LEISURE TIME PHYSICAL ACTIVITY, SEDENTARY BEHAVIOR AND PERCEIVED WORK ABILITY OF FOREIGN DOMESTIC HELPERS IN HONG KONG

BY

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We hereby recommend that the Honors Project by Miss Wong Ho Wai entitled “Leisure Time Physical Activity, Sedentary Behavior and Perceived Work Ability of Foreign Domestic Helpers in Hong Kong” be accepted in partial fulfillment of the requirements for the Bachelor of Arts Honors Degrees in Physical Education and Recreation Management.

_______________________  ______________________
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_______________________
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ABSTRACT

The purpose of this study was to investigate the influence of physical activities and sedentary behavior of foreign domestic helpers during their leisure time on their perceived work ability. Data were collected through questionnaires. The subjects were 287 female domestic helpers who had their day-offs on Sundays in Central, Mongkok or Yuen Long. Results of this study showed that (a) church meeting, reading and listening to music were the most popular sedentary behaviors among domestic helpers in Hong Kong, (b) the majority of the interviewees had no participation in physical activities during their leisure time in the past six months, (c) interviewees rated their work ability an average of 8.3 (SD=1.6) out of 10, (d) leisure time physical activities and perceived work ability was positively related, (e) leisure time sedentary behavior and perceived work ability was also positively related.
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Chapter 1

INTRODUCTION

According to the Immigration Department (2010), there were 273,609 foreign domestic helpers as at 31st December 2010. This figure continued to rise every year and it reached 299,961 and 312,395 at the year end of 2011 and 2012 respectively (Immigration Department, 2011; Immigration Department, 2012). As at 31st December 2013, a total of 320,988 was recorded, in which 51% were from the Philippines and 46% were from Indonesia (Immigration Department, 2013). These figures together showed that in Hong Kong, there was an increasing demand for live-in foreign domestic helpers.

Foreign domestic helpers made up approximately 3% of the population of Hong Kong. The rights and responsibilities of both the foreign domestic helpers and their employers were abided by the Standard Employment Contract (Immigration Department, 2015), and the extension of the contract was closely related to the working performance of the employees.
If the employees had dissatisfying performance, their employers had the right to ask for replacement as quoted by the Consumer Council (2011). Therefore, the work ability was the key that determined the prospect of employment of these foreign domestic helpers.

Most foreign domestic helpers ("Domestic helpers'", 2011) gathered outdoor, like Central and Victoria Park, with their friends during their Sundays off. Some even formed small communities and interest groups and they ate, sat, relaxed, danced and shared among their peers. While most of these domestic helpers engaged in non-physical demanding activities during their free time, it had been reported that physical inactivity was closely associated with a wide range of chronic diseases (Ding & Hu, 2009). Therefore, if we could assess the relationship between physical activities, sedentary lifestyle and job performance of the domestic helpers, their health status and working performance could be enhanced.
Statement of Problem

The purpose of this study was to investigate the physical activities and sedentary behavior of domestic helpers in Hong Kong during their leisure time, the influence of these activities on their perceived work ability by the use of the Work Ability Index questionnaire.

Delimitations

1. This study was delimited to only those foreign domestic helpers who could read and speak English as they would be approached in English and the questionnaires were written in English.

2. The subjects were delimited to those foreign domestic helpers who gathered in Central, Mong Kok and Yuen Long.

3. The subjects were limited to those who had their day-off on Sundays.

Limitations

1. As the questionnaires measured subjects’ own perception and personal feelings, the data collected was subjective.
2. The questionnaires regarding leisure time activities concerned only the frequency but not the intensity of the activities, which could not precisely reflect exercise level.

3. Interviewees were not supposed to discuss when they were doing the questionnaire, however, unforeseen situation existed, for example the interviewees chatted in their mother language.

4. Work ability index might be affected by many other factors like competence and family problems, not solely by choices on leisure time activities.

**Definition of Terms**

**Leisure Time**

Charles (1960) viewed leisure time as time when we could freely choose what to do just for the pursuit of pleasure and fulfillment of personal satisfaction. Leisure time may also be viewed as free time.
Physical Activity

According to World Health Organization, physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure.

Sedentary Behavior

People with sedentary behavior engage in no or very little physical activities. It was characterized by any waking activities that required energy expenditure of basal metabolic rate 1.0 to 1.5 and a sitting or reclining posture (Rezende, Rey-Lopez, Matsudo & Luiz, 2014). Watching television and using computer are examples of sedentary behavior.

Foreign Domestic Helper

Foreign domestic helpers are full-time workers from outside Hong Kong who stay and live in Hong Kong to perform domestic duties assigned by the employers. Their rights and duties are protected in accordance with the Standard Employment Contract by the Immigration Department, and they
are entitled to the same benefits and protection under the Employment Ordinance (Labour Department, 2014).

