THE PERCEIVED LEISURE CONSTRAINTS
OF RETIRED ELDERLY PEOPLE
IN ALDRICH BAY

BY
LEUNG HO YIN
05017629

AN HONOURS PROJECT SUMMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENT FOR THE DEGREE OF
BACHELOR OF ARTS
IN
PHYSICAL EDUCATION AND RECREATION MANAGEMENT (HONOURS)
HONG KONG BAPTIST UNIVERSITY
APRIL 2008
HONG KONG BAPTIST UNIVERSITY
Honours Project Release Form

Student No.: 05017629

Author / Student Name: LEUNG Ho Yin

Honours Project Title: The Perceived Leisure Constraints of Retired Elderly People in Aldrich Bay

Degree Program: Physical Education and Recreation Management

Year of the Honours Project: 2008

Declaration:

☑ I agree that the full text of my Honours Project may be consulted by any/all users in electronic format online through Internet connection, and in print version for onsite use at the University Library, for purposes of private study, educational use, scholarship or research.

Signature of Author: [Signature]

Date: 20/11/2009
HONG KONG BAPTIST UNIVERSITY

25th April, 2008

We hereby recommend that the Honours Project by Miss Leung Ho Yin entitled “The Perceived Leisure Constraints of Retired Elderly People in Aldrich Bay” be accepted in partial fulfillment of the requirements for the Bachelor of Arts Honours Degree in Physical Education and Recreation Management.

____________________                _________________________
Dr. Eva Tsai                          Dr. Lau Wing Chung, Patrick
Chief Adviser                        Second Reader
ACKNOWLEDGMENTS

I wish to express my sincere appreciation for the advice and deepest guidance of my chief adviser, Dr. Eva Tsai for the valuable recommendations in the preparation for the survey and support throughout the whole study. Special gratefulness is given to Dr. Lau Wing Chung as my second reader. The study would not have been as successful without their supervision.

Greatest appreciation is extended to my family. They provided me with unlimited encouragement to carry out the study confidently. Moreover, I would also like to thank all the volunteers, especially Mr. LAM Yiu Pan, Peter, for his assistance in the data collection phase and for their enthusiastic assistance in collecting the survey data.

Finally, special thanks to all participants for their sincere participation.

____________________

Leung Ho Yin

Department of Physical Education

Hong Kong Baptist University

Date: 25th April, 2008
ABSTRACT

The purpose of this study was to examine the leisure constraints perceived by the retired elderly people in Aldrich Bay, and the contribution of leisure satisfaction to the life satisfaction among them. The participants were 120 retired elderly people in Aldrich Bay aged from 60 to 90. They were interviewed at elderly centers, estate shopping malls and parks conveniently. This study discovered that the most common leisure activities the elderly people engaged was doing morning exercise, followed by tai chi; while the most important perceived leisure constraint was physiological constraint (age, health and physical ability). Lastly, this study found that leisure satisfaction correlated positively with life satisfaction, higher life satisfaction the retired elderly people have. It concluded that physiological constraint was the most concerned factor among the elderly people and enhancing the elderly satisfaction would help them to enhance their life satisfaction.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>4</td>
</tr>
<tr>
<td>Research Questions</td>
<td>4</td>
</tr>
<tr>
<td>Definition of terms</td>
<td>5</td>
</tr>
<tr>
<td>Delimitations</td>
<td>6</td>
</tr>
<tr>
<td>Limitations</td>
<td>7</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>8</td>
</tr>
<tr>
<td>2. REVIEW OF LITERATURE</td>
<td>10</td>
</tr>
<tr>
<td>Roles of leisure activities for the retired elderly</td>
<td>10</td>
</tr>
<tr>
<td>The benefits of leisure activities for retired elderly</td>
<td>12</td>
</tr>
<tr>
<td>Factors affecting leisure activities participation among retired elderly</td>
<td>13</td>
</tr>
<tr>
<td>Common leisure constraints of the retired elderly</td>
<td>16</td>
</tr>
<tr>
<td>Leisure and life satisfaction</td>
<td>21</td>
</tr>
<tr>
<td>Summary</td>
<td>23</td>
</tr>
<tr>
<td>3. METHOD</td>
<td>25</td>
</tr>
<tr>
<td>The Sample</td>
<td>25</td>
</tr>
<tr>
<td>Development of the questionnaire</td>
<td>26</td>
</tr>
<tr>
<td>Data Collection</td>
<td>28</td>
</tr>
<tr>
<td>Method of Analysis</td>
<td>29</td>
</tr>
<tr>
<td>4. ANALYSIS OF DATA</td>
<td>30</td>
</tr>
<tr>
<td>Validity</td>
<td>30</td>
</tr>
<tr>
<td>Results</td>
<td>31</td>
</tr>
<tr>
<td>Discussion</td>
<td>51</td>
</tr>
<tr>
<td>5 SUMMARY AND CONCLUSIONS</td>
<td>60</td>
</tr>
<tr>
<td>Summary of Results</td>
<td>60</td>
</tr>
<tr>
<td>Conclusions</td>
<td>62</td>
</tr>
</tbody>
</table>
Recommendations of Further Study............. 63
REFERENCES............................................. 66
APPENDIX.................................................. 75
A  Consent Form......................................... 75
B  Modified Questionnaire (English Version)..... 76
C  Modified Questionnaire (Chinese Version)..... 80
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Correlation between each dimension of perceived leisure constraints and the total perceived leisure constraints</td>
<td>31</td>
</tr>
<tr>
<td>2.</td>
<td>Score of mean, frequency, percentage of the subject’s gender</td>
<td>33</td>
</tr>
<tr>
<td>3.</td>
<td>Frequency and Percentage of the subject’s age group</td>
<td>33</td>
</tr>
<tr>
<td>4.</td>
<td>Frequency and Percentage of the subject’s education level</td>
<td>34</td>
</tr>
<tr>
<td>5.</td>
<td>Frequency and Percentage of the subject’s health condition</td>
<td>34</td>
</tr>
<tr>
<td>6.</td>
<td>Number and percentage of diseases among the retired elderly people</td>
<td>35</td>
</tr>
<tr>
<td>7.</td>
<td>Number and percentage of leisure activities among the retired elderly people</td>
<td>36</td>
</tr>
<tr>
<td>8.</td>
<td>Frequency and Percentage of subject’s economical status</td>
<td>37</td>
</tr>
<tr>
<td>9.</td>
<td>Frequency and Percentage of subject’s marital status</td>
<td>37</td>
</tr>
<tr>
<td>10.</td>
<td>Pairwise Comparisons on relative importance of each dimension of leisure constraints</td>
<td>38</td>
</tr>
</tbody>
</table>
11a Independent t-test for leisure hours between male and female................................. 39
11b Independent t-test for perceived leisure constraints between male and female............. 40
11c Independent t-test for leisure satisfaction and life satisfaction between male and female...... 41

