The Impact of Community Settlement on Leisure Time Use and Body Composition in Determining Physical Lifestyles among Women

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Abstract—Leisure time is an important component to offset the sedentary lifestyle of the people. Women tend to benefit from leisure activities not only to reduce stress but also to provide opportunities for well-being and self-satisfaction. This study was conducted to investigate body composition and leisure time use among women in Selangor from the influences of community settlement. A total of 419 women aged 18-65 years were selected to participate in this study. Descriptive statistics, t-test and ANOVA were used to analyze the level of physical activity and the relationship between leisure-time use and body composition were made to analyze the physical lifestyles. The results showed that women with normal body composition seem to be involved in more passive activities than women with less weight gain and obesity. Thus, the study recommended that the government and other health and recreational agencies should develop more places and activities suitable for leisure preference for women in their community settlement so they become more interested to engage in more active recreational and physical activities.

Keywords—Body composition, community settlement, leisure time, lifestyles.

I. INTRODUCTION

IN Malaysia, 60% of adults represent the non-active group with major health problem [1], as evidenced by the percentage increased in obese women in this category [2]. According to the World Health Survey, out of 18% of the population in 51 countries were physically inactive. Malaysia was the highest physical inactivity (16.5%) among the participating Western Pacific region countries [3].

Physical activity plays an important role in healthy lifestyles and there are many factors affecting participation in physical activity. For example, socio demographic profile can affect a woman's decision to involve in physical activity to maintain a healthy lifestyle. However, not much research has been conducted on leisure time and its association with location for physical participation among women, especially when 36% of adults do not adopt physically active lifestyles in Malaysia [4]. Thus, this study will investigate the impact of community settlement, in terms on urbanization, on leisure time use and body composition among women in Selangor.

II. REVIEW OF LITERATURE

Leisure is a crucial lifestyle component that balances people's lifestyles [5]. By balancing work and business with leisure, allows people to perform to best of their peak at work without feeling burnt out. With regard to leisure time physical activity, the association between sedentary lifestyle and socioeconomic factors is the most evident. Overall, sedentary behavior has showed a positive association with socioeconomic conditions including physical activities during leisure time or at work. Other studies on leisure time physical activity showed that people with lower socioeconomic conditions tend to be more sedentary [6].

In view of women and physical activity, there is strong evidence that shows differences between what motives women and men in physical activity. Other research has shown that women tend to do exercise more than men in order to lose weight and improve their appearance [7].

Physical activity is also related with improved body composition. People who do a regular physical activity such as jogging can maintain their body composition in terms of weight. Exercise is often urged with improved body composition. In comparison, more time spent on sedentary activities is associated with increases in body composition and an adverse metabolic profile.

There are also associations between body composition and leisure time [6]. Results showed that the average physical activity among factory workers was three times higher than unreported employment, and twice as high in young adults as in old adults. It was also reported that the more involvement in physical activity corresponded with lesser sedentary leisure time thus resulting in lower levels obesity. More time spent on sedentary leisure means less time applicable for physical activity. A sedentary activity usually accompanied by snacking and watching television at outside of mealtimes can lead to unconscious over consumption. In other words, unhealthy dietary patterns as a result of increased exposure to food advertising might also influence those who spend more time watching a television.

Body mass index (BMI) is used as an early indicator for an individual's health. Based on the results of research, 56.5% of staff members at one public university in Malaysia are of the ideal weight, while 32.2% are overweight and obese [8], which is actually high compared to other countries around the region.

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The issues of leisure and healthy lifestyle are occurring more and more frequently nowadays. This issue has a major impact on everybody, since health, is fundamental to our life.

Participation in leisure has been proven to be beneficial and has a positive link to a more prosperous aging process [9]. Malaysia is undergoing a rapid expansion of its elderly population and is expected to attain the status of an ageing country by 2035, by which time, 14% of total population will be aged 60 years old and above.

A projection by the United Nations reported that the proportion of elderly in Malaysia will increase to 22% or 8.7 million in 2050. This phenomenon is arousing interest in those countries affected globally and has led to making active ageing a central feature for developing ageing policies.

