

Perception and attitude of medical doctors in Dhaka, Bangladesh, with regard to Ayurvedic medicine

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ABSTRACT

The World Health Organization (WHO) Traditional Medicine Strategy (2014–2023) aimed to help member states promote the safe and effective use of traditional medicine. While economic conditions have markedly improved in Bangladesh, the country is experiencing significant public health problems. Because of limited medical resources, there is a strong incentive to enhance complementary and alternative medicine usage in Bangladesh. Therefore, this study aimed to confirm the perceptions and attitudes of medical doctors (MDs) in Dhaka, Bangladesh, with regard to Ayurvedic medicine (AM). A total number of 159 MDs in Dhaka were interviewed by face-to-face between February and June 2015. The study revealed that 62.0% of MDs had treated patients with AM and 55.3% believed that AM should be regarded as its own specialty, whereas 39.7% of MDs believed that AM should be part of the conventional medical curriculum and 32.7% thought that AM did not seem scientific. In terms of gender, 45.3% of male MDs agreed or strongly agreed that AM only had a placebo effect. On the other hand, 65.8% of female MDs disagreed or strongly disagreed it. In terms of age, 77.0% of MDs aged 36 or elder (elder MDs) believed they were more likely to recommend AM use and 80.3% of elder MDs believed that the government should encourage more initiatives to promote AM. To enhance AM use, scientifically robust information on the efficacy, safety and scientific basis of AM should be more effectively conveyed to male MDs.

Key Words: Ayurvedic medicine, perception, Bangladesh, attitude, medical doctor

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INTRODUCTION

Based on the concept of the Declaration of Alma-Ata, USSR, on September 6–12, 1978,¹⁾ the recommendation to use complementary and alternative medicine (CAM) has been disseminated worldwide to vigorously enhance public health. To implement this initiative, in October 2013, the World Health Organization (WHO) published the WHO Traditional Medicine Strategy

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(2014–2023),²⁾ which followed the WHO Traditional Medicine Strategy (2002–2005) launched in 2001.³⁾ This strategy aimed to help member states harness the potential contribution of traditional medicine (TM) for health, wellness, and people-centered health care. Furthermore, it aimed to promote the safe and effective use of TM by regulating, researching, and integrating TM products, practitioners, and practice into health systems, where appropriate. Ayurveda, which is related TM, has been practiced for thousands of years in South Asia, is one of the oldest medical systems, and is recognized by the WHO as a medical science.⁴⁾

In Japan, herbal medicine (HM), termed *Kampo*, is not only utilized over-the-counter but also as ethical drugs that are used nationwide and covered by universal health insurance.^{5–8)} Furthermore, the efficacy and safety of HM has been demonstrated in numerous studies.^{9–16)}

Although economic conditions have markedly improved in Bangladesh, the country is experiencing significant difficulties associated with public health issues.^{17–22)} The Ministry of Health and Family Welfare of Bangladesh has adopted various countermeasures to promote the health and welfare of the country.

In Bangladesh, a national policy on TM/CAM was issued in 1995.²³⁾ However, national laws and regulations are still in the development stage. In 1998, a national program was introduced, but national research institutes on TM, CAM, or HMs have not yet been established.

The Directorate General of Drug Administration (DGDA), under jurisdiction of the Ministry of Health and Family Welfare, is the authority for drug regulation in Bangladesh. DGDA supervises and implements all measures associated with drug regulations and conducts all activities associated with import, procurement of raw and packing materials, production and import of finished drugs, export, sales, and pricing, according to the drug laws. In Bangladesh, there are approximately 550 medical plants, of which more than 300 are used as TMs in the country.

In 2011, we conducted a study of how Muslim religious leaders (MRLs) and citizens in Bangladesh perceive AM.^{24,25)} Data obtained from MRLs showed that there was adequate perception, satisfaction, and very positive attitude regarding HM among MRLs and that the mass media had a significant contribution toward its promotion. However, data obtained from citizens showed that scientifically sound information on AM needed to be rigorously collected and promptly conveyed to eliminate skepticism among younger citizens. The results showed that elder citizens had a better impression of AM than younger citizens, especially in terms of adverse drug reactions. Moreover, younger citizens did not receive more benefit from AM than elder citizens. On the other hand, younger citizens did not get more harm from AM than elder citizens. Younger citizens were more satisfied with AM and recommended it to others more, with statistically significant differences. From the viewpoint of gender, more female citizens, as compared to male citizens, thought that those who fear the discomfort of treatment from medical doctors are more likely to use AM.

