

## Conventional Vs Non-Conventional Therapies in Treating Migraine Headache

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### ABSTRACT

The main purpose of this research is to identify the effectiveness of conventional medicines, in general, against headache or any migraine attack. Also, it aims to help individual to understand and differentiate the characteristics of a pain caused by headache and as well as migraine. In recent years, there has been a growing public interest and demand in the complementary and alternative medicine (CAM) therapies for the prophylaxis and treatment of headache or migraine attacks. CAM in other word, known as the non-conventional therapy which is usually based from herbs and acupuncture. Hereby, this study determines how well has this therapy is being well absorbed and have gained trust among the society. This descriptive-analytical study was conducted on 400 young adult (18-28 years old). Data were collected by a valid and reliable questionnaire which consists of three sections; A, B and C. Seksyen 13, Shah Alam became the demographic target because this area has four big institutions which are often flooded with the target age group.. Collected data sets were analysed by SPSS software. In total, 65.25% were reported to favour the null hypothesis, which sides on the conventional therapy. The findings indicate that the conventional therapy is significantly effective than the non-conventional. The objective to prove that the alternative treatment approach is more effective failed. But there's a positive correlation which shows that the society do accept the fact that it is SAFE and are of least side effects. This believe may incline in the next few years.

### Keywords

Headache, Migraine, Conventional therapy, Non-conventional therapy.

### Introduction

Headaches are a widespread chronic pain condition and are the most common reason for people to buy over-the-counter pain medications (Sheftell, 1997). Although headaches feel like pain inside the brain, they are actually not, since brain has no pain receptors. It actually results from the damages of the surrounding structures like the nerves, blood vessels, muscles or sensory organs (Kaniecki. 2015). The damage to these structures can result from injury, inflammation, or disease (Cassis & Agrawal, 2015). Some headaches, particularly tension-type headaches, might also be caused by eyestrain, anxiety, stress, sleep deprivation, or jaw problems. Therefore, tension-type headaches are not associated with a specific nerve or nerve cluster. Rather, the associated nerve or nerve cluster for a tension-type headache is dependent on which muscle group is undergoing extreme strain, which leads to the headache (Dodick & Silberstein, 2016).

Migraine is a disorder associated with significant psychosocial impact. The diagnosis of migraine requires a good clinical history, and exclusion of other causes of headache (Lance, 2015). Migraine is an extremely prevalent and disabling neurotic disorder that manifests as periodic attacks of severe head pain and is accompanied by associated symptoms of interference with activity, nausea/vomiting, and sensitivity to light and sound (Marsh *et al.*, 1973). Headache can be said as the symptom of certain illness whereas migraine are the illness. Usually migraine pain are felt on one side with intense, pulsing or throbbing sensation which can actually last for days.

He/she might experience flashing of light and as well as nausea and vomiting. All these symptoms may be severe and are unlike of the headaches (Láinez& Marti, 2016).

Conventional therapies are the treatment options widely used by medical doctors in a health care setting. It includes all kind of formulation of drugs available in the drug store, chemotherapy, radiation and even surgery. Conventional treatments are cheap, easily available and of known pharmacology actions. Normally, a number of side effects are associated with the use this treatment approach but the results are usually faster.

Non-conventional therapy however is the alternative medication which are available and mostly least of side effects as they are based on natural ingredients (Niggemann&Grüber, 2003). The results from prolonged use of this treatment approach is usually promising. And also pharmacological actions usually depends on the individuals and have no strong scientific evidence on how they produce response.

## METHODOLOGY

### Research Area

Seksyen 13, Shah Alam becomes the target area as the target age group people can easily be approached and achieved. It is very much convenient because there are four big, well-established institutions in this small area. They are Management & Science University, KDU University, Polytechnic Shah Alam, and PTPL Shah Alam.

### Research Design and Duration

This is an observational study where cross-sectional study design was applied to assess the knowledge and perception of young adults in Seksyen 13, Shah alam on the conventional vs non-conventional therapies in treating the headache/migraine. This research was conducted for three months (Sayutiet *al.*, 2020).

### Sampling Method

A stratified random sampling method was utilized in selecting the participants (Koo *et al.*, 2018).

### Selection of Sample

In this research study a total of four hundred participants were selected based in sample size calculation from Yamane formula. Respondents were selected from universities and colleges from seksyen 13, Shah Alam. Twenty participants from MSU was firstly used for pilot study before conducting the research to ensure respondents were able to understand and answer the questionnaires. Questionnaires were printed in English because the target age group of people are believed to have good skills in reading and understanding basic english at least.

