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“To be healthy and to live long, we have to exercise” – Psychosocial factors related to physical activity among Cambodian Americans

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Abstract

Regular physical activity produces various health benefits; however, relatively few adults in the United States (US) get enough physical activity. Little is known about physical activity behaviors, and barriers and facilitators to physical activity among Cambodian-Americans. Cambodian Americans were recruited from community venues to participate in one-on-one interviews and focus groups. A total of 20 adults (10 women and 10 men) participated in one-on-one interviews and 37 adults (23 women and 14 men) participated in one of four focus groups. Fifteen of the 20 interviews and all the focus groups were conducted in Khmer. Participants were generally born in Cambodia and over two-thirds had a high school education or less. About one-half of the participants met or exceeded the 2008 US Department of Health and Human Services physical activity guidelines. Commonly reported types of physical activity were walking, running, and working out at the gym. Barriers to physical activity included lack of time, inconvenient work hours, and family responsibilities. Perceived benefits of physical activity included improved health, improved appearance, and reductions in stress. Sweating caused by physical activity was thought to produce a variety of health benefits. Data from this qualitative study could be used to inform the development of culturally-relevant physical activity survey measures and culturally-relevant physical activity interventions for Cambodian Americans.

Keywords

Physical activity; Asian Americans; Cambodian Americans; qualitative research

INTRODUCTION

Regular physical activity provides various health benefits, including reduced risk of overall mortality and mortality from causes such as coronary heart disease, hypertension, diabetes, breast cancer, and colon cancer.¹ There is strong evidence to suggest that physical activity prevents weight gain, reduces depression, and improves cognitive function in older adults.¹ For most health outcomes, increasing benefit occurs with increasing amounts of physical activity, as defined by activities that are higher intensity, greater frequency, or longer duration^{2–4, 1}.

The 2008 US Department of Health and Human Services (DHHS) physical activity guidelines specify that adults should do at least 150 minutes (two hours and 30 minutes) a

week of moderate-intensity physical activity, or 75 minutes (one hour and 15 minutes) a week of vigorous-intensity physical activity, or an equivalent combination of moderate-intensity and vigorous-intensity physical activity¹. Moderate-intensity physical activities are those that cause some increases in breathing and heart rate, and can be comfortably sustained for 60 minutes (e.g., raking leaves). Vigorous-intensity physical activities are those that cause large increases in breathing and heart rate, and are sufficient to cause fatigue in 20 minutes (e.g., shoveling snow).¹

Despite the proven health benefits of physical activity, over one-third of adults in the US get less physical activity than recommended by the US DHHS and low levels of physical activity are a significant public health problem⁵. Moreover, levels of physical activity are thought to be particularly low in some racial/ethnic communities and those of low socio-economic status. Available physical activity data on Asian Americans is generally reported for the population as a whole, despite distinct heterogeneity in Asian population subgroups. The 2000 US Census counted 206,000 Cambodians.⁶ However, Census figures are widely considered to represent an undercount of the actual population in refugee and immigrant groups.⁷

The limited available data indicate that Cambodian American adults have low levels of physical activity, compared to most other racial/ethnic groups. The Centers for Disease Control's Racial and Ethnic Approaches to Community Health (REACH) program reported physical activity data from 2001 – 2002 for Asian Americans in Lowell, Massachusetts, where Cambodian Americans constitute 57% of the Asian American population⁸. The data show that only 16% of Asians surveyed met the guidelines for physical activity; this compared to 43% for the general population in Lowell⁸. Previous research addressing physical activity among groups having low socio-economic status, generally report lower leisure-time physical activity and higher levels of occupational activity⁹. Individuals who are foreign-born or who have a low socio-economic position are thought to have greater demands on their time, and less access to facilities for participating in physical activity.

Massachusetts data show Cambodian Americans experience health disparities for multiple health problems that are related to physical activity. Among Cambodians aged 45 or older, 16% of deaths are attributable to stroke and 13% are attributable to diabetes. These data compare to total Massachusetts stroke and diabetes proportional death rates of 7% and 3% for similarly aged adults.¹⁰

Little is known about specific types of physical activity that Cambodian-Americans do or about the barriers and facilitators Cambodian-Americans experience toward participating in physical activity. Using data from one-on-one interviews and focus groups with 57 Cambodian-Americans, we explored physical activity behaviors, knowledge of physical activity recommendations, and psychosocial factors related to physical activity behaviors. We also examined perceptions about differences in types and frequency of physical activity performed in Cambodia and among Cambodian-Americans in the US. Data from these interviews could be used to inform the development of culturally-relevant physical activity survey measures and culturally-relevant physical activity interventions for Cambodian Americans.

