Perceptions of Ayurvedic medicine by citizens in Dhaka, Bangladesh

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ABSTRACT

Bangladesh is now facing the public health problems of deficiency of iron and iodine, especially for women. The Ministry of Health and Family Welfare of Bangladesh has implemented strong countermeasures to enhance the health condition of the nation. On the other hand, based on the concept of the Declaration of Alma-Ata, complementary and alternative medicine should be used more vigorously to enhance public health in the world. The usage of complementary and alternative medicine such as ayurvedic medicine (AM) should be increased in Bangladesh. Therefore we conducted the study on perceptions of AM by citizens in Dhaka, Bangladesh in order to promote and enhance the effective usage of AM, including herbal medicines as medical resources, from December 2010 to January 2011. This study showed younger citizens (61.1%) did not get more benefit from AM than elder citizens (48.0%). On the other hand, younger citizens (76.8%) did not get more harm from AM than elder citizens (70.1%). We think that in terms of effectiveness of AM, the younger generation in Dhaka seems to be more skeptical to AM than the elder generation in Dhaka, even though the younger generation are more satisfied with AM than the elder generation. With viewpoint of enhancement of usage of AM in Dhaka, we think that scientifically sound information on AM should be collected rigorously and brought to the citizens vigorously to remove the skeptical feeling of AM from younger citizen in Dhaka. In terms of the effective utilization of limited medical resources, AM should be used appropriately in Bangladesh, Asia and the world.

Key Words: Ayurvedic medicine, perception, Bangladesh, citizen, satisfaction

INTRODUCTION

Ayurvedic medicine (AM) is in number three in position in terms of worldwide popularity. Eighty percent of the world population uses traditional medicine for primary health care. AM derives from plants which contain various phytochemicals and these phytochemicals make relief from disease by removing metabolic toxins from our body, boost up immunity and purify the blood. Many traditional healing herbs and their parts have been shown to have medicinal value and can be used to prevent, alleviate, or cure several human diseases. Presently, there is a resurgence of herbal medicine as people want more control in their personal healthcare.
Bangladesh has approximately 170 million population and is now facing and tackling public health problems such as deficiency of iron and iodine, especially for women, and the contamination of arsenic in drinking water. We examined the frequency of iron and iodine deficiencies and associations of iron and iodine deficiencies with common diseases among 395 under-2 children, 355 adolescent girls, and 263 pregnant women of Bangladesh. Anemia was found in 49.1% of children, 24.8% of adolescent girls, and 44.4% of pregnant women. Prevalence of iodine deficiencies (urinary iodine <100 μg/L) was 38.4% in adolescent girls and 39.4% in pregnant women. The Ministry of Health and Family Welfare of Bangladesh makes strong countermeasures to enhance the health conditions for the nation.

Furthermore, with the viewpoint of disease treatment, a larger contribution of Ayurveda should be focused on, conducted by medical doctors or doctors of AM. Traditional medical practice is still ongoing in Bangladesh. The traditional medical practitioners perform a central role in providing primary healthcare to the rural inhabitants of Bangladesh. There are 86,000 villages in the country and almost every village has one or two traditional practitioners. They are the providers of primary healthcare to village populations in Bangladesh. On the other hand, the Declaration of Alma-Ata of International Conference on Primary Health Care, Alma-Ata, USSR, on 6–12 September 1978 declared that the conference strongly reaffirmed that health, which is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, was a fundamental human right and that the attainment of the highest possible level of health is the most important world-wide social goal whose realization required the action of many other social and economic sectors in addition to the health sector. Based on the concept of the Declaration of Alma-Ata, complementary and alternative medicine (CAM) should be used more vigorously to enhance public health all over the world. Therefore, the purpose of this study is to confirm the perceptions of AM by citizens in Dhaka, Bangladesh. We hope this research will contribute to promoting and enhancing the effective usage of AM, including herbal medicines as medical resources in Bangladesh, Asia, and the world.

MATERIALS AND METHODS

This study was conducted by face-to-face interview by trained staffs in Dhaka, Bangladesh using a structured questionnaire during December 2010 to January 2011. Respondents were 1502 citizens in Dhaka, Bangladesh. The respondents were randomly selected by the trained staffs of the research team of Dhaka, Bangladesh. The research team of Bangladesh initially obtained the name of villages and coded them using digital numbers. The respondents were recruited based on the household unit in the selected villages. The exclusion criteria were not adopted in this study.

