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WEIGHT LOSS EXERCISE: KNOWLEDGE, ATTITUDES AND PRACTICES AMONG NURSING STUDENTS IN KUALA TERENGGANU NURSING COLLEGE

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ABSTRACT

Exercise is an important practice in leading a healthy lifestyle. However, recently the percentage of Malaysians who practice healthy lifestyle has decreased and the rate of overweight or obesity is increasing. This study aims to explore the knowledge, attitudes and practices of exercise among nursing college students. Questionnaires were used as a research instrument and distributed to Kuala Terengganu Nursing Collage students consisting of 281 students, ranging from year 1 to year 3 in semester II. Data collection was carried out within two weeks. The results of this study showed that almost 66.9% of trainees chose aerobic exercise as their favorite exercise. This form of exercise is good for strength and durability of the cardiovascular. Almost 90.4% of them did exercises together with their friends. From the results, their coach had a relatively good level of knowledge about exercise. The majority of students have a positive attitude towards exercise. There is a relationship between knowledge and their value of exercise. Age is correlated with knowledge, meaning that the older the person the more knowledgeable they are on the benefits of exercise. Age and semester of study showed moderate correlation of 0.525 with awareness of exercises to increase stamina and strength of the body's defenses.

Keywords: Exercise, Knowledge, Attitude, Practice and Nursing Students

INTRODUCTION

This study aims to identify the knowledge, attitudes and practices of exercise among nursing college students. The target population in this study is the entire diploma nursing students ranging from year 1 Semester II to year 3 Semester II in Kuala Terengganu Nursing College. Currently, the total number of nursing students in Kuala Terengganu Nursing College from year 1 Semester II to year 3 Semester II was totaled as 281 students. The knowledge, attitude and practices of exercise such as three times a week for weight loss in accordance to Kuala Terengganu healthy BMI among nursing college students were examined. Data were analyzed using percentages, mean and ANOVA to examine differences between groups.

RESEARCH METHODOLOGY

(a) Age

Table 1: Age of Respondents

Age	Frequency	Percent
18-20 yrs	64	22.8
21 -23 yrs	200	71.2
24 -27 yrs	17	6.0
Total	281	100.0

Table 1 shows the age distribution; the majority of the participants who involved in this study were aged between 21 to 23 years old. Followed by age 18 to 20 years, and the minority group were aged 24 to 27 years.

(b) Semester of Study

Table 2: Semester of Study

Semester	Frequency	Percent
Year 1 Semester II	48	17.1
Year 2 Semester II	49	17.4
Year 3 Semester I	75	26.7
Year 3 Semester II	109	38.8
Total	281	100.0

Table 2 shows a total of 281 student nurses at Kuala Terengganu nursing college, from Year 1 Semester II, Year 2 Semester II, Year 3 Semester I and Year 3 Semester II involved in this study.

(c) Body Mass Index (BMI)

Table 3: Body Mass Index

Body Mass Index	Frequency	Percent
less than 18.5	37	13.2
18.5 -22.9	184	65.5
23 -24.9	40	14.2
25 -29.9	20	7.1
Total	281	100.0

Table 3 shows the classification of BMI based on WHO (2004) for Asian countries. This presents the participants who were classified as overweight with BMI more or equal 25 kg/m², totaling 20 students. However among the participants those who were still classified as underweight that is BMI less than 18.5 kg/m² were around 37 students.

RESULTS

In analyzing the knowledge, attitudes and practices of exercise, most of the responses show that the average respondent has the knowledge of exercise. However she did not practice because her attitude toward exercise is low. This was demonstrated by a mean knowledge of 41.48, attitudes 17.28 and the lowest for practices at 16.21.

Table 4 : Knowledge, Attitudes and Practices

Construct	Knowledge	Attitudes	Practices
Mean	41.48	17.28	16.21
Median	43.00	16.00	16.00
Mode	40.00	16.00	17.00

Table 4 shows the distribution of knowledge, attitudes and practices by summing up the scores of each item measuring a construct. Figure 1 shows the distribution for knowledge with mean 41.48 and standard deviation of 6.88. The mean is lower than the median of 43.00 and the distribution is negatively skewed indicating high score as shown.