Because of the limited medical and financial resources, CAM usage should be significantly augmented in Bangladesh. Therefore, this study aimed to assess the perception and attitude of MDs in Dhaka, Bangladesh, with regard to AM. We believe that this study provides support for enhanced AM use including HM in Bangladesh, Asia, and the rest of the world.

MATERIALS AND METHODS

The data in this study were obtained from face-to-face interviews conducted by trained staff in Dhaka between February and June 2015. Four data-collecting staff members, who administered a structured questionnaire, were trained in how to collect data from the respondents. Their interviewing skills were assessed through pretesting of the questionnaire. A total of 159 MDs

were interviewed.

MDs in Dhaka were recruited by the four trained staff members of the research team. Exclusion criteria were not adopted in this study. Subjects were informed that they were free to decline answering any question that they were not comfortable with. Their anonymity was preserved. Verbal informed consent was obtained from each participant before the interview. The content of the questionnaire was developed by our research team. The questionnaire was translated into Bengali and modified for the respondents' understanding before data collection in the field. Furthermore, the questionnaire was also translated into English.

For questions regarding the perception of AM and satisfaction from AM use, an index of "yes" or "no" was applied. For questions regarding attitudes toward AM use, a 5-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree" was applied. Raw data were sent to Nagoya University and analyzed with SPSS version 23.

A χ^2 -test and Mann–Whitney U test were applied. The study protocol was approved on October 23, 2014, by the Ethics Committee of the Graduate School of Medicine, Nagoya University, before data collection (approval number: 2014–0208).

RESULTS

Table 1 shows the demographics of the MD survey respondents in Dhaka. We obtained responses from 159 MDs (86 males and 73 females). A statistically significant gender difference was observed in job status for the MDs. Most male MDs (52.9%) were private/NGO employees and 37.6% were government employees, whereas most female doctors (56.2%) were government employees and 31.5% were private/NGO employees. Although a statistically significant difference was observed in the monthly income according to gender, most male MDs (62.8%) earned 30000–60000 (Taka), whereas most female MDs (52.1%) earned 30000–60000 (Taka).

Table 2 shows the experience of using AM and the perception of whether AM should be used as part of CAM among MDs in Bangladesh. In terms of gender, male MDs received more patients from AM practitioners than female doctors; this indicated a statistically significant difference. In addition, compared to female MDs, male MDs were more likely to consider that AM was not particularly scientific; this indicated a statistically significant difference. In contrast, compared to male MDs, more female MDs believed that AM should be part of the conventional medical curriculum. Female doctors were significantly more likely to state that AM should be regarded as its own specialty, that particular age groups should be treated by AM, that they would recommend AM use, and that the government should have more initiatives to promote AM.

Compared to MDs aged 25–35 years old (younger MDs), MDs aged ≥ 36 years old (elder MDs) were more likely to recommend AM use; this indicated a statistically significant difference. In addition, elder MDs believed that the government should encourage more initiatives to promote AM, compared to younger MDs; this indicated a statistically significant difference.

Table 3 presents the responses concerning attitudes with regard to AM use among MDs in Bangladesh. In terms of gender, there were statistically significant differences in 4 out of 11 items. The 4 items were "the usage of AM threatened public health," "AM only had a placebo effect," "only poor people seemed to use AM," and "people were mostly motivated to use AM through television, radio, and mass media."

A total of 76.7% of female MDs disagreed or strongly disagreed that the usage of AM threatened public health. In contrast, 31.4% of male MDs were undecided. In addition, 65.8% of female MDs disagreed or agreed that AM only had a placebo effect. However, 45.3% of male MDs strongly agreed or agreed with this statement. Furthermore, 56.2% of female MDs disagreed that