12a Independent t-test for leisure and life satisfaction between retired elderly people with and without chronic disease.......................... 41
12b Independent t-test for total leisure constraints between retired elderly people with and without chronic diseases (CD).......................... 42

13 One-way ANOVA comparing on the retired elderly people financial status and leisure constraints 43

14a Correlation between age and leisure constraints ................................................. 44
14b Correlation between leisure hours and leisure constraints................................. 45

15 One-way ANOVA test for perceived leisure constraint between the retired elderly people in different age groups........................................... 45

16a One-way ANOVA for perceived leisure constraint between the retired elderly people in different martial status................................. 47
Post Hoc test (Scheffe) of environmental constraints among three groups of martial status retired elderly people ......................... 48

One-way ANOVA on the leisure time, leisure satisfaction and life satisfaction scores for retired elderly people.......................... 49

Correlation between leisure satisfaction and other aspects........................................ 50

Correlation between leisure satisfaction and life satisfaction................................... 51
In the modern world, the rapid development of technology and medical treatment could improve the quality of life and increase the life expectancy. The elderly people were the fastest growing population segment (Best, 2001) in many advanced countries. It was estimated that the number of individuals who were aged 65 or above would be the fastest growing segment of the population in the world by 2030 (Mazzeo, Cavanagh, Evans, Fiatarone, Hagberg, McAuley & Startzell, 1999).

Dychtwald (1990) indicated that today older adults were living longer, healthier, and more active lives than the past. Similarly, life of people in Hong Kong were longer than those in the past. According to the Hong Kong Government Information Services Department (Daryanani, 1995), the life expectancy at birth of Hong Kong people increased from 77.65 years old in 1992 to 78.2 years old in 1994. On the other hand, Ngan & Li (1991) reported that there were about 721,600 people aged 60 or above or 12.6% of the total population in 1989 in Hong Kong. However, it would increase to increase to 959,600 which was equal to 15.3% of the total population in 1999. The Census and Statistics Department survey (CSD, 2002) proportion of people, who aged 65 and over, would rise from 11% in 2001 to 24% in 2031 markedly. It also reported that the number of older persons increased by 764,878 or at an average annual growth
rate of 5.1% over the past 45 years (i.e. from 1961 to 2006) and there were 852,796 older persons in Hong Kong in 2006 (CSD, 2006). The rapid growth of the older population presents a challenge to maintain and improve the physical health and psychological well-being of older people (Chou, Chow & Chi, 2004). Therefore, better care for the elderly in the society became the most important issue to be concerned for social welfare.

The increase in the number of elderly people would lead to the increase in portion of health care resources largely (Best, 2001). Hence, it was so important that the elderly people could maintain good health and high quality of life which helped to reduced health bill of Hong Kong Government. In other countries like USA, the emergence of leisure as a central aspect of the health of Native American retired elders was also explored. Finding out the elderly people participated in leisure activities and exercises once a week were effective intervention to prevent functional declines associated with aging (Stafford, 2004). It helped to improve the concept of health, independent, lifestyle and quality of life (Mazzeo, et al., 1999).

People became more concerned with the quality of life with an increase in living standard. Brady Moore (2000) suggested that a person who was active during leisure time would lead to a better quality of life. The increase in participating in leisure activities would further increase life expectancy, improvements in health status and expanding
early retirement would mean that leisure activities had rising importance in quality of life in old age (Hendricks and Cutler, 2003). Blane and Netuveli (2008) also indicated that self-reported health status had a close relationship with quality of life at old ages too. It stated the importance of healthy condition towards elderly people. However, according to the survey from Sports Development Board in 2000, there were only 20% of the interviewed elderly people who participated in physical activities once per week in Hong Kong. Dunlap and Barry (1999) indicated that there might be some existing exercise barriers among the public should seek ways to overcome them.

Carroll and Alexandris (1997) also stated that there was a negative relationship between constraints and leisure participation. That would lead to non-participation or reduction of leisure participation. Constraints limited leisure participation including lack of transportation, money and partners (Losier, Bourque & Vallerand, 1993). The elderly was one of the most disadvantage groups because they were more likely to encounter constraints such as health and financial problems. There was a need to identify barriers that hinder rewarding leisure experiences, especially for the elderly (Iso-Ahola & Mannell, 1985).

Therefore, this study aimed at examining the perceived leisure constraints of elderly people and suggestions would be made to reduce their leisure constraints.
Statement of the Problem

The purpose of the study is to investigate the perceived constraints of retired elderly people in Aldrich Bay. Moreover, the relationship among the perceived leisure constraints, leisure and life satisfaction will be investigated.