Gender is also a key factor affecting women's participation in sport, leisure and physical activity. Women tend to place a lower priority on physical activity and leisure participation as they usually put their family's needs first before other factor. This is rather common among the Malaysian–Eastern traditions, which views a person as a member of a family, dependent on others, and as a result, deriving her identity as a member of her in-group [10].

III. METHODOLOGY

A total of 419 respondents were used for the survey and the data were collected through self-administered questionnaires, either distributed personally to the respondents or online.

The sample consists of women in Selangor from 18-65 years old. The age range was divided into two categories: young adult (20-25 years old) and adulthood (26-64 years old). Leisure time use was analyzed based on the Adolescent Leisure Time Use Inventory [11].

Descriptive analysis was used to analyze leisure time use and body composition and one-way ANOVA to examine if there is a relationship between body composition and leisure time use among women in Selangor.

IV. RESULTS

TABLE I
AGE

Age Range	Frequency	Percent (%)
Young adult (18-40 years old)	384	91.6
Adulthood (40-65 years old)	35	8.4
Total	419	100.0

Table I shows the age of respondents, which ranged from 15 years to 65 years. Most of the respondents, 91.6% (N=384), were young adults, while the remaining 8.4% (N=1) were adulthood. The age range in this study refers to the Erikson Stage Theory.

Table II represents the types of community settlement of the respondents. Community settlement is divided into two, which are urban and suburban. For urban, 36.2% (N=152) of the respondents were from Petaling, 28.6% (N=120) from Klang, 7.9% (N=33) from Gombak, 2.4% (N=10) from Hulu Langat and 1.7% (N=7) from Sepang Districts. For suburban, 9.3% (N=39) of the respondents were from Kuala Langat, 8.1%

(N=34) from Kuala Selangor, 3.3% (N=14) from Sabak Bernam and 2.6% (N=11) from Hulu Selangor.

TABLE II
TYPES OF COMMUNITY SETTLEMENT

	District	Frequency	Percent (%)
Urban	Petaling	152	36.2
	Klang	120	28.6
	Hulu Langat	10	2.4
	Gombak	33	7.9
	Sepang	7	1.7
	Kuala Langat	39	9.3
	Kuala Selangor	34	8.1
Suburban	Hulu Selangor	11	2.6
	Sabak Bernam	14	3.3
	Total	420	100.0

The urban area refers to a gazetted area and has a population of more than 10,000 people. In this study, urban refers to five districts in Selangor that are classified under the City Council. Suburban refers to a non-gazetted area with a population of less than 10,000 people [12]. Suburban refers to four districts in Selangor that are managed under the District Council.

In general, the body composition among women in Selangor is presented in Table III. Body composition was calculated using a formula of weight (kg) divided by height (m^2).

TABLE III
BODY COMPOSITION AMONG WOMEN IN SELANGOR

Body Composition Level	Frequency	Percent
Underweight	58	13.8
Normal	225	53.7
Overweight	79	18.9
Obesity	57	13.6
Total	419	100.0

Table III shows the body composition among women in Selangor. There are four body composition levels: underweight, normal, overweight and obesity. 53.3% (N=226) were normal, 18.8% (N=79 overweight, 13.8% (N=58) were underweight and 13.6% (N=57) of the respondents were obese.

Table IV shows the body composition among women in Selangor in their community settlement. For urban area, the highest percentage of body composition was normal (42.0%, N=176). This is followed by overweight (12.9%, N=54), obesity (11.2%, N=47) and underweight (10.5%, N=44). For suburban, the highest percentage of body composition was normal (11.7%, N=49). This is followed by overweight (6.0%, N=25), underweight (3.3%, N=14) and obesity (2.4%, N=10).

Table V shows the level of physical activity engagement among women in Selangor with regards to their types of community settlement. The level of physical activity is categorized as low, moderate and high. For urban area, 30.8% (N=129) of the respondents had low level of physical activity. This is followed by high level of physical activity which is 28.6% (N=120) and moderate level of physical activity is

17.2% (N=72). For suburban area, 10.0% (N=42) of the respondents had high level of physical activity. This is followed by low level of physical activity which is 9.1% (N=38) and moderate level of physical activity which is 4.3% (N=18).