Table 1 Demographic data of medical doctors in Dhaka, Bangladesh

		Sex						test ^a
		Male		Female		Total		
		Mean	S.D	Mean	S.D	Mean	S.D	
Age (years)		36.51	6.752	34.81	6.535	35.73	6.687	0.110
Working period as MD (year)		7.15	5.605	5.19	4.904	6.25	5.369	0.023
		n	%	n	%	n	%	
Residence	Urban	61	71.8%	49	67.1%	110	69.6%	0.604
	Rural	24	28.2%	24	32.9%	48	30.4%	
	Total	85	100.0%	73	100.0%	158	100.0%	
Marital status	Married	53	61.6%	43	58.9%	96	60.4%	0.894
	Not married	28	32.6%	25	34.2%	53	33.3%	
	Widow	0	0.0%	1	1.4%	1	0.6%	
	Divorced/Separated	5	5.8%	4	5.5%	9	5.7%	
Total	86	100.0%	73	100.0%	159	100.0%		
Education	MBBS ^b	52	60.5%	54	74.0%	106	66.7%	0.091
	Post graduates	34	39.5%	19	26.0%	53	33.3%	
	Total	86	100.0%	73	100.0%	159	100.0%	
Job status	Government Employee	32	37.6%	41	56.2%	73	46.2%	0.025
	Private/NGO employee	45	52.9%	23	31.5%	68	43.0%	
	Private practice	8	9.4%	9	12.3%	17	10.8%	
	Total	85	100.0%	73	100.0%	158	100.0%	
Monthly income (in Taka ^c)	<30000	9	10.5%	26	35.6%	35	22.0%	<0.000
	30000–60000	54	62.8%	38	52.1%	92	57.9%	
	>60000	23	26.7%	9	12.3%	32	20.1%	
	Total	86	100.0%	73	100.0%	159	100.0%	
Religion	Muslim	62	72.1%	54	77.1%	116	74.4%	0.497
	Hindu	21	24.4%	14	20.0%	35	22.4%	
	Buddhist	1	1.2%	2	2.9%	3	1.9%	
	Christian	2	2.3%	0	0.0%	2	1.3%	
	Total	86	100.0%	70	100.0%	156	100.0%	
Per day patient number	1–9 patients	23	27.4%	21	29.6%	44	28.4%	0.655
	10–19 patients	31	36.9%	18	25.4%	49	31.6%	
	20–29 patients	15	17.9%	14	19.7%	29	18.7%	
	30 or more patients	15	17.9%	18	25.4%	33	21.3%	
	Total	84	100.0%	71	100.0%	155	100.0%	

a: t-test for Age (years) and Working period as MD (year), χ^2 -test for Residence, Marital status, Education, Job status, Religion, Mann-Whitney U-test for Monthly income (in Taka), Per day patient number

b: MBBS: Bachelor of Medicine, Bachelor of Surgery

c: 1USD =70 Taka

Perception of Ayurvedic medicine in Dhaka

Table 2 Satisfaction on AM use among medical doctors in Dhaka, Bangladesh

		Total		Sex				Test	Age				Test ^a
				Male		Female			25–35		36 or elder		
		n	%	n	%	n	%		n	%	n	%	
Have an experience to treat patients with AM	Yes	98	62.0%	49	57.0%	49	68.1%	0.188	56	57.7%	42	68.9%	0.181
	No	60	38.0%	37	43.0%	23	31.9%		41	42.3%	19	31.1%	
	Total	158	100.0%	86	100.0%	72	100.0%		97	100.0%	61	100.0%	
Refer patient to AM practitioner	Yes	9	5.7%	4	4.7%	5	6.8%	0.733	8	8.2%	1	1.6%	0.155
	No	150	94.3%	82	95.3%	68	93.2%		90	91.8%	60	98.4%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
Receive patient from AM practitioner	Yes	110	68.4%	69	80.2%	41	56.2%	0.001	67	68.4%	43	70.5%	0.860
	No	49	30.8%	17	19.8%	32	43.8%		31	31.6%	18	29.5%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
AM should be part of conventional medical curriculum	Yes	62	39.7%	27	31.8%	35	49.3%	0.033	41	41.8%	21	36.2%	0.504
	No	94	60.3%	58	68.2%	36	50.7%		57	58.2%	37	63.8%	
	Total	156	100.0%	85	100.0%	71	100.0%		98	100.0%	58	100.0%	
AM is requested to use as its own specialty	Yes	88	55.3%	40	46.5%	48	65.8%	0.017	57	58.2%	31	50.8%	0.414
	No	71	44.7%	46	53.5%	25	34.2%		41	41.8%	30	49.2%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
AM does not seem scientific	Yes	52	32.7%	35	40.7%	17	23.3%	0.027	36	36.7%	16	26.2%	0.224
	No	107	67.3%	51	59.3%	56	76.7%		62	63.3%	45	73.8%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
Some particular age groups should be treated by AM	Yes	108	67.9%	50	58.1%	58	79.5%	0.006	63	64.3%	45	73.8%	0.227
	No	51	32.1%	36	41.9%	15	20.5%		35	35.7%	16	26.2%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
I will recommend the usage of AM	Yes	103	64.8%	48	55.8%	55	75.3%	0.012	56	57.1%	47	77.0%	0.016
	No	56	35.2%	38	44.2%	18	24.7%		42	42.9%	14	23.0%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
Government should take more initiatives to promote AM	Yes	111	69.8%	54	62.8%	57	78.1%	0.039	62	63.3%	49	80.3%	0.032
	No	48	30.2%	32	37.2%	16	21.9%		36	36.7%	12	19.7%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	

