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PREVALENT USE OF ACUPUNCTURE AMONG EYE RELATED PROBLEMS PEOPLE IN THREE DIFFERENT STATES IN MALAYSIA- A CROSS SECTIONAL STUDY

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ABSTRACT

Acupuncture has traditionally been successfully employed in China to treat most illnesses and there is little doubt that acupuncture is an excellent therapy for people suffering with many eye conditions. There are several studies suggesting that acupuncture can be very helpful in the treatment of many eye problems such as glaucoma and cataract. The objective of this study is to measure the prevalence of acupuncture treatment among eye related problems people and the relationship between age, gender, race and possible adverse effect in three different states (Kedah, Perak and Kuala Lumpur) in Malaysia. A cross sectional study was chosen as an appropriate method to achieve the aims. Interview with the patients and also questionnaire form has been distributed to them in order to collect statistical data from the period of January to October 2011. A sample of 250 patients (n=250) has been interviewed. The research has been conducted in private acupuncture clinic in particular state. All the data collected is analyzed using SPSS version 17.0.

KEYWORDS: Cross sectional study, Acupuncture, Eye related problems, Prevalence.

INTRODUCTION

Acupuncture has evolved as part of traditional Chinese medicine (TCM) for millions of years but however it has become included into general medicine most recently. Generally, it's being utilized as a complementary treatment (one given alongside conventional treatments) (Harwood *et al.,* 2000). During ancient times, practitioners of traditional Chinese medicine conceive that there is energy called 'qi' flows around our body in channels (meridians). They believes that the unbalanced and opposite properties of yin and yang is the major cause of illness in human. The needles which employed in acupuncture aspire to restore this balance. It's based on the fundamental idea that acupuncture needles able to stimulate nerve endings and alter the way our brain functions especially in response to pain (Faith J. Hill *et al.,* 2000; Goddard B *et al.,* 2011). Many experiments have been conducted and it is found that this technique which is being applied in acupuncture provides multiple effects towards our body and brain. One of the theory suggested that stimulated nerve fibers transmit signals to the spinal cord and brain, activating the body's central nervous system. Thus, activated brain and spinal cord tend to release hormones which will ease the pain. In a point of fact, a study using images of the brain

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53

Shankar Jothi. et al. / International Journal of Pharmacy & Therapeutics, 3(1), 2012, 52-63.

confirmed that acupuncture, undeniably produces long term pain relief. Besides that, acupuncture may also increase blood circulation and body temperature, affect white blood cell activity (responsible for our immune function), reduce cholesterol and triglyceride levels, and regulate blood sugar levels. Acupuncture is also well known to treat a wide range of circumstances including lower back pain, migraine and knee pain. Apart from that, acupuncture is also used to treat addiction (such as alcoholism), asthma, bronchitis, carpal tunnel syndrome, constipation, diarrhea, facial tics, fibromyalgia, headaches, irregular menstrual cycles, polycystic ovarian syndrome, low back pain, menopausal symptoms, menstrual cramps, osteoarthritis, sinusitis. There are numerous ways of acupunctures which includes Traditional Chinese Medicine (TCM) it's based on a diagnosis on eight principles of complementary opposites (yin/yang, internal/external, excess/deficiency, hot/cold),French energetic acupuncture, it emphasizes meridian patterns, in particular the yin yang pairs of primary meridians, Korean hand acupuncture based on the principle that the hands and feet have concentrations of qi, and that applying acupuncture needles to these areas is effective for the entire body (Law S *et al.,* 2007). However, its undeniable that acupuncture do has its own drawbacks such as, discomfort when the needle is inserted dizziness, bruising or bleeding at the site of the needle as well as damage to an internal organ due to the insertion of a needle.

Acupuncture is a vastly used treatment modality for various conditions, including ophthalmologic diseases (Jenerick H *et al.,* 1998). It is generally accepted as an effective treatment option in clinical practices as mentioned earlier. Nevertheless, neither its efficacy nor its safety is well established. This is mainly due to the quality of the clinical trials that evaluate acupuncture is too low to draw an accurate and definite conclusions. Generally, the following factors usually come along to cause an eye disease which includes marked reduction of 'qi' in the eyes as a result of a local 'qi' deficiency, and often a general qi deficiency as well, significant of organ imbalance or weakness such as kidney 'yang' deficiency. As for acupuncture, those circumstances are relatively straightforward. In fact, it's undeniable that acupuncture is the superior to almost all other therapy in this respect. Typically, we have options of three classes of points: local, near, and distal and by employing a good needle technique, qi can be directed from the distal and near points to the eyes. Local, general and psychological adverse events are possible as the consequences of acupuncture treatment (Kim TH *et al.,* 2009).

MATERIALS AND METHODS
Study area
The study area was drawn from three different states in Malaysia that is Kedah, Perak and Kuala Lumpur. Private acupuncture clinic or provider has been chosen among these three states randomly to conduct this survey. Name of the clinic or provider does not enclosed here due to confidential uphold.

Population
The population of the study comprised of adults who were obtaining the treatment from the provider. The sample consists of various races, age and background and is picked randomly among them.

Sample
A sample size of 250 (n=250) was surveyed. A statistical technique used to determine sample size for a known population. To select the respondents, a multistage sampling technique was used. The first stage involved filtering of the patients visiting the clinics according to eye related problems patient. In stage two, patients were selected from the selected sample using simple random sampling. Each patient were given the questionnaire form to be filled up and also interviewed by our team mate in order to gain more information regarding the acupuncture treatment.