TABLE IV
BODY COMPOSITION AND TYPES OF COMMUNITY SETTLEMENT

			Body Composition				Total
			Underweight	Normal	Overweight	Obesity	
Types of Community Settlement	Urban	Count	44	176	54	47	321
		% of Total	10.5%	42.0%	12.9%	11.2%	76.6%
	Suburban	Count	14	49	25	10	98
		% of Total	3.3%	11.7%	6.0%	2.4%	23.4%
Total		Count	58	225	79	57	419
		% of Total	13.8%	53.7%	18.9%	13.6%	100.0%

TABLE V
LEVEL OF PHYSICAL ACTIVITY ENGAGEMENT AND TYPES OF COMMUNITY SETTLEMENT

			Level of Physical Activity			Total
			Low	Moderate	High	
Types of Community Settlement	Urban	Count	129	72	120	321
		% of Total	30.8%	17.2%	28.6%	76.6%
	Suburban	Count	38	18	42	98
		% of Total	9.1%	4.3%	10.0%	23.4%
Total		Count	167	90	162	419
		% of Total	39.9%	21.5%	38.7%	100.0%

Table VI shows the types of activities engaged during leisure time with community settlement. Results indicate that there is no significant difference between all types of activities (passive leisure, active leisure and social leisure) with types of community settlement. For passive leisure (f = 0.933, p = 0.352), urban is more passive than suburban, for active leisure (f = -0.887, p = 0.376), suburban is more active, while for social leisure (f = 0.264, p = 0.792), urban is more social than suburban.

Finally, one-way ANOVA was used to identify if there is any relationship between body composition and leisure time use among women in Selangor.

TABLE VI
TYPES OF ACTIVITIES ENGAGED DURING LEISURE TIME AND TYPES OF COMMUNITY SETTLEMENT

	Types of Community Settlement	N	Mean	t	df	Sig.(2-tailed)
Passive	Urban	321	4.0284	0.933	184.339	0.352
	Suburban	98	3.9554			
Active	Urban	321	2.3252	-0.887	417	0.376
	Suburban	98	2.4082			
Social	Urban	321	2.5637	0.264	417	0.792
	Suburban	98	2.5449			

TABLE VII
LEISURE TIME USE AMONG WOMEN ACROSS BODY COMPOSITION

		Sum of Squares	df	Mean Square	F	Sig.
passive	Between Groups	3.663	3	1.221	2.865	0.036
	Within Groups	176.846	415	0.426		
	Total	180.509	418			
active	Between Groups	3.198	3	1.066	1.631	0.182
	Within Groups	271.278	415	0.654		
	Total	274.475	418			
social	Between Groups	3.100	3	1.033	2.771	.041
	Within Groups	154.747	415	0.373		
	Total	157.847	418			

Table VII shows the results of leisure time use among women across body composition. It shows that of all the types of leisure activities involved, active leisure was found to be not significant among different level of body compositions (sig> 0.05). This indicates that regardless of their body composition, women were frequently involved in active leisure. However, results showed that there were significant differences between level of body composition in passive and

social leisure, which indicated that leisure participation among women in both passive activities were also influenced by their level of body composition. Post Hoc test was carried out to determine the differences.

Table VIII shows the results of Post Hoc for leisure activities and body composition. Post Hoc test was carried out in order to identify exactly where the differences between each of the groups lie. There was statistically significant difference at the p < 0.05 level in the leisure activities scores for passive and social leisure between different types of body composition. For passive leisure (f = 2.865, p = 0.036) for instance, although the actual difference in mean score between groups was quiet small (Table VII), but Post Hoc Test in Table VIII showed that the actual difference lies between underweight and normal (sig. = 0.020). Another significant difference was between normal and obesity (sig. = 0.034). There was actually no true significant difference between underweight and obesity. The Post Hoc finding indicated that women of normal body composition are involved in passive leisure more as compared to underweight and obesity.