Research Questions
1. What were the important leisure constraints perceived by retired elderly people in Aldrich Bay?
2. Were there any differences in the perception of leisure constraints between male and female elderly people in Aldrich Bay?
3. Were there any differences in the perception of leisure constraints between retired elderly people in different age group in Aldrich Bay?
4. Were there any differences in the perception of leisure constraints between retired elderly people with different health conditions in Aldrich Bay?
5. Were there any differences in the perception of leisure constraints between retired elderly people with different self-perception economic status in Aldrich Bay?
6. Were there any differences in the perception of leisure constraints between retired elderly people with difference marital status in Aldrich Bay?
7. Were there any relationships in the perception of leisure
constraints between retired elderly people with different amount of leisure time in Aldrich Bay?

8. Did perception of the leisure constraints related to leisure satisfaction of the retired elderly people in Aldrich Bay?

9. Did the perception of the leisure constraints and leisure satisfaction related to life satisfaction of retired elderly people in Aldrich Bay?

Definition of terms

The following terms were operationally defined in this study:

Retired Elderly

Elderly people refers to people who retired (A person who has worked previously but is not currently working because of old age) (CSD, 2006) and aged 60 or above.

Leisure time

Leisure time refers to free time or spare time, the time when people do not need to study, work or to do domestic work (Edginton, Jordan, DeGraaf & Edginton, 2002).

Leisure Activity

Leisure activity refers to “apart from obligations of work, family, and society to which the individual turns at will for either relaxation or boardening his knowledge and his spontaneous social participation” (Dumazedier 1967, as cited in Edginton, et al., 2002, p. 35).

Constraint
Constraint refers to any factors that limit or inhibit people’s participation in a given leisure pursuit (Raymore, Crawford, Godbey & VonEye, 1993), and those define that inhibit one’s preference and interest for leisure activities and actual participation (Jackson, 1990).

**Life Satisfaction**

Life satisfaction is a broad and non-specific subjective perception comparable to self-rated health. (Oishi, Diener, Lucas & Suh, 1999. It was one of the indicators of subjective well-being (Honkanen, Honkanen, Viinamaki & Heikkila, et al., 2001), happiness, or quality of life that is available to an individual (Edginton, et al., 2002). It has been conceptualized as an assessment of life as a whole on the basis of the fit between personal goals and achievements. (Honkanen, et al., 2001).

**Delimitations**

The following delimitations were established for this study:

1. This study confined to elderly people who lived in Aldrich Bay. Aldrich Bay was formerly a bay in the north shore on the Hong Kong Island, Hong Kong. It was then reclaimed and had been a housing area outside the area of Shau Kei Wan, neighboring A Kung Ngam and Lei King Wan. It contained Oi Tung Estate and some HOS and private housings, with two community centers. It was administratively part of the
Eastern District and contained approximately about 60% were elderly people (CSD, 2006).

2. The study focused on leisure activity. Elderly people undertook leisure activities in non-leisure time were excluded.

3. This study was delimited to studying retired elderly people who were aged 60 or above.

Limitations

The following limitations needed to be considered when interpreting the results of the research:

1. The study was limited by the small sample size.

2. The history and past experience of the elderly were not counted as a factor in this study.

3. The level of understanding of the words used in the questionnaire.

4. The honesty of subjects in answering all of the questions of the questionnaire.

Significance of the study

McAuley and Rudolph (1995, p.67) stated that "leisure activity was a key ingredient in healthy aging". It was important to know how people attain satisfaction from and through their leisure activities (Edginton, et al., 2002).
Elderly people was becoming the largest portion of population in Hong Kong, they had adequate leisure time but often lack resources for quality leisure. Besides, Brown (1992, p.191) found that “It was popular to believe that leisure activity enhanced psychological well-being across a person’s life span, or at old age, and there was evidence of an association between leisure activity and psychological well-being in the elderly”. However, elderly people’s participation rate, in leisure activity was not satisfactory with, only 20% of the interviewed elderly people participated in physical activities regularly (SDB, 2000), reflecting that there should have some leisure constraints leading to the low leisure participation rate. Therefore, developing a positive attitude towards physical activities was very important for the elderly and it was necessary to recognize the constraints that prevent them from engaging leisure activities.

In fact, there were a lot of opportunities for elderly to participate in leisure activities in Hong Kong. Leisure and Cultural Services Department (LCSD) aimed to provide quality leisure and cultural services (LCSD, 2006). It also organized many leisure activities for elderly like “Fitness Corner for The Elderly”, numerous fitness stations and fitness programs for older persons (LCSD, 2002). Moreover, some non-government organizations like The Hong Kong Society For The Aged (SAGE) organized sports and leisure programs regularly which could further increase the opportunities for
elderly to participate in leisure activities.

Finding out the constraints to leisure activity participation could help the society to understand the factors that change people’s everyday leisure behaviors (Edginton, et al., 2002), and there were limited research about elderly people’s leisure constraints in Hong Kong, simply speaking, this study was to draw more people attention about elderly attitude in participation in leisure activities, leisure satisfaction and their life satisfaction.

Chapter 2

REVIEW OF LITERATURE

This study focused on the perceived leisure constraints, leisure and life satisfaction level of elderly people. In this chapter, a review of literature a) roles of leisure activities for the elderly, b) the benefits of leisure activities for elderly, c) factors affecting leisure activities
participation among elderly, d) common leisure constraints of the elderly were reviewed. Lastly, e) leisure and life satisfaction and summary were presented.

Roles of leisure activities for the retired elderly

Leisure activities contributed physiological benefits to elderly people, and sedentary behaviors caused restrictive reduction in normal physical capabilities (Bennett, 1985) and muscle loss (Krucoff, 2000). Elderly people participated in light intensity exercise could reduce the number of falls (Mazzeo, et al., 1999), and resistance exercises helped frail elderly people improve their muscle strength (Kricoff, 2000). Moreover, Seltzer (1995) told that physical immortality presupposes the total elimination of death.