a: χ^2 -test**Table 3** Attitudes of the medical doctors on AM in Dhaka, Bangladesh

		Total		Sex				Test	Age				Test ^a
				Male		Female			25–35		36 or elder		
		n	%	n	%	n	%		n	%	n	%	
The usage of AM threatens public health	Strongly disagree	16	10.1%	6	7.0%	10	13.7%	0.048	3	3.1%	13	21.3%	0.003
	Disagree	90	56.6%	44	51.2%	46	63.0%		59	60.2%	31	50.8%	
	Haven't decided	36	22.6%	27	31.4%	9	12.3%		26	26.5%	10	16.4%	
	Agree	15	9.4%	8	9.3%	7	9.6%		9	9.2%	6	9.8%	
	Strongly agree	2	1.3%	1	1.2%	1	1.4%		1	1.0%	1	1.6%	
	Total	159	100.0%	86	100.0%	73	100.0%		98	100.0%	61	100.0%	
I am discouraged with AM because it is not scientific	Strongly disagree	1	0.6%	0	0.0%	1	1.4%	0.527	1	1.0%	0	0.0%	<0.000
	Disagree	6	3.8%	2	2.4%	4	5.5%		6	6.2%	0	0.0%	
	Haven't decided	29	18.4%	15	17.6%	14	19.2%		25	25.8%	4	6.6%	
	Agree	122	77.2%	68	80.0%	54	74.0%		65	67.0%	57	93.4%	
	Strongly agree	0	0.0%	0	0.0%	0	0.0%		0	0.0%	0	0.0%	
	Total	158	100.0%	85	100.0%	73	100.0%		97	100.0%	61	100.0%	