TABLE VIII
POST HOC FOR LEISURE ACTIVITIES AND BODY COMPOSITION

Dependent Variable	(I) Body Composition	(J) Body Composition	Mean Difference (I-J)	Std. Error	Sig.
Passive	Underweight	Normal	-0.22464*	0.09613	0.020
		Overweight	-0.10754	0.11288	0.341
		Obesity	-0.01891	0.12175	0.877
	Normal	Underweight	0.22464*	0.09613	0.020
		Overweight	0.11710	0.08537	0.171
		Obesity	0.20573*	0.09680	0.034
	Overweight	Underweight	0.10754	0.11288	0.341
		Normal	-0.11710	0.08537	0.171
		Obesity	0.08864	0.11345	0.435
	Obesity	Underweight	0.01891	0.12175	0.877
		Normal	-0.20573*	0.09680	0.034
		Overweight	-.08864	0.11345	0.435
Social	Underweight	Normal	-0.11479	0.08992	0.202
		Overweight	0.02556	0.10559	0.809
		Obesity	0.11722	0.11389	0.304
	Normal	Underweight	0.11479	0.08992	0.202
		Overweight	0.14036	0.07986	0.080
		Obesity	0.23202*	.09055	0.011
	Overweight	Underweight	-0.02556	0.10559	0.809
		Normal	-0.14036	0.07986	0.080
		Obesity	0.09166	0.10612	0.388
	Obesity	Underweight	-0.11722	0.11389	0.304
		Normal	-0.23202*	0.09055	0.011
		Overweight	-0.09166	0.10612	0.388

For social leisure (f = 2.771, p = 0.041), although there were significant differences across body composition, as shown in Table VII; however, Post Hoc analysis revealed that underweight did not differ significantly with either normal, overweight or obesity, meaning, there is no real difference in between the four body composition and women across types of body composition in social leisure activities.

V. DISCUSSIONS

Overall results showed that women in Selangor have normal body composition, which indicates a larger proportion is having ideal weight for their height, although obesity is now occurring in endemic proportions in many Asian countries. With regards to types of community settlement, urban areas showed a higher percentage of normal level of body composition (42.0%) as compared to suburban area (11.7%). This is due to more available and accessible facilities in urban area than in suburban area. Urban areas are more likely to see large distinction in socioeconomic status. This can be related with the previous research that in developed countries, the increase in socio-economic inequalities is associated with healthy inequality [13].

With regards to the level of physical activity engagement, it was found that the majority of respondents (n=168) were at low level of physical activity. Malaysia is of no exception on rising in physical inactivity levels [14]. This recommends that there should be continued efforts to promote physical activity in such countries. For example in Malaysia, the Healthy Lifestyle Campaign was conducted by Ministry of Health with the theme "Be Healthy for Life", since 1991, which emphasizes four main components; not smoking, managing stress, healthy eating, exercise and physical activity, to lead a healthy and wholesome lifestyle [15].

The types of activities engaged by women in Selangor during leisure time were affected by many factors. One of the factors is the attractiveness of that activity. From this research, it was found that passive and social leisure activities were the most participated activities by women in Selangor during leisure time. The passive leisure activities include reading, watching, listening to music, relaxing, doing nothing, telephone conversation, chatting and online. While for social leisure activities, these include visits, going to parties, attend an organized social event, engage in political activities, clubs, movies, hanging around town with friends, spending time with a partner, talking with a friend, attending a religious place, family outings, dancing, traveling, dinner with friends and telephone conversation.

Women's involvement in passive leisure activities is said to be affecting the subjective factor rather than the objective due to reasons related to age, favor in leisure time activities, vicinity of home and financial related situation, which are considered important [16].

In association with body composition, women of normal body composition are involved in passive leisure more than those who are underweight or obese. This could be possibly because they do not feel the need to engage in active leisure, as they already have the ideal body weight compared to women who need to tone up and reduce weight. Similarly, women with normal body composition and involved in passive

leisure feel that such activities are more relaxing because passive leisure activities provide relaxation, which is necessary to mental health, and such activities are sedentary [17].

Meanwhile for overweight and obesity, this group was struggling to decrease their body composition and be more involved in active leisure activities such as sports and exercises, which are ways to help them to have an ideal body composition and maintain a healthy body. In conclusion, the fact that many of the factors that influence body composition and leisure time among women are modifiable factors, it is important that these factors be identified and dealt with early in life. Ideal body weight, relaxing and less serious activity were factors favoring being passive among women. Proactive measures are helpful in identifying more factors that influence body composition and leisure time to the benefit of women in their lifestyle.

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