

THE LEVEL OF PHYSICAL ACTIVITIES AMONGST ELDERLY IN A COMMUNITY

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ABSTRACT: Little is known of Malaysian older people's participation in physical activities, and the purpose of this pilot study is to explore their participation and the barriers. A self-administered questionnaire was given to 80 eligible respondents at the Kuala Lumpur Health Clinic of which 70 responded. Thirty-six (51.4%) were males and 34 (48.6%) were females. There were 26 (37.1%) Malays, 20 (28.6%) Chinese, 18 (25.7%) Indians and 6 (8.6%) of other ethnic groups. Forty (57.1%) took part in some form of physical activities and the remaining 30 (42.9%) reported no participation at all. The Chinese participated actively in physical activities (90%), followed by Indians (66.7%) and Malays (30.8%). The five common activities were walking (60%), tai chi (20%), gardening (12.5%), stretching (2.5%) and cycling (5.0%). Identified barriers to physical activities were lack of time (26.7%), having health problems (26.7%), was already fit (26.7%), no companion to exercise with (13.3%) and no exercise knowledge (6.7%). These findings indicated that emphasis should be given to the females and the Malay ethnic group when planning physical activity education for the older people as they were identified to be the least active groups. (*JUMMEC 2007; 10(1): 29-33*)

KEYWORDS: physical activities, geriatric, older persons

Introduction

Global growing number of elderly population and the emerging social and health consequences of ageing is a major challenge, especially to the developing countries(1). The number of elderly people (those aged 65 or older) in less developed countries is expected to increase from 249 million to 690 million between 2000 and 2030 (2). Furthermore, because the elderly are at high risk for disease and disability, this aging population will place urgent demands on the healthcare systems of developing-countries, most of which are ill-prepared for such demands (2).

In Malaysia, ageing has also become an important issue because of dramatic changes in life expectancy, as a result of socioeconomic development and advancement in medical services. In 2000, the life expectancy at birth was 70 to 72 years for males and 74 years for females, compared to 68 to 70 years for males and 70 to 72 years for females in 1996 (3). At present, there are approximately one million elderly people in Malaysia, which is 6.1% of the total population. If life expectancy continues to increase, it is estimated that by the year 2020, the total ageing population will be 3.8 millions that is 11.3 % of the total Malaysian population (3).

As people are living longer, there is a need to develop health-promoting strategies to cope with the growing societal consequences of ageing. Increasing age is associated with increasing health problems, disability and loss of independence (4,5). If the incidence of such consequences is not controlled, the costs in treating elderly people with health problems will continue to increase (6).

A number of measures have been identified to help maintain older people's health and quality of life (7). Simple measures include using the impact of modifiable influences such as diet, environmental elements and physical activity (4). The benefits of physical activity, defined as 'any bodily movement produced by the contraction of skeletal muscles' (8) in improving and maintaining health and well-being of elderly persons have been well documented (9,10,11). However, little

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is known about the participation of older population in these recommended activities, particularly in Malaysia. The aims of this study are to explore patterns of participation in physical activities within a group of Malaysian older people and to determine whether the patterns of participation in physical activities is related to the demographic characteristics, that is age, gender and ethnicity.

Methods

This study is a non-experimental descriptive study using a self-administered questionnaire. The questionnaire comprised two parts: Part A comprising demographic characteristics of the respondents and Part B looks into the patterns of physical activity participation. Questions in the questionnaires were adapted from Zutphen Physical Activity Questionnaire (8) and CHAMPS Activities Questionnaires for Older Adults (12) which have been tested for their validity and found to have good inter-rater and intra-rater reliability value. A pilot study on the questionnaire was carried out on ten elderly, who responded well to the questionnaire, indicating reliability of the questions asked. Further improvement was made on the questions prior to using it in this study. The questions included in the questionnaire were those considered to be relevant to the lifestyle of the elderly as they match the cultural activities of the Malaysian society.

The selected demographic characteristics were age, gender and ethnicity. These data were collected to enable comparison in physical activity patterns between the subgroups. As for the questions pertaining to patterns of physical activity participation, the respondents were first asked to acknowledge whether they have participated in any physical activities. Those who answered 'NO' were asked to give their main reason for no participation and those who answered 'YES' were required to state the type of activities they performed most. Questionnaire was tested for clarity prior to conducting the actual survey.

Analysis was done by subgroups using descriptive statistics, mainly frequencies and cross tabulations by using the Statistical Package for the Social Sciences (SPSS). Comparisons between the subgroups were made to study the differences in physical activity patterns according to age, gender and ethnicity.