In fact, the functions of leisure were perceived freedom (Teaff, 1985), gained family solidarity, mental health and self-actualization (Ajzen, 1991) and life satisfaction (McPherson, 1991). Teaff (1985) suggested that the psychological function of leisure contributed to the individual life satisfaction due to participation in leisure activities could satisfy certain psychological needs of people. Tinsley, Barrett, and Kass (1977, as cited in Teaff, 1985) also found that needs of understanding, independence, affiliation and getting along with others were satisfied much through participation in leisure activities.
Meer (2008) reported that leisure activities afford an important way for old people to continue to take part in society and have a positive effect on personal wellbeing. Besides that, according to Beard and Ragheb (1980), leisure helped people satisfaction especially in social satisfaction: rewarding relationships with other people. Bennett (1985) mentioned that social insecurity arise in middle age. Leisure provided a means for social integration. Leisure was a social space for family and friends developed. It is a source of additional social identities (Kelly, 1985) and personal meaning for the elderly (Teaff, 1985). Hence, leisure made the role development, personal identity and social identity. If leisure experiences were to be meaningful to elderly people, they would incorporate everyday aspects of life (Willite et al., 1994).

The benefits of leisure activities for retired elderly

Elderly would gain lots of benefits in leisure activities. According to WHO (2002), it stated that physical leisure (LTPA) activities had many health benefits. The stated benefits were: most of the leisure activities could be beneficial for skeletal and muscle health and emotional well-being and prevent arthritis. Fransson et al. (2003) found that physical leisure (LTPA) activities could
significantly reduce the risk of developing cardiovascular disease for elderly. Juarbe et al. (2002) mentioned that a regular pattern of leisure activities could generate a number of health benefits like a sense of improved physical health, helping in the management of disease and in illnesses prevention and promoting mental health. The overall quality of life could be greatly improved.

Perry and Shaw (1999) also indicated that leisure activities could improve health and reduce the risk of disease. Their study showed that the emotional well being of elderly could be maintained through participating active physical leisure activities. Moreover, elderly people could obtain a sense of familiarity, security, and continuity, other practices allowed them to develop new interests, to focus on themselves and to improve their self-attitudes (Kleiber & Dirkin, 1985).

Similarly, Ponde and Santana (2000) found that elderly who were low family income could be reduced the symptoms of anxiety or depression via participating in leisure activities. The reason was the leisure activities allowed them to compensate for adverse effects of poor living conditions.

Brown et al. (2000) reported that those elderly who participated in low to moderate intensity leisure time physical activities might gain a range of health benefits. They concluded that this was important, because elderly got adequate free time and most of them were retired, might need
to find a long period of leisure time each week for enhancing health and reducing morbidity. Elderly would gain benefits in leisure activities. Therefore, it was essential to promote participation of leisure activities to them.

Factors affecting leisure activities participation among retired elderly

Bijnen et al. (1998) found in a Dutch sample a negative relationship between age and leisure participation. It seemed to indicated that leisure participation tended to decline as age increased (Teaff, 1985). MacAvoy (1979, as cited in Hutchison, 1994) told that elderly liked involving in passive leisure activities but less likely participate in active leisure activities. In passive leisure activities, like watching TV and chatting with friends and neighbors (Csikszentmihalyi & Kleiber, 1991). A Study of America showed that the average time people sent on watching TV was 7 hours and 49 minutes per day (Cordes & Ibrahim, 1999). The time spent on TV was similar for elderly or even higher because they had more leisure time. This indicated that most of the elderly were passive and at “passive participation” level in Nash’s (1960) Model. There might be some constraints among elderly people and hindered them to join active leisure activities.

On the other hand, we knew that most of the elderly engaged in passive sedentary activities. It was important for us to know what factors were affecting their leisure participation.
In Pageot (1987, cited in Mannell & Zuzanek, 1991) studies, the most important reason for elderly to engage in leisure was that they had interests in leisure activities. The second reason was they had good health and the third one was the convenience of transportation. Same as the study of Mannell and Zuzanek (1991) which reviewed on elderly people’s leisure participation suggested that the low involvement of the elderly was the result of poor health and limited access to transportation (Trela & Simmons, 1971) and time inhibited leisure participation (Scott & Zoernick, 1977). Overall, health was perceived as common constraints in the world (Buchanan & Allen, 1985; McGuire, 1985). In Mannell and Zuzanek’s (1991) study, the elderly people pointed out that the major constraints to participate in physically active leisure, just because of lacking of interest when they thought their lives were filled with other activities like housework.

Besides, leisure opportunities might affect elderly people’s leisure participation. Leisure researchers found ways to form partnerships with other community institutions to maximize support and resources in elderly leisure. This would increase the leisure opportunities of elderly and thus their leisure participation. (Bullock & Howe, 1991; Pedlar, Gilbert & Gove, 1994; LePore & Janicki, 1990). In the United States, support from friends was the important factor which influenced leisure participation level of people and family had more significant influence in leisure participation than
friends (Wong, et al., 1999).

Lastly, socialization was studied. It was an important part of leisure experience (Hultsman, 1995). Studies showed that social interaction was the central component of leisure and was one of the underlying dimensions of leisure needs (London, Crandall & Fitzgibbons, 1977). It contributes to the physical and psychological health of the elderly (Schulz, 1976). Markson and Hess (Hutchison, 1994) concluded that elderly liked to be with friends. They liked social activities as it was the common ages for them to share their life experience. Therefore, the more preferred leisure activities were activities involved both of friendly interaction and activity. Unfortunately, if the elderly people limited their leisure choices, with the result of reducing leisure satisfaction and decline in the quality of life (Ison-Ahola & Mannell, 1985). In fact, Iso-Ahola and Mannell (1985) found that negative attitudes toward leisure (perceived incompetence) was the major obstacle to leisure behavior. Crawford et al. (1991) suggested that constraining factors might influence subsequent aspects of engagements, such as the frequency of participation and level of involvement and caused reduce in leisure participation or withdrawal from leisure activities.