Data collection
The only instrument for data collection was a structured questionnaire (closed end questions) developed by the researchers which was administered to each participant. Research assistants were trained to facilitate administration. For participants who were not literate, the questionnaire was interpreted to them. The questionnaire was pretested amongst 20 adult patients visiting the clinic accordingly. Results were used to improve the language used in the questionnaire and mode of questioning. The questionnaire contained questions on socio-demographic profile of respondents, their health status, and also examined prevalence of CAM use, forms and reasons for use. Informed consent was obtained from all the participants who were willing to take part in this study.

Data analysis
Data generated were analyzed using frequencies and percentages. All the data collected is analyzed using SPSS version 17.0and CAM use with the level of significance at p = 0.05.

RESULTS
Table 1. Gender vs. Percentage

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	165	65.5	66.0	66.0
	Male	85	33.7	34.0	100.0
	Total	250	99.2	100.0	
Missing	System	2	.8		
Total		252	100.0		

Table 2. Age vs. Percentage

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	6	2.4	2.4	2.4
	26-35	20	8.0	8.0	10.4
	36-45	38	15.2	15.2	25.6
	46-55	100	40.0	40.0	65.6
	56 above	86	34.4	34.4	100.0
	Total	250	100.0	100.0	

Table 3. Race vs. Percentage

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	15	6.0	6.0	6.0
	Chinese	195	78.0	78.0	84.0
	Indian	30	12.0	12.0	96.0
	Others	10	4.0	4.0	100.0
	Total	250	100.0	100.0	

Table 4. Eye problems vs. Percentage

		Eye problems			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cataract	135	54.0	54.0	54.0
	Glaucoma	55	22.0	22.0	76.0
	Myopia	15	6.0	6.0	82.0
	Hyperopia	34	13.6	13.6	95.6
	Others	11	4.4	4.4	100.0
	Total	250	100.0	100.0	

Table 5. Adverse effect vs. Percentage

		Adverse effect			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	2	.8	.8	.8
	no	248	99.2	99.2	100.0
	Total	250	100.0	100.0	

Table 6. Duration of treatment vs. Percentage

Duration					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 week	18	7.2	7.2	7.2
	1month	112	44.8	44.8	52.0
	2-6 month	97	38.8	38.8	90.8
	1year	23	9.2	9.2	100.0
	Total	250	100.0	100.0	

Table 7. Education level vs. Percentage

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	primary school	84	33.6	33.6	33.6
	secondary school	140	56.0	56.0	89.6
	college/university	26	10.4	10.4	100.0
	Total	250	100.0	100.0	

Table 8. Monthly income vs. Percentage

Income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RM 1000 and below	58	23.2	23.2	23.2
	RM 1001-2001	127	50.8	50.8	74.0
	RM 2001 and above	65	26.0	26.0	100.0
	Total	250	100.0	100.0	

Table 9. Frequency of treatment per month vs. Percentage

Frequency					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<3 times	30	12.0	12.0	12.0
	4-8 times	90	36.0	36.0	48.0
	9-15 times	85	34.0	34.0	82.0
	>16 time	45	18.0	18.0	100.0
	Total	250	100.0	100.0	

Table 10. Number of people wish to continue CAM vs. Percentage

Continue CAM					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	250	100.0	100.0	100.0

Table 11. Concurrent modern treatment vs. Percentage

Concurrent treatment					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	202	80.8	80.8	80.8
	no	48	19.2	19.2	100.0
	Total	250	100.0	100.0	

Table 12. Overall statistic of this research; (n=250)

|		Race	Age	Sex	Eye problems	Adverse effect	Duration	Education	Income	Frequency	Continue CAM	Concurrent treatment
								Statistics				
N	Valid	250	250	250	250	250	250	250	250	250	250	250
	Missing	0	0	0	0	0	0	0	0	0	0	0
Std. Error of Mean		.036	.064	.030	.078	.006	.048	.039	.044	.058	.000	.025
Std. Deviation		.567	1.017	.475	1.241	.089	.762	.623	.702	.920	.000	.395
Variance		.322	1.035	.225	1.540	.008	.580	.388	.493	.847	.000	.156
Range		3	4	1	4	1	3	2	2	3	0	1
Minimum		1	1	1	1	1	1	1	1	1	1	1
Maximum		4	5	2	5	2	4	3	3	4	1	2