METHODS

Setting

The study took place in the Seattle metropolitan area of Western Washington, a region that has the third largest Cambodian population in the US (after southern California and western

Massachusetts). At the time of the 2000 Census, about 20,000 Cambodians lived in metropolitan Seattle ¹¹.

Data gathering

We limited our recruitment to Cambodian-Americans who were aged 20 – 69. The project collaborates with an advisory group that includes leaders from Seattle's Cambodian community. Recruitment for the interviews was conducted through community-based organizations that serve Cambodians and Khmer Buddhist temples, as well as advisory group members' professional and personal networks. Potential participants were contacted by phone and asked if they were interested in participating in the project. Interviews and focus groups were scheduled at convenient times for participants. Participants were given a reminder phone call the day before their scheduled interview or focus group. Data were collected in late 2009 and early 2010.

A total of 20 interviews were completed. Five of these interviews were conducted in English and 15 were conducted in Khmer. Following the elicitation interviews, four confirmatory focus groups were conducted with a newly recruited sample of Cambodian-Americans. Focus groups were conducted among groups of Cambodian-Americans separated by gender and age; women aged 20 – 44, women aged 45 – 69, men aged 20 – 44, and men 45 – 69. All focus groups were conducted in Khmer. Focus groups allow triangulation.

Interviews and focus groups were led by a male bi-lingual (Khmer and English) facilitator, who was trained in elicitation interview and focus group techniques and briefed on the discussion topics by a project investigator who has wide experience in qualitative data methods. He was given instructions concerning listening skills, being flexible when necessary, accepting all ideas and opinions as valid, being non-judgmental and understanding, and being sensitive to individuals who do not want to reveal information; qualities that are thought to maximize trust of the participants. A female bi-lingual note-taker attended the focus group sessions.

Before the discussion, the facilitator explained to the participants that information gathered in the interviews and focus groups would be used for research purposes and that the discussion would be audio-recorded. Participants were assured that their names would not be associated with the tape. Written consent was obtained from all participants. The Institutional Review Board at the Fred Hutchinson Cancer Research Center approved the interview and focus group questions, as well as our study procedures.

An open topic schedule was used to guide the interviews and focus groups, leaving the interviewer/facilitator considerable freedom to explore issues that emerged in the discussion. The following topics were addressed: What do you do to maintain your health? What types of physical activity do you and other Cambodians do? What are some things that keep you or other Cambodians from doing physical activity? What are some of the benefits of physical activity? What are the differences between types of physical activity in Cambodia and the US?

Following the interview or focus group, a short survey was administered to participants. The survey included questions about demographic characteristics as well as physical activity behaviors. Leisure time physical activity questions were adapted from the Behavioral Risk Factors Surveillance System ¹² and a question about workplace physical activity was added.

Ten men and 10 women participated in the one-on-one interviews. Twelve participants were aged 20 – 44 and 8 were aged 45 – 59. Each interview lasted about 40 minutes. A total of 37 individuals (14 men and 23 women) participated in 4 focus groups, each of which lasted

about 90 minutes. Group sizes ranged from 6 to 14. All of those who attended agreed to sign a consent form and participate in the discussion.

Data analysis

Analysis of the information was based on the audio-tapes and the field notes taken by the facilitator/note-taker. After the interviews and focus groups, transcriptions were made of the tapes and field notes. Khmer language transcriptions were translated into English and were reviewed by the Khmer-speaking note-taker present for the meeting of that group (for focus groups only). Audio-tapes were shared only with the project staff and were erased after transcription to help maintain confidentiality.

Analysis of the information was made following principles of qualitative research suggested by Morgan and Krueger^{13–14}. In each interview and focus group, a matrix of the main topics was created. From the matrix, staff independently identified and coded key words and common themes that appeared throughout the interviews. The four staff members then met to review all the themes and key words that were identified. In cases where there was disagreement about a theme or key word, the item was discussed until a consensus was reached. Where this could not be attained, the opinion of the interviewer or facilitator prevailed. As a check of the data, findings were discussed with advisory group members.