Work Ability

Ilmarinen and Rantanen (1999) defined work ability as the ability of a worker to perform his/her job, taking into account the specific work demands, individual health condition and mental resources.

Hypothesis

There is positive relationship between physically-active lifestyle and the perceived work ability of foreign domestic helpers in Hong Kong and there is negative relationship between sedentary lifestyle and the perceived work ability of foreign domestic helpers in Hong Kong.

Research questions

1. What kinds of activities do foreign domestic helpers engage in during their leisure time?
2. Are there any relationship between leisure time physical activities and perceived work ability?
3. Are there any relationship between leisure time sedentary behavior and perceived work ability?

4. Do their social demographic backgrounds affect their participation in leisure time physical activities?

5. Do their social demographic backgrounds affect their involvement in leisure time sedentary behavior?

**Significance of study**

Foreign domestic helpers, who left their home town and came to work in Hong Kong, were suffering from exploitative working conditions, abusive employment ("Domestic helpers',", 2011) and they were under great working pressure with ambiguous official working hour each day (French and Lam, 1988). Some even became victims of physical abuse and sexual harassment (Ng, 2014). Leisure was the time when they could get away from work (Charles, 1960), gather with their friends to eat, dance and relax ("Domestic helpers',", 2011).

Meanwhile, Arvidson, Borjesson, Ahlborg, Lindegard and Jonsdottir (2013) stated in their research that there was a
positive relationship between self-reported leisure time physical activity and work ability. On the other hand, as pointed out by Powell & Blair (1994), a sedentary life would bring along higher risk of coronary heart disease, hypertension, diabetes, obesity and many other physical disorders. Referring to the aim of this study, that was to investigate the influences of physical activities and sedentary behavior of domestic helper during their leisure time on their perceived work ability, it helped foreign domestic helpers to have a better plan for their leisure time and to enhance their job performance and health, which would result in better employee-employer relationship and a more pleasant working environment.
Chapter 2

REVIEW OF LITERATURE

The target of this study was foreign domestic helpers who lived and worked in Hong Kong. Report had showed that work ability increased when self-reported leisure time physical activities increased, on the contrary, sedentary lifestyle was related to different kinds of diseases (Powell & Blair, 1994). In this review of literature, some previous studies and research about leisure time physical activity, sedentary lifestyles, work ability, as well as current situation of foreign domestic helpers were presented. They were divided into 4 parts, namely (a) importance of physical activity, (b) problems caused by sedentary behavior, (c) physical activity, sedentary lifestyle and work ability (performance and satisfaction), and (d) situation of foreign domestic helpers nowadays.

Importance of Physical Activity

The government has put a lot of efforts on promoting and
encouraging participation in physical activities, for example the 'Sport for All' scheme introduced by the LCSD, because previous research had shown that engaging in regular physical activity reduced greatly the chance of suffering from obesity, type II diabetes, cardiovascular morbidity and overall mortality (Warburton, Nicol & Bredin, 2006; Hoton, 2009; Rodjer et al., 2012). Blair et al. (1989) pointed out that an increase in levels of physical activity would lead to a decrease in chances of premature death and in relative risk of death. Laaksonen et al. (2002) stated in their study that with even low-intensity physical activity, there would be smaller chance of having metabolic syndrome. Therefore, people of all ages shall engage in moderate and regular physical activities for the pursuit of a healthy and illness-free life. Moreover, Lee & Skerrett (2001) found out that intensity of physical activity and mortality had an inversed and linear relationship. Thus, it was important to determine the optimum and minimum amount (combination of
frequency, duration and intensity) of physical activities that would benefit our health.

Problems caused by Sedentary Behavior

Physical activities had been proved as the key to prevent many kinds of chronic diseases, meanwhile, sedentary behavior had appeared to be a new risk factor of health (Katzmarzyk, 2010) and the problem of being sedentary was especially severe in older adults. Matthews et al. (2003-2004) reported that older adults who aged over 60 spent nearly 80% of their waking time in sedentary activities. Rezende, Rey-Lopez, Matsudo & Luiz (2014) reported that greater time spent in sedentary activities resulted in increased risk of all-cause mortality, Hu et al. (2004) added that idle middle-aged women who involved in exercises less than one hour per week would have a 52% increase in all-cause mortality. It was also found that greater chance of suffering from metabolic syndrome and obesity, increased waist circumference were related to sedentary behavior.
Physical Activity, Sedentary Lifestyle and Work Ability

(Performance and Satisfaction)