Fig 1. Gender vs. Percentage
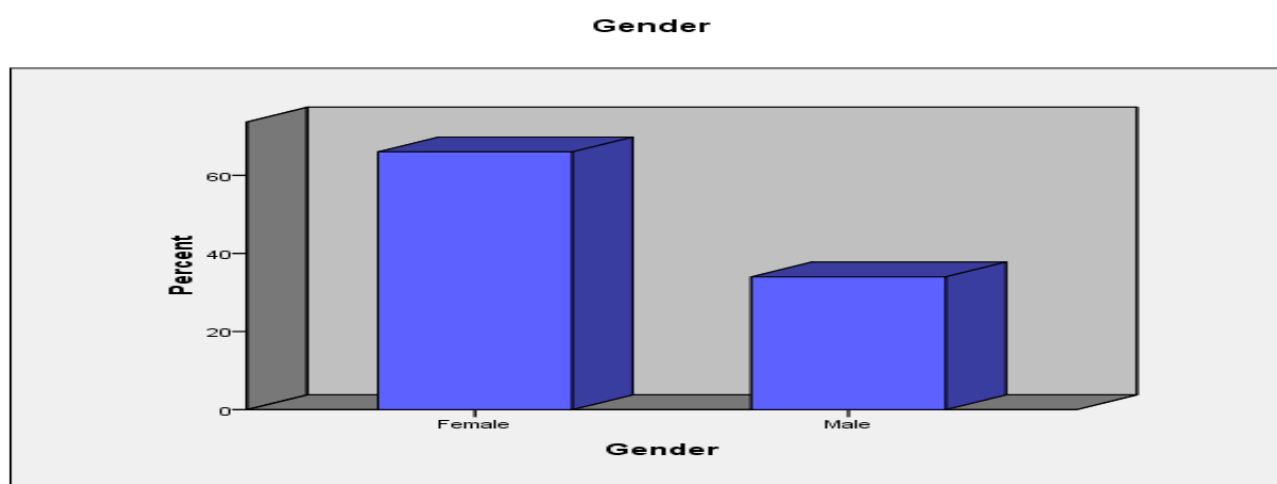
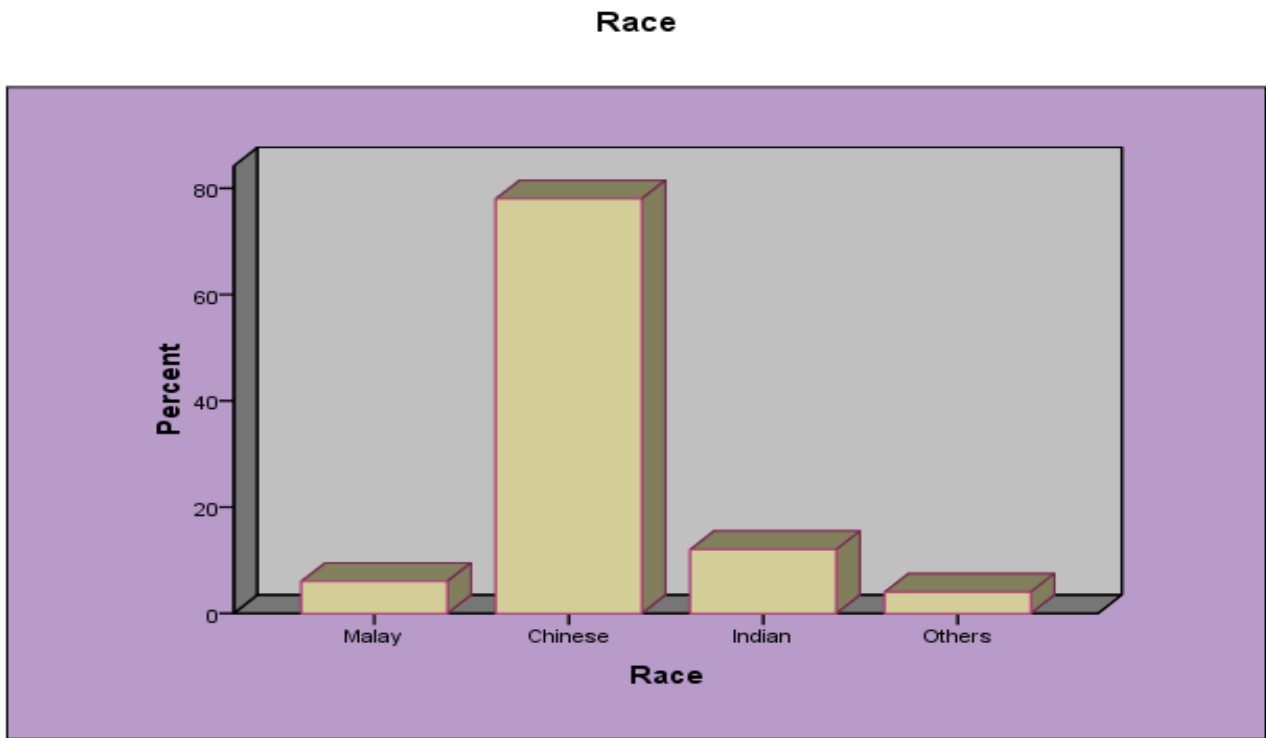**Fig 2. Age vs. Percentage**
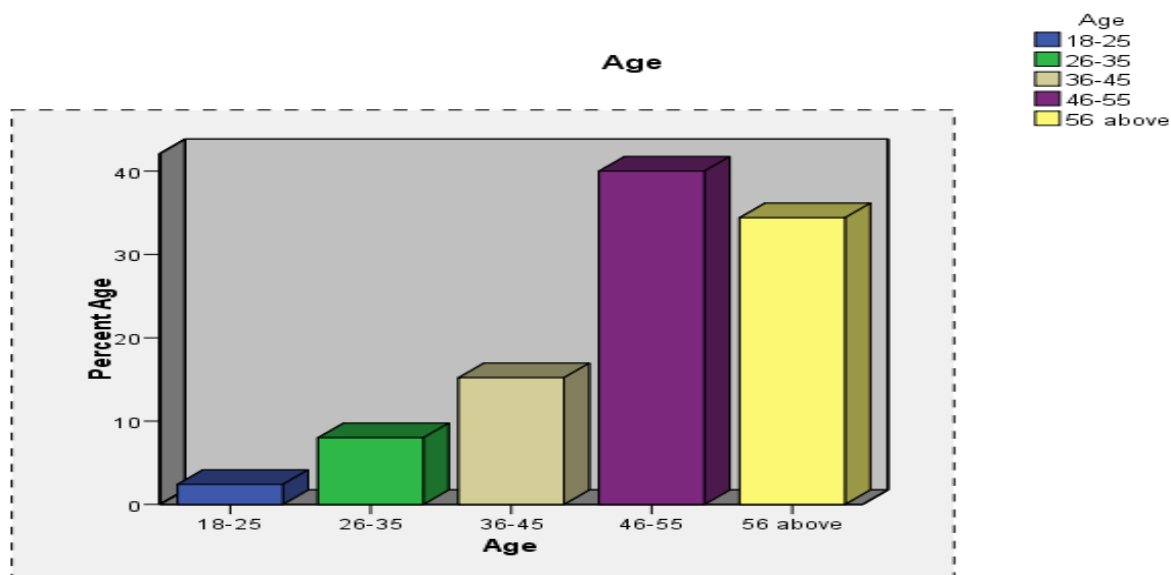
Fig 3. Race vs. Percentage