The subjects were informed that they were free to decline answering any question with which they were not comfortable. Anonymity of their personal identity was preserved. Written informed consent was obtained from every participant before the interview.

The questionnaire was translated into Bengali and changes were made to make it understandable for the respondents before data collection in the field and back translated into English. To respond the questions of situation and perception of use of AM and Satisfaction on AM use among citizens, an index of “yes” or “no” was applied. For questions of attitudes toward AM use among citizens, a 5-point Likert scale ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” was applied. Raw data was sent to Nagoya University and was analyzed with SPSS version 2.0. χ²-test and U-test were applied. Since this study was not involved in experimental research involving human subjects and also anonymization of personal identity was preserved, the concept of exemption of ethical approval was accepted at that time.
RESULTS

Table 1 shows the demographics of the survey respondents of citizens in Dhaka, Bangladesh. We obtained responses from 1502 citizens (958 males and 544 females). Statistically significant gender differences of citizens were observed in the residence, marital status, education, occupation, monthly income, and health status. Though a statistically significant difference was observed in the residence by gender, the majority of male citizens (53.0%) were in rural areas, as were the majority of female citizens (61.7%). Though a statistically significant difference was observed in marital status by gender, the majority of males (59.1%) were married, as were the majority of females (70.4%). A significant difference was observed in education by gender, the majority of males (49.1%) had an education period of 11 years and more, 18.0% having 6 to 11 years education period, whereas the majority of females (36.4%) had an education period of 11 years and more and 22.9% had 6 to 11 years education period. The majority occupation of males (35.0%) was others which mainly consisted of retired, day laborer, rickshaw/van puller, and students, whereas the majority occupation of females (60.3%) was housewife. On the other hand, though a statistically significant difference was observed in the monthly income by gender, the majority of males (63.9%) received less than 7000 (Taka), as did the majority of females (84.4%). A significant difference was observed in health status by gender, the majority of males (43.0%) had good health status, as did the majority of females (44.6%).

| Table 1 | Demographic data of citizens in Dhaka, Bangladesh |
|---------|--------------------------------------------------|
|         | Sex                                              |
|         | Male | Female | Total | Test* |
|         | n   | %     | n    | %    | n     | %     |
| Age     |      |       |       |       |       |       |
| 15–24   | 259  | 27.0%  | 143  | 26.3% | 402   | 26.8% |
| 25–34   | 301  | 31.4%  | 171  | 31.4% | 472   | 31.4% |
| 35–44   | 168  | 17.5%  | 127  | 23.3% | 295   | 19.6% |
| 45–54   | 110  | 11.5%  | 47   | 8.6%  | 157   | 10.5% |
| 55–64   | 69   | 7.2%   | 32   | 5.9%  | 101   | 6.7%  |
| 65 or more | 51 | 5.3%   | 24   | 4.4%  | 75    | 5.0%  |
| Total   | 958  | 100.0% | 544  | 100.0%| 1502  | 100.0%|
| Residence |      |       |       |       |       |
| Urban   | 450  | 47.0%  | 207  | 38.3% | 657   | 43.9% |
| Rural   | 507  | 53.0%  | 333  | 61.7% | 840   | 56.1% |
| Total   | 957  | 100.0% | 540  | 100.0%| 1497  | 100.0%|
| Marital status |      |       |       |       |       |
| Married | 567  | 59.1%  | 380  | 70.4% | 947   | 63.2% |
| Unmarried | 388 | 40.5%  | 139  | 25.7% | 527   | 35.2% |
| Widow   | 1    | .1%    | 19   | 3.5%  | 20    | 1.3%  |
| Divorced/separated | 3 | .3%    | 2    | .4%   | 5     | .3%   |
| Total   | 959  | 100.0% | 540  | 100.0%| 1499  | 100.0%|
| Education |      |       |       |       |       |
| No education | 137 | 14.3%  | 121  | 22.5% | 258   | 17.3% |
| Primary | 177  | 18.5%  | 98   | 18.2% | 275   | 18.4% |
| 6–10    | 172  | 18.0%  | 123  | 22.9% | 295   | 19.8% |
Table 2 shows satisfaction on AM use among citizens. 61.1% of citizens aged 15–34 years old and 52.0% of citizens aged 35 years old or elder did not receive benefits from AM. On the other hand, 76.8% of citizens aged 15–34 years old and 70.1% of citizens aged 35 years old or elder did not get harm from AM. 73.6% of citizens aged 15–34 years old and 64.7% of citizens aged 35 years old or elder were satisfied with AM, respectively. 72.9% of citizens aged 15–34 years old and 62.1% of citizens aged 35 years old or elder recommended AM to others. These differences were statistically significant. On the other hand, in terms of gender, there was no statistically significant difference.