To maintain the richness of the information obtained during the interviews and focus groups, we present direct quotes in the results section. Although the specific words may not have been repeated by all participants, the meaning was expressed and widely affirmed during at least four interviews or focus groups. Where divergent opinions were expressed, they are noted in the text. In cases where a Khmer word had no suitable English translation, we used the Khmer word and described its meaning in the text.

For the purpose of statistical analysis, we report frequencies of data for demographic characteristics. We used the 2008 DHHS guidelines as the basis for determining whether or not participants engaged in recommended levels of physical activity (150 minutes a week of moderate-intensity physical activity, or 75 minutes a week of vigorous-intensity physical activity, or an equivalent combination of moderate-intensity and vigorous-intensity physical activity).

RESULTS

Socio-demographics

Elicitation interview participants were generally born in Cambodia (Table 1). Nearly two-thirds had lived in the US for 10 or more years, spoke English “fair” or “good”, and had a high school education or less. Working in a trade such as electronic assembly or a warehouse were the most commonly reported occupations, followed by the service industry. About one-half of participants were married.

Focus group participants were all were born in Cambodia. Over one-half had lived in the US for less than 10 years and a similar proportion spoke little to no English. Three-quarters had a high school education or less and 44% were not currently working. About two-fifths were married.

Physical activity behaviors

Ninety percent of elicitation interview respondents and 86% of focus group respondents reported engaging in moderate-intensity physical activity. Among those who engaged in moderate physical activity, the most commonly reported frequency was 4 or more days per

week and for one hour or less each time. Vigorous activity was reported by 60% of elicitation interview respondents and 57% of focus group respondents. Among those who engaged in vigorous physical activity, the most common frequencies were 3 or fewer times per week and one hour or less each time. Forty percent of elicitation interview respondents and 54% of focus group participants met the 2008 DHHS physical activity guidelines.

Types of physical activity

Physical activity was thought of as any activity that keeps one moving. The most commonly reported type of physical activity was walking, and all participants referred to walking as a leisure-time rather than a transportation-related activity (Table 2). Some participants described walking as an activity that older Cambodian-Americans do; and that younger Cambodian-Americans instead ran or exercised at the gym. Group sports were reported by several interview and focus group participants, and specific sports included basketball, volleyball, and soccer. Other activities included using a treadmill (either at home or at the gym), doing housework (which was generally cooking, cleaning or doing yard work), lifting weights, and doing push-ups, jumping jacks, and stretches. Though less commonly mentioned, participants noted several activities, such as raising arms and legs, playing Cambodian hacky sack “sai” (where instead of a bean bag, a plastic birdie is used) and Cambodian kick volleyball “*sepak takraw*” (where a rattan ball is used and players can only use their feet, knees, chest, and head to touch the ball). Notably, several participants mentioned physical activity that they did in the workplace, such as janitor work, factory work, or landscaping.

--“... the people who do landscaping... they do it intensely.”

Knowledge about recommended amount of physical activity

Participants generally believed that it is important to engage in physical activity at least 3 times per week and many preferred to do physical activity in the morning. The range of times spanned 2 – 7 times a week and for 10 minutes – 1 hour. Nevertheless, the common response was 3 days a week for 30 minutes, which meets the physical activity guidelines only if it is vigorous intensity. Some respondents noted that they exercised only until they sweat. Others expressed caution about doing too much physical activity (with more than 1 hour being too much) and encouraged skipping certain days to allow the body time to heal. A common theme throughout the interviews was the importance of sweating. One person noted,

--:“... we don’t have to do it [exercise] too much. We could do 10 or 20 minutes a day to sweat.”

Perceived barriers to physical activity

Lack of time was the most commonly reported barrier to engaging in physical activity. Several participants also noted inconvenient work hours, such as working nights, or working two jobs as an impediment to doing more physical activity. Others reported that family responsibilities were an important impediment. Several respondents noted that others lacked an understanding of the importance of physical activity. Laziness, lack of transportation to get to gym facilities, tiredness, and lack of safety in one’s neighborhood were also cited by a minority of respondents. A few respondents noted that they have a high metabolism and therefore do not need to be physically active in order to look healthy or stay thin. One participant noted,

--“I would have motivation, but my metabolism is still pretty quick so I’m still using that to my advantage.” Others noted that the small stature of most Cambodians serves as a deterrent to physical activity.

--“... because they’re small they [think] there’s no health issue.”