### Sample Size Calculation

The current 2016 statistics data on population size of people in Seksyen 13, Shah Alam is 19,3332. The study was carried out in the state of Selangor, due to highest population capacity in Malaysia (Department of Statistics, 2016). Using stratified sampling techniques for the study, people were randomly selected for this descriptive study. The targeted age group has no need to be worried about as the sample are chosen from the institutions around Seksyen 13 who would range around that age group. Yamane (1967) sample population formula were applied to calculate total amount of sample needed. From the formula, 400 respondents were necessary to

gather information on their perception and preference on conventional vs non-conventional therapies in treating headache/migraine. Also, it was to test the knowledge and ability to differentiate both headache and migraine attacks. Hence, 400 participants of age range between 18-28 years old were selected (Neniet *al.*, 2019).

### **Statistical and Data Analysis**

All the data that has been collected were analysed using Statistical Package for the Social Sciences (SPSS) version 17.0. Descriptive studies (frequency and percentage) were used to describe the socio-demographic and the KAP characteristics. Chi-Square test was used to compare the KAP between the different socio-demographic characteristics (Widiasmoroselamat *et al.*, 2020)

## **RESULTS AND DISCUSSION**

In general 49.8% of male and 50.2% of female consisting of 30.75%(123) of Malays, 32.75%(131) of Chinese, 32.5% (130) of Indians and 1.50% (16) of other ethnicity respondents involved respectively. Almost all participants are of students whom are full time students and some are doing part time work in additional, accumulating to 90% (360 participants) which leaves only 10%(40 participants) whom belong to the working young adults category. Almost 100% of the participants in this research study are able to understand and to distinguish the difference between both migraine and headache attack. This is due to some good educational background but even in migraine cases, participants prefer taking painkillers and treat as a normal headache. The percentage of people who have had a migraine attack over the last three months is 18%(72), headache is 66%(264) and about 16% (64) accounts to not having any headache or migraine attack. Based on the presented sign and symptoms, migraine attack is further classified into (i) with aura -7.25%(29) and (ii) without aura - 10.75% (43) (Bahra, 2011).

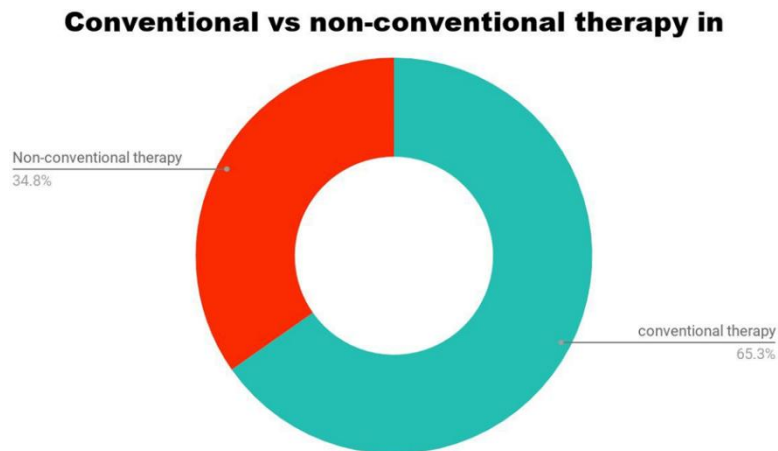
Majority of the participants are students and only a small number of working adults were involved. This is because Seksyen 13, Shah alam is targeted due to the existence of the institutions which practically means students were the main target. The reason behind it; is because students these days are facing a lot of pressure due to constantly changing education system and also many students are also taking up part time jobs. Situations like this; juggling both studies and work- surely is stressful and can be a big time cause for experiencing headache/migraine attack (Robotham, 2008).

Analysis of number of people who have had any of the sign and symptoms over the last three months reveals that majority has experienced the most common type of headache which is the tension-headache; (264 participants) followed by migraine (72 participants) which was further divided into migraine with aura (29 participants) and without aura (43 participants); and lastly those who had not experienced any headache/migraine attack over the last three months (January-March) totaling up to 64 respondents. After deducting the non-headache/migraine participants, there was a sum of 336 respondents who continued to Section B part of the questionnaire where the effects of the condition and medicines are analysed. About 41.96% (141) of the participants sometime need to lie down and rest whereas 58.04% (195) of them do not need to rest. 61.90% (208 participants) do agree on taking medications or any type of treatment approach to reduce the ache that he/she experiences. Whereas about 38.10% (128 participants) denies to take any

medication or any treatment approach to resolve any headache/migraine attack. Below are the illustration on why some of the participants refuse to take any medications.

Also, it has come to an understanding that most participants prefer taking paracetamol as their first medication of choice to suppress the uncomfortableness caused by headache/migraine (Morgan, S., & Dorman, 2004; Tfelt-Hansen. 2000). Some of them also take aspirin as they are cheap and easily available. Only when situations are out of hand or extreme pain sensation or frequent attacks, participants refers to medical doctor or pharmacists to get migraleve, syndol, Metoclopramide or Sumatriptan.

Initially this research was interested in proving that the non-conventional therapy is much more preferable among the society but at the end of this research it is to be concluded that the conventional drugs are still the number one choice because of the advantages discussed. Non-conventional therapy requires a practice in society's everyday live to prevent any attack. But the society's mindset these days works by wanting things to be get done quickest. And so, the alternative hypothesis is thereby rejected due to a significant difference in wanting the conventional therapy. In other words, the null hypothesis is accepted (Gaul *et al.*, 2009).



