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## Perception, Attitude, and Knowledge of Nursing Students towards Wet Cupping Therapy (Hijamah)

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### Abstract

**Background:** Complementary and Alternative Medicine (CAM) is a part of the health system that is well known and useful worldwide. One of the therapies used by many people is wet cupping therapy (hijamah). Nowadays, wet cupping therapy (hijamah) is taught in nursing and medical school.

**Objective:** The study investigated the perception, attitude, and knowledge of nursing students toward wet cupping therapy (hijamah).

**Method:** This study was quantitative research that uses descriptive research design and cross-sectional approaches. The sampling technique used was purposive sampling with 85 respondents. The data were collected using questionnaires and analyzed with bivariate analysis.

**Result:** The result showed that the perceptions of the respondents were mostly in the average category, with the best perception of respondents is in the benefit component (76.5%). Respondents have good view of cupping therapy as is useful as a form treatment, and is more practical and affordable. The respondents' attitudes and knowledge were in the average category, which was 58.8% and 68.2%. This study showed that most respondents already understand that cupping (hijamah) is a treatment with contraindications to specific health conditions. Respondents also could show the basic scientific concepts of cupping and hadiths that explained cupping. However, some respondents still think that cupping (hijamah) can be applied for all ages.

**Conclusion:** In conclusion, respondents' perceptions, attitudes, and knowledge toward wet cupping therapy (hijamah) were still insufficient in some aspects.

**Keywords:** Perception, Attitude, Knowledge, Wet cupping therapy (hijamah)

### INTRODUCTION

National Center for Complementary and Integrative Health (NCCIH) defines Complementary, and Alternative Medicine (CAM) is a group of medications and treatment systems that are not part of conventional medicine (NCCIH, 2018). Based on the World Health Organization (WHO), the use of CAM worldwide increased in 2018. There are 98

WHO member countries that have developed national policies on CAM, and 109 countries have national policies on CAM (WHO, 2019).

A study conducted in Saudi Arabia showed the high prevalence of the usage of CAM by the community, especially herbs, prayer therapy, consumption of honey, and wet cupping (Elolemy & AlBedah, 2012).

Wet cupping is a widely used therapy in various countries and cultures. It is known in the Islamic term as Hijamah. Wet cupping is beneficial for pain relief (Al-Bedah et al., 2019), lowering cholesterol (Allafi & Al-Haifi, 2020), and increasing parasympathetic nerve activity (Arslan, Yeşilçam, Aydın, Yüksel, & Dane, 2014).

A study showed the perception of medical students towards studying CAM is in average category because more students still need to accept CAM for CAM to be considered as an important part of the healthcare system (Al Mansour et al., 2015). Another research showed that medical students have poor knowledge and attitudes toward complementary medicine. It is necessary to enhance students' awareness through CAM courses in the university (Hooshangi et al., 2017). A recent study describing the attitude, perception, and knowledge of the public regarding cupping therapy, concluded that healthcare providers should be educated regarding cupping and create an open, respectful environment for communication with patients about cupping therapy (Al-Yousef, Wajid, & Sales, 2018).

The use of wet cupping therapy is the responsibility of health workers, especially nurses. Nurses should always improve their knowledge about wet cupping therapy as lack of understanding will harm the patients. One way to improve attitudes and knowledge is through the academic, educational, and university systems (Khorasgani & Moghtadaie, 2014).

This study investigates nursing students' perceptions, attitudes, and knowledge towards wet cupping therapy (hijamah). This study's results are expected to impact policymakers in formulating curriculum or educational programs related to CAM.

## **METHODS**

This research was a quantitative study using a descriptive research design and a cross-sectional approach. This population was 108 students of the Nursing Study Program at the Muhammadiyah University of Yogyakarta. The sampling technique used was purposive sampling and a sample size of 85 people based on the *Slovin* formula.

In this study, the inclusion criteria were all of the fourth-year nursing students who were willing to be respondents and were in the research location when the data were collected using a questionnaire. This study's exclusion criteria included students who were not present when distributing questionnaires and students who had not received teaching and practice related to cupping due to illness and other reasons and were unwilling to be respondents. This research was conducted in February 2019.

The instrument used to obtain data in this study was a questionnaire. The authors have designed this questionnaire, and three expert researchers in cupping therapy confirmed the validity of the questionnaire. The questionnaire internal reliability was calculated using Cronbach's alpha and factor analysis. It was piloted by using 20 participants who were similar to the research participants in terms of demographics features. This pilot study helped the authors to remove the potential problem of the questionnaire. The questionnaire to measure perceptions and attitudes used Likert scale with multiple choices answer, including strongly disagree, disagree, agree, and strongly agree. Meanwhile, the questionnaire to measure the level of knowledge used the Guttman scale with multiple choices.

Data collection began by filling out the informed consent sheet, followed by filling out the research questionnaire. Furthermore, the questionnaire was collected back to the researcher. Research assistants assisted the researchers in data collection process. This study used univariate analysis. The results of data analysis were presented in the form of frequency and percentage. This research has passed the ethical clearance of the ethics commission of FKIK UMY with ethics number 028/EP-FKIK-UMY/I/2019.