Study Location

The study was conducted at the Kuala Lumpur Health Clinic, which is the main health clinic for residents from

the Klang Valley. A letter informing about the study and requesting for permission to carry out the study was sent to the Director of Kuala Lumpur Hospital, in which the study was conducted. Seventy subjects were enrolled in the study using a convenience sampling method. In Malaysia, older people are defined as those aged 60 and above (3); therefore the lowest age limit for participants was 60. Exclusion criteria were inability to read and write due to whatever reason and poor mental capacity. Consent of the subjects was inferred by voluntary completion and return of the survey questionnaires. The anonymity of the respondents was protected by not having their names, contact addresses and any identification numbers on the questionnaires. This is to ensure that the respondents reported their experiences without being prejudiced.

Results

Out of a total of 80 questionnaires distributed, 70 questionnaires (87.5%) were returned, while those who did not respond were not able to write or were rushing off immediately from the centre to go home. Among the participants, 51.4% (n = 36) were males and the remaining 48.6% (n = 34) were females; 37.1% were Malays, 28.6% Chinese and 25.7% Indians, and 8.6% other ethnic groups.

About 57% claimed that they took part in physical activities and another 42.9% reported no participation in any physical activities.

In the non-physically active group, 23.3% were those aged between 60 and 64 years similar to those aged 65 and 69 years. Eight (26.7%) were aged 70-74 years. Six (20%) were aged 75 and 79 years and two (6.6%) were above 80 years. The proportion that reported participation in physical activities was higher than those who reported not actively participating for all age groups except for the age groups of 70-74 and 75-79 years.

In terms of gender, a total of 60% (n = 24) who reported participation in physical activities were males and 40% (n = 16) were females, whereas those who reported no participation in physical activities were 40% (n = 12) men and 60% (n = 18) women.

Among the different ethnic groups, the highest score of participation was 45% (n = 18) Chinese followed by 30% (n = 12) Indians, 20% (n = 8) Malays and 5% (n = 2) "others". Interestingly, when 'no participation in physical activity' was observed, the Malays showed the biggest percentage, followed by Indians, and least among Chinese.

Table 1. Physical activities among active participants

| Characteristics | n(%) |
|--------------------|-----------|
| Age (years) | |
| 60-64 | 11 (27.5) |
| 65-69 | 11 (27.5) |
| 70-74 | 9 (22.5) |
| 75-79 | 6 (15) |
| >=80 | 3 (7.5) |
| Gender | |
| Female | 16 (40) |
| Male | 24 (60) |
| Ethnicity | |
| Malay | 8 (20) |
| Chinese | 18 (45) |
| Indian | 12 (30) |
| Others | 2 (5) |

In Figure 1, the types of physical activities performed among those who participated in physical activities included walking 60% (n = 24), tai chi 20% (n = 8), gardening 12.5% (n = 5), stretching 2.5% (n = 1) and bicycling 5.0% (n = 2).

In comparison, the reasons for barriers to physical activities among those who did not perform physical activities were 26.7% (n = 8) lack of time, 26.7% (n = 8) having 'health problems', 26.7% (n = 8) 'is already fit', 13.3% (n = 4) having no companion to exercise, and lastly 6.7% (n = 2) commented that they have no exercise knowledge (Figure 2).

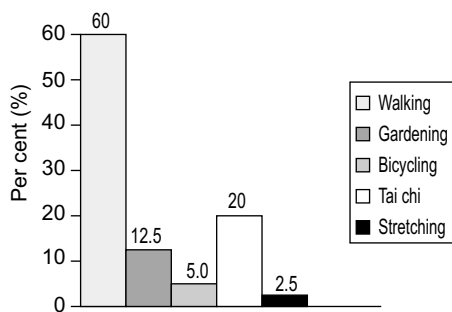


Figure 1. Common types of physical activities performed

Discussion

Out of 70 participants, 57.1% reported participation in physical activities and another 42.9% reported no participation indicating that the proportion of participants who were physically active was slightly higher than those who were inactive. This result is comparable with the findings by DiPasquale-Davis *et al* (13), who reported that a higher proportion of those who were physically active (60%) compared to those who were inactive among a group of older Filipino. This shows that a higher proportion of the older people practise an active lifestyle and lower proportion have a sedentary lifestyle though the sample size of this study is too small to generalise the lifestyle of Malaysian elderly participation in physical activities.