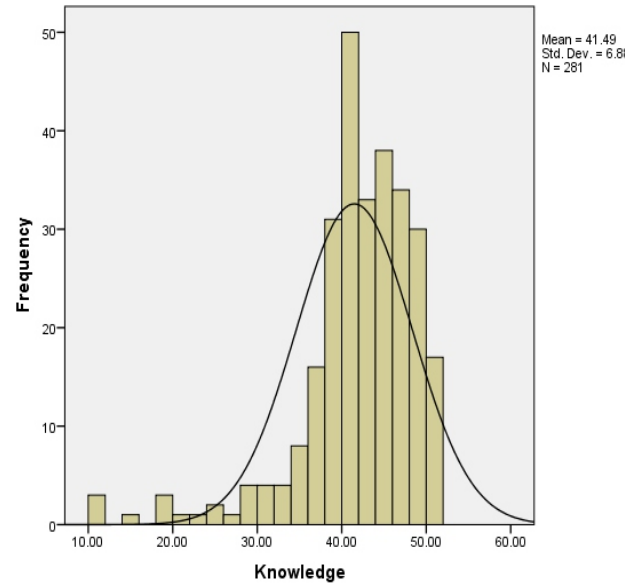

Figure 1: Distribution of Knowledge

Attitudes of respondents towards exercise show a distribution with mean 17.29 and standard deviation 6.18. The mean is higher than median of 16.00 and the distribution is negatively kurtosis as shown in Figure 2.

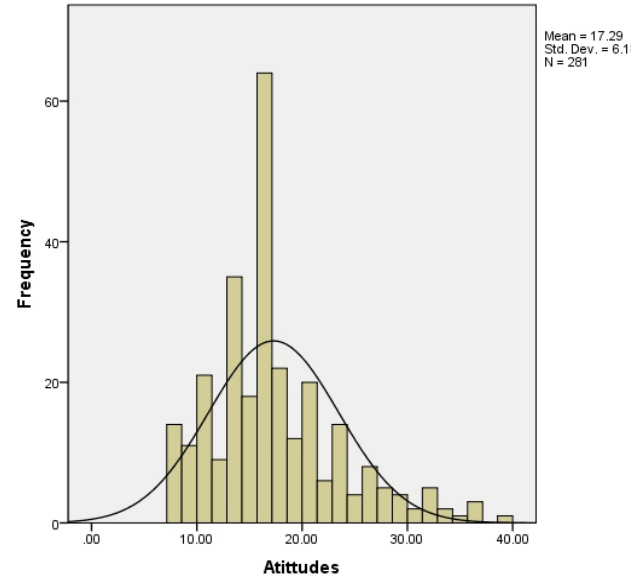

Figure 2: Distribution of Attitudes

Practice among respondents such as three times a week of exercise shows a normal distribution with mean 16.22 and standard deviation of 3.06. The mean is slightly higher than the median of 16.00 as presented in Figure 3.

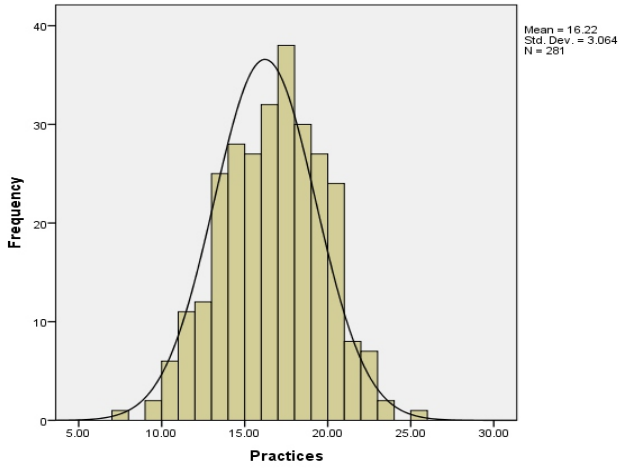

Figure 3: Distribution of Practices

Factors relating to Knowledge, Attitudes and Practices

There are three age groups, four semesters of study and four levels of Body Mass Index. Differences between mean of groups were analyzed using ANOVA to ascertain factors relating to their knowledge, attitudes and practices on exercise.

(a) Effect of Age

Table 5 : Differences between Age Groups

	Df	Mean Square	F	Significance
Knowledge	2	270.545	5.658	0.004*
Attitudes	2	215.385	5.763	0.004*
Practices	2	8.673	0.913	0.402

**Significant difference at p<0.05*

In Table 5, ANOVA test results show that overall there are significant differences between the age groups for Knowledge and Attitudes. Post Hoc analyses reveal actual significant differences.

Table 6: Differences between Age Groups

Dependent Variable	Age	Mean Difference	Std. Error	Significance
Knowledge	18-20 yrs	-3.39997*	1.01701	0.003*
	21-23 yrs			
Attitudes	18-20 yrs	2.97619*	0.88432	0.003*
	21-23 yrs			

Table 6 shows the results of Pair wise Comparisons between age groups. This shows that the average knowledge of the age group 18-20 and 21-23 (mean difference of 3:39, p <.05), while the average attitude of the age group 18-20 and 21-23 (mean difference of 2.97, p <.05) are significantly different. This means that the overall differences are due to differences between the two age groups.