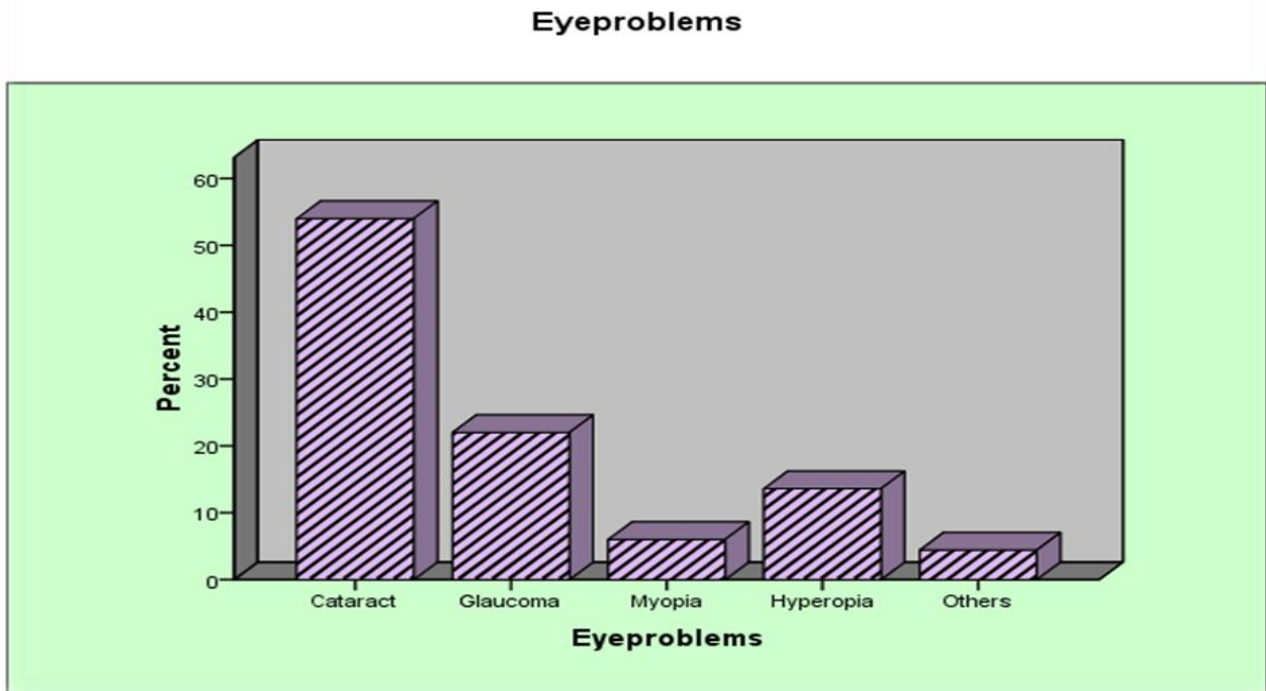**Fig 4. Eye problems vs. Percentage**
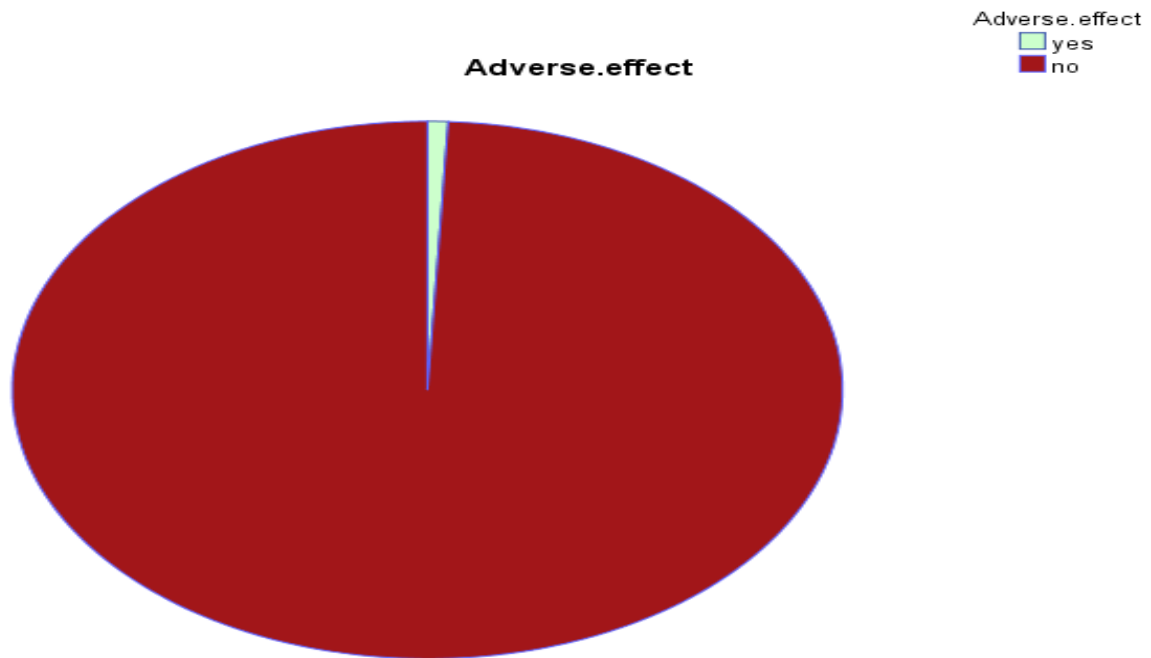
Fig 5. Adverse effect vs. Percentage