## **RESULTS**

The respondent's characteristics in this study were classified based on the age and gender (Table 1).

**Table 1. Respondents Characteristic (n=85)**

Characteristic	Frequency	Percentage (%)
<b>Age</b>		
20-22	79	93
23-25	6	7
<b>Gender</b>		
Male	18	21.2
Female	67	78.8

Table 1 shows that most of respondent's characteristics, according to the age range, are 20-22 years old, with a total of 79 people (93%) and based on gender he majority of respondents were female, with a total of 67 people (78.8%).

**Table 2. The Perception of Respondents (N=85)**

Perception Components	Category	Frequency (n)	Percentage (%)
Benefit	Good	20	23.5
	Average	65	76.5
Safety	Good	17	20
	Average	59	69.4
	Poor	9	10.6
Indication	Good	6	7.1
	Average	66	77.6
	Poor	13	15.3
Contraindication	Good	8	9.4
	Average	74	87.1
	Poor	3	3.5

Based on Table 2, the result shows that the perceptions of the respondents are mostly in the average category for each component of perception, namely 65 people for the benefit (76.5%), 59 people for the safety (69.4%), 66 people for the indication (77.6%) and 74 people for contraindication (87.1%).

**Table 3. The attitude of Respondents (N=85)**

Category	Frequency	Percentage (%)
Good	35	41.2
Average	50	58.8

**Table 4. The Knowledge of Respondents**

Category	Frequency	Percentage (%)
Good	12	14.1
Average	58	68.2
Poor	15	17.6

Based on Table 3, the results show that the respondent's attitude is mostly included in the average category (58.8%). Whereas, based on Table 4, the result shows that the respondent's

knowledge regarding cupping therapy is mostly in the average category (68.2%).

## DISCUSSIONS

The number of respondents involved in this study based on age was dominated by the age range of 20-22 years old (93%) and female respondent(78.8%). According to the WHO, this age is categorized as young adults (17-25 years old) (WHO, 2020). This age's characteristics is that people of this age started to see themselves as adults and show attitudes, thoughts, and behavior that are getting older (Paramitasari & Alfian, 2012). They have been able to make wise decisions and learn to be a responsible person for themselves and others, even though it is not yet performed entirely.

### A. The perception of respondents

The results of this study indicated that the best perception of respondents is in the benefit component. This result is in line with previous research, which stated that 59.6% of respondents had a positive perception that cupping was effectively used in treatment (Razzaq, Khan, & Zehra, 2013). In comparison, the worst perception is in the indication component (15.3%). This result is not in line with finding of previous study explaining that most respondents agreed on the existence of a specific age recommended for cupping (Al-Balawi, Almutairi, Alawad, & Merghani, 2016).

Based on the benefit component, respondents already understand the benefits of cupping (*hijamah*), which is indicated by the answers which result in the average statement agreeing that diseases such as gout, cholesterol, and heart disease can be overcome by cupping (*hijamah*) in addition to conventional medicine and they also agree that cupping (*hijamah*) is an affordable treatment.

A study revealed that one of the reasons for undergoing and choosing cupping therapy was the efficacy or suitability of therapy for hypertension (Kamaluddin, 2010). Furthermore, one reason for choosing is also because "it is a cheap alternative medicine" which is frequently considered a genuine reason. The present study is also in line with a study which explains that there is a public opinion that getting or finding complementary medicine is not as

complicated as medical treatment (Al Mansour et al., 2015).

Based on the safety component, most of the respondents understand that cupping (*hijamah*) is an action that cannot be conducted every day as it will cause infection or irritation. The respondents understand that cupping (*hijamah*) can only be carried out in a closed room for safety and also to avoid exposure to outside pathogens. However, this study found that the respondent has a low category of perception since the respondents still think experts and people in general can still perform the cupping since it will make no difference (*hijamah*). A study explained that most hypertensive patients choose complementary alternative therapies due to their nature and the absence of side effects from the cupping therapy (Syahruramdhani, Chiu, & Kartina, 2017). Other studies explain that people use cupping (*hijamah*) as it is safe and has no side effects (Razzaq et al., 2013). According to Sridhar's study on client in the United Arab Emirates who used complementary and alternative medicine, which showed that 51.6% of the client had a positive perception of cupping therapy benefits, safety, and effectiveness (Sridhar, Shariff, Al Halabi, Sarmini, & Harb, 2017).

Based on the indication component, this study shows that respondents believe cupping (*hijamah*) can be a treatment option to reduce disorders and pain in the body. However, some respondents still think that cupping (*hijamah*) can be applied to all ages of people. This perception is not in line with previous theories and research. Based on the hadith from Ibn Sina it was stated that it is not permissible to apply cupping (*hijamah*) for client less than two years old and over sixty years old (Qureshi et al., 2017). This statement is also supported by a study stating that the age group that uses cupping therapy more widely are between 20-39 years old (70.63%) and 40-59 years old (17.5%) (Damayanti, Muharini, & Gunawan, 2012). Al-Balawi explained that as many as 57.4% of respondents agreed that there was a specific age recommendation for cupping (Al-Balawi et al., 2016).

