

ANALYSIS OF KNOWLEDGE OF HEALTH FACULTY STUDENTS ABOUT PAIN MANAGEMENT USING THE TUINA METHOD

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ABSTRACT

Acute pain is generally related to the body's response to a health problem such as the presence of comorbidities, inflammatory processes or the psychological perception of an injury. Pain response can be modified in intensity by using drugs or other complementary therapies such as tuina. Tuina is a therapeutic technique originating from China by using pressure or massage techniques at the location of certain points on the body to reduce pain. Continuous pain management studies are important for the development of health sciences so that they can increase health students' knowledge regarding the management of pain problems. Purpose: This study aims to describe the knowledge of Health Faculty students at ITEKES Bali about pain management using the tuina method. Research Methods: Quantitative research with descriptive analysis method was used on 300 respondents by purposive sampling technique. Results: Health Faculty students' knowledge of pain management with the tuina method was in the good category (30.3%), sufficient category (48.7%) and poor category (21.0%). Conclusion: By knowing the description of student knowledge, it becomes a motivation in introducing and developing knowledge of the Tuina method of pain management so that it can be learned, applied or practiced by health workers or students.

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1. INTRODUCTION

Tuina is an alternative treatment method for a symptom arising from a health problem. Tuina is a traditional medicine technique originating from China which is often known by the term *massage or acupressure* which is a therapy with pressing and massaging techniques at the location of certain points on the human body using the thumbs, palms or elbows to stimulate vital energy in the body to become harmonious and balanced (Cooper, 2010; Liu & Ke, 2013). Tuina therapy is not only used to increase the body's immunity but can also overcome the painful symptoms of an illness (YW Chen & Wang, 2014; Li & Culture, 2020).

In the perspective of studying the concepts of health and illness, pain is influenced by several factors and has different dimensions from biophysical, psychological and sociological factors. Pain can arise due to an illness or health problem, then it has an impact on feelings of discomfort and the perception of pain in oneself due to psychological factors. Changes or development of pain symptoms can be influenced by the ability to play a role in dealing with

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health problems that cause pain(Hidayat, 2021; Suryanti, 2021). For example, in research results it is known that inflammation can cause pain as the body's response due to tissue damage and pain can be reduced by using analgesic drugs(Hisyam, Bahar, & Ahmad, 2013). Whereas in the concept of philosophy of Chinese medicine, it has a different perspective, the problem of pain can be caused by an energy imbalance *yin* and *which* in the body, this can be influenced by external and internal factors of the body, such as weather factors, environmental cleanliness and also the factor of having a previous history of illness(Maciocia, 2015). For example, it is known that the symptoms of pain in patients with hypertension in Chinese medicine are caused by deficiency syndrome *yin* and hyperactivity *which* on the body(Yang & Lao, 2019), apart from that pain problems can also occur in someone who has a history of diabetes mellitus and the risk of hypertension has a significant relationship with the incidence of pain in cases of diabetes mellitus, if hypertension is not handled properly it can cause diabetic neuropathy pain(Duarsa, Arimbawa, & Indrayani, 2019).

Initial handling of pain problems can be done using various approaches, either conventional, traditional or integrated. Pain management using analgesic drugs is widely known, such as the efficacy of using paracetamol drugs with a combination of B vitamins has a significant relationship to reducing pain.(Ariady, Yudiyanta, & Paryono, 2020). In addition, handling pain in cases of sports injuries by using rest, cooling and compression techniques can reduce muscle activity to prevent the severity of swelling that can cause pain.(Y. Chen, Bunman, & Prakobsrikul, 2020). Meanwhile, tuina therapy can also be an alternative option as an integrated complementary therapy in reducing pain(Kong et al., 2012).

The development of science in the world of health is urgently needed to create innovations in overcoming various kinds of polemics related to health problems. The development of science can improve the quality of human resources, namely health workers in providing health services. The participation of tertiary institutions or higher educational institutions is needed in developing science and creating human resources in the professional health sector. In the philosophy of science, knowledge is the result of knowing about phenomena that occur and knowledge of these phenomena can develop and be influenced by the perception of an object. Knowledge is an important domain that is a factor in the formation of a behavior(Nasution, 2016).

A person's tendency to change behavior, especially in trying to seek knowledge or truth from a phenomenon, can be influenced by several factors such as motivation, level of knowledge, age and educational background.(Goddess, 2020). RThe formulation of the problem in this research is how knowledge of ITEKES Bali Health Faculty students about pain management with the tuina method. While the purpose of this research is to describes the knowledge of ITEKES Bali health students about pain management with the tuina method.

2. METHOD

This research is a quantitative research with descriptive analysis method. The population in this study were students of the Faculty of Health at ITEKES Bali, a sample of 300 respondents was obtained using a purposive sampling technique. The data collection method uses a questionnaire through the Google form which contains true and false statements about pain management with the Tuina method. Prior to data collection, the questionnaire had been tested for reliability with Cronbach's alpha 0.730, so that the questionnaire could be declared reliable. Data collection was carried out from 14 November 2022 to 16 November

2022. After the data was collected, the data was analyzed using SPSS version 26 with a descriptive analysis test.

3. RESULTS AND DISCUSSION

RESEARCH RESULT

1. Characteristics of respondents

Table 1. Frequency distribution based on the characteristics of the respondents (n=300)

	Frequency (n)	Percentage (%)
Gender		
Man	68	22,7
Woman	232	77,3
Age		
20 years	56	18,7
21 years	87	29,0
22 years	81	27,0
23 years	76	25,3
Education		
Bachelor	150	50,0
Applied Bachelor	150	50,0
Experience learning about tuina and pain		
There is	181	60,3
There is no	119	39,7

Table 1 shows that the majority of respondents are female (77.3%), the age of the respondents is at most 21 years (27.9%) and has post-secondary experience (60.3%)

2. Respondent knowledge

Table 2. Knowledge of respondents (n=300)

	Frequency (n)	Percentage (%)
Well	91	30,3
Enough	146	48,7
Not enough	63	21,0

Table 2 shows that the majority of respondents have sufficient knowledge (48.7%) about pain management using the tuina method.