(b) Effect of Semester of Study

Table 4 shows that the overall differences in knowledge and attitudes between semesters of study are significant. Post Hoc analyses reveal the actual differences.

Table 7: Differences Between Semester of Study

	df	Mean Square	F	Significance
Knowledge	3	257.223	5.458	0.001*
Attitudes	3	147.437	3.935	0.009*
Practices	3	14.877	1.577	0.195

**Significant difference at p<0.05*

Table 7 shows that the mean difference for knowledge for Year 1 Semester I and Year 3 Semester II (mean difference of 3.78, p < .05). The mean difference for knowledge for Year 2 Semester II and Year 3 Semester II (mean difference of 4.15) was significant. This means that differences between the three groups of study were significant.

Table 8: Differences for Knowledge between Semesters of Study

Dependent Variable	(I) semester	(J) semester	Mean Difference (I-J)	Significance
Knowledge	Year 1 Semester II	Year 2 Semester II	0.36690	0.994
		Year 3 Semester I	-1.74264	0.537
		Year 3 Semester II	-3.78554*	0.012*
	Year 2 Semester II	Year 1 Semester II	-.36690	0.994
		Year 3 Semester I	-2.10955	0.354
		Year 3 Semester II	-4.15245*	0.004*
	Year 3 Semester II	Year 1 Semester II	3.78554*	0.012*
		Year 2 Semester II	4.15245*	0.004*
		Year 3 Semester I	2.04290	0.209

**The mean difference is significant at the 0.05 level*

Table 8 show that the average attitudes of the semester group year 1 semester II and year 3 semester I (mean difference of 3.13, $p < .05$) , year 1 semester II and year 3 semester II (mean difference of 2.93, $p < .05$) were significantly different.

Table 9: Differences for Attitudes between Semesters of Study

Dependent Variable	(I) semester	(J) semester	Mean Difference (I-J)	Significance
Attitudes	Year 1 Semester II	Year 2 Semester II	0.81242	0.915
		Year 3 Semester I	3.13399*	0.033*
		Year 3 Semester II	2.93203*	0.033*
	Year 3 Semester I	Year 1 Semester II	-3.13399*	0.033*
		Year 2 Semester II	-2.32157	0.169
		Year 3 Semester II	-.20195	0.996
	Year 3 Semester II	Year 1 Semester II	-2.93203*	0.033*
		Year 2 Semester II	-2.11961	0.187
		Year 3 Semester I	0.20195	0.996

**The mean difference is significant at the 0.05 level*

(c) Effect of Body Mass Index

Table 10: Differences based on Body Mass Index

Body mass index	df	Mean Square	F	Significance
Knowledge	3	84.048	1.712	0.165
Attitudes	3	52.213	1.356	0.257
Practices	3	1.856	0.194	0.901

Table 10 shows no significant differences in knowledge, attitude and practices according to Body Mass Index of respondents.

DISCUSSION

The inclusion of exercise training as part of an exercise program for promoting health and preventing disease has been endorsed by the American Heart Association (Pollock *et al.*, 2000), American College of Sports Medicine (Pescatello *et al.*, 2004) and the American Diabetes Association (Sigal *et al.*, 2004) as an integral part of an overall health and fitness program. Various populations including patients with cancer, cardiovascular disease, chronic fatigue syndrome, Hodgkin's disease and fibromyalgia have reported aerobic exercise as an effective method to treat fatigue (Craig & Kakumanu, 2002).

The prevalence of obesity in children and adolescents is increasing rapidly worldwide (WHO, 1997). A rising rate of obesity in epidemic proportions also brings about economic consequences and substantial healthcare costs. The early onset of obesity leads to an increased likelihood of obesity into adulthood and links to increased prevalence of obesity related disorders such as coronary diseases, insulin resistance, diabetes mellitus, hypertension, sleep apnea, arthritis, cancer, stroke and heart failure in later life (Ministry of Health, 2004).

Strategies aimed at treating long-term established obesity in adults have not been effective. In view of the alarming rise in physical inactivity in children and adolescents worldwide, and even possible trends of decreasing physical fitness, four primary preventions should be emphasized as early as childhood to prevent the link between obesity in early life with obesity in later life. Studies in adults with obesity have demonstrated that low aerobic fitness is as important as Body Mass Index (BMI) for predicting mortality.

However, recently the percentage of Malaysians who practice healthy lifestyle has decreased and the rate of overweight or obesity is increasing. According to a statement issued by Ministry of health based on a study conducted in 2007 with University Putra Malaysia, Universiti Sains Malaysia and Universiti Kebangsaan Malaysia, 3.8 million (27%) of adults in this country suffer rates of overweight and 12% or 1.7 million suffer from obesity. The obesity rate among the people of this country has increased by almost 20% in seven years.