AM only has Placebo effect	Strongly disagree	8	5.1%	4	4.8%	4	5.5%	0.044	2	2.1%	6	10.0%	0.002
	Disagree	80	51.0%	36	42.9%	44	60.3%		44	45.4%	36	60.0%	
	Haven't decided	11	7.0%	6	7.1%	5	6.8%		9	9.3%	2	3.3%	
	Agree	24	15.3%	12	14.3%	12	16.4%		13	13.4%	11	18.3%	
	Strongly agree	34	21.7%	26	31.0%	8	11.0%		29	29.9%	5	8.3%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
Theories of AM are beneficial to Complementary and alternative medicine (CAM)	Strongly disagree	10	6.4%	5	6.0%	5	6.8%	0.697	8	8.2%	2	3.3%	0.027
	Disagree	44	28.0%	24	28.6%	20	27.4%		27	27.8%	17	28.3%	
	Haven't decided	37	23.6%	23	27.4%	14	19.2%		28	28.9%	9	15.0%	
	Agree	63	40.1%	30	35.7%	33	45.2%		31	32.0%	32	53.3%	
	Strongly agree	3	1.9%	2	2.4%	1	1.4%		3	3.1%	0	0.0%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
CAM has less side-effects	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	0.771	0	0.0%	0	0.0%	<0.000
	Disagree	22	14.0%	13	15.5%	9	12.3%		5	5.2%	17	28.3%	
	Haven't decided	9	5.7%	6	7.1%	3	4.1%		6	6.2%	3	5.0%	
	Agree	115	73.2%	59	70.2%	56	76.7%		75	77.3%	40	66.7%	
	Strongly agree	11	7.0%	6	7.1%	5	6.8%		11	11.3%	0	0.0%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
Conventional medicine has more side-effects	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	0.519	0	0.0%	0	0.0%	0.001
	Disagree	19	12.1%	13	15.5%	6	8.2%		6	6.2%	13	21.7%	
	Haven't decided	3	1.9%	1	1.2%	2	2.7%		1	1.0%	2	3.3%	
	Agree	123	78.3%	63	75.0%	60	82.2%		78	80.4%	45	75.0%	
	Strongly agree	12	7.6%	7	8.3%	5	6.8%		12	12.4%	0	0.0%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
AM stimulates body well	Strongly disagree	1	0.6%	0	0.0%	1	1.4%	0.783	0	0.0%	1	1.7%	0.259
	Disagree	49	31.2%	25	29.8%	24	32.9%		26	26.8%	23	38.3%	
	Haven't decided	42	26.8%	21	25.0%	21	28.8%		28	28.9%	14	23.3%	
	Agree	63	40.1%	37	44.0%	26	35.6%		41	42.3%	22	36.7%	
	Strongly agree	2	1.3%	1	1.2%	1	1.4%		2	2.1%	0	0.0%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
AM should be used for only sexual disorders	Strongly disagree	9	5.7%	5	6.0%	4	5.5%	0.088	9	9.3%	0	0.0%	0.027
	Disagree	69	43.9%	34	40.5%	35	47.9%		38	39.2%	31	51.7%	
	Haven't decided	33	21.0%	24	28.6%	9	12.3%		24	24.7%	9	15.0%	
	Agree	46	29.3%	21	25.0%	25	34.2%		26	26.8%	20	33.3%	
	Strongly agree	0	0.0%	0	0.0%	0	0.0%		0	0.0%	0	0.0%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
AM has no effect on cancer	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	0.132	0	0.0%	0	0.0%	0.005
	Disagree	9	5.7%	5	6.0%	4	5.5%		4	4.1%	5	8.3%	
	Haven't decided	78	49.7%	48	57.1%	30	41.1%		58	59.8%	20	33.3%	
	Agree	69	43.9%	31	36.9%	38	52.1%		35	36.1%	34	56.7%	
	Strongly agree	1	0.6%	0	0.0%	1	1.4%		0	0.0%	1	1.7%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	
Only poor people seems to use AM	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	0.024	0	0.0%	0	0.0%	0.005
	Disagree	75	47.8%	34	40.5%	41	56.2%		39	40.2%	36	60.0%	
	Haven't decided	4	2.5%	3	3.6%	1	1.4%		2	2.1%	2	3.3%	
	Agree	46	29.3%	23	27.4%	23	31.5%		28	28.9%	18	30.0%	
	Strongly agree	32	20.4%	24	28.6%	8	11.0%		28	28.9%	4	6.7%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	

Perception of Ayurvedic medicine in Dhaka

People are mostly motivated to use AM through television, radio and mass media	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	0.042	0	0.0%	0	0.0%	0.008
	Disagree	54	34.4%	24	28.6%	30	41.1%		31	32.0%	23	38.3%	
	Haven't decided	7	4.5%	3	3.6%	4	5.5%		4	4.1%	3	5.0%	
	Agree	64	40.8%	33	39.3%	31	42.5%		34	35.1%	30	50.0%	
	Strongly agree	32	20.4%	24	28.6%	8	11.0%		28	28.9%	4	6.7%	
	Total	157	100.0%	84	100.0%	73	100.0%		97	100.0%	60	100.0%	

a: Mann-Whitney U-test

only poor people seemed to use AM, whereas 56.0% of male MDs strongly agreed or agreed with this statement. On the other hand, 53.5% of female MDs agreed or strongly agreed that people were mostly motivated to use AM through television, radio, and mass media, whereas 67.9% of male MDs agreed or strongly agreed with this statement.