Yang et al. (2010) suggested that work helped shaping one’s individuality and personality while leisure activities helped shaping one’s character. Therefore, work and leisure was closely related. Arvidson et al. (2013) stated in their research that there was a positive relationship between self-reported leisure time physical activity and work ability, implying that higher level of physical activity and better performance at work were correlated. And in Tabarsa et al. (2013) ‘s opinions, leisure time activities could improve workers’ physical and psychological health, which in turns strengthened workers’ abilities to adjust themselves to achieve a balanced life. Tabarsa et al. (2013) also quoted that ‘leisure activities are related to work specific outcomes such as higher job satisfaction (Parks and Steelman, 2008)’. In addition, Bai, Kwok, Chan and Ho (2013) specifically pointed out that job satisfaction was a major factor that
affected the quality of services provided by live-in foreign domestic helpers. We could see that while leisure time physical activities led to better performance at work, and better performance resulted in greater job satisfaction, which eventually increased the workers’ willingness of work hard.

In contrast to engaging in physical activities during leisure time, the 2013 Sun Life-Buffet National Wellness Survey of 400 employees discovered sedentary lifestyle had recently become the major concern of most employers. The president of Creative Wellness Solutions in Halifax, Lydia Makrides explained that since employees with sedentary lifestyle started to develop back, neck and shoulder problems that caused huge amount of medical expenses (Bernier, 2013), it drew more and more attention that a change in their lifestyle was needed.

**Situation of Foreign Domestic Helpers Nowadays**

Foreign domestic helpers, who worked and stayed in an
unfamiliar country to earn a living, faced many difficulties in their daily life. These difficulties might in turn affect their working performance and eventually mental health. In order to help foreign domestic helpers in the country to overcome their problems regarding to differentiation in networks, activities and lifestyles, as well as language barriers, the Taiwan government had decided to implement a series of management policy to organize and promote foreign labour leisure activities, with the aim of helping them to adapt to living in Taiwan (Tsai, 2014). In UK, the government proposed a draft law in 2014 to protect the migrant domestic workers from being abused by their employee (“UK: Protect,”, 2014). In 2010 during a meeting of the International Labour Organization in Geneva, India suggested setting up an International labour convention for domestic helpers in order to help these workers with their employment and provide social protection across the world. However, the Indian’s idea was rejected by most of the participating countries (Lam, 2010).
Summary

There was no doubt that physical activities benefited people’s health by reducing the chances of suffering from different kinds of diseases, like cardiovascular disorders and diabetes (Horton, 2009). In contrast, sedentary behavior would not only cast an adverse effect on health, but would also affect job performance, employers should pay more attention to the issue.

Ewart (1985) believed that leisure time physical activity served as important source of social support. It was especially important for foreign domestic helpers, as they left their homeland and worked aboard with no family support by their side and were facing quite unfavorable working condition.
Chapter 3

METHODS

The aim of this study was to investigate the physical activities and sedentary behavior of domestic helper in Hong Kong during their leisure time, and the influence of these activities on their perceived work ability. The data was collected through questionnaire and the method of this study was divided into 4 parts: (a) Sample of selection, (b) Procedures for data collection, (c) The instrument, and (d) Method of analysis.

Sample of Selection

The subjects of this study were foreign domestic helpers from outside Hong Kong who could speak and read English. Cluster Sampling was used because the foreign domestic helpers were scattered across different districts in Hong Kong. Hong Kong as a whole was divided into 3 clusters, they are the Hong Kong Island, Kowloon and the New Territories, one spot from
each cluster was selected respectively and simple random sampling would be used to select subjects.

**Procedures for Data Collection**

After designing the questionnaire in January, the distribution of questionnaires followed. 287 subjects in total were approached, in late-February to March, face-to-face during Sundays in Central (representing Hong Kong Island), Mongkok (representing Kowloon) and Yuen Long (representing the New Territories), where crowds of domestic helpers were gathered. All 287 subjects were female. Almost half of them were within 30-39 years old (N=141, 49.1%) and 89.9% (N=258) were from Philippines. They were being told the purpose of this study and the majority was willing to fill in the questionnaire without hesitation.

**The Instrument**

A set of questionnaires was designed in January. It was modified from Work Ability Index, Godin Leisure-Time Exercise Questionnaire, in order to collect information about how they
spend their leisure, what kinds of leisure activities they engaged in, how they feel about their job and so on. Other demographic information, like gender and nationality, would also be asked.

In the leisure time activities-related part, a list of 10 activities were provided for the interviewees to indicate how often did they take part in these activities in the past six months with 1 meant no participation, 2 meant participating less than once a month, 3 meant participating 1 to 2 times per month on average, 4 meant participating 1 to 2 times per week on average and 5 meant participating more than 3 times per week on average. Blanks were also given for interviewees to write down any other activities that were not listed. Sum of total physical activities (3-15 marks) and sum of total sedentary behaviors (9-45marks) were obtained. (Godin & Shepard, 1985)

Each questions in the work ability part carried a certain number of marks and these marks were added up to obtain the
work ability index. The full mark was 26 and 23–26 marks meant that the interviewee had excellent work ability, 18–22 marks meant good work ability, 13–17 marks meant moderate work ability, and 4–12 marks meant poor work ability.

