Original Article

Place of residence and sport campaign participation on exercise of Thai population

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Abstract

Objective: The goal of this paper was to explore and examine causal relationship between socio-demographic factors and sport and exercise practice among the Thai population. The objectives of this research were: (1) to analyze the difference in exercise by the place of residence (urban – rural) and socio-demographic factors, (2) to analyze the difference of a sport campaign participation in exercise by socio-demographic factors, (3) to explore the socio-demographic variations in exercise, (4) to analyze and measure the interactive effect between place of residence and sport participation on probabilities of practicing sport and exercise among the Thai population.

Method: We employed the data of the evaluation of health program of health promotion and sports at the local region in 2010. The last survey was conducted by the Institute for population and social research (IPSR) Mahidol University. This survey used the multi-stage stratified random sampling. The survey included 8,325 subjects aged between 15 to 70 years old. We implemented the Multinomial logistic regression model (MLR) to analyze the independent and dependent variables.

Results: Males and females shared the same proportion of non-exercise. Urban residents were more likely not to exercise compared with rural residents. The average age of respondent was 47.6 years. We found that among those who did not exercise, 36.68% were not involved in any sport participation; 45.02% had no education and most of the respondents who did not exercise resided in the east region (37.56%). The analysis showed that there was a positive relationship between attitudes toward exercise and sport campaign participation with both local and general exercise ($p < 0.05$). Importantly, the interactive effect between place of residence and sport and exercise participation had strong effect on sport and exercise practicing.

Discussion and conclusion: The analysis demonstrated that attitudes toward exercise and sport campaign participation had an influence on exercise behavior for both types of exercise. In addition, sport campaign participation was more important than the place of residence which clearly showed an increase in the probability of exercise in urban and rural areas. However, it was very important to organize sport and exercise campaign in both areas. The main result of this analysis showed that interaction between the two had a strong influence on probabilities of practicing sport and exercise.

Key words: Exercise, Physical activity, Sport campaign participation, Rural, Urban

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Introduction

Exercise or physical activity is an important behavior that improves the quality of life. The benefits of exercise have long been known to be a major factor in reducing health problems both physiologically and psychologically. Hundreds of studies indicate the association between the lack of exercise and common diseases, including the control of diabetes mellitus and obesity, reduction in hypertension and morbidity/mortality from cardiovascular diseases and some forms of cancer.[1] Psychologically, exercise has also been associated with a reduced state anxiety, tension, depression, and an increasing sense of well-being[2].

Despite the obvious evidence based of the benefits of exercise on health, there are still a larger percentage of population who do not exercise. In America, for example, over 60% of adults do not undertake the recommended amount of physical activity[3] and only 10%-regularly exercise[4]. In Thailand, over 70% of Thai adults (over 15 years of age) do not participate in exercise or physical activity[5]. The Thai government, through the National Economic and Social Development Plan, number 8 and 9 and the National Sport Development Master Plan number 3, B.E. 2545-2549 (2002-2006) recommends participation in regular exercise and sport[6]. However, most people still do not exercise. Recent research shows that people aged-15-24 years spend less than 15% of their free time in exercise. Females especially, participate less than 5% in exercise[7].

In order to develop effective intervention programs that promote exercise, variables that influence this activity must be identified[8]. Psychological, social, demographic and environmental variables are all related to exercise. However, unexpected interventions which could play an important role is "place of residence" and "sport participation".

Place of residence plays an important role in life circumstances. People that live in rural areas, for example, have more difficulty in accessing health promotion services compared to urban residents. Higher levels of poverty, lower levels of education, and the lack of exercise facilities or equipment can all result in reduced exercise[9]. If these obstacles were to be eliminated the chances of increased exercise among rural residents could be possible. Some studies have found that rural adults tend to have high rates of inactivity and less interest in involvement in activities. However, higher levels of physical activity in rural residents compared to urban and suburban residents have also been found[10 - 12]. Furthermore, regarding sport participation, many studies report a relationship between exercise behavior and exercise participation among urban – rural area. People who join sport clubs or an exercise community will be more engaged in physical activity than those who don't.