Table 3 shows attitudes of citizens on AM. Though 41.5% of citizens aged 15–34 years old agreed that their AM provider gives good information on maintaining a healthy lifestyle, 43.1% of citizens aged 35 years old or elder strongly agreed it. Though 56.1% of citizens aged 15–34 years old and 52.9% of citizens aged 35 years old or elder agreed that herbal medicine has less side effects, 21.1% of citizens aged 15–34 years old had not decided it, while 32.3% of citizens aged 35 years old or elder strongly agreed. Though 53.5% of citizens aged 15–34 years old and 58.8% of citizens aged 35 years old or elder agreed that AM involves natural plant formulas which were healthier than taking western medicines, 26.1% of citizens aged 15–34 years old had not decided it, while 19.6% of citizens aged 35 years old or elder strongly agreed it. 55.4% of citizens aged 15–34 years old and 47.1% of citizens aged 35 years old or elder agreed

| Occupation     | Total | 11 and more | 35% | 15–34 years old | 665 | 44.5% | 965 | 100.0% | 1493 | 100.0% |
|----------------|-------|-------------|-----|----------------|-----|------|-----|--------|------|--------|
| Service        | 216   | 49.1%       | 196 | 36.4%          | 665 | 44.5% |     |        |      |        |
| Business       | 257   | 26.9%       | 20  | 3.7%           | 277 | 18.5% |     |        |      |        |
| Housewife      | 12    | 1.3%        | 327 | 60.3%          | 339 | 22.7% |     |        |      |        |
| Jobless        | 135   | 14.2%       | 64  | 11.8%          | 199 | 13.3% |     |        |      |        |
| Others         | 334   | 35.0%       | 48  | 8.9%           | 382 | 25.5% |     |        |      |        |
| Total          | 955   | 100.0%      | 538 | 100.0%         | 1493| 100.0%|     |        |      |        |

| Monthly income (in Taka*) | Total | <7000 | 63.9% | 455 | 44.5% | 1063 | 71.3% |
|---------------------------|-------|-------|-------|-----|-------|------|------|
| <7000–15000               | 197   | 20.7% | 59    | 10.9% | 256 | 17.2% |     |
| >15000                    | 146   | 15.4% | 25    | 4.6%  | 171 | 11.5% |     |
| Total                     | 951   | 100.0%| 539   | 100.0%| 1490| 100.0%|     |

| Religion       | Total | Islam | 90.9% | 495 | 91.7% | 1361 | 91.2% |
|----------------|-------|-------|-------|-----|-------|------|------|
| Hindu          | 87    | 9.1%  | 45    | 8.3% | 132 | 8.8% |
| Total          | 953   | 100.0%| 540   | 100.0%| 1493| 100.0%|     |

| Health status  | Total | Excellent | 3.5% | 7 | 1.3% | 40 | 2.7% |
|----------------|-------|-----------|-----|---|-----|----|-----|
| Very good      | 119   | 12.5%     | 48  | 8.9%| 167 | 11.2%|
| Good           | 410   | 43.0%     | 242 | 44.6%| 652 | 43.6% |
| Average        | 302   | 31.7%     | 167 | 30.8%| 469 | 31.4% |
| Not good       | 89    | 9.3%      | 78  | 14.4%| 167 | 11.2%|
| Total          | 953   | 100.0%    | 542 | 100.0%| 1495| 100.0%|     |

a: Mann-Whitney U-test, b: 1USD = 70 Taka
*
P < 0.05
### Table 2: Satisfaction on Ayurvedic medicine (AM) use among citizens in Dhaka, Bangladesh