According to Tuomi, Ilmarinen, Jahkola, Katajainne and Tulkki (1998), the work ability index (WAI) questionnaire is a self-administered questionnaire constructed by the Finnish in the early 1980s with the aim of assessing an individual’s work ability. It comprises of seven items, namely current work ability, work ability in relation to the demands of the job, number of current diseases diagnosed by a physician, estimated work impairment due to diseases, sick leave during the past 12 months, personal prognosis of work ability 2 years from now and mental resources.

Since the WAI questionnaire is self-administered, its credibility may be a concern. And while perception on different items varied from person to person, the reliability of the test was also in doubt. De Zwart, Frings-Dresen and
van Duivenbooden (2002) had conducted a test to examine the reliability of WAI questionnaire with 97 participants and the result provided evidence of an acceptable reliability of the classification of a subject’s work ability by using the questionnaire and the data obtained was a stable measure. The fact that the WAI had been frequently used and checked in different parts of the world like in Poland (Makowiec-Dabrowska, Sprusinska, Bazylewiz-Walczak, Radwan-Wkodarczyk & Zoszada, 2000) had also proved its credibility. The advantages of using the WAI questionnaire to assess one’s work abilities are its low cost and its easiness of conducting over large population, as mentioned by Kaleta, Makowiec-Dabrowska and Jegier (2004). Yet, it was assumed that the subject answered each question truly and honestly.

A pilot study that involved two domestic helpers and one local worker had carried out to see if the design and wordings of the questionnaire was understandable, practical and user-friendly. After the pilot study, there was a
re-arrangement of questions’ order and an addition line of instruction for better readability.

**Method of analysis**

The data collected were input into and analyzed by SPSS (Statistical Package for the Social Science, Version 12.0) and Microsoft Excel. The significant alpha level of the SPSS software was set at 0.05.

Description of subjects’ demographic background, descriptive analysis of perceived work ability, leisure time physical activities and leisure time sedentary behavior were presented. Pearson correlation was used to analyze the relationship between perceived work ability and leisure time activities, as well as the relationship between demographic background and leisure time activities. The significant level was set at 0.05.
Chapter 4

ANALYSIS OF DATA

Results

The purpose of this study was to investigate the physical activities and sedentary behavior of domestic helpers in Hong Kong during their leisure time and the influence of these activities on their perceived work ability. The data collected in this study were analyzed and presented in the following order:

1. Description of demographic background including gender, age range, homeland and years of staying in Hong Kong
2. Descriptive analysis of perceived work ability and perceived work ability index
3. Descriptive analysis of leisure time physical activities and sedentary behavior
4. The correlation between perceived work ability, leisure time physical activities and leisure time sedentary behavior
5. The correlation between demographic background including age and years of staying in Hong Kong, leisure time physical activities and leisure time sedentary behavior

Description of Demographic Background including Gender, Age Range, Homeland and Years of Staying in Hong Kong

Of all the 287 interviewees, 100% of them were female. According to Table 1, the majority of these interviewees were from Philippines (N=258, 89.9%) while the remaining were from Dubai, Indonesia and Nepal respectively. There were 5 age groups, 20-29 years old, 30-39 years old, 40-49 years old, 50-59 years old and 60 years old or above. None of them were from the group 60 years old or above and most of the interviewees were 30-39 years old (N=141, 49.1%).

Their years of staying in Hong Kong varied from 1 month to 28 years, with a mean of 6.7 years (standard deviation=6.3) and a median of 4 years. There were 34 (11.8%) of them who had been staying in Hong Kong for 3 years, constituted the mode. 12.9% (N=37) of the total had been staying in Hong Kong
Kong for less than a year, 20.2% (N=58) for less than 2 years, 44.6% (N=128) for less than 4 years and only 10.9% (N=32) had been staying in Hong Kong for more than 16 years.

Table 1. Demographic background of interviewees

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Homeland</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Philippines</td>
<td>258</td>
<td>89.9</td>
</tr>
<tr>
<td>• Dubai</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>• Indonesia</td>
<td>22</td>
<td>7.7</td>
</tr>
<tr>
<td>• Nepal</td>
<td>6</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 20-29</td>
<td>54</td>
<td>18.8</td>
</tr>
<tr>
<td>• 30-39</td>
<td>141</td>
<td>49.1</td>
</tr>
<tr>
<td>• 40-49</td>
<td>67</td>
<td>23.3</td>
</tr>
<tr>
<td>• 50-59</td>
<td>25</td>
<td>8.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of staying</td>
<td>6.7</td>
<td>6.3</td>
<td>0.1-28.0</td>
</tr>
</tbody>
</table>

Perceived Work Ability and Perceived Work Ability Index

In the part of work ability in the questionnaire, questions
related to interviewees’ work and their own feelings towards their jobs were asked. 166 (57.8%) of them thought that their work was physically demanding, and only 1.7% (N=5) thought that it was psychologically demanding while the remaining (N=116, 40.4%) thought their work was both physically and psychologically demanding.