"Common leisure constraints of the retired elderly

Constraints included obstacles, limitations, impediments, restrictions, and other factors placed in front
of individuals either by themselves or by culture, society, or environment" (Edginton, et al., 2002, p.24). From this definition, all of these factors prevented people from engaging in satisfying leisure experience. Shaw (1994) thought that elderly people’s leisure constraints could be concluded into time, economic, lack of opportunities, facilities and programs. Besides, psychological constraints intervened between the preference for an activity and leisure participation (Henderson, Bialeschki, Shaw & Freysinger, 1996), which can lead to leisure non-participation (Edginton, et al., 2002).

Elderly who joined leisure activities because they thought certain leisure activities got fun while some of them did not think so, barriers were being involved. (Jaffee, Lutter, Rex, Hawkes, & Bucaccio, 1999). To understand constraints, it was necessary to know the components consisted in it. Constraints were obstacles existed to achieve a meaningful quality of life on both individual and a societal basis (Jackson, 2000). The removal of constraints increased the frequency of satisfying experience (Iso-Ahola & Mannell, 1985). It might help increased the quality of life of elderly too. Thus, social and psychological constraints on people’s leisure behaviors were identified in this part.

According to Jackson (1990), there were two categories of constraints influenced one’s leisure participation. The first was antecedent constraint, it interfered one’s preferences
for certain leisure activities. The second was intervening constraint, it came between a preference for an activity and actual participation in it. Also, Edginton, et al. (2002) classified constraints into six dimensions. They were accessibility, social isolation, personal reasons, costs, time commitments and facilities. Tsai and Coleman (1999) also measured leisure constraints in six dimensions. But the dimensions were different. They were factors-social-cultural constraints, interpersonal constraints, access constraints, affective constraints, psychological constraints, and resources constraints. These constraints were assumed to inhibit participation or leisure engagement once a preference for an activity had been formed (Jackson & Scott, 1999).

There were several studies examined leisure constraints among the elderly. Juarbe et al. (2002) showed that a variety of chronic disease such as arthritis and low back pain limited elderly in engaging in leisure activities. Also, Dunpal and Barry (1999) suggested that injury and health were the main barriers among people who aged 60 to 78; discomfort, misconceptions and fear of injury about exercise were the other common barriers which showed in an Australian survey. Moreover, the elderly might be busy for caring their grandchildren and housework. Dunpal and Barry’s (1999) study found two main exercise barriers among elderly, personal factors like fear of injury and social isolation and environmental difficulties like inconvenience to access and
unfavorable weather. Factors were composed of several dimensions, they were physical barriers, time, perception of exercise and misconception etc. These personal traits were significant to variations in leisure behavior and experience (Kleiber & Dirkin, 1985). To determine perceived personal leisure constraints, it was important to determine belief formation. Belief was formed on the basis of external provided information which came from reading newspapers, watching TV or chatting with friends and “Information” and motivational constraints on leisure behavior were caused by the lack of the external information (Iso-Ahola & Mannell, 1985). It was due to the lack of recreation programs, activities and knowledge on environments. Elderly might not know the potential benefits in leisure activities which might cause information constraint too.

In addition, environmental constraints, attitudes toward recreation based on earlier experience and other social characteristics attitudes might also affect leisure style of an individual (Hutchison, 1994). Environment constraints included lack of community recreational facilities and inconvenience to access the leisure destination. Life history might influence an individual’s motivation for involvement in leisure activity. Long working hours and other responsibilities might prevent people participating in leisure activities in earlier life, and thus their exercise skills did not develop (McPherson, 1995 and Lehr, 1992).
feeling of socially unacceptability might restrict opportunities of elderly to have group activities (Dunpal & Barry, 1999). Since human was “social animals” (Mannell & Zuzanek, 1991), elderly needed their friends and family too. However, there was a trend which the elderly would be self-isolated. Isolation might be one of the leisure constraints to the elderly (Dunpal & Barry, 1999), and their leisure participation might be socially affected (Iso-Ahola & Mannell, 1985).

"Time constraints dominated people’s perceptions of the problems they experienced in successful leisure participation" (Jackson & Scott, 1999). Time constraints would influence the participation level and intensity among elderly (Hultsman, 1995). In Hong Kong, Sivan and Robertson (1996) studied the leisure activities of Hong Kong residents from all district, aged 60 years old or above and claimed that “both males and females attributed their lack of participation in desired leisure activities primarily to lack of time. Relatively few suggested that they were constrained by lack of facilities.” (p. 282) Socio-economic changes such as limited income influenced elderly person’s ability to participate in educational programs by affecting the choices one made regarding participation in program (Beare, 1999). The participants in cultural programs such as opera were usually those who had high income. In addition, middle-class elderly were found to be more community oriented in their leisure (Teaff,
than lower class. This showed that money constraint was an important constraint among elderly. Moreover, it showed “an inverse relationship between income and participation. The reason for this was that low income groups tend to have less space in their homes and make more use of playgrounds.” (Sivan & Robertson, 1996, p.139) Thus, those who had lower income might affect their leisure and life satisfaction.

Leisure and life satisfaction

In the previous research for older adults reported that spending time in leisure activity is positively associated with physical health, psychological well-being and life satisfaction (Iwasaki and Smale, 1998). Other research also showed a relationship between older adults' leisure involvement and life satisfaction. Individuals who participate more frequently and in a greater variety of activities experience greater psychological well-being (Siegenthaler, 1996). Besides, the importance of self-rated health status had been demonstrated in Chinese older adults, and had been found to be significantly related to life satisfaction (Chou and Chi 1999, 2004).