| Age       | 15–34 | 35 or more | Total | Test | Male | Female | Total | Test |
|-----------|-------|------------|-------|------|------|--------|-------|------|
| n %       | n %   | n %        | n     | n %  | n %  | n %    | n %   | n %  |
| Did you benefit from AM? |       |            |       |      |      |        |       |      |
| Yes       | 334   | 38.9%      | 293   | 48.0%| 627  | 42.7%  | **    | 391  |
| No        | 524   | 61.1%      | 317   | 52.0%| 841  | 57.3%  |       | 547  |
| Total     | 858   | 100.0%     | 610   | 100.0%| 1468 | 100.0% |       | 938  |
| Did you harm from AM? |       |            |       |      |      |        |       |      |
| Yes       | 199   | 23.2%      | 184   | 29.9%| 383  | 26.0%  | **    | 247  |
| No        | 657   | 76.8%      | 431   | 70.1%| 1088 | 74.0%  |       | 691  |
| Total     | 856   | 100.0%     | 615   | 100.0%| 1471 | 100.0% |       | 938  |
| Were you satisfied with AM? |       |            |       |      |      |        |       |      |
| Yes       | 627   | 73.6%      | 394   | 64.7%| 1021 | 69.9%  | **    | 652  |
| No        | 225   | 26.4%      | 215   | 35.3%| 440  | 30.1%  |       | 273  |
| Total     | 852   | 100.0%     | 609   | 100.0%| 1461 | 100.0% |       | 925  |
| Did you recommend AM to others? |       |            |       |      |      |        |       |      |
| Yes       | 628   | 72.9%      | 384   | 62.1%| 1012 | 68.4%  | **    | 644  |
| No        | 234   | 27.1%      | 234   | 37.9%| 468  | 31.6%  |       | 273  |
| Total     | 862   | 100.0%     | 618   | 100.0%| 1480 | 100.0% |       | 946  |