**Figure 1: The doughnut chart above illustrates the first choice among participants to treat any headache/migraine attack.**

### CONCLUSION

The results obtained in this study demonstrates that the migraine or headache attacks are most common to be experienced by young adults ranging from the age of 18-28 years old. The prevalence of headache or migraine in Female to Male in the form of ratio 2:1. Also, this society believes that the conventional therapies are better than non-conventionals because they are easily available, have a very fast onset of action, easy to be used when there is any headache/migraine attack. Not only that, doctors and pharmacists roles are not seem to be so significant in resolving cases like migraine or headache as this age group of people prefers utilizing the internet as all details can be obtained in a snap of a finger. The medicines used by most of the participants are to be highlighted as in both cases, they prefer using aspirin and paracetamol as their first choice.

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## REFERENCES

- [1] Bahra, A. (2011). Primary headache disorders: Focus on migraine. *Reviews in pain*, 5(4), 2-11.
- [2] Cassis, A. M., & Agrawal, Y. (2015). Treatment of Vestibular Migraine. *Vestibular Migraine*, 37-45. doi:10.1007/978-3-319-14550-1\_5.
- [3] Dodick, D. W., & Silberstein, S. D. (2016). Migraine Symptoms and Diagnosis. *Migraine*, 1-26. doi:10.1093/med/9780199793617.003.0001.
- [4] Gaul, C., Eismann, R., Schmidt, T., May, A., Leinisch, E., Wieser, T., ... & Zierz, S. (2009). Use of complementary and alternative medicine in patients suffering from primary headache disorders. *Cephalalgia*, 29(10), 1069-1078.
- [5] Kaniecki, R. G. (2015). Tension-Type Headache. *Headache and Migraine Biology and Management*, 149-160. doi:10.1016/b978-0-12-800901-7.00012-4.
- [6] Koo, H., Lee, C., NurHidayah, A., & NurainHazwani, A. (2018, 4 1). Knowledge, attitudes and practices of schoolchildren toward whole grains and nutritional outcomes in Malaysia. *Appetite*, 123, 256-263.
- [7] Láinez, M. J., & Marti, A. S. (2016). Sphenopalatine ganglion stimulation in cluster headache and other types of headache. *Cephalalgia*, 36(12), 1149-1155.
- [8] Lance, J. (2005). Types of Headache. *Mechanism and Management of Headache*, 17-24. doi:10.1016/b978-0-7506-7530-7.50007-4.
- [9] Marsh, B. T., Mennie, A. T., Samarasinghe, J., & Robbie, D. S. (1973). A Pain Clinic Assessment of Syndol in Headache. *Journal of International Medical Research*, 1(6), 567-572. doi:10.1177/030006057300100610.
- [10] Morgan, S., & Dorman, S. (2004). Paracetamol (acetaminophen) allergy. *Journal of Pain and Symptom Management*, 27(2), 99-101. doi:10.1016/j.jpainsymman.2003.12.007.
- [11] Neni, W. S., Subrain, G., Shamshir Khan, M. S. N.-N., Martinez, K. P., & Auamnoy, T. (2019). Awareness, Knowledge, and Attitude (AKA) of government secondary school students on the use of antibiotics in Shah Alam, Malaysia. *Journal of Public Health*, 1-9. <https://doi.org/10.1007/s10389-019-01034-y>.
- [12] Niggemann, B., & Grüber, C. (2003). Side-effects of complementary and alternative medicine. *Allergy*, 58(8), 707-716.
- [13] Robotham, D. (2008). Stress among higher education students: Towards a research agenda. *Higher education*, 56(6), 735-746.
- [14] Sayuti, Y. A., Albattat, A., Ariffin, A. Z., Nazrin, N. S., & TengkuSilahudeen, T. N. A. (2020). Food safety knowledge, attitude and practices among management and science university students, Shah Alam. *Management Science Letters*, 10(4), 929-936.

<https://doi.org/10.5267/j.msl.2019.10.002>.

- [15] Sheftell, F. D. (1997). Role and impact of over-the-counter medications in the management of headache. *Neurologic clinics*, 15(1), 187-198.
- [16] Tfelt-Hansen, P. (2000). Trial design in migraine prophylaxis. *MONOGRAPHS IN CLINICAL NEUROSCIENCE*, 17, 244-249.
- [17] WidiasmoroSelamat, N., Paul Martinez, K., SarimieNurulNizam, M., Subrain, G., Tan Lee Yin, E., & Auamnoy, T. (2020). Awareness, Knowledge & Attitude on Urinary Tract Infection among Government Secondary School Students in Shah Alam, Malaysia. *Malaysian Journal of Medicine and Health Sciences* (Vol. 16).
- [18] Yamane, T. (1967). *Elementary sampling theory*.