Perceived benefits of physical activity

Improving heart-disease related symptoms was the most commonly reported benefit of physical activity; and specifically reducing cholesterol, lowering blood pressure, increasing heart rate and improving circulation by improving the function of blood vessels were named. With regard to blood vessels, one participant noted,

--“When we don’t walk much and just sleep and sit, our vessels will “*doung*” (coagulate). We’re old, our vessels don’t work well.”

Notably, producing sweat was cited by several as a benefit to physical activity. Specifically, one respondent stated,

--“I never have diseases because I sweat a lot. Toxins get out of my body.”

Sweating itself was thought to produce a variety of health benefits including improved function of blood vessels, lowered blood pressure, reduced stiffness in the arms and legs, increased energy, and improved ability to excrete toxins.

Physical activity was also thought to reduce the risk for a variety of chronic diseases, such as heart disease, obesity, and diabetes. Controlling weight, as well as building strong muscles and bones were also mentioned by several participants. Some respondents noted that physical activities help bring oxygen into the lungs and allows one to “breathe well”,

--“...if we could take some time to exercise, we could breathe well...”

Apart from the prevention of chronic conditions, several respondents suggested that physical activity can prevent acute illness, such as colds and flus. Emotional factors, such as looking and feeling better, and clearing one’s head were mentioned by several participants.

Motivators to doing physical activity

Some benefits of physical activity were also considered motivators. Maintaining one’s health and preventing disease were commonly mentioned, and some thought these motivators were particularly salient among older individuals. One participant noted,

--“I love my life. I want to be healthy so I have to exercise. I have diabetes. I want to see my kids’ future, my kids’ happiness. To be healthy and to live long, we have to exercise.”

Building muscles or improving one’s physical condition, and relaxing or reducing stress also were reported by several participants.

--“First, I want to be skinny. Second, I want to have muscles. Third, I want to eliminate stress or disease.”

Seeing others doing physical activity and having a friend with whom to do activities was considered a motivator for some. Specifically, some participants noted,

--“We can talk. We can exchange ideas. We can exercise for long.”

A minority of participants mentioned that having fun served as a motivator to physical activity.

The influence of climate on physical activity

The difference in the climate between Cambodia and the US was mentioned by several people as both a barrier and as a motivator to physical activity. The limited daylight hours in the winter were described as an impediment to physical activity, and some participants noted that they only work out on the weekends during the winter months. Others mentioned that the cold weather diminished their motivation for physical activity. One participant noted,

-- “When it is cold, I don’t feel like going out.”

At the same time, another common theme was that the cooler temperatures in the US, compared to Cambodia, meant that one had to go to the gym to exercise and sweat, rather than sweating as part of their daily activities.

--“Our country is warm. Here’s cold. Therefore, it requires us to do a lot of exercise. It [exercise] burns our muscles and we sweat so we get rid of toxins in our bodies. We walk a lot in Cambodia and it’s warm. So, just a little exercise is fine. But, it [the weather] requires us to do a lot of exercise here.”

Figure 1 shows the relationship of climate to physical activity and the perceived benefits of sweating (Figure 1). One participant noted,

--“Those in Cambodia don’t think much about exercise because it’s already hot. They think that they don’t need exercise because they already sweat.”

Differences between Cambodia and the US in levels and types of physical activity

When asked about the differences in types of physical activity between the US and Cambodia, participants mentioned a variety of factors. Some stated that in the US, there is more physical activity equipment, whereas in Cambodia, people make do with whatever is available. In the US, most people have jobs that require that they sit for most of the day, whereas in Cambodia more jobs require heavy physical labor.

--“Some Cambodians [in Cambodia] don’t exercise because their living standard is lower than that. The work they do is more than exercise.”

Another difference was the community emphasis on sporting events, which was thought to be more pronounced in the US than in Cambodia. Several participants, who had recently visited Cambodia, mentioned organized exercises and dance instruction that takes place in the Olympic Stadium in the capital city of Phnom Penh.

DISCUSSION

Our analyses represent first efforts to report on qualitative data to characterize the physical activity behaviors, knowledge, and psychosocial influences on physical activity among Cambodian-Americans. Our findings could be used to inform the development of culturally-relevant survey measures and interventions to improve participation in physical activity in this group.

Our qualitative findings show that Cambodian Americans held a broad view of physical activity, generally believing that any movement is physical activity. Knowledge about

recommendations for physical activity duration and intensity varied across participants with the most commonly reported response 3 days per week for 30 minutes each time.