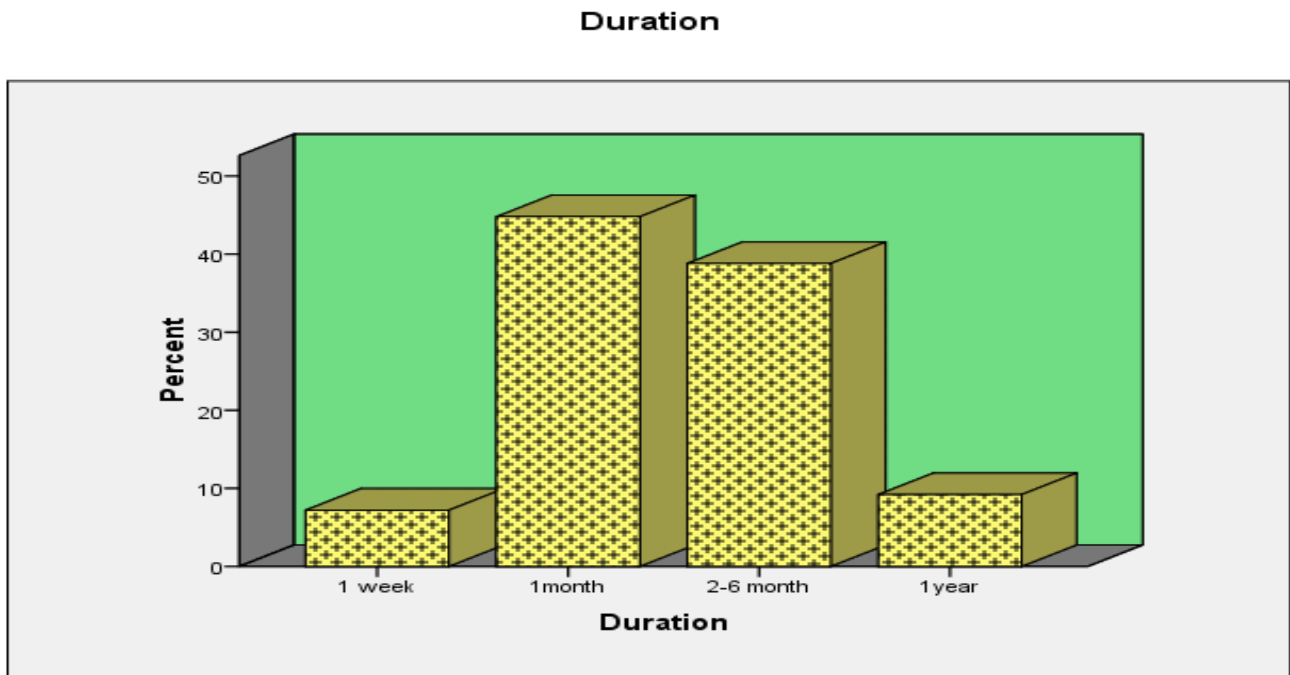**Fig 6. Duration of treatment vs. Percentage**