In terms of age, there were statistically significant differences in 10 out of 11 items. The item without a statistically significant difference was "AM stimulated body well." In the following three items, younger MDs harbored more skepticism than elder MDs; 72.1% of elder MDs disagreed or strongly disagreed that the usage of AM threatened public health, whereas 26.5% of younger MDs had not decided it. Although 60.0% and 18.3% of elder MDs disagreed or agreed, respectively, that AM only had a placebo effect, 43.3% of younger MDs strongly agreed or agreed with this statement. In addition, 60.0% and 30.0% of elder MDs disagreed or agreed, respectively, that only the poor seemed to use AM, whereas 57.8% of younger MDs strongly agreed or agreed with this statement. On the other hand, 93.4% of elder MDs agreed that they were discouraged with AM because it was not scientific, while only 67.0% of younger MDs agreed with this statement. Thus, elder MDs harbored more skepticism toward AM compared to younger MDs.

In all, 53.3% of elder MDs agreed that the theories of AM were beneficial to CAM, whereas 32.0% of younger MDs agreed with this statement. Although 66.7% of elder MDs agreed that CAM had fewer side-effects, 88.6% of younger MDs agreed or strongly agreed with this statement. A total of 75.0% of elder MDs agreed that conventional medicine had more side-effects, while 92.8% of younger MDs agreed or strongly agreed with this statement. A total of 51.7% of elder MDs disagreed that AM should be used only for sexual disorders. However, 39.2% and 26.8% of younger MDs disagreed or agreed, respectively, with this statement. A total of 56.7% of elder MDs agreed that AM has no effect on cancer, while 59.8% of younger MDs had not decided it. A total of 50.0% of elder MDs agreed that people were mostly motivated to use AM through television, radio, and mass media, while 64.0% of younger MDs agreed or strongly agreed with this statement.

DISCUSSION

The results of this study reveal that several MDs in Dhaka use AM as a medical resource, but do so while harboring skepticism toward this form of medicine. In addition, the results demonstrate that male MDs harbor more skepticism toward AM than female MDs. Although younger MDs harbor more skepticism toward AM than elder MDs, almost all elder MDs are discouraged with AM because they think it is not scientific. To enhance AM use, information on the efficacy and safety of AM usage should be conveyed more effectively and rigorously to MDs in Dhaka.

Since the results of this study also indicate that MDs recognize the importance of AM use and believe that the division of roles between conventional medicine and AM is important, efforts

must be made to reduce skepticism among MDs in Dhaka in order to motivate increased AM usage. According to our results, MDs believe that there is not enough scientific knowledge about AM, including HM. Thus, more research needs to be conducted to provide a better scientific foundation for AM.

Younger MDs were more likely to agree that CAM has fewer side-effects than conventional medicine. Recently, studies on the efficacy and safety of CAM have been conducted, especially regarding the adverse effects of TM.¹⁴⁻¹⁶⁾ We believe that additional studies on AM, including HM, would be useful to encourage their usage by MDs. Therefore, more comprehensive information on AM, including HM, needs to be provided to MDs in Bangladesh.

In Bangladesh, AM, or related topics on TM, are not included in the medical school curriculum. Only the Ayurvedic Medical College provides a comprehensive curriculum to study Ayurvedic medicine. Therefore, it is one of the very effective ways that AM or any related topic should be included in syllabus of a medical school.

In Japan, Kampo, the traditional Japanese medicine, has been added to the core curriculum of medical schools.²⁶⁾ Kampo medicine has been taught at all 80 medical schools and universities since 2007. Imaizumi *et al.* reported that further development of graduate education and its standardization, as well as the improvement of bedside training, was needed for Kampo education.²⁶⁾ They also mentioned that the establishment of a post-graduate Kampo education system will be crucial in the future.²⁶⁾ In Bangladesh, the establishment of a graduate education system for AM should also be considered.

In addition, the previous studies in Japan revealed that there was a deviation in perception of medical terms between healthcare workers and citizens.²⁷⁻³⁰⁾ Therefore, it is critical to minimize the perception gaps between healthcare workers and patients to ensure that the medical care administered to patients in Bangladesh includes AM.

This study has following limitations. First, since the study was only conducted in Dhaka, the capital city of Bangladesh, our research may not be representative of the whole country. Finally, the sample size was not very large, and thus, may not accurately reflect the attitudes and perceptions of all physicians.

This research should be expanded to other countries in Asia, as well as to other parts of the world, in order to encourage more widespread usage of AM by MDs.

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CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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