Table 3. Description and correlation of respondent's age to knowledge score (n=300)

	<i>Means</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
Respondent's age	21.59	20	23	1.06
Knowledge score	66,73	40	100	17.75
<i>Correlation coefficient =0.837,</i> <i>p =0.000 < 0.05</i>				

Table 3 shows that the average age of respondents is 21.59 years and the average score of respondents' knowledge is 66.73, there is a strong correlation between age and knowledge scores ($r=0.873$, $p=0.000<0.05$)

Table 4. Description and comparison of knowledge scores based on the type of education of the respondents (n=300)

	Knowledge score			
	<i>Means</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
Education				
Undergraduate (n=150)	67,87	40	100	18,81
Applied Bachelor (n=150)	65,60	40	100	16.52
<i>Significance 0.176 > 0.05</i>				

Table 4 shows that the mean and average score of respondents' knowledge in undergraduate education is 67.87, while in applied undergraduate it is 65.60, there is no significant difference between the score of knowledge about tuina in undergraduate and applied undergraduate students ($p=0.176>0,05$)

DISCUSSION

Knowledge or cognitive aspect is a very important domain in shaping one's actions. In Bloom's Taxonomy, the level of knowledge in the cognitive domain is the ability to know, understand, apply, analyze, synthesize and evaluate. (Huit, 2011). Knowledge can arise when a person uses his senses and reason to recognize a phenomenon or thing that has never been observed or felt. A person's level of knowledge develops with age, as well as a person's ability and willingness to learn from the knowledge he has acquired (Harris & Deary, 2011; Saputra & Lisiswanti, 2015). In developing knowledge about pain management with the tuina method, cognitive strategies are also needed to help maximize the learning process. Several factors such as age, education, comprehension skills and social and psychological factors can influence cognitive strategies to increase knowledge (Pressley & Levin, 2012). It was shown in this study that students who have experience in learning about tuina as a method of pain management have the potential to have adequate and good knowledge. There is a strong correlation between

age and respondents' knowledge scores in understanding pain management with the tuina method. As they get older, students' ability to understand and analyze something can increase. This study also showed that there was no significant difference in knowledge scores between undergraduate students and applied undergraduate students, this indicated that most students had homogeneous knowledge or perceptions about tuina as a method of pain management.

Students who are currently studying at the Faculty of Health at undergraduate and applied undergraduate levels, most have experience learning about the concept of pain, students know that pain is an important sensation for the body. Pain is the result of stimulation of sensory receptors. Provocation of pain sensory nerves produces a discomfort reaction. Based on the pathological review, pain is classified into acute pain syndrome, somatic pain, visceral pain, chronic pain syndrome, cancer pain, non-malignant pain.(Vitani, 2019). In addition, most students also have experience learning about pain management such as tuina. Tuina is a traditional Chinese medicine technique that can be applied to treat pain problems. Tuina is performed by applying physical pressure to several points on the surface of the body which are places for energy circulation and balance in cases of pain symptoms(Liu & Ke, 2013). Students view the tuina technique as a non-invasive, safe, and effective method. Tuina, also known as the acupressure method, is a development in the science of acupuncture therapy. The technique in this therapy uses fingers instead of needles but acupressure is performed on the same points as those used in acupuncture therapy and is often used as an alternative to non-pharmacological treatment.

Knowledge about pain management that students get from learning experience in class is the management of conventional pain problems, the proper use of analgesics alone or in combination with them to reduce pain intensity. Students also understand that not all pain can be intervened with systemic analgesics, in fact, several studies have shown unfavorable stigma aimed at the use of pain-reducing drugs.(Brown, 2014). Fear of addiction, tolerance, respiratory depression, and drug dependence lead to discontinuation of analgesia. Tramadol which is a synthetic opioid has side effects of nausea, vomiting, constipation and confusion in the elderly. Non-steroidal anti-inflammatory drugs (NSAIDs) can cause dyspepsia, stomach bleeding, peptic ulcers, abnormal bleeding, gastrointestinal damage, and acute kidney nephritis(Kneale & Davis, 2011). So that non-pharmacological management such as tuina or acupuncture can be applied as a substitute for intervention or a combination in reducing pain intensity.

With a cognitive strategy approach to developing student knowledge, it is hoped that the introduction of pain management using the tuina method to students will not only be through seminars but that learning about tuina has the potential to become part of complementary learning in an integrated long-term care curriculum both in class learning and clinical practice, so that the introduction Tuina method of pain management can be learned, applied or practiced by health workers or students.

4. CONCLUSION

The knowledge of health faculty students about pain management with the tuina method is in the good category (30,3%), sufficient category (48,7%) and less category (21.0%). Knowing the description of student knowledge can be a motivation to increase knowledge through continuous introduction of pain management with the tuina method, and cognitive strategies are also needed to help maximize the learning process so that Tuina method of pain management can be learned, applied or practiced by health workers or students.

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