The goal of this study was to determine the causal relationship between such variables as gender, age, education, occupation, attitude toward, sport participation, place of residence, region, and sport and exercise behavior. In addition, the interaction between sport and exercise participation and place of residence would be analyzed in terms of their relationship with type of exercise. The main objectives of this study were as follows:

(1) to analyse the difference in exercise by place of residence (urban – rural) and socio-demographic factors,

(2) to analyse and examine the different types of sport, and exercise campaign and participation in them by socio-demographic factors,

(3) to explore and identify the influence of socio-demographic factors on type of sport and exercise,

(4) to analyze and measure selected interactive effects between the place of residence and the sport and exercise participation on probabilities of participation in sport and exercise.

This study attempted to examine the level of exercise across the urban-rural setting which very few studies have done before due to their limited geographical scope. We expanded upon various factors discussed above with regard to sport participation as the model of interaction factor.

Method

The study used data from the project on evaluation of health promotion and sports in local regions conducted by the Institute for Population and Social Research (IPSR) Mahidol University in 2010.

The sample was selected through a multi-stage stratified random sampling procedure. The population for this study were people aged between 15 and 70 years who were living in both rural and urban area which was approximately 27,924,285 people. A minimum sample size was calculated, and expanded to 8,325 cases.

Two provinces per region (5 regions) were first chosen for the sampling design, after that 2 districts from 5 provinces and 2 cities from 10 districts. For the final step, we selected 2 villages that were selected from 20 cities. The sample size in each province was a proportional sample size from the total sample (8,325). Every person was interviewed that was 15 years old and above, with regard to their general information such as socio-economic, health status, and exercise behavior.

- Determinants of exercise

Exercise level was evaluated using the questionnaire to assess health enhancing exercise. The questionnaire was completed by people aged 15 and over, and the interviews were spread over a year (to avoid seasonal differences). The questionnaire included questions on type of exercise, days per week, average time per day and intensity.

The total number of minutes of exercise per week was calculated by multiplying the number of days per week spent on the activities with the number of minutes per day spent on the activity. Dummy variables were created which stated whether or not people spent time on the different exercise and whether or not people were physically active for 30 minutes at least five days per week categorized by type of exercise.

For this study, we classified types of exercise into four groups. They were: (1) no exercise, (2) general exercise, (3) local exercise, and (4) both of general and local exercise.

- General exercise used large muscles rhythmically and continuously and elevated the heart rate and breathing for a sustained period. Common examples included walking, jogging/running, swimming, rowing, stair climbing, bicycling, cross-country skiing, step and dance exercise classes, roller skating and the more continuous forms of tennis, racquetball and squash[13].

- Local exercise used low impact on muscles such as stretching, Thai dance, yoga, gentle strength[13].

- Analyses

The data were processed through STATA (version 11) and analyzed by descriptive statistics, percentage, mean, median, and standard deviation. Multinomial logistic regression model (MLR) of the type of exercise (no exercise, general exercise, local exercise and both general and local exercise) was used to investigate socio-demographic factors. Moreover, we analyzed the interactions between place of residence and sport participation to examine evidence for the potential impact of the differential place of residence and promotion of health at the rate of exercise and exercise patterns.

Results

- Sample characteristics

The results of the data analysis were presented in such a way as to highlight the background variables of the respondents, test the hypotheses of the study and discuss its findings. The sample of females was 60.4% and males was 39.6%; the average age was 47.6 years. Most respondents lived in rural than urban areas (70.3% compared with 29.6%). We found only 32.6 percent that were involved in a sport campaign participation. Most of the respondents were high school educated (78.8%) followed by bachelor or higher (15.7%). The rest of the respondents had no education (5.5%). Occupation of respondents was housewives & students (39.3%) followed by agriculture (23.6%), business sector (22.0%) and government officer (14.9%).

Table 1 Characteristics of the sample, by type of exercise (n = 8,325)

Characteristics	Type of exercise				
	No exercise	Local sport	General sport	Both	Total
Gender (%)					
- Female	26.59	3.60	31.26	38.55	100.00
- Male	26.45	2.39	34.06	37.09	100.00
Place of residence (%)					
- Rural	24.16	2.73	31.31	41.81	100.00
- Urban	32.18	4.05	34.90	28.86	100.00
Education (%)					
- No education	45.02	6.49	30.09	18.40	100.00
- High school	27.65	3.40	30.84	38.10	100.00
- Bachelor or higher	14.38	0.54	40.86	44.22	100.00
Occupation (%)					
- Housewives & Students	31.73	2.59	32.64	33.04	100.00
- Agriculture	23.55	6.32	22.38	47.76	100.00
- Business	25.97	2.01	40.72	31.30	100.00
- Government	18.43	1.12	35.10	45.35	100.00
Sport campaign participation (%)					
- No	36.68	1.96	37.75	23.61	100.00
- Yes	5.66	5.51	21.31	67.52	100.00
Region (%)					
- Central	37.01	2.08	35.89	25.01	100.00
- North	23.39	7.10	29.13	40.38	100.00
- Northeast	16.18	2.12	22.59	59.10	100.00
- South	21.72	1.48	42.97	33.83	100.00
- East	37.56	2.82	34.82	24.80	100.00
Total (%)	26.53	3.12	32.37	37.97	100.00