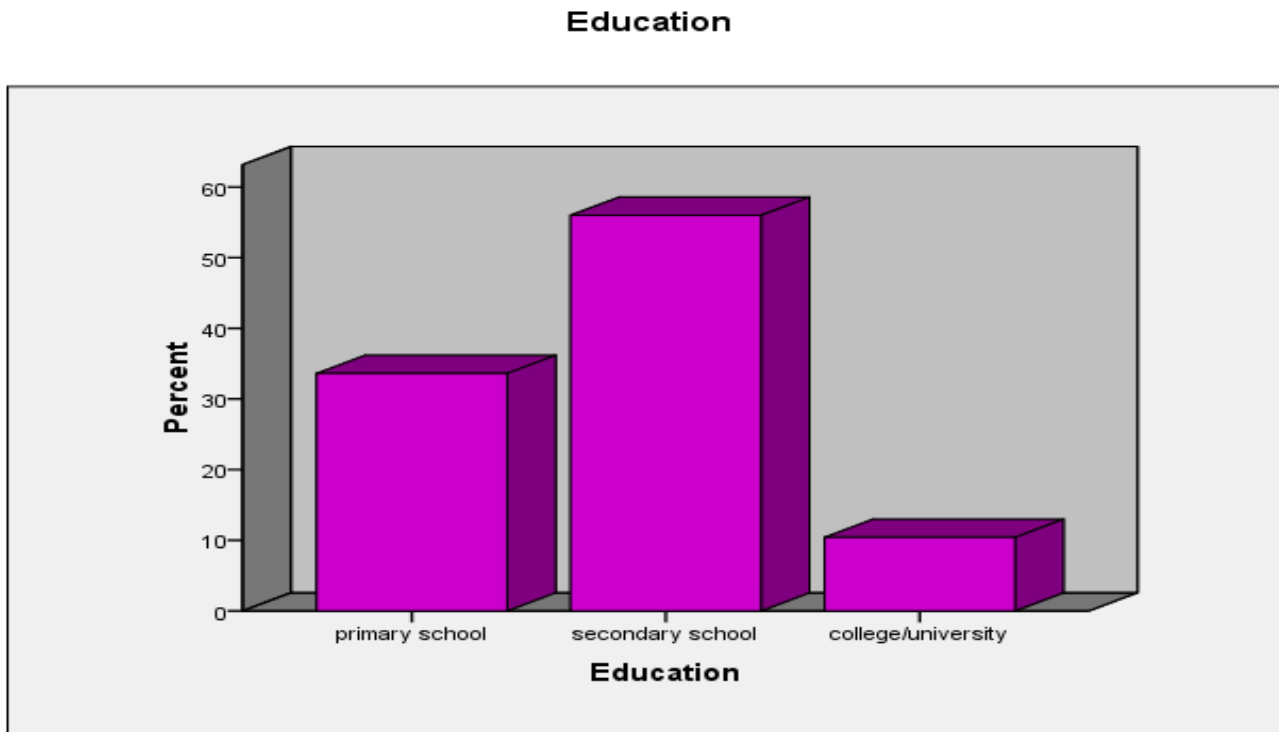**Fig 7. Education level vs. Percentage**