Previous research addressing physical activity among groups having low socio-economic status, generally report lower leisure-time physical activity and higher levels of occupational activity⁹. Consistent with this research, a relatively large share of our respondents, 7/18 interview and 9/25 focus group, reported mostly walking or doing heavy labor as part of their occupation. These data raise concerns about the validity of self-collection instruments that omit question addressing workplace physical activity. While the International Physical Activity Questionnaire (IPAQ) long form contains a set of questions about workplace physical activity, this domain is combined with other physical activity domains in the IPAQ short form and is omitted from instruments such as the Godin Leisure-time exercise questionnaire^{15–16}.

While occupation was a source of physical activity for some respondents, it also served as a deterrent to physical activity for others. Some respondents noted that inconvenient work hours or the need to work two jobs prevented them from participating in physical activity. Consistent with previous research that addresses barriers to physical activity, lack of time emerged as a key impediment to greater participation in physical activity¹⁷. Other key barriers were family responsibilities and failure to understand its importance.

While workplace sources of physical activity were commonly noted, other domains of physical activity were rarely mentioned. Few participants, for example, discussed transportation-related sources. The most commonly reported activity, walking, was solely described as a leisure-time activity, and not as a means for travel to or from work, bus stops, or retail outlets. Similarly, biking was mentioned occasionally and never for the purpose of transportation.

A common theme that emerged from our qualitative interviews was the importance of sweating. Sweating was viewed by some as the mechanism by which physical activity improves health, and by others as the goal of physical activity (“I work out until I sweat”). Notably, the cooler weather in the US compared to Cambodia was thought to require that individuals work out in order to sweat, rather than sweating as part of their daily activities as in Cambodia. Several respondents cited various health benefits of sweating, such as the removal of toxins, improving the function of blood vessels, lowering blood pressure, reducing stiffness in arms and legs, and increasing energy. The high value placed on sweating ought to be considered in interventions to increase levels or intensity of physical activity among Cambodian Americans, especially in geographic regions with relatively cool climates.

Several differences between types and attitudes toward physical activity between the US and Cambodia were noted. Specifically, several respondents noted a greater emphasis on physical activity in the US, whereas in Cambodia people “make do” and undertake physical activity as part of their daily life. In the US, there is a greater emphasis on sporting events and there are more gyms. Several respondents noted that gyms are less accessible in Cambodia. However, many also noted that the Olympic Stadium in the capital city of Phnom Penh, was commonly used as a venue where individuals and families go to dance or exercise.

With few exceptions, the types of physical activities noted by our participants were similar to those reported in national surveillance systems. The most commonly reported activity was walking, and this was followed by running, then going to the gym. Similarly, national data from the Behavioral Risk Factor Surveillance Survey (BRFSS) from 2000 show that the most commonly reported types of physical activity were walking (47%) and running (7%),

and weightlifting was reported by 5% of the sample¹². Team sports cited by our respondents were basketball, volleyball, and soccer. Some unique activities such as “raising arms and legs” (generally among the elderly), playing Cambodian hacky sack, and Cambodian kickball (where a rattan ball is used) were mentioned.

Of note, household activities such as cooking, cleaning, and gardening were mentioned by a surprising high number of respondents. The Guidelines for Physical Activity classify gardening as a moderate-intensity activity and heavy gardening (such as continuous digging or hoeing, with heart rate increases) as a vigorous-intensity activity¹. BRFSS data show that gardening (spading, weeding, digging, and filling) was reported by 7% of respondents. Of note, mowing the lawn and raking leaves were reported by 0.4% and 0.08% of the BRFSS sample¹².

Household activities such as cooking and cleaning are included as a domain in relatively few data collection instruments. While there is debate in the literature about whether or not these activities are adequate to maintain health¹⁸, their emergence as themes in our study may suggest that culturally-relevant instruments measure these activities, either for the purpose of including them or eliminating them from calculations of physical activity levels.

Consistent with previous research that has addressed the perceived benefits of physical activity¹⁹, our study found that both physical and mental factors were important, the most common of which related to the reduction of cardiovascular risk factors, such as cholesterol and high blood pressure, and the reduction in stress. Our findings highlight an awareness of the link between heart disease and personal health behaviors, a link that was not observed in a previous qualitative study of Cambodians¹⁰.