Types of exercise were classified by socio-demographic indicators as shown in table 1. Males and females had the same proportion of non-exercise (26.45% and 26.59%, respectively). Urban residents were more likely not to exercise compared to rural residents (32.18% and 24.16%, respectively), while 31.73% who did not exercise were housewives and students. Furthermore, we found that among those who did not exercise, 36.68% were not involved in sport participation; 45.02% had no education and most of the respondents who did not exercise lived in the east region (37.56%).

- Causal relationship between socio-demographic factors and type of sport and exercise participation

We used multinomial logistic regression in order to test the research hypothesis that the likelihood of the respondent's to exercise was related to gender, age, education, occupation, place of residence, attitude toward exercise, sport campaign participation, region and the interactive effect between place of residence and sport campaign participation on type of sport and exercise practice.

- Factors affecting local exercise behavior

According to the MLR model (table 2) results showed the log of the odds of local exercise behavior was positively related to occupation of housewife and agriculture ($p < 0.05$), attitude toward exercise ($p < 0.05$), sport campaign participation ($p < 0.05$), northern region ($p < 0.05$) and interaction between place of residence and sport campaign participation ($p < 0.05$); it was negatively related to age group 15-24 years and 25-36 years and insignificantly related to gender ($p = 0.149$).

The positive coefficient associated with "housewife and agriculture occupation" and "north region" (CF = 0.724 and 1.117, respectively) implied that people in the category of housewife and agriculture and, living in the northern region were more likely to have higher local exercise behavior than people who worked in other sectors and lived in other regions, holding all other explanatory variables in constant. The odds of housewife and agriculture engaging in local exercise behavior was 1.968 (=e0.724, table 2) times greater than other occupations. For the northern region we found 3.036 (=e1.117) times larger than other regions meaning that northern people had more proportion that undergo local exercise behavior than others.

A similar trend was observed with sport campaign participation and attitudes toward exercise. The odds of people who attended a sport campaign were 5.814 (=e2.139, table 2) times higher for local exercise behavior than people who were not involved in a sport campaign. For attitude toward exercise, the higher the attitude toward exercise score, the greater the local exercise behavior. This interpretation was rendered by a positive coefficient associated with the attitude toward exercise score. As the attitude toward exercise score changed from 1 to 2 or from 2 to 3, the odds increased by 0.788 for higher local exercise behavior.

In addition, we found a negative relationship to age group 15 - 24 years and 25-39 years (-1.826 and -0.801, respectively) that indicated people in the age group 15 - 24 years old tend to diminish their local exercise behavior 4.964 (=e1.826) times while it was 2.177 (e=0.801) times in the age group 25-39 years.

- Factors affecting general exercise behavior

Findings shown in table 2 revealed that males tended to have general exercise 0.446 times (=e0.164) less than females. People aged 15 - 24 years had a probability to undergo general exercise more than the age group 25 - 39 and 40 - 59 years old, with the coefficients being 0.306 and 0.253, respectively. Moreover this study found a positive coefficient associated with the attitude toward exercise score and sport campaign participation.

This coefficient implied that if the attitude toward exercise increased by 1 score, it would lead to an increase of 0.327 (32.7%) in both general exercise and sport campaign participation which would increase the probability for general exercise to 3.406 times more than no sport campaign participation.

- Factors affecting both local and general exercise behavior

The estimated regression equation for both local and general exercise behavior revealed that 6 variables had significant influences at the 5 percent significant level with regard to both local and general exercise behavior. Six variables comprised of age, occupation, place of residence, attitude toward exercise, sport campaign participation and the region (north, northeast, south and east region).