**: \( \chi^2 \)-test; n.s.; p < 0.01

### Table 3: Attitudes of the citizens on Ayurvedic medicine (AM) in Dhaka, Bangladesh

| Age       | 15–34 | 35 or more | Total | Test | Male | Female | Total | Test |
|-----------|-------|------------|-------|------|------|--------|-------|------|
| n %       | n %   | n %        | n     | n %  | n %  | n %    | n %   | n %  |
| AM provider gives good information on maintaining a healthy lifestyle |       |            |       |      |      |        |       |      |
| Strongly disagree | 28    | 3.2%       | 14    | 2.2% | 42   | 2.8%   | **    | 54   |
| Disagree    | 20    | 2.3%       | 10    | 1.6% | 30   | 2.0%   |       | 50   |
| Haven’t decided | 242   | 27.8%      | 129   | 20.6%| 371  | 24.8%  |       | 371  |
| Agreed      | 362   | 41.5%      | 203   | 32.4%| 565  | 37.7%  |       | 567  |
| Strongly agree | 220   | 25.2%      | 270   | 43.1%| 490  | 32.7%  |       | 490  |
| Total       | 872   | 100.0%     | 626   | 100.0%| 1498 | 100.0% |       | 1500 |
| Herbal medicine has less side effects |       |            |       |      |      |        |       |      |
| Strongly disagree | 8     | 0.9%       | 2     | 0.3% | 10   | 0.7%   | **    | 18   |
| Disagree    | 15    | 1.7%       | 11    | 1.8% | 26   | 1.7%   |       | 41   |
| Haven’t decided | 184   | 21.1%      | 80    | 12.7%| 264  | 17.6%  |       | 344  |
| Agreed      | 490   | 56.1%      | 332   | 52.9%| 822  | 54.7%  |       | 914  |
| Strongly agree | 220   | 25.2%      | 270   | 43.1%| 490  | 32.7%  |       | 490  |
| Total       | 874   | 100.0%     | 628   | 100.0%| 1502 | 100.0% |       | 1504 |
| AM involves natural plant formulas which are healthier than taking drugs given by the medical doctors |       |            |       |      |      |        |       |      |
| Strongly disagree | 13    | 1.5%       | 4     | 0.6% | 17   | 1.1%   | **    | 24   |
| Disagree    | 27    | 3.1%       | 12    | 1.9% | 39   | 2.6%   |       | 61   |
| Haven’t decided | 227   | 26.1%      | 118   | 19.0%| 345  | 23.1%  |       | 363  |
| Agreed      | 466   | 53.5%      | 366   | 58.8%| 832  | 55.7%  |       | 898  |
| Strongly agree | 138   | 15.8%      | 122   | 19.6%| 266  | 17.4%  |       | 394  |
| Total       | 871   | 100.0%     | 622   | 100.0%| 1493 | 100.0% |       | 1504 |
| People would be more likely to use AM if there were more AM clinics |       |            |       |      |      |        |       |      |
| Strongly disagree | 8     | 0.9%       | 6     | 1.0% | 14   | 0.9%   | n.s.  | 22   |
| Disagree    | 36    | 4.1%       | 19    | 3.0% | 55   | 3.7%   |       | 84   |
| Haven’t decided | 172   | 19.8%      | 148   | 23.6%| 320  | 21.4%  |       | 502  |
| Agreed      | 388   | 44.6%      | 250   | 39.9%| 638  | 42.6%  |       | 788  |
| Strongly agree | 265   | 30.5%      | 204   | 32.5%| 469  | 31.4%  |       | 734  |
| Total       | 869   | 100.0%     | 627   | 100.0%| 1496 | 100.0% |       | 1504 |
| AM build up the body’s own defenses |       |            |       |      |      |        |       |      |
| Strongly disagree | 17    | 2.0%       | 12    | 1.9% | 29   | 1.9%   | n.s.  | 22   |
| Disagree    | 30    | 3.4%       | 17    | 2.7% | 47   | 3.1%   |       | 57   |
| Haven’t decided | 279   | 32.1%      | 176   | 28.1%| 455  | 30.4%  |       | 616  |
| Agreed      | 396   | 45.5%      | 302   | 48.2%| 698  | 46.7%  |       | 704  |
| Strongly agree | 148   | 17.0%      | 119   | 19.0%| 267  | 17.8%  |       | 325  |
| Total       | 870   | 100.0%     | 626   | 100.0%| 1496 | 100.0% |       | 1498 |
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| The more knowledge a person has on AM, the more likely he/she use it | Strongly disagree | Disagree | Haven't decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| n.s. | 13 | 2.6% | 31 | 6.7% | 46 | 9.9% | 98 | 2.0% | 20 | 1.3% |

| Parent(s) can influence youth’s AM use by exposing them to it | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| n.s. | 24 | 2.8% | 13 | 2.1% | 37 | 2.5% | 95 | 2.0% | 19 | 1.3% |

| Teacher can influence youth’s AM use by exposing them to it | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| n.s. | 11 | 1.3% | 22 | 3.5% | 33 | 2.2% | 96 | 2.1% | 13 | 2.2% |

| People who believe in the physical, mental and spiritual aspects of health are more likely to use AM | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| **| 66 | 7.6% | 45 | 7.2% | 111 | 7.4% | 361 | 4.0% | 114 | 7.4% |

| Those who fear the discomfort of treatment from medical doctors are more likely to use AM | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| **| 86 | 9.9% | 37 | 5.9% | 123 | 8.2% | 346 | 3.8% | 122 | 14.5% |

| AM are not harmful | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| n.s. | 8 | 0.9% | 7 | 1.1% | 15 | 1.0% | 25 | 0.9% | 15 | 1.0% |

| People are mostly motivated to use AM by television, radio and mass media | Strongly disagree | Disagree | Haven’t decided | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| n.s. | 12 | 1.4% | 8 | 1.3% | 20 | 1.3% | 30 | 1.0% | 20 | 1.3% |

| a: Mann-Whitney U-test | p < 0.05 | p < 0.01 |
that teacher can influence youths’ AM use by exposing them to it. Though 29.0% of citizens aged 15–34 years old had not decided whether people who believe in the physical, mental and spiritual aspects of health were more likely to use AM, 33.6% of citizens aged 35 years old or elder agreed it. 29.5% of citizens aged 15–34 years old and 36.6% of citizens aged 35 years old or elder agreed that those who fear the discomfort of treatment from medical doctors were more likely to use AM. 43.2% of citizens aged 15–34 years old and 48.5% of citizens aged 35 years old or elder agreed that AM was not harmful. These abovementioned differences were statistically significant.