Lawton (1994) surveyed 828 participants in Elderhostel programs to examine the relationship between psychological well-being and leisure participation. Results indicated that those individuals who participated more frequently in leisure activities experienced greater psychological well-being and
contentment. This provided additional support to evidence that leisure involvement and life satisfaction in elderly people were closely linked. In contrast, an investigation of leisure to life satisfaction of 618 older female revealed negative attitudes toward leisure activities (Cutler Riddick & Stewart, 1994). In general, the old women reported low life satisfaction, although they did not acknowledge that leisure enhanced their lives.

Lemon, Bengston, and Peterson (1972) found that leisure activities with friends increased so did life satisfaction. Social participation was significantly related to each other (Graney, 1975). It was also positively correlated with life satisfaction for elderly (Palmore & Kivett, 1977). In addition, a negative attitude towards leisure could influence an individual's leisure behavior, which undermined leisure and life satisfaction (Cutler & Stewart, 1994). Therefore, quality social leisure was essential for elderly to satisfy their leisure and life.

According to Activity theory, personal satisfaction of elderly was maintained through continued active leisure participation. Graney (1975) found that there was a significant relationship between social participation among elderly who aged from 62 to 89, the increase in leisure activity participation rate had a positive influence on happiness. Thus, participate in leisure activities could help in avoiding feelings of uselessness (Habighurst, Neugraten & Tobin, 1968).
Leisure dominated the life of elderly. It achieved the highest priority of life because it represented an opportunity for pursuing excellence (Csikszentmihalyi & Kleiber, 1991). The greater activity, the greater the life satisfaction elderly gained (Teaff, 1985).

Summary

Elderly citizens were growing segment of the population in all countries. In Hong Kong, it was predicted that by the year 2025, there would be 25% of the Hong Kong population who were aged 65 or above (Phillips, 1995). Elderly was an increasingly large portion of health care resources (Best, 2001) and correlated with a high cost of medical and welfare services (Hon, 2002). Furthermore, according to the WHO (2007), active aging was the “process of optimizing opportunities for health, participation and security to enhance the quality of life of elderly people”. Leisure and life satisfaction were examined. In order to help the elderly have a healthy lifestyle, it was important to provide and promote leisure activities with maximum participation for elderly.

The diversity within older population like the functional disability (Seltzer, 1995) made elderly encountered different constraints towards leisure activities. After reviewing the previous literature, we had a general understanding about the constraints among elderly people, they perceived personal, physical, health and financial constraints. Since
understanding constraints offered the potential for new understandings of the importance of leisure in individuals’ lives and draw the attention from the government (Jackson & Scott, 1999), elderly people’s leisure constraints should be studied and it was necessary to know what the benefits they were able to gain by participating in leisure activities.

Elimination of leisure constraints might bring elderly people with quality leisure and also get satisfaction in life, so leisure professionals should try to overcome barriers and constraints elderly people in leisure participation and help them become an active people.
Chapter 3

Methodology

This chapter presented the method of this survey as follow: (1) The Sample, (2) Development of the Questionnaire, (3) Data Collection and (4) Method of analysis.

The Sample

The target population of this study was the elderly aged 60 or above in Aldrich Bay. In this study, a sample of 120 elderly people (male=56, female=64) aged 60 to 90 years old were interviewed. 36.7% (n=44) of the subjects had no chronic diseases. The remaining 63.3% (n=76) had chronic disease, and the most common disease was high blood pressure, 31.7% (n = 38). The educational level of the participants was: 82.5% primary educational level or below (n = 99), 10.8% secondary educational level (n = 13) and 6.7% university educational level or above (n = 8). The martial status of the 25.8% participants was unmarried (n = 31), 57.5% (n =69) married, 1.7% (n = 2) divorce, 12.5% (n = 15) widow and 2.5% (n = 3) separation.

The respondents had different leisure pattern, morning
exercise, 36.3% (n=57) hold the greatest participation rate among the respondents.

Development of the questionnaire

The data was collected with adviser consulting questionnaire. The instrument used in this study was a modified questionnaire of Tsai and Coleman (1999). There were several procedures for developing this modified questionnaire. First, it included studying the questionnaires of Tsai and Coleman (1999). Then, proper questions were chosen. Finally, questions were translated into Chinese version. The questionnaire conduction and translation were supervised by the advisor.

The questionnaire was consisted of 14 questions, which was divided into fifth parts. The first part contained the subject's personal information (including gender, age, health condition, amount of free time per day, economic, education level and marital status).

The second part of the questionnaire contained the general factors that limited retired elderly people to participate in leisure activities. In this part, the questionnaire of Tsai and Coleman (1999) were modified, and a 5-point Likert Scale, range from 0 (extremely unimportant) to 4 (extremely important) was used and constraints were placed in random number. The
factors were classified into six dimensions and set randomly. The six dimensions were (1) time constraints referred to constraint items 2, 5 and 6. (2) financial constraints referred to constraint items 10 and 11. (3) interpersonal constraints (interaction with friends or family) referred to constraint items 3, 9, 12 and 17. (4) environmental constraints items 1, 13, 15, 16 and 18. (5) physiological constraints (health and age) referred to constraint items 4, 19, 20 and 22. (6) personal attitude (no interest and motivation) referred to constraint items 7, 8, 9, 15 and 22.

The third part of the questionnaire examined the influence by others significantly such as family and friends by a 5-point Likert Scale, range from 0 (extremely discourage) to 4 (extremely encourage). The questions were modified from Tsai and Coleman’s (1999) questions.

The fourth and fifth parts measured the leisure and life satisfaction level respectively. The questions were modified from the questionnaire of Tsai (2000), a 5-point Likert Scale, range from 0 (Strongly disagree) to 4 (Strongly agree) was used.