The coefficient correlation for age group 40 - 59 years old and sport campaign participation are 0.184. This means that people who are aged 40 - 59 years old were 0.500 (=e0.184) times to do both local and general exercise behavior less than others age groups. Moreover,

sport campaign participation played a role in both local and general exercise behavior 3.406 times (=e2.546) more than no sport campaign participation.

With regard to occupation, we found that the government sector had 0.721 (=e0.262) times undergoing both local and general exercise behavior followed by housewife and agriculture (0.652 times) and business sector (0.147 times). The northeast people were the most active and had a probability exercise behavior (=e1.140) followed by the south (=e0.531) and north (=e0.409).

Furthermore, we found a positive relationship between attitude toward exercise for both local and general exercise behavior with a correlation coefficient of 0.583. This coefficient implied that a 1 score increased in attitude toward exercise would lead to an increase of 0.583 at both local and general exercise behavior. Despite this, we found a negative association in the place of residence which means rural people had a probability to undertake both local and general exercise 2.088 times (=e-0.768) greater than urban people.

- Interaction between place of residence and participation

From these results, it was clear that a sport campaign participation had a significant relationship to exercise behavior. From the outset, this study intended to limit and control the environmental factor (the place of residence) in order to understand how sport campaign participation played a role on exercise behavior and the differences of sport campaign participation effect between urban and rural areas. This study measured interaction between sport campaign participation and the place of residence as shown in table 3.

In urban areas sport campaign participation increased the probability of both local and general exercise from 38.8% to 42.7% and from 4.8% to 7.9% in local exercise, on other hand without a sport campaign participation, the probability of general exercise dropped from 30.1% to 22.8%.

Table 2 Multinomial logistic coefficient for regression of determinants of exercise in Thailand

Variables	Local vs not ex.	General vs not ex.	Both vs not ex.	General vs local	Both vs local	Both vs general
_cons						
Gender						
Female	-6.575**	2.168**	-4.143**	4.407**	2.431**	-1.976
Male	-0.291	0.164**	0.022	0.455**	0.312*	-0.142*
Age						
Age 15 - 24	-1.826**	0.856**	1.058	2.683**	2.884**	0.201
Age 25 - 39	-0.801**	0.306**	0.348	1.107**	1.149**	0.042
Age 40 - 59	-0.223	0.253**	0.184*	0.476**	0.407*	-0.069
Age 60+						
Education						
No education						
Education attainment	0.480	0.300*	0.833	-0.181	0.353	0.534**
Graduated education	-0.527	1.063**	1.317	1.591**	1.844**	0.253

Table 2 Multinomial logistic coefficient for regression of determinants of exercise in Thailand (continued)

Variables	Local vs not ex.	General vs not ex.	Both vs not ex.	General vs local	Both vs local	Both vs general
Occupation						
Housewife and agriculture	0.724**	-0.166	0.240*	-0.890**	-0.484**	0.405**
Business sector	-0.152	0.372**	0.054**	0.525	0.206	-0.318
Government sector	0.109	0.145	0.262**	0.036**	0.153	0.117**
Place of residence	-0.390	-0.247	-0.768**	0.144	-0.377	-0.521**
Attitude toward local exercise	0.788**	0.327**	0.583**	-0.462**	-0.206	0.256**
Sport campaign participation (reference : yes)	2.139**	1.253**	2.546**	-0.886**	0.407*	1.293**
Region (reference : central)						
North	1.117**	0.201	0.409**	-0.916**	-0.708**	0.208*
Northeast	0.124	0.268**	1.140**	0.145	1.016**	0.871**
South	0.086	0.723**	0.531**	0.637*	0.445	-0.192*
East	0.316	0.074	0.099	-0.242	-0.217	0.025
Interaction area* participation	1.276**	-0.370	0.223	-1.646**	-1.053**	0.593**

Notes: N = 8,325 model X^2 = 2,977.57 D.F.= 39

*Sig. ** < 0.01, * < 0.05 pseudo R^2 = 0.15*

Variables were defined as follows (reference categories in parentheses, as appropriate): Gender: female, (male), Age: (15-24 years old), 25-39 years old, 40-59 years old and 60+ years old, Education attainment: (yes), no, Graduated education: (yes), no, Occupation: (housewife and agriculture), business sector, government sector, Place of residence: (urban), rural, Attitude toward exercise: score of attitude, Sport campaign participation: (yes), no, Region: (central), north, northeast, south, east.