Interviewees were also asked to rate themselves at a 10-point scale for their current work ability with the work ability at its best had a value of 10. Referring to Table 2, the mean score was 8.3 (standard deviation= 1.6) and the median was 9-point. Most of them rated themselves an 8 (N=84, 29.3%), a 9 (N= 73, 25.4%) and a 10 (N=71, 24.7%). Only 11.8% (N=34) rated themselves 6-point or below. Meanwhile, only 180 (62.7%) of them were relatively certain about being able to do their current job two years from now. 37.3% were uncertain or even unlikely to do so.

The interviewees’ mean Work Ability Index was 22.4 with a standard deviation of 2.8. The score ranged from 10 to 26
marks, and the median and mode was 23.0 and 24 (N=56, 19.5%) respectively. Only 1 (0.3%) of them fell into the category of poor work ability, 20 (7%) of them were in moderate work ability, 118 (36.9%) were in good work ability and 51.6% (N=148) were in excellent work ability.

Table 2. Distribution of perceived work ability

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current work ability</strong></td>
<td>8.3</td>
<td>1.6</td>
<td>1-10</td>
</tr>
<tr>
<td><strong>Work Ability Index</strong></td>
<td>22.4</td>
<td>2.8</td>
<td>10-26</td>
</tr>
</tbody>
</table>

**Leisure Time Physical Activities and Sedentary Behavior**

In the part of leisure time physical activities and sedentary behavior in the questionnaire, questions on how the interviewees spent their leisure time are asked. The activities during leisure could be classified as physical activities and sedentary behavior. In the past three months, most of the interviewees were able to enjoy their regular daily activities sometimes (N=118, 41.1%) and often (N=93, 32.4%).
18 (6.3%) were never able to enjoy their regular daily activities.

Table 3 summarized the mean score for total physical activities was 4.8 (standard deviation= 2.2) with a range from 3-13, for total sedentary behaviors, the mean and range was 19.5 (SD = 6.1) and 9-37 respectively.

Table 3. Leisure time physical activities and leisure time sedentary behavior

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of physical activities</td>
<td>4.8</td>
<td>2.2</td>
<td>3-13</td>
</tr>
<tr>
<td>Sum of sedentary behavior</td>
<td>19.5</td>
<td>6.1</td>
<td>9-37</td>
</tr>
</tbody>
</table>

According to Table 4, it has revealed that 72.5% (N=208) and 45.3% (N=130) of them did not participate in any team/racket sports nor physical activities in the past 6 months. Only 8.7% (N=25) of them took part in team/racket sports at least once a week and only 20.9% (N=60) involved in physical activities at least once a week.
Table 4. Distribution of leisure time physical activities

<table>
<thead>
<tr>
<th></th>
<th>No &lt;1/month</th>
<th>1-2/month</th>
<th>&gt;3/week</th>
<th>No &lt;1/week</th>
<th>1-2/week</th>
<th>&gt;3/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td><strong>Team/Racket</strong></td>
<td>208</td>
<td>72.5</td>
<td>39</td>
<td>1.36</td>
<td>15</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td>130</td>
<td>45.3</td>
<td>59</td>
<td>20.6</td>
<td>38</td>
<td>13.2</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>283</td>
<td>98.6</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

As stated in Table 5, church meeting, shopping and reading book/magazine/newspaper were the three most popular leisure time sedentary behaviors that most interviewees engaged in, in which only 13.2% (N=38), 30.7% (N=88) and 25.1% (N=72) had no participation in these three activities respectively. 118 interviewees (41.1%) attended church meeting 1 to 2 times a week, 101 (35.3%) went shopping less than once a month, 63 (22%) sat and chat on the phone 1 to 2 times a week, 49 (17.1%)
sat and watched TV/ DVD/ VCD/ films less than once a month, 23 (8%) played computer or video games, 60 (20.9%) sat and listened to music less than once a month, 86 (30%) sat and read less than once a month and 28 (9.8%) drove or sat on bus/car/train less than once a month.