A pilot study had carried out to ensure that the questions the researcher translated were understandable. In this pilot study, the subjects were neighbors. Subjects were 5 elderly who were 2 males and 3 females, aged from 60 to 80. The pilot study suggested that the elderly people understood all the questions. After the pilot study, there was no modification
was made on the questionnaire.

Data Collection

In this study, 120 elderly people aged 60 or above living in Aldrich Bay were interviewed. The survey was conducted by interviewing the retired old people who took rest at podium outside the plaza and elderly centre. They were found randomly three days per week from 2pm to 5pm in 3 months. The sample was obtained by using Convenient Sampling and this method was a kind of limitation that told in the previous chapter. Only those who were willing to participate in the survey were surveyed. Data was collected at where the elderly usually emerge together. There were two difficulties which were found in this survey. First, for some subjects who had low educational level, they found difficulties to understand and answer the questions, so they needed more time to finish the questionnaire. Second, the elderly talked so much about their previous personal experience but unrelated to the questions. Thus, researcher used about 15 minutes to finish each questionnaire.

Survey was also done with the help of volunteers. The questionnaires, a briefing session about the research objective and interview procedure were given to the helpers before they started to interview. The Chinese version of the questionnaire was used by both interviewers and interviewees.
Method of analysis

Collected data was input and analyzed into SPSS (Statistical Package for the Social Science) for Window 15.0 version. The significant level was set at .05. The mean of each dimension was calculated. The calculated mean scores were used to analyze with other items. Descriptive statistics of the respondents were presented; One-way ANOVA was used to test the constraints among different economical status, employment status, age group; independent t-test was used to test the constraints between single and married elderly people. Correlation was used to analyze the relationship of the elderly between free time and constraints.
Chapter 4
ANALYSIS OF DATA

The purpose of this study was to investigate the perceived leisure constraints of the elderly people in Aldrich Bay. It also examined if there was any relationship between perception of leisure constraints, leisure satisfaction and life satisfaction among retired elderly people in Aldrich Bay. Correlation, descriptive statistic, independent samples t-test and One-way ANOVA were used to analyze the data.

There are 3 parts in this chapter, they are: 1) examination of leisure constraints questions, 2) results, and 3) discussion.

Examination of Leisure Constraints Questions

In the questionnaire, perceived leisure constraints of the retired elderly people in Aldrich Bay were conceptualized as composed of 6 dimensions. Constraints items related to the same dimension were group together to calculate the constraints scores of each participant. The mean score in each dimension was calculated by averaging scores of items in the respective factors which was adapted from Tsai and Coleman (1999). Moreover, the relationship between each of perceived leisure constraint dimensions were examined by comparing the correlation. Either one constraint dimension score increased,
the total leisure constraint score increased. Therefore, the perceived leisure constraint dimensions were believed to be valid measured of perceived leisure constraints.

Table 1
Correlation between each dimension of perceived leisure constraints and the total perceived leisure constraints

<table>
<thead>
<tr>
<th>Total Leisure Constraints</th>
<th>Pearson Correlation</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>.296</td>
<td>.001*</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.299</td>
<td>.001*</td>
</tr>
<tr>
<td>Environmental</td>
<td>.494</td>
<td>.000*</td>
</tr>
<tr>
<td>Physiological</td>
<td>.352</td>
<td>.000*</td>
</tr>
<tr>
<td>Financial</td>
<td>.411</td>
<td>.000*</td>
</tr>
<tr>
<td>Personal Attitude</td>
<td>.510</td>
<td>.000*</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

Results

The purpose of this investigation was to find out the perceived leisure constraints of elderly people. The data of this study were presented and analyzed in the following order:
1. Description of the personal data, including gender, age, educational level, health condition, financial status, number of free time per day, leisure pattern and marital status.
2. Description of the relative importance of the perceived leisure constraints among the elderly people.
3. A result from Independent Samples t-test between male and female on different dimensions of the perceived leisure constraints and the total leisure constraints.

4. A result from Independent Samples t-test between the elderly people with chronic diseases and without chronic disease on dimensions of the perceived leisure constraints and the total leisure constraints.

5. A result from One-way ANOVA comparing between the elderly people with high and low perception levels on financial status on different dimensions of the perceived leisure constraints and the total leisure constraints.

5. A result from mean correlations among the elderly people with different background (e.g. gender, age, financial status), perceived leisure constraints, leisure importance, leisure satisfaction and life satisfaction.

6. One-way ANOVA test for perceived leisure constraint between the retired elderly in different age groups.

7. One-way ANOVA for perceived leisure constraint between the retired elderly in different martial status

8. One-way ANOVA on the leisure time, leisure satisfaction and life satisfaction scores for retired elderly

9. Correlation between leisure satisfaction and other aspects

Description of personal information

The modified questionnaire obtained personal information of retired elderly people in Aldrich Bay. 120 participants
were interviewed, 46.7% were male and 53.3% were female; and their age mean was 77.68, (see Table 2).

Table 2

Mean, frequency, percentage of the subject’s gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>56</td>
<td>46.7</td>
<td>77.98</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>53.3</td>
<td>77.41</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100.0</td>
<td>77.68</td>
</tr>
</tbody>
</table>

For the age of elderly people, ranged from 60 to 90 (SD=7.635). They were classified into three age groups (age 60-69, 70-79 and 80 or above). 15% of the retired elderly people were aged 60 to 69 (n = 18), 41.7% were aged 70 to 79 (n = 50) and 43.3% were aged 80 or above (n = 52) (see table 3).

Table 3

Frequency and Percentage of the subject’s age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-69</td>
<td>18</td>
<td>15.0</td>
</tr>
<tr>
<td>70-79</td>
<td>50</td>
<td>41.7</td>
</tr>
<tr>
<td>80 or above</td>
<td>52</td>
<td>43.3</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The educational level of the participants was: 82.5% primary educational level or below (n = 99), 10.8% secondary educational level (n = 13) and 6.7% university educational
level or above \((n = 8)\) (see Table 4).