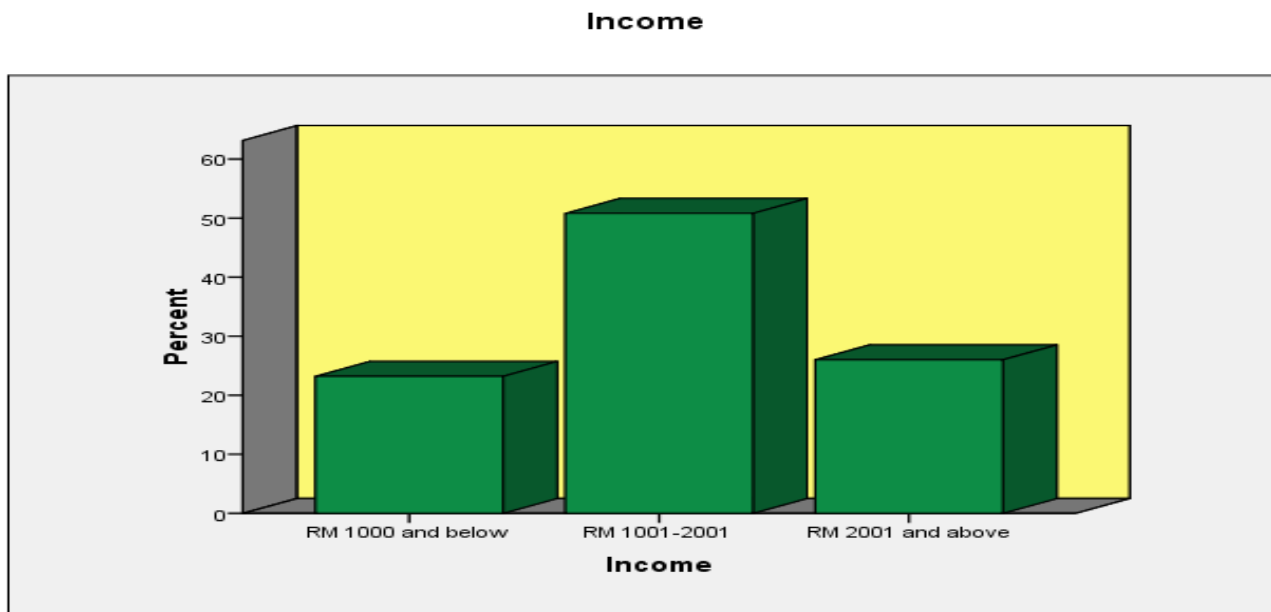**Fig 8. Monthly income vs. Percentage**

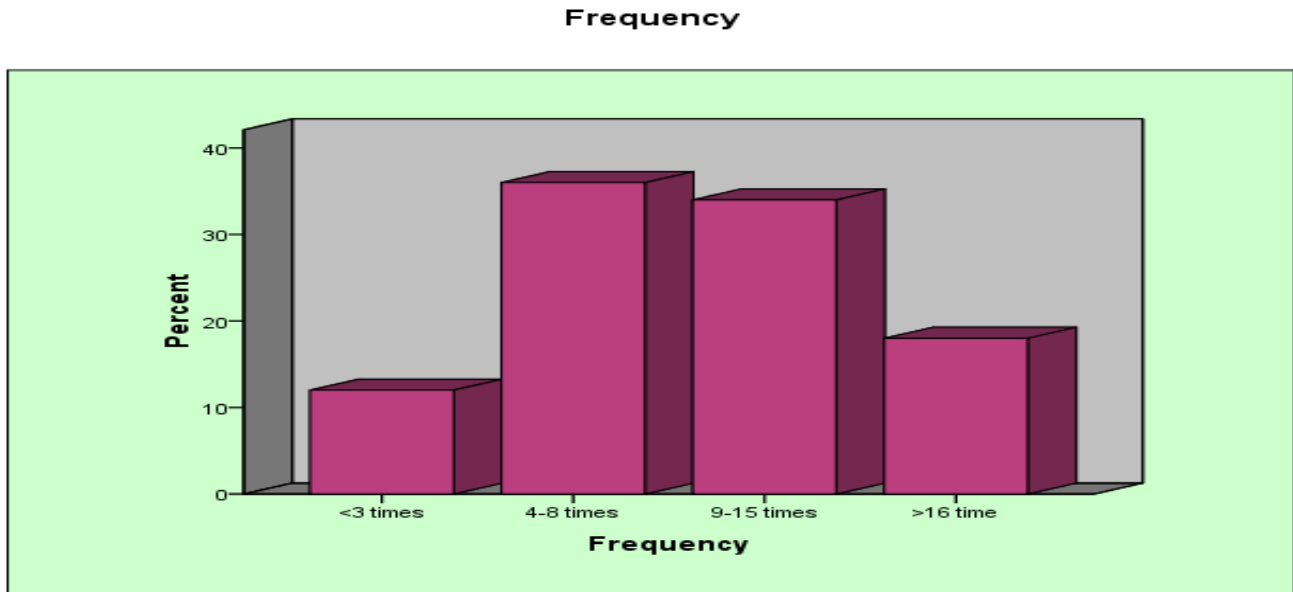**Fig 9. Frequency of treatment per month vs. Percentage**

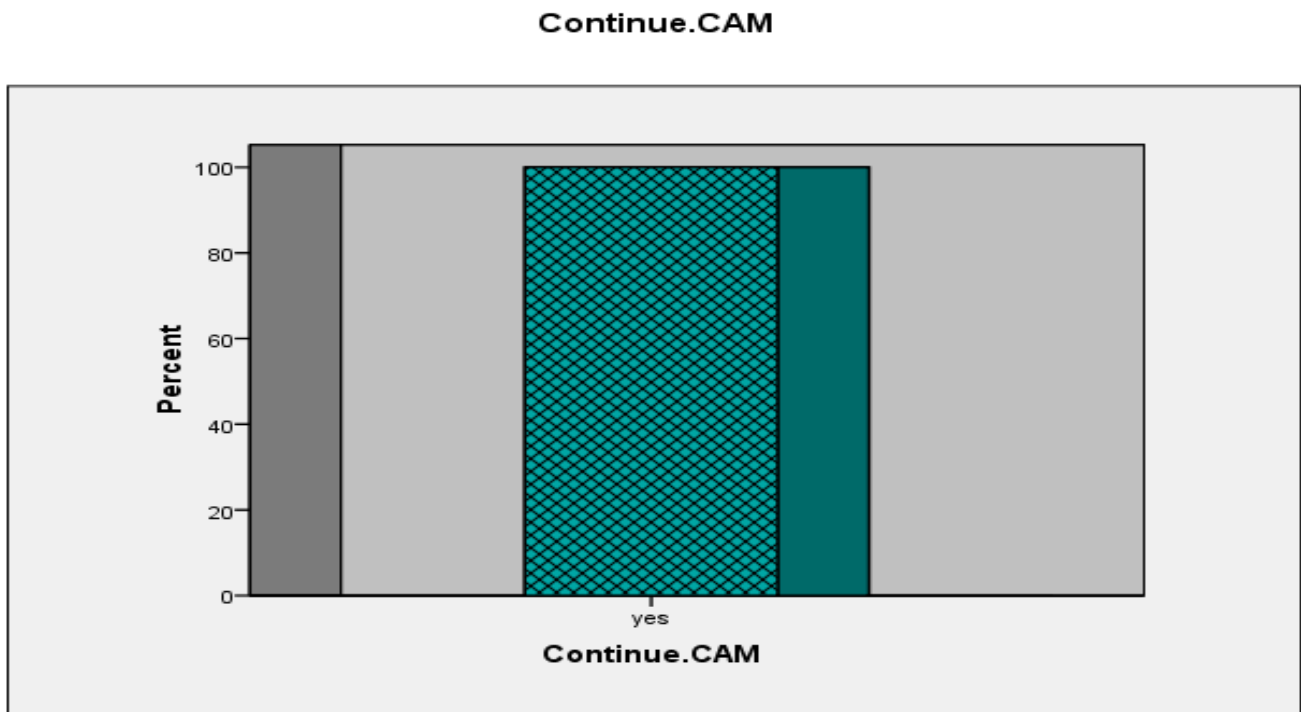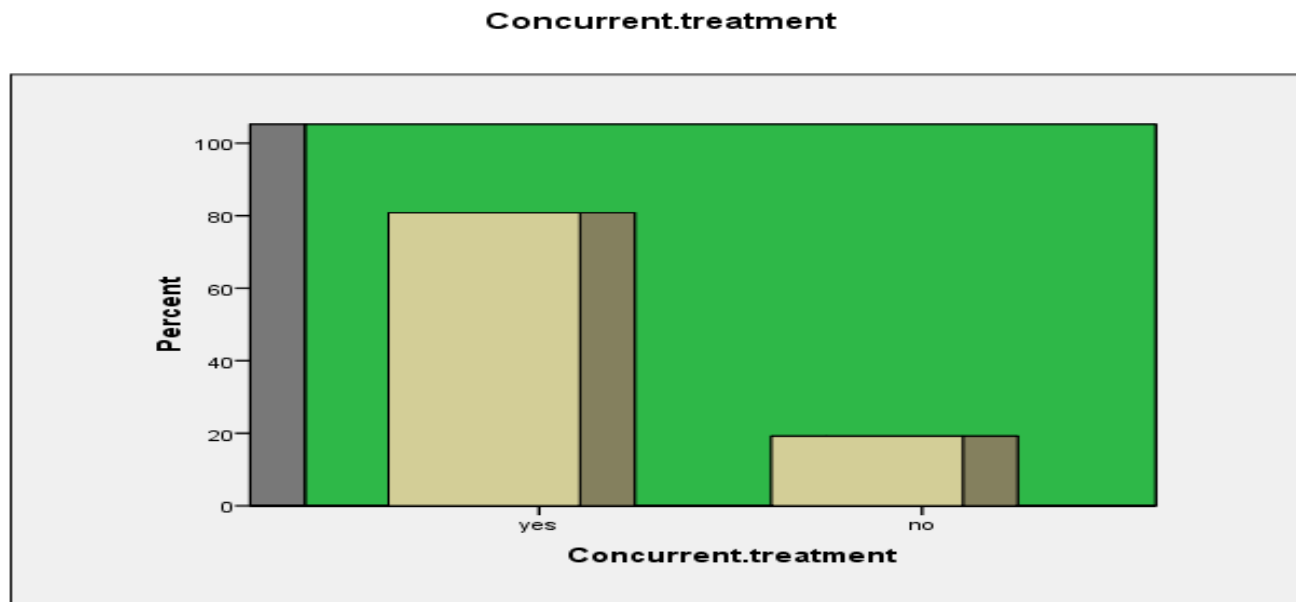**Fig 10. Number of people wish to continue CAM vs. Percentage**