Table 5. Distribution of leisure time sedentary behaviors

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>&lt;1/month</th>
<th>1-2/month</th>
<th>1-2/week</th>
<th>&gt;3/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Church meeting</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
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</tr>
<tr>
<td>Shopping</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Sitting and chatting on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the phone</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Sitting and watching TV/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>DVD/ CD/ films</td>
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<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
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<td>Computer/ video games</td>
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<td>%</td>
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29
<table>
<thead>
<tr>
<th>Activity</th>
<th>Perceived Work Ability</th>
<th>Leisure Time Physical Activities</th>
<th>Leisure Time Sedentary Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting and listening to music</td>
<td>108 37.6 60 20.9 43 15.0 33 11.5 43 15.0</td>
<td>72 25.1 86 30.0 70 24.4 24 8.4 35 12.2</td>
<td>194 67.6 28 9.8 13 4.5 25 8.7 27 9.4</td>
</tr>
<tr>
<td>Sitting and reading</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sitting on/driving car/bus/train</td>
<td></td>
<td></td>
<td></td>
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<td>Others</td>
<td>275 95.8 0 0 9 3.1 3 1.0 0 0</td>
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<td></td>
</tr>
</tbody>
</table>

The Correlation between Perceived Work ability, Leisure Time Physical Activities and Leisure Time Sedentary Behavior

Referring to Table 6, both leisure time physical activities (r=0.211, p=0.000) and leisure time sedentary behavior (r=0.178, p=0.002) had shown a significant positive correlation with perceived work ability.
Table 6. Correlation between perceived work ability and leisure time activities

<table>
<thead>
<tr>
<th></th>
<th>Pearson</th>
<th>p</th>
</tr>
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<tr>
<td><strong>Correlation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Work ability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• leisure time physical activities</td>
<td>0.211</td>
<td>0.000**</td>
</tr>
<tr>
<td>• leisure time sedentary behavior</td>
<td>0.178</td>
<td>0.002**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)

The Correlation between Demographic Background including Age and Years of Staying in Hong Kong, Leisure Time Physical Activities and Leisure Time Sedentary Behavior

According to Table 7, only leisure time sedentary behavior (r=-0.183, p=0.002) had a significant negative correlation with age and only leisure time physical activities (r=0.252, p=0.000) had a significant positive correlation with years of staying in Hong Kong.
Table 7. Correlation between demographic background and leisure time activities

<table>
<thead>
<tr>
<th></th>
<th>Pearson</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• leisure time physical activities</td>
<td>0.077</td>
<td>0.195</td>
</tr>
<tr>
<td>• leisure time sedentary behavior</td>
<td>-0.183</td>
<td>0.002**</td>
</tr>
<tr>
<td><strong>Years of staying in Hong Kong</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• leisure time physical activities</td>
<td>0.252</td>
<td>0.000**</td>
</tr>
<tr>
<td>• leisure time sedentary behavior</td>
<td>-0.012</td>
<td>0.834</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)**

Discussions

According to the Immigration Department (2013), foreign domestic helpers made up 3% of the population in Hong Kong and many household employed a domestic helper to alleviate their household burden. In this study, 287 female domestic helpers were interviewed. The result provided a clearer understanding on these domestic helpers’ perception on their own work ability and how they spent their leisure time. Most
of the interviewees were from Philippines (N=258, 89.9%) aged 30-39 (N=141, 49.1%), and had an average of 6.7 years of staying in Hong Kong.

The result could be divided into two parts regarding their work ability and leisure time activities. For work ability, while domestic helpers’ main duties were those dull and recurring domestic tasks including cleaning and vacuuming, watering plants, taking care of infant or elderly and so on (National Post, 2015), over half of the interviewees (N=166, 57.8%) thought their work was physically demanding but rated themselves 8.3 in average (stand deviation=1.6) on a 1-10 scale. The average work ability index was 22.4 (standard deviation=2.8) which could be classified as good work ability.

For leisure time activities, high percentage of the interviewees did not take part in any team/ racket sports (72.5%) nor physical activities (25.3%) in the past six months. They engaged in sedentary activities like church meeting, using computer, reading and so on during most of their leisure
time. The result was in agreement with a research done by French (1986) which found that the most frequently reported leisure activities foreign domestic helpers took part in were reading books, going to church meeting and chatting with their friends over phone. A qualitative research done by Nakonz & Shik (2009) found that the mostly-Philippines domestic helpers in Hong Kong were suffering from two main burdens, homesickness and poor work condition. When they attended church meeting, they worshiped and shared, in that way, they could meet friends with the same religious belief thus receiving comfort, gaining social support and strength to overcome hardship. Therefore, going to church meeting was a popular activity during their leisure time. However, Matthews et al. (2008) suggested that there might be under-estimation on the average amount of time involving in sedentary behaviors because most assessment tools could only provide a brief and limited numbers of discretionary choices, yet numerous activities could still be viewed as sedentary behavior.
From the result, we could see that there was a positive significant relationship between perceived work ability and leisure time physical activities was also found and it was supported by Arvidson et al. (2013). In their study, they had involved nearly 3000 participants with a follow-up after two years. Arvidson et al. concluded after their cross-sectional analysis that there was a positive relationship between physical activity and work ability, in which an increase level of physical activity would lead to a decrease in poor or moderate work ability, that is to say proper physical activity would enhance work ability.