Based on contraindication components, respondents understand that cupping (*hijamah*) is a treatment with contraindications for specific health

conditions. Cupping (*hijamah*) is not recommended when the patients are in excessive hunger or full condition. Furthermore, pregnant women are also prohibited from getting cupping therapy (*hijamah*) as they are concerned about its impact or side effects. According to Razzaq's research, it was stated that the majority of respondents had a positive perception where they (59.6%) agreed that cupping was significant and had no side effects (Razzaq et al., 2013). However, some respondents still think that people with leukemia and hemophilia can be treated with cupping (*hijamah*). The present study is not in line with previous research, which explained that as many as 25.3% of respondents understood that cupping was contraindicated in patients suffering from certain diseases (Al-Balawi et al., 2016).

#### *B. The attitude of respondents*

The result of this study indicates that the majority of respondent's attitude toward cupping therapy is in the average category (58.8). Student's attitude toward *hijamah* in the average category indicates that most respondents in this study have not fully responded well to cupping therapy. The educational factor is the most dominant factor affecting the level of knowledge in students. when someone has good knowledge, it will automatically affect one's attitude. This statement is in line with a study that investigated the knowledge and attitude of nursing students regarding traditional medicine. It showed that the attitude/custom of using traditional medicine method had been created in academic and universities circles (Khorasgani & Moghtadaie, 2014). Introduction of CAM in the curricula is important because the lack of evidence supporting CAM practices was considered to be the major barrier toward more students using CAM and advising their patients to use CAM in the future (Al Mansour et al., 2015).

Other research showed that one type of complementary and alternative therapy that was quite popularly used for medicine was cupping therapy (*Hijamah*) (El Sayed, Mahmoud, & Nabo, 2013). The present study is in line with previous research, which explained that respondents agreed that alternative medicine helped conventional medicine (Khorasgani & Moghtadaie, 2014). It also follows the research done in Indonesia which

explain that there has been an increase in the use of complementary and alternative therapies as treatment from year to year (Supardi, 2010).

This study showed that most respondents responded positively to cupping therapy, although it was in average attitude category. Respondents have a good view for cupping therapy as it is useful as a form of treatment and is more practical and affordable.

This result is in line with the current research which explained that cupping effectively enhanced blood supply and activated the autonomous nerves (sympathetic and parasympathetic nerves). Cupping therapy could cause the release of Nitric Oxide (NO) from endothelial cells, hence, can induce certain beneficial biological changes. NO is a triggering gas molecule that mediates vasodilatation and regulates blood flow and volume (Al-Bedah et al., 2019). A study showed that cupping therapy restored sympathovagal imbalances (sympathetic and parasympathetic nerves) by stimulating the peripheral nervous system. These results indicate for the first time in humans that cupping might be cardioprotective (Arslan, Yeşilçam, Aydın, Yüksel, & Dane, 2014).

The present research is supported by research stating that a relationship between patient's attitudes and traditional medicine, where respondents have a positive attitude towards traditional medicine, in this case the treatment used was the cupping therapy (Al-Yousef, Wajid, & Sales, 2018). People with middle and lower-income groups widely use cupping therapy (*hijamah*) as it is very affordable compared to medical treatment.

Recent research revealed that one of the reasons for choosing cupping therapy was its effect (*hijamah*) on blood pressure, namely a decrease in blood pressure in hypertensive patients (Al-Tabakha et al., 2018). The present study is also in line with a research explaining that 62.5% of people used cupping therapy due to its medicinal benefits (Damayanti et al., 2012).

### C. The knowledge of respondents

This study indicates that the majority of respondents have an attitude in the average category (68.2). Student's knowledge data showed

that the majority of respondents in this study did not fully understand about cupping therapy. The educational factor is also very influencing as the higher the person's education is, the more understanding they will have. This research showed that most respondents already understood that cupping, in general such as the types and indications of cupping. The present inquiry is in line with recent studies where respondents could answer cupping types consisting of dry, wet, fire, and synergy cupping. Besides that, respondents could show the basic scientific concepts of cupping and hadiths that explained cupping.

This study showed that most respondents already understand that cupping (*hijamah*) is a treatment with contraindications to specific health conditions. It is not recommended when patients feel hungry or full. A study showed respondents agreed that cupping therapy is contraindicated with patients suffering from certain diseases (Alghadir, Al-Yousef, Al-Hussany, Hasaneen, & Iqbal, 2016). This study is also supported by the results of other research which explained that cupping (*hijamah*) is linked to certain conditions, thus, cupping (*hijamah*) is not recommended for patients with low skin elasticity, anemia, chronic skin diseases, hypotension, blood disorders (leukemia and hemophilia) and also patients with low platelets (Hooshangi et al., 2017; Syahruramdhani, Agustiniingsih, & Sofro, 2016).

## CONCLUSIONS

In conclusion, respondent's perceptions, attitudes, and knowledge towards cupping therapy (*hijamah*) are still insufficient in some aspects.

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