Fig 11. Concurrent modern treatment vs. Percentage

DISCUSSION

This study has shown a high prevalence of CAM use among the adult populations in Malaysia. Based on gender, female are dominating the survey with 66% of them compare to male that are only 34%. Age group of 46 to 55 years old recorded highest percentage (40.0%) followed by 56 years old and above with (34.4%) respectively. This is mainly because most of the people with older age tend to get more chronic eye diseases. As acupuncture is an alternative treatment originated from China, our survey also showed the prevalence of this treatment in Malaysia is highest among Chinese population with 78% of the respondent are them followed by Indian 12%, Malay 6% and other races with 4% respectively. CAM has been used for many problems and diseases and this recent finding among eye related problems respondent showed that majority of the respondent use this acupuncture treatment in treating cataract problems (54%), while glaucoma shows value of 22% of the respondent while hyperopia and myopia recorded 13.6% and 6% respectively. Our research also shows that among the entire respondent, only two (0.8%) reported having adverse effect while others did not. Apart from that, the duration of the treatment that is undergone by the people to achieve the desired effect is also recorded. It shows that majority of the people (44.8%) takes approximately 1 month and 38.8% of them take them 2 to 6 months to show the effect. When comes to education level, 56% of them are graduated from secondary school and 33.6% of them are with primary school education only. 10.4% of them are graduated from university/college respectively. Apart from this, income level among the respondent are also recorded. 50.8% of the respondent are earning between RM 1000 to RM 2000 per month while 26.1% of them earning above RM 2000 per month. Frequency of the respondent in receiving acupuncture treatment is also included in this survey. 36% of the respondent came for treatment 4 to 8 times per month, followed by 34% of them came for 9 to 15 times per month. Only 12% from them came for less than 3 times per month. We also included few closed end question in order to get some feedback from the respondent. All the respondent (100%) suggests that this alternative treatment should be continue their usage in Malaysia. Apart from that this research also showed that 80.8% of the respondent is concurrently using modern medicine with acupuncture compare to only 19.2% of them only using acupuncture alone.

CONCLUSION

Use of CAM (Complementary and Alternative Medicine) is common among patients with eye diseases. This research concludes that acupuncture do have effectiveness in treating many eye related problems. The prevalence in this three different states show that

62

Shankar Jothi. *et al.* / *International Journal of Pharmacy & Therapeutics*, 3(1), 2012, 52-63.

the number of people using alternative medicine is higher. Thus this CAM can be used concurrent with allopathic treatment and yet much research has to be done in order to prove the effectiveness of this treatment against modern modalities. This trend which is neither static nor decreasing is likely to continue if there is no control by the National drug-safety monitoring system. There is need for regulation by the appropriate authority to ensure evidence of safety, efficacy and rational use of CAM. Although this study cannot be generalized to the general Malaysian population, it has increased the body of knowledge on CAM use by adult population. Future studies includes clinical trials should examine the prevalence of CAM use at the national level and among different socio cultural groups.

DECLARATION OF INTEREST
The authors report no conflicts of interest.

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