However, the result also reflected a positive significant relationship between perceived work ability and leisure time sedentary behavior. Referring to the perception that many of them thought their work was physically demanding, it might be one of the reasons for them to take part in sedentary behaviors rather than physical activities, because the sedentary activities allowed their body and mind to rest and
relax after a day of physically demanding work, thus enhancing better working performance.

These relationships among perceived work ability, leisure time physical activities and leisure time sedentary behavior might be controversial. Yet, Van den Berg et al. (2008) found out in their study that poor work ability were associated with lack of leisure time, vigorous physical activity, poor musculoskeletal capacity, older age, obesity, high mental work demands, lack of autonomy, poor physical work environment and a high physical work load. It indicated that though physical activity helped improving work ability, vigorous physical activity lead to poor work ability. The intensity of an exercise could be determined by one’s heart rate. Since the questionnaire focused on the frequency of taking part in leisure time physical activities, the quality and intensity of each exercise session was unknown. If the interviewees involved in moderate level of physical activities, their work ability might be increased, but if they involved in vigorous
physical activities, work ability might be decreased.

Moreover, the result had shown that there was significant positive relationship between leisure time physical activities and years of staying in Hong Kong. It could be explained that when an individual had stayed in a place for a certain period of time, he/she gained familiarity and learnt more about the people and custom of that place, thus their problem of lacking knowledge of leisure opportunity (Stodolska, 1998) could be solved and therefore the longer they stayed, the greater the chances of involving in leisure time physical activities. On the other hand, result showed that there was significant negative relationship between leisure time sedentary behavior and age, which was against previous research findings that age was usually inversely related to leisure time physical activities (Bauman et al., 2012).
Chapter 5

SUMMARY AND CONCLUSIONS

This chapter was divided into three parts, they were (a) summary of results, (b) conclusions, and (c) recommendations for future study.

Summary of Results

Questionnaires were distributed to 287 foreign domestic helpers on Sundays in March in Central, Mongkok and Yuen Long and the results were summarized as follow:

Demographic Background of Interviewees

1. All 287 interviewees were female. 89.9% of them (N=258) were from Philippines, and the remaining were from Dubai (N=1, 0.3%), Indonesia (N=22, 7.7%) and Nepal (N=6, 2.1%).
2. The years of staying in Hong Kong ranged from 1 month to 28 years with a mean of 6.7 years (standard deviation=0.7).
3. 49.1% (N=141) of them were in the age group 30-39, 23.3% (N=67) were in 40-49, 18.8% (N=54) were in 20-29, 8.7% (N=25) were in 50-59 and none of them were 60 years old or above.
**Perceived Work Ability**

1. 57.8% of interviewees (N=166) thought their work was physically demanding, 1.7% (N=5) thought it was psychologically demanding and 40.4% (N=116) thought it was both physically and psychologically demanding.

2. The interviewees’ current work ability had an average of 8.3 (standard deviation=1.6). Only 9.1% (N=26) rated themselves lower than 6.

3. For the work ability index, the mean was 22.4 (standard deviation=2.8). Only 1 (0.3%) interviewee was classified as poor work ability, 20 (7%) were in moderate work ability, 118 (36.9%) were in good work ability and 51.6% (N=148) were in excellent work ability.

**Leisure Time Activities**

1. 72.5% of the interviewees (N=208) had no participation in any team/ racket sports and 45.3% (N=130) did not take part in any physical activities in the past six months. Sum of score of physical activities ranged from 3-13 and had a mean
of 4.8 (standard deviation= 2.2).

2. The two most popular sedentary activities were church meeting (N=249, 86.8%) and reading (N=215, 74.9%). Sum of score of sedentary behaviors ranged from 9-37 with a mean of 19.5 (Standard Deviation = 6.1).

Relationship between Perceived Work Ability, Leisure Time Physical Activities and Leisure Time Sedentary Behavior

1. There was a significant positive relationship between leisure time physical activities (r=0.211, p=0.000) and perceived work ability.

2. There was a significant positive relationship between leisure time sedentary behavior (r=0.178, p=0.002) and perceived work ability.

Relationship between Demographic Backgrounds and Leisure Time Activities

1. There was a significant negative relationship between leisure time sedentary behavior (r=-0.183, p=0.002) and age, but there was no significant relationship between leisure
time physical activities and age.

2. There was a significant positive relationship between leisure time physical activities ($r=0.252, p=0.000$) and years of staying in Hong Kong, but there was no significant relationship between leisure time sedentary behavior and years of staying in Hong Kong.

