.34%
Disagree	7	8.86 3.12-9.45%
Neutral	25	31.64 27.34-31.14%
Agree	38	48.1 31.56-39.1%
Strongly agree	8	10 7.67-14.89%

CI*: Confidence level interval calculated by standard statistical method at 95% confidence level.

Table-6

Variable	p value	Comment	
Gender Male Female	p >0.05[*]	Retain hypothesis	null

*Chi-square test

Table 7:

Variable	p value	Comment	
Academic year Year 1 Year 2 Year 3 Year 4	Knowledge <0.05[*]	Reject hypothesis	null
	Perception:p <0.05[*]	Reject hypothesis Retain hypothesis	null null
	Attitude: p >0.05[*]		

* Chi-square test

Table 4: Attitude of the pharmacy students towards TM (n=79)

No.	Questions	Year	Frequency (percentage)				
			Strongly disagree	Disagree	Neutral	Agree	Strongly agree
21	I would like to take traditional medicine course.	1	0 (0%)	1 (1.27%)	6 (7.59%)	10 (12.7%)	3 (3.80%)
		2	0 (0%)	2 (2.53%)	10 (12.7%)	10 (12.7%)	3 (3.80%)
		3	1 (1.27%)	2 (2.53%)	4 (5.06%)	10 (12.7%)	2 (2.53%)
		4	0(0%)	2 (2.53%)	5 (6.33%)	8 (10.1%)	0(0%)
22	I would be interested in attending a continuing educational program related to traditional medicine.	1		1(1.27%)	1 (1.27%)	10 (12.7%)	8 (10.1%)
		2	0	0(0%)	1 (1.27%)	14 (17.7%)	10 (12.7%)
		3		1(1.27%)	10 (12.7%)	7 (8.86%)	1 (1.27%)
		4		0(0%)	5 (6.33%)	8 (10.1%)	2 (2.53%)
23	I will choose for traditional medicine even if it is expensive.	1	1 (1.27%)	4 (5.06%)	7(8.86%)	7 (8.86%)	1 (1.27%)
		2	0 (0%)	4 (5.06%)	10 (12.7%)	9 (11.4%)	2 (2.53%)
		3	1 (1.27%)	5 (6.33%)	8 (10.1%)	5 (6.33%)	1 (1.27%)
		4	0 (0%)	1 (1.27%)	7 (8.86%)	6 (7.59%)	1 (1.27%)
24	I will refer to pharmacist for any adverse reaction associated with the usage of traditional medicine.	1		5(6.33%)	5 (6.33%)	5 (6.33%)	5 (6.33%)
		2	0	3(3.80%)	8(10.1%)	9 (11.4%)	5 (6.33%)
		3		1(1.27%)	4 (5.06%)	11 (13.9%)	3 (3.80%)
		4		0(0%)	7 (8.86%)	6 (7.59%)	12 (15.2%)
25	I will refer to physician for any adverse reaction associated with the usage of traditional medicine.	1	4 (5.06%)	7(8.86%)	5 (6.33%)	4 (5.06%)	0 (0%)
		2	5 (6.33%)	7 (8.86%)	10 (12.7%)	2 (2.53%)	1 (1.27%)
		3	4 (5.06%)	6 (7.59%)	5 (6.33%)	4 (5.06%)	0 (0%)
		4	8 (10.1%)	2 (2.53%)	3 (3.80%)	2 (2.53%)	0 (0%)
26	I will advise patients on traditional medicines in the future.	1	2 (2.53%)	3(3.80%)	3 (3.80%)	6 (7.59%)	6 (7.59%)
		2	0 (0%)	2(2.53%)	5 (6.33%)	10 (12.7%)	8 (10.1%)
		3	1 (1.27%)	2(2.53%)	5 (6.33%)	10 (12.7%)	3 (3.80%)
		4	0 (0%)	2(2.53%)	3 (3.80%)	5 (6.33%)	5 (6.33%)
27	I will use traditional medicines even without practitioner consultation.	1	1 (1.27%)	4 (5.06%)	7(8.86%)	7 (8.86%)	1 (1.27%)
		2	0 (0%)	4 (5.06%)	10 (12.7%)	9 (11.4%)	2 (2.53%)
		3	1 (1.27%)	5 (6.33%)	8 (10.1%)	5 (6.33%)	1 (1.27%)
		4	0 (0%)	1 (1.27%)	7 (8.86%)	6 (7.59%)	1 (1.27%)
28	I will refer my patient to a traditional practitioner in the future.	1	4 (5%)	5 (6.32%)	8 (10.13%)	1 (1.2%)	0 (0%)
		2	1 (1.2%)	8 (10.13%)	6 (7.59%)	8 (10.13%)	2 (2.53%)
		3	1 (1.2%)	6 (7.59%)	12 (15.19%)	0 (0%)	0 (0%)
		4	3 (3.7%)	2 (2.53%)	7 (8.86%)	4 (5%)	1 (1.2%)

Table 8: Mean and median of the score for attitude in students usage history on using TM.

Usage history	Mean score	Median score
yes	5.54	5.00
no	4.62	4.00

Conclusion

The pharmacy students of the World University of Bangladesh (WUB) have limited knowledge but positive perception and attitude towards Traditional medicine. The knowledge and perception are affected by the academic year of study as the results had shown that there was a significant different. The fourth year pharmacy students had shown the highest score on knowledge and perception. The reason might be as they had already completed Pharmacognosy, Pharmacology courses and visited different community pharmacy for project work which leads to their enhanced knowledge on traditional medicine usage. The pharmacy students wished to commence TM course in their curriculum which will be their core and integral part of their professional degree.

References

1. Ayaz, e. & alpsoy, h. 2007. Garlic (allium sativum) and traditional medicine]. Türkiye parazitolojii dergisi/türkiye parazitoloji derneği= acta parasitologica turcica/turkish society for parasitology, 31, 145

2. Black Seed (Nigella sativa): A cure for every disease: Islam web. *www.islamweb.net/emainpage/index.php?page=articles&id. 14/03/2010*

3. Fahmy, s. A., abdu, s. & abuelkhair, m. 2010. Pharmacists' attitude, perceptions and knowledge towards the use of herbal products in abu dhabi, united arab emirates. Pharmacy practice, 8, 109-115.

4. Ghani, Abdul (1998), Medicinal Plants of Bangladesh: Chemical Constituents and Uses, Asiatic Society of Bangladesh, Dhaka.

5. Islam, Hakim Hafiz Azizul (1994), Chairman, Board of Unani and Ayurvedic systems

of medicine, Dhaka, Bangladesh. Personal communication.

6. Neem: From Wikipedia, the free encyclopedia, en.wikipedia.org/wiki/Azadirachta_indica

7.Qureshi, Mahmud Shah (editor) (1984), Tribal Culture in Bangladesh, Institute of Bangladesh Studies, Rajshahi University, Bangladesh.

8. Turmeric-western medicine: traditional herbal medicines, *www.kew.org/plant-cultures/plants/turmeric_western_medicine.html*

AUTHORS' CONTRIBUTIONS

Authors contributed equally to all aspects of the study.

PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.