Nearly one-half of our respondents met or exceeded the 2008 US DHHS Guidelines for Physical Activity, a percentage that is lower than the national average and yet higher than the limited data available on Cambodian-Americans, suggesting that our sample may be non-representative of the larger population of Cambodian Americans. Further research is needed to assess levels of physical activity in this population, as much of the existing data is from a single state, Massachusetts.

Our findings could help inform the development of physical activity instruments that are relevant for the Cambodian-American population. Specifically, the types of physical activity that we observed can be substituted into instruments that allow for cultural adaptation (such as the IPAQ). Our findings underscore the importance of workplace as a source of physical activity and the need to measure this domain in selected survey instruments. Special consideration is needed for commonly reported low intensity movements that may not be considered physical activity, such as raising arms and legs or stretching. Given their occurrence, investigators might consider measuring these types of activities in survey instruments in order to eliminate them from calculations of activity levels.

Our findings could also be used to guide the development of culturally-relevant interventions to improve levels of regular physical activity in this population. Common personal barriers, such as lack of time, inconvenient work hours, and family responsibilities can be addressed in interventions designed to identify and reduce barriers. Several culturally-based perceptions of the benefits of physical activity observed in our study can be emphasized in interventions targeting higher intensity activities. These include the perceived value of sweating, the perceived benefit of blood vessels that work well, and the significance of breathing well. Key motivators such as improved health, improved appearance, and reductions in stress can also be emphasized in educational interventions.

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Figure 1.
Explanatory model for the role of sweating in physical activity

Table 1

Socio-demographic characteristics of elicitation interview and focus group participants

Demographic characteristic	Elicitation interview participants n (n = 20)	(%)	Focus group participants n (n = 37)	(%)
Gender				
Female	10	(50)	23	(62)
Age				
20 – 44	12	(60)	19	(51)
45 – 69	8	(40)	18	(49)
Birthplace				
Cambodia	18	(90)	37	(100)
Vietnam	2	(10)	0	(0)
Years in US				
< 10	8	(40)	20	(54)
≥ 10	12	(60)	17	(46)
English proficiency				
Fluent/very good	4	(20)	3	(9)
Good/so-so/fair	13	(65)	14	(40)
Not good/little/none	3	(15)	18	(51)
Education^d				
≤ High school	13	(65)	24	(75)
> High school	7	(35)	8	(25)
Occupation				
Trade ^a	8	(40)	12	(33)
Service ^b	6	(30)	6	(17)
Not currently working ^c	4	(20)	16	(44)
Other	2	(10)	2	(6)
Marital Status				
Married	10	(53)	15	(43)
Widowed/divorced/separated	3	(16)	7	(20)
Single	6	(32)	13	(37)
Physical activity				
Moderate				
Yes	18	(90)	32	(86)
Frequency (days/wk)				
≤ 3	5	(29)	9	(28)
4 or more	12	(71)	23	(72)
Total time (minutes/wk)				
≤ 60 minutes	14	(78)	19	(59)
> 60 minutes	4	(22)	13	(41)

Demographic characteristic	Elicitation interview participants n (n = 20)	(%)	Focus group participants n (n = 37)	(%)
Vigorous				
Yes	12	(60)	21	(57)
Frequency (days/wk)				
<= 3	8	(67)	9	(43)
4 or more	4	(33)	12	(57)
Total time (minutes/wk)				
<= 60 minutes	10	(83)	8	(38)
> 60 minutes	2	(17)	13	(62)
Met Guidelines (2008 US DHHS)				
Yes	8	(40)	20	(54)
Workplace activity ^e				
Mostly sitting or standing	10	(63)	13	(65)
Walking	5	(31)	1	(5)
Mostly heavy labor or physically demanding work	0	(0)	2	(10)
Missing	1	(6)	4	(20)

^a includes electronic assembly, mechanic, warehouse worker, shipping, sewing

^b includes interpreter, janitor, nurse assistant, caregiver

^c includes unemployed, retired, student

^d data were missing for 5 focus group participants

^e among those employed (n = 16 elicitation interview and n = 20 focus group participants)

Table 2

Types of physical activity reported by participants in order of frequency

Walking *
Running
Going to the gym
Basketball
Using treadmill or other "machine" **
Housework (cooking, cleaning) *
Soccer
Raising arms and legs *
Lifting weights **
Push ups, jumping jacks, stretching
Volleyball
Biking

* generally only reported for older generation

** at home or at the gym