**Conclusions**

Based on the results, the conclusions were as follow:

1. Foreign domestic helpers mostly engaged in sedentary activities like church meeting, reading and listening to music, during their leisure time.

2. Foreign domestic helpers who involved in more leisure time sedentary behavior had good perceived work ability.

3. Foreign domestic helpers who took part in more leisure time physical activities also had good perceived work ability.

4. Foreign domestic helpers who stayed in Hong Kong for a longer period engaged more in leisure time physical activities.
Recommendations for Future Study

1. The choices and items on leisure time activities of this study were limited and it did not account for the intensity of each activities. It may not be able to reflect the real situation of their engagement in these activities. It was recommended that more detailed questionnaire should be made for further study.

2. The small sample size could not reflect the whole population of domestic helpers in Hong Kong. It was recommended that a much greater sample size to be considered in further study, so that domestic helpers of different age, nationalities and gender were covered.

3. It was recommended that a qualitative study to be conducted in further study, to gain a more in-depth knowledge on the topic.
REFERENCES


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Horton, E. S. (2009). Effects of lifestyle changes to reduce risks of diabetes and associated cardiovascular risks: Results from large scale efficacy trials. Obesity, 17, S43-8. doi:http://dx.doi.org/10.1038/oby.2009.388


Immigration Department (2015). Frequently Asked Questions


APPENDIX

Questionnaire

My name is Sandy, a final year student who is majoring in Physical Education and Recreation Management in the Hong Kong Baptist University. I am working on a study on ‘leisure time physical activity, sedentary behavior and perceived work ability of foreign domestic helpers in Hong Kong’. The purpose of this study is to investigate the influences of leisure time physical activities and sedentary behavior on perceived work ability.

Please would you spend a few minutes to fill-in this questionnaire and all the data collected will be kept confidential. Your patience and cooperation is highly appreciated.

Part I: Work Ability

In this part, questions related to your job/work and your own feelings towards your job are asked.

Please tick the appropriate box to indicate your answer.

1. My work is □ physically □ psychologically □ physical and psychologically demanding.

2. Assume your work ability at its best has a value of 10. How many would you give your current work ability?

   (Circle the appropriate number)

   Completely unable to work ←---------------------------------> work ability at its best

   0  1  2  3  4  5  6  7  8  9  10
3. At present, are you suffering from any diseases or injuries?
   □ Yes, in my opinion
       [Please specify: _______________________________]
   □ Yes, by physician’s diagnosis
       [Please specify: _______________________________]
   □ No → Skip Q.4

4. Are your illness/ injuries a hindrance to your current job?
   (May choose more than one option)
   □ there is no hindrance.
   □ I am able to do my job, but it causes some symptoms.
   □ I must sometimes slow down my work pace or change my work methods.
   □ I must often slow down my work pace or change my work methods.
   □ Because of my condition, I feel I am able to do only part time work.
   □ In my opinion, I am entirely unable to work.

5. Do you believe, according to your present state of health, that you will be able to do your current job two years from now?
   □ Unlikely
   □ Not certain
   □ Relatively certain

Part II: Leisure-time Physical Activities and Sedentary Behavior
In this part, questions on how you spend your leisure time are asked.
Please circle the appropriate phrase or number to indicate your answer.
6. In the past 3 months, have you been able to enjoy your regular daily activities?
   [ often / rather often / sometimes / rather seldom / never ]
7. In the past 6 months, how often did you participate in the following activities during your leisure time?

*Leisure time in this study means the time when you are free from work and can freely choose what to do.*

1= no participation  
2= participate less than once a month  
3= participate 1-2 times per month on average  
4= participate 1-2 times per week on average  
5= participate more than 3 times per week on average

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team/ Racket Sports (e.g. volleyball, badminton...)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Physical activities (e.g. jogging, hiking, dance, swimming...)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Church meeting</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Shopping</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sitting and chatting on the phone</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sitting and watching TV/DVD/VCD/films</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Playing computer or video games</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sitting and listening to music on radio/ tapes/ CDs</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sitting and reading book/magazine/newspaper</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sitting on/ driving car/ bus/ train</td>
<td>1 2 3 4 5</td>
</tr>
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<td>Other activity 1, please specify: ___________________________</td>
<td>1 2 3 4 5</td>
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</table>
Other activity 2, Please specify: __________________________

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<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Part III: Personal Information

Please tick the appropriate box and fill-in the blanks to indicate your answer.

8. Gender
   □ M
   □ F

9. Age
   □ 20-29
   □ 30-39
   □ 40-49
   □ 50-59
   □ 60+

10. Which country are you from?
    ________________________________

11. How long have you been staying in Hong Kong?
    ________ years

The end.
Thank you very much for your time.