Digital evaluation of student perception and self-use in a medical faculty

E Nurhayati* and D S Argadiredja
Department of Public Health, Medical Faculty, Universitas Islam Bandung, Indonesia
*eka.nurhayati@unisba.ac.id

Abstract. The aim of this descriptive study was to describe the use and the perception of the third year undergraduate medical students in Bandung Islamic University toward integrative medicine. Data was collected quantitatively with cross sectional approach with the sample size consisted of 111 people. Results of this research on the use of integrative medicine showed that two-thirds (66.6%) of the students used integrative medicines, but this number was considered low compared to other studies. The most common used types of integrative therapy are massage (54.5%), consumptions of vitamins and minerals (46.6%), herbal medicine (35.2%) and aromatherapy (22.7%). The study also shown that the students held moderate perceptions on every statement given. The study concluded that most of the students used integrative medicines. The most common integrative medicine modalities by the students were massage, consumptions of vitamins and minerals, herbal therapy and aromatherapy. The perceptions towards integrative medicine mostly dominate by moderate perception.

1. Introduction
Integrative medicine, also known as complementary and alternative medicine (CAM) according to The National Centre for Complementary and Alternative Medicine in USA (NCCAM) is a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine [1,2] It is called as alternative medicine when being used as a substitute for conventional medicine, and called complementary medicine if it combined with conventional medicine. NCCAM has classified integrative medicine into 5 divisions: alternative medical systems, energy therapies, manipulative and body based method, and mind-body medicine [2,3].

The research and development on integrative medicine has been increasing rapidly this recent year, even though it is not yet fully accepted in the world of conventional medicine. It has been used world widely both in developing and developed countries [1,3,4]. Community choose to use integrative medicine because of its principle that are holistic philosophy, patient centered, build strong patient-doctor relationship and also efficient compared to conventional medicine [5-7].

Involving integrative medicine in the undergraduate medical faculty curriculum has been a growing ideas around the world. In Oman Medical College, they teach basic of integrative medicine in clinical years curriculum to provide doctors that can meet the need of the community [3]. There are also studies in England and Germany showed that studying integrative medicine could encourage medical students to improve the patient-doctor relationship [8].
Many studies about self-use, attitudes, perceptions and understanding of integrative medicine has been conducted among students undertaking healthcare professional course such as medical and pharmacy students. Attitudes and perceptions of integrative medicine among medical and pharmacy students, and even in medical practitioners in many countries were generally positives [1,3,4,7,9-11]. In Indonesia, little research has shown the use and perceptions of medical students toward integrative medicine.

In Medical Faculty, Bandung Islamic University, the topic about basic integrative medicine is introduced as one of the topics in Family Medicine subject in the third year of undergraduate program. The aim of the study was to describe the use and perceptions of the third year undergraduate medical students in Bandung Islamic University toward integrative medicine.

2. Materials and method
The study used a descriptive cross-sectional design. The population was the third-year undergraduate medical students in Bandung Islamic University, Indonesia. The third-year students were selected because they received the family medicine subject. Study was conducted in May 2018. Students were asked to fill the questionnaire before lecture about integrative medicine, one of the topics in Family Medicine subject. All of the third-year undergraduate medical students as much as 178 persons were invited to participate, but only 111 returned the questionnaire.

The questionnaire designed was composed of three sections. The first section was about the use of integrative medicine, the second section was about the modalities of integrative medicine that were used by the students and the third section was about the perceptions toward integrative medicine. The third section was showed as Likert scale questionnaire where the students asked to assess some statements about integrative medicine. All the data obtained then processed with Microsoft Excel 2016. Data were expressed in frequencies and percentages.

3. Results
The study showed that 111 students were mainly consist of women as much as 95 person (85.6%) and 16 persons of men (14.4%). The use of integrative medicine shown in table 1.

Table 1. Use of integrative medicine.

| Use of integrative medicine | N | %  |
|-----------------------------|---|----|
| Use of integrative medicine |   |    |
| Yes, for prevention         | 45| 40.5 |
| Yes, for therapy            | 29| 26.1 |
| No                          | 37| 33.3 |

There were 74 (66.6 %) of students were used integrative medicine for prevention and for curative aspect. Further research showed that 62,3% used alternative medicine and the rest used complementary medicine. The most famous type of integrative medicine that used were massage (54,5%), consumptions of vitamins and minerals (46,6%), herbal medicine (35,2%) and aromatherapy (22,7%) as shown in table 2.

Table 2. Use of different type of integrative medicine.

| Integrative Medicine Modalities | N  | %  |
|--------------------------------|----|----|
| Acupuncture                    | 8  | 9.1 |
| Aromatherapy                   | 20 | 22.7|
| Herbal medicine                | 31 | 35.2|
| Homeopathy                     | 1  | 1.1 |
| Hypnosis                       | 2  | 2.3 |
| Massage                        | 48 | 54.5|
| Meditation                     | 2  | 2.3 |
Table 2. Cont.

|                  |      |     |
|------------------|------|-----|
| Naturopathy      | 5    | 5,7 |
| Reflexology      | 16   | 18,2|
| Shiatsu          | 2    | 2,3 |
| Vitamins & minerals | 41  | 46,6|
| Yoga             | 14   | 15,9|

In response to the perceptions of integrative medicine, shown in Table 3. The students were asked to assess the statements about integrative medicine in Likert Scale (1= strongly disagree; 2=agree; 3=moderate; 4=agree; and 5=strongly agree).