BMI increased among those who have low levels of physical activity. Individuals with active lifestyles require more calories than those who are less active. We can understand this situation by balancing the intake and calorie consumption needed to maintain ideal body weight. For weight loss process to take place, we need to reduce calorie intake and favor its use to be more effective. Controlling calorie intake can also reduce the percentage of body fat. Being overweight or obese has

an impact on both the quality and quantity of life. Individuals who suffer from this problem have shorter life spans and higher risks for heart disease, high blood pressure, diabetes and cancer. Obesity also increases the risk of cancer, gallstones, gout, osteoarthritis and infertility.

Individuals who are overweight also have lower self esteem and depression because of their body image. In other words, carrying excess weight reduces the quality of life. To address this problem one should exercise consistently. Regular exercise can reduce the stress experienced by individuals who have excess weight. This is because physical strength as a result of exercise can raise the self confidence and the individual will feel energized and confident with their skills.

Obesity is closely related to unhealthy quality of life. Teens with normal weight usually do not have problems with depression, self-esteem or their social lives. Individuals who do not practice a healthy lifestyle will gain low level of health or fitness. This will affect their performance in physical activity and cause them to function less in society and suffer psychological problems.

Percent body fat reserved for women aged 19 years to 29 years is 19.2%. This is for woman who weighs 52.9 kg to 59.9 kg with height 161 cm. For women aged 20 to 35 years, the percentage fat proposed is 19.3%, 164 cm tall and weighs 57 kg to 65 kg. Weight loss is not something to be taken lightly. You need to reduce the 500 kilo calories per day just to reduce your body weight by 0.5 kg in a week. It is easier if you are eating less and exercising more. Weight gain among Malaysians is an increasing problem. Bodily inactivity can affect work function and gradually affect the performance of an individual. Many studies have shown that regular exercise is essential for a healthy body and improve the wellbeing of the body. Despite knowing clearly, the importance of exercise and the benefits of regular exercise, the involvement of students in Kuala Terengganu Nursing College (KKKT) in exercises is quite alarming. This phenomenon is also worrying many parties as the number of nurses in Malaysia is large and the numbers are growing. They are supposed to be role models for the community. Excuses such as lack of time, equipment and facilities, warm weather, norms and beliefs of the community and often embarrassment are factors limiting their involvement in regular exercise.

This study shows that almost 66.9% of trainees choose aerobic exercise as their favorite form of exercise. This form of exercise is good for strength and durability of cardiovascular (heart). Almost 90.4% of them did exercises together with their friends. This is a good way to improve and maintain the motivation to exercise regularly.

CONCLUSION

From this study, it can be concluded that the students have a fairly good level of knowledge on exercise. Majority has a positive attitude towards exercise shown by the relationship between knowledge and the value of exercise. But the data on practice showed that half or 50% did not practice good exercise while nearly 46.3% of them did not practice the exercises correctly not consistently. More of them exercised according to their mood. Exposure to knowledge about the importance of exercise and a way of doing the right exercise plays an important role in a more effective workout. Results of the study showed a correlation between age and awareness of exercises to increase stamina and strength of the body's defenses.

REFERENCES

Craig, T. & Kakumanu, S. (2002). Chronic fatigue syndrome: evaluation and treatment. *American Family Physician*, 65(6), pp 1083-1091.

Ministry of Health Malaysia (2004), Clinical Practice Guidelines. Management of Obesity. Kuala Lumpur. Retrieved from: http://www.moh.gov.my/penerbitan/CPG2017/3932.pdf

Pescatello, L. S., Franklin, B. A., Fagard, R., Farquhar, W. B., Kelley, G. A. & Ray, C. A. (2004). Exercise and hypertension. *Medicin Science Sports Exercise journal*, 36(3), pp 533-553.

Pollock, M. L., Franklin, B. A., Balady, G. J., Chaitman, B. L., Fleg, J. L., Fletcher, B., Limacher, M., Pina, I. L., Stein, R. A., Williams, M. & Bazzarre, T. (2000). AHA Science Advisory. Resistance exercise in individuals with and without cardiovascular disease: benefits, rationale, safety, and prescription: An advisory from the Committee on Exercise, Rehabilitation, and Prevention, Council on Clinical Cardiology, American Heart Association; Position paper endorsed by the American College of Sports Medicine. *Circulation*, 101(7), pp 828-833.

Sigal, R. J., Kenny, G. P., Wasserman, D. H. & Castaneda-Sceppa, C. (2004). Physical activity/exercise and type 2 diabetes. *Diabetes Care*, 27(10), pp 2518-2539.

World Health Organization (1997). Obesity : preventing and managing the global epidemic: report of a WHO Consultation on Obesity, Geneva.