**AGE 60+ and no education dropped due to co-linearity*

Table 3 Simulated proportions of types of exercise, by gender, age, place of residence, attitude score, education, campaign participation and interaction between campaign participation and area

	Types of exercise				
Variables	Not exercise	Local sport	General sport	Both local & general sport	Total
Gender					
- Female	27.2%	3.4%	31.2%	38.2%	100.0%
- Male	25.6%	2.6%	34.2%	37.6%	100.0%
Age					
- Age 15 - 24	14.8%	2.2%	38.1%	44.9%	100.0%
- Age 25 - 39	12.2%	0.1%	39.1%	48.6%	100.0%
- Age 40 - 59	11.0%	0.7%	40.4%	47.9%	100.0%
Place of residence					
- Urban	30.6%	4.3%	33.6%	31.5%	100.0%
- Rural	23.4%	2.1%	34.5%	40.0%	100.0%
Attitude toward exercise					
- 0	5.9%	6.4%	24.7%	63.0%	100.0%
- 3	3.4%	2.0%	32.0%	62.6%	100.0%
- 6	13.8%	5.8%	30.8%	49.6%	100.0%
- 9	3.7%	12.5%	21.5%	62.3%	100.0%
- 12	0.7%	21.5%	11.7%	66.1%	100.0%
Education attainment					
- High school	27.6%	3.5%	30.8%	38.1%	100.0%
- Bachelor or higher	14.3%	5.4%	36.1%	44.2%	100.0%
Campaign participation					
- No	4.2%	0.2%	42.5%	53.1%	100.0%
- Yes	1.1%	0.5%	18.9%	79.5%	100.0%
Interaction (place of residence * sport campaign participation)					
- Urban* sport campaign participation	26.6%	7.9%	22.8%	42.7%	100.0%
- Urban* No sport campaign participation	26.3%	4.8%	30.1%	38.8%	100.0%
- Rural* sport campaign participation	24.4%	1.6%	40.6%	33.4%	100.0%
- Rural* No sport campaign participation	26.6%	2.6%	33.2%	37.6%	100.0%

*AGE 60+ and no education were dropped due to co-linearity

The reason this paper used simulation probabilities were due to the effects of MLR in the table which appeared to various Multinomial logistic regression (MLR). This situation caused difficulty in interpreting the results and so simulation probabilities were used to better interpret the results.

For rural areas the analysis showed a similar result where a sport campaign participation increased the probability of general exercise from 33.2% to 40.6% and decreased the probability of both local and general exercise from 37.6% to 33.4% if these areas did not have a sport campaign participation.

Discussion and conclusion

This study analyzed the casual relationship between socio-demographic factors, sport and exercise campaign participation, place of residence and probabilities of practicing some sport and exercise, measured by four categories as presented above. The results of our analysis accepted the attitude toward exercise and sport campaign participation as correlated of exercise behavior for overall type of exercise. In addition, these data supported that sport campaign participation was more important than place of residence, by analyzing the interaction between the sport campaign participation and the place of residence whereby the probability of exercise in urban and rural areas were at the same level. Furthermore, when we compared both areas by adding sport campaign participation; the probability of exercise was not different between the two places. However, as shown in table 3, the influence of sport campaign participation clearly showed an increase in the probability of exercise in urban and rural areas.

The relation between the attitude toward exercise and sport campaign participation with exercise behavior found in this study are consistent with other reports[14 - 16]. We found that attitude toward exercise influenced behaviors regarding exercise and could be a barrier to decrease activity, such as belief that exercise will have detrimental side effects. Lack of information or inaccurate information may also lead to misunderstandings and reduce the chance of exercise, especially in rural areas. Thus, information and attitude outcome for the understanding of health impacts must be disseminated widely, both within the health field and the general public to encourage people to exercise more.

Sport and exercise participation was noted as an important predictor of physical activity. For example, the activity gave the participants the opportunity to take part in sports and exercise such as aerobics, running, jogging, yoga, and some Thai dances whether it involved traditional sports or other activities. Community members, who participated in sport and exercise campaigns, may have motivated other people to join in this activity. Moreover, the sport and exercise motivation offers an evidence-based guide to exercise and physical activity; an exercise video, easy access to relevant science and news, and tools for making and coordinating an exercise plan, all of which were made available and promoted through a national outreach campaign.