Table 3. Perceptions of integrative medicine.

| Statements                                | 1  | 2  | 3    | 4    | 5    |
|-------------------------------------------|----|----|------|------|------|
| Integrative medicine practitioner shares  | 3(2,7%) | 10(9,01%) | 68(61,3%) | 21(18,9%) | 7(6,3%) |
| Integrative medicine has lesser side effect | 2(1,8%) | 14(12,6%) | 53(47,7%) | 34(30,6%) | 7(6,3%) |
| Integrative medicine is healthier         | 2(1,8%) | 30(27,0%) | 64(57,7%) | 10(9,0%)  | 4(3,6%) |
| Integrative medicine is harmless          | 3(2,7%) | 16(14,4%) | 63(56,8%) | 24(21,6%) | 4(3,6%) |

4. Discussion

The study showed that answer to the use of integrative medicine is dominantly answered with “yes” (66,6%), both for prevention and cure illness. This number is considered low compared to other studies among medical and pharmacy students. A study by Saha et al in Bangladesh showed that 90,34% of the pharmacy students had the experience of using integrative medicine. More than half (59,24%) of the respondents were using homeopathy and just a few (1,26%) were having experiences using hypnosis. Other study in Malaysia, showed that 78% pharmacy students had used integrative medicine, even though the current users were only 58% [11]. The use of integrative medicine among healthcare practitioners in Trinidad and Tobago showed that 82,3% doctors, 92,4% nurses and 83,3% pharmacist used integrative medicine [9]. However, this result is higher compared to the study conducted in Iran, that showed that only 15% of medical students had once using integrative medicine, 16% used it several times, while 69% had not used integrative medicine [8]. This results perhaps caused by unclear question especially about the time using the integrative medicine and lack of knowledge about the types of integrative medicine, since the questionnaire were filled before the students had the lecture about integrative medicine. One of the study held by Saha revealed that lack of knowledge, lack of trained professional and lack of scientific evidence were the major impediments to integrative medicine use to university student.

The most common integrative medicine used by the students were massage, consumption of vitamins and minerals, herbal therapy and aromatherapy. This may be explained by the fact that Indonesia is one of the countries that rich with cultural diversity, including the culture of traditional remedies and therapies such as variety of traditional massage techniques and jamu, the most famous traditional herbal drinks in Indonesia. The fact shown that almost 80% of the remedy plants grow in Indonesia, even though only 283 that has been registered [12].

This result also not far from the study in Majmaah University, Saudi Arabia which showed that the most common integrative medicine used by the medical students were spiritual healing, herbal medicine, massage and consumption of nutritional supplements [1].

The perceptions of the students toward integrative medicine were dominantly answered with moderate perceptions. This study is different with the study conducted by Rajashree et al in India. Rajashree et al showed that there is more positives attitude toward integrative medicine. He showed that there was a trend in India towards more openness towards integrative medicine. Medical students are aware of the fact that integrative medicine practices are being exercised by the patients [4].
The perceptions result also different with the survey done on medical students in Iran. Survey showed that 51% of the students held moderate attitude, but 49% held positive attitudes. There were no negative attitudes derived from the survey, while in this study many students showed negative attitudes toward integrative medicine [8]. This results perhaps caused by the concerns that in developing countries such as Indonesia, integrative medicines are mainly performed by traditional healers with no health academic knowledge and skill. It is also may cause by the lack of knowledge towards integrative medicine.

5. Conclusion
This study involved 111 third year undergraduate medical students of Bandung Medical University. Most of them were women. This study showed that the respondents mostly used integrative medicine. The most common type of integrative medicine used were massage, consumption of vitamins and mineral, herbal therapy and aromatherapy. The perceptions of the respondents toward integrative medicine were moderate.

References
[1] Mansour M A, Mohamed E Y, Abdalla S M, Medani K A, Mahmoud W S and Meraj S A 2015 J. Taibah Univ. Med. Sci. 10(1) 74–78
[2] Guererra M P 2016 Textbook of Family Medicine Rakel DP (Philadelphia: Elsevier Ltd) p 126-140
[3] Jahan F, Al-Ward M M, Siddiqui M A, Al-Khoury M A 2015 J. Heal. Educ. Res. Dev. 3(2) p 1-5
[4] Rajashree R, Jirge V V L, Parineetha B and Goudar S S 2016 Nati. J. Intg. Rese. Med. 7(1) p 83-87
[5] Widyatuti 2004 J. Kep. Indo. 12(1) p 53-57
[6] Crocker R L, Grizzle A J, Hurwitz J T, Rehfeld R A, Abraham I and Horwitz R 2017 BMC. Complement. Altern. Med. 17(490) p 1-8
[7] Kong F H, Man L K and Shetty R S 2013 Indian J. Res. Rep. Med. Sci 3(2) p 5-9
[8] Sadeghi M, Rabeipoor S, Forough AS, Jabbari S and Sahabi S 2016 J. Evid. Based Complementary Altern. Med. 21(4) p 306-310
[9] Bahall M and Legall G 2017 BMC. Complement. Altern. Med. 17(144) p 1-9
[10] Loh K P, Ghora H, Clarke E, Conroy R and Barlow J 2012 J. Altern. Complement. Med. 18 p 1–7
[11] Hasan S S, Yong C S, Babar M G, Naing C M, Hameed A and Baig M R 2011 BMC. Complement. Altern. Med. 11(95) p 1-9
[12] Jennifer H and Saptutyningsih E 2015 J. Ekon. Stud. Pembang. 16(1) p 26-41