On the other hand, in terms of gender, although 29.5% of male citizens agreed that people who believe in the physical, mental and spiritual aspects of health were more likely to use AM and 28.2% had not decided, 22.2% disagreed, 29.5% of female citizens agreed and 26.9% had not decided, 17.5% strongly agreed. 29.0% of male citizens and 38.6% of female citizens agreed that those who fear the discomfort of treatment from medical doctors were more likely to use AM, respectively. These above mentioned differences were statistically significant. As a whole 42.7% of respondents agreed that people would be more likely to use AM if there were more AM clinics, with 31.3% strongly agreeing. 46.6% of respondents agreed that AM built up the body’s own defenses, with 17.9% strongly agreeing. 41.6% of respondents agreed that the more knowledge a person had of AM, the more likely he/she would use it, with 30.7% strongly agreeing. 48.3% of respondents agreed that parents could influence youths’ AM use by exposing them to it, with 15.3% strongly agreeing. 51.3% of respondents agreed that people could be influenced to use AM if friends were using it, with 17.2% strongly agreeing. 50.3% of respondents agreed that people were mostly motivated to use AM by television, radio and mass media, with 28.5% strongly agreeing.

DISCUSSION

First of all, we conducted this study as cross-sectional study. However, economic development of Bangladesh recently makes progress remarkably. Therefore, this kind of study should be conducted continuously to confirm precisely the perceptions of AM by citizens in Dhaka, Bangladesh. We think this is one of the limitations of the study.

To the best of the authors’ knowledge, this is the first study on the perceptions of AM, including herbal medicine by citizens in Dhaka, Bangladesh. This study showed elder citizens had better impressions of AM than younger citizens especially in terms of adverse drug reactions. This study also showed that younger citizens did not get 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 also recommended AM to others more, with statistically significant differences. We think that in terms of effectiveness of AM, the younger generation in Dhaka seems to be more skeptical of AM than the elder generation, even though the younger generation are more satisfied with AM than elder generation. From the viewpoint of enhancement of usage of AM in Dhaka, we think that appropriate information should be delivered vigorously in order to remove the skeptical feeling of AM from younger citizen in Dhaka.

This study also showed that elder citizens thought more that AM providers gave good information on maintaining a healthy lifestyle than younger citizens did. In terms of side effects, elder citizens thought more that herbal medicine had less side effects than younger citizens. In addition, elder citizens thought more that AM involved natural plant formulas which were healthier than taking western medicines. Elder citizens seemed more to believe in the physical, mental and
spiritual aspects of health, were more likely to use AM and also agreed more that those who feared the discomfort of treatment from medical doctors were more likely to use AM. On the other hand, from the viewpoint of gender, there were not so great differences among respondents. In Japan herbal medicine is used to treat patients as not only over-the-counter drugs but also ethical drugs covered by universal health insurance.6-8) Recently a lot of studies regarding the safety and efficacy of herbal medicines have been vigorously conducted.9,10 The studies regarding safety and efficacy of herbal medicines don’t always show that herbal medicines are much safer than western medicine.14-16) But we think every kind of information should be delivered, because any kinds of scientific data may become one of the strong tools to enhance the usage of herbal medicine in Bangladesh as well as Asia and the world as the sound evidence.

In addition, the previous studies we conducted in Japan showed that there was a perception gap in medical terms between healthcare worker and citizens.17-20) The perception gap also becomes an obstacle to ensuring the healthy lives of citizens with medical care, including AM. Therefore, this issue is also considered by the healthcare workers of Dhaka, Bangladesh.

The results of this study confirmed that the more AM was familiar to the citizens in Dhaka, the more the usage of AM was enhanced and improved. In addition, this study also confirmed that television, radio and mass media had huge impact on the promotion of usage of AM, including herbal medicine.

From the viewpoint of effective utilization of limited medical resource, AM should be used appropriately in Bangladesh, Asia and the world. Therefore, scientifically sound information should be collected rigorously and brought to the citizens vigorously.

ACKNOWLEDGMENTS

This study was partially supported by Research Foundation for Oriental Medicine.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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