Furthermore, the effect of the sport and exercise participation had an influence on "the decisions to exercise behavior". For instance, it derived some attention in encouraging people to exercise. Just as important, type of sport and exercise that would be promoted has to fit with the social context of the area. The reasons for success of a sport and exercise participation should depend not only on the intensity of campaign or information provided but also on the type of exercise that is appropriate for each area.

In summary, government offices such as community health promotion hospital, local administrative office, and others that involved in sport and exercise promotion need to consider the important role and benefits of sport and exercise campaigns as this activity has strong statistical influences on an increasing in probabilities of practicing some form of sport and exercise as shown from this study.

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บทคัดย่อ

เขตที่อยู่อาศัยและการรณรงค์การออกกำลังกายของประชากรไทย

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บทนำ: การศึกษาปัจจัยที่ส่งผลให้คนออกกำลังกายถือเป็นประเด็นสำคัญและเป็นเป้าหมายที่สำคัญยิ่งของการวิจัยนี้ที่จะส่งผลทำให้คนมีสุขภาพดีขึ้น วัตถุประสงค์การศึกษานี้คือ ต้องการพิสูจน์ว่าเขตพื้นที่ที่แตกต่างมีผลต่อพฤติกรรมการออกกำลังกาย พร้อมกับต้องการตรวจสอบปฏิกิริยาร่วมระหว่างเขตพื้นที่ที่อยู่อาศัยกับการมีส่วนร่วมในการรณรงค์การออกกำลังกายที่มีผลต่อโอกาสของความน่าจะเป็นในการออกกำลังกายของประชากรไทย

วิธีการศึกษา: การศึกษาครั้งนี้ใช้ข้อมูลจากโครงการการประเมินผลโครงการส่งเสริมการออกกำลังกาย และกีฬาเพื่อสุขภาพร่วมกับองค์กรปกครองท้องถิ่น พ.ศ. ๒๕๕๓ เก็บรวบรวมข้อมูลจากประชากรอายุระหว่าง ๑๕ ปี ถึง ๗๐ ปี โดยสถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล วิเคราะห์โดยใช้สถิติการถดถอยโลจิสติกแบบหลายกลุ่ม มีจำนวนตัวอย่างทั้งสิ้น ๘,๓๒๕ ราย

ผลการศึกษา: ผลการศึกษาพบว่า กลุ่มตัวอย่างชายและหญิงมีสัดส่วนของการไม่ออกกำลังกายเท่ากัน เขตเมืองมีสัดส่วนของการไม่ออกกำลังกายมากกว่าเขตชนบท อายุเฉลี่ยของกลุ่มตัวอย่าง เท่ากับ 47.6 ปี สำหรับผู้ที่ไม่ได้ออกกำลังกายผลการศึกษาพบว่า ร้อยละ ๓๖.๖๘ ไม่ได้เข้าร่วม กิจกรรมการรณรงค์การออกกำลังกาย ร้อยละ ๔๕.๐๒ ไม่ได้รับการศึกษา และร้อยละ ๓๗.๕๖ อาศัยอยู่ในภาคตะวันออก ผลการทดสอบสมมติฐานพบว่า ทัศนคติต่อการออกกำลังกาย และการเข้าร่วมกิจกรรมการรณรงค์การออกกำลังกายมีความสัมพันธ์เชิงบวกกับพฤติกรรมการออกกำลังกาย อย่างมีนัยสำคัญทางสถิติที่ระดับ ๐.๐๕ ที่น่าสนใจยิ่งคือปฏิกิริยาร่วมระหว่างเขตที่อยู่อาศัยกับการมีส่วนร่วมในการรณรงค์การออกกำลังกายที่มีผลต่อโอกาสของการออกกำลังกายอย่างยิ่ง

วิจารณ์ และสรุปผลการศึกษา: การเข้าร่วมกิจกรรมการรณรงค์การออกกำลังกายเป็นปัจจัยที่มีผลสำคัญที่สุดที่ส่งเสริมให้คนออกกำลังกายทั้งในเขตเมืองและเขตชนบท ดังนั้น หากต้องการให้มีจำนวนผู้ออกกำลังกายเพิ่มมากยิ่งขึ้นในทุกพื้นที่จะต้องมีการรณรงค์และส่งเสริมการมีส่วนร่วมในการรณรงค์กีฬาและการออกกำลังในทุกพื้นที่

คำสำคัญ: การออกกำลังกาย, กิจกรรมทางกาย, การรณรงค์การออกกำลังกาย, เขตชนบท, เขตเมือง