Participation in physical activities was higher in men than women, similar to the findings by USHHS (14) that reported women were more likely to report no physical activity than men. Culturally, the Malaysian older women, regardless of their age, are more involved in housework and childcare as compared to men. As these activities are energy consuming, women, being naturally less energetic than men (15) might not have extra energy to partake in any leisure time physical activity. Another possible reason is that the older Malaysian women are more 'indoor' and are less likely to involve in social activities compared to men. Socialisation exposes a person to knowledge on healthy lifestyle practices better, particularly when active interaction occurs with other members in the society who lead an active lifestyle.

In terms of ethnicity, the participation in physical activities was highest among the Chinese, while the Malays demonstrated the highest proportion of inactivity. The culture of these three main ethnic groups are different. Therefore, this finding supports the

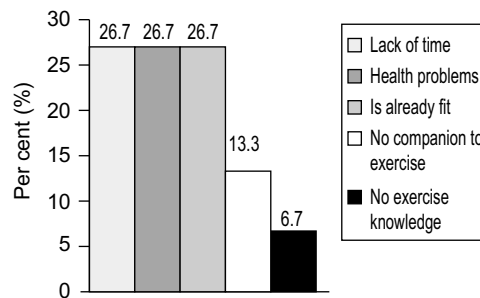


Figure 2. Common barriers to physical activities

statement that health behaviours vary among and within cultural groups (13). The Chinese might appreciate health more than Indians and Malays for a reason that is not well-understood. Another possible reason is, being Muslim, the Malays perform their prayers five times a day; each session involves repetitive concentric and eccentric movements of the legs. This results in moderate physical exercise, to every muscle in the body. Some muscles contract isometrically and some contract in approximation or isotonicly. The energy needed for the muscle metabolism increases during the performance of Salat (formal worship performed five times each day), resulting in a relative deficiency of oxygen and muscle nutrients. In turn, this deficiency causes vasodilation- an increase in the caliber of blood vessels, thereby, allowing blood to flow easily back to the heart. The temporarily increased load on the heart acts to strengthen the heart muscle and to improve the circulation within the heart muscle (16). As a result, the Malays might regard themselves as already physically fit, therefore do not require exercise or physical activity.

In this study, the participants reported five types of activities commonly performed that is walking, tai chi, gardening, stretching and bicycling. Walking was the most commonly reported physical activity consistent with studies done in other countries (14,17,18). In Malaysia, the Healthy Lifestyle Campaign places great emphasis on walking as a recommended activity towards health gains. Furthermore, walking was given wide coverage by the mass media in the previous health write-ups. These would have probably influenced the choice of physical activities in this study group. Studies have shown that the older people perceived ability to maintain walking as a sign of successful ageing (17). If this is also true among the older Malaysians, this could be another reason for choosing walking exercise, as it is only this way that their walking ability could be maintained.

A number of reasons were reported for no participation in physical activities. The most commonly reported reasons were lack of time, health problems and the perception that one is fit and no companion. These results are comparable with many studies that looked into barriers for no participation in physical activity among the older people (16,17,19). The proportion that reported 'no exercise knowledge' is small, indicating that generally, subjects in this study possessed knowledge on physical activity. This might be due to the existence of the Health Education Unit at the Kuala Lumpur Health Clinic, which runs health education talks on a regular basis; therefore providing opportunity for the participants to gain knowledge on physical activities. This result also supports the findings by Goggin

and Morrow (20) who reported that older people are aware of the health benefits of physical activities though a high proportion of them did not participate in this activity.

Conclusion

Information generated from this study can be used as baseline in reviewing health education programme for the elderly in Kuala Lumpur Health Clinic. The findings indicated that emphasis should be given to the females and the Malay ethnic group when planning physical activity education for the older people as they are identified as the least active groups in the study. Strategies should include ways to overcome barriers; preferably tailored individually since the perceived barriers differ across the sub-groups. It is also important to educate the older people on the current recommendation of physical activity to ensure that the older people benefit optimally from their physical activity practices. The selection of participants is non-random, therefore it is inadequate to generalise on the physical activity amongst elderly in the Malaysian population. However, since this study is a pilot, further research should be carried out in a population of elderly, both in rural and urban communities.

Future studies should also look into the reasons why different people choose different activity and its relation to their functional status to ensure better understanding of the patterns of physical activities among the older people. By doing so, education on physical activities for the older people can be delivered more effectively by the involved health care providers.

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