### Table 4

Frequency and Percentage of the subject’s education level

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school or below</td>
<td>99</td>
<td>82.5</td>
</tr>
<tr>
<td>Secondary school</td>
<td>13</td>
<td>10.8</td>
</tr>
<tr>
<td>University or above</td>
<td>8</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The health condition was 36.7% had no chronic disease and the rest 63.3% had chronic diseases (see Table 5).

### Table 5

Frequency and Percentage of the subject’s health condition

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without chronic disease</td>
<td>44</td>
<td>36.7</td>
</tr>
<tr>
<td>With Chronic Disease</td>
<td>76</td>
<td>63.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Among the retired elderly people with chronic disease, the most frequent disease was high blood pressure, 39.5% \((n=32)\), and the second frequent one was rheumatic, 24.69% \((n=20)\), and the third frequent one was back pain, 11.1% \((n=9)\), which each retired elderly person could choose more than one choice. (see table 6)
Table 6
Number and percentage of diseases among the retired elderly people

<table>
<thead>
<tr>
<th>Disease</th>
<th>No of respondents</th>
<th>Percentage of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Blood Pressure</td>
<td>32</td>
<td>39.5</td>
</tr>
<tr>
<td>Rheumatic</td>
<td>20</td>
<td>24.69</td>
</tr>
<tr>
<td>Back pain</td>
<td>9</td>
<td>11.1</td>
</tr>
<tr>
<td>Oestoroposis</td>
<td>8</td>
<td>9.88</td>
</tr>
<tr>
<td>Arthrosis</td>
<td>5</td>
<td>6.17</td>
</tr>
<tr>
<td>Cataract</td>
<td>2</td>
<td>2.47</td>
</tr>
<tr>
<td>Gout</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Dementia</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Limbs Recurring</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>100</td>
</tr>
</tbody>
</table>

For the leisure activity style in the passed month, among those chosen leisure activity, the top three leisure activities which elderly engaged in as follows: doing morning exercise, 57 out of 153 responses (37.25%); doing tai chi 24 out of 157 responses (15.69%) and gardening 13 out of 157 responses (8.47%). (see Table 7).

Table 7
Number and percentage of leisure activities among the retired elderly people

<table>
<thead>
<tr>
<th>Leisure Activity</th>
<th>No of Respondents</th>
<th>Percentage of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning Exercise</td>
<td>57</td>
<td>37.25</td>
</tr>
<tr>
<td>Tai Chi</td>
<td>24</td>
<td>15.69</td>
</tr>
<tr>
<td>Gardening</td>
<td>13</td>
<td>8.47</td>
</tr>
<tr>
<td>Swimming</td>
<td>11</td>
<td>7.19</td>
</tr>
<tr>
<td>Dancing</td>
<td>9</td>
<td>5.88</td>
</tr>
<tr>
<td>Chi gong</td>
<td>7</td>
<td>4.58</td>
</tr>
<tr>
<td>Jogging</td>
<td>7</td>
<td>4.58</td>
</tr>
<tr>
<td>Singing</td>
<td>7</td>
<td>4.58</td>
</tr>
<tr>
<td>Cantonese Opera</td>
<td>7</td>
<td>4.58</td>
</tr>
<tr>
<td>Reading</td>
<td>5</td>
<td>3.27</td>
</tr>
<tr>
<td>Hiking</td>
<td>2</td>
<td>1.31</td>
</tr>
<tr>
<td>Calligraphy</td>
<td>2</td>
<td>1.31</td>
</tr>
<tr>
<td>Drawing</td>
<td>1</td>
<td>0.65</td>
</tr>
<tr>
<td>Musical Instrument</td>
<td>1</td>
<td>0.65</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>100</td>
</tr>
</tbody>
</table>

Among these 120 elderly people, for the economical status, the retired elderly people were classified into three groups (below average, average and above average). 62.5% were below average \((n = 75)\), 33.3% were average \((n = 40)\), the rest 4.2% were above average \((n = 5)\) (see table 8).
Frequency and Percentage of subject’s economical status

<table>
<thead>
<tr>
<th>Economic Status</th>
<th>Frequency</th>
<th>Percent(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below average</td>
<td>75</td>
<td>62.5</td>
</tr>
<tr>
<td>Average</td>
<td>40</td>
<td>33.3</td>
</tr>
<tr>
<td>Above average</td>
<td>5</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

As for martial status of the retired elderly people, they were classified into three groups (single, married and divorce/widow). 25.8% of them were single ($n=31$), 57.5% ($n=69$) were married and 16.7% ($n=20$) were divorce and widow (see table 9).

Table 9

Frequency and Percentage of subject’s martial status

<table>
<thead>
<tr>
<th>Martial Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>31</td>
<td>25.8</td>
</tr>
<tr>
<td>Married</td>
<td>69</td>
<td>57.5</td>
</tr>
<tr>
<td>Divorce/Widow</td>
<td>20</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Description of the relative importance of the perceived leisure constraints among retired elderly people in Aldrich Bay
Table 10 shows that relative importance of each dimension of perceived constraints. The importance of each perceived constraints were calculated by averaging the scores of items in respective factors. Physiological constraints had the highest score (Mean=2.44), the second one was interpersonal attitude (Mean=2.17) and the least was time (Mean=1.33). The mean scores of each constraint factor of all respondents were computed by using Pairwise Comparison. The result showed that the mean score of physiological constraint was significant different from all the other constraints dimensions and perceived as the most important constraints, followed by interpersonal and personal attitude (see table 10).

Table 10
Pairwise Comparisons on relative importance of each dimension of leisure constraints

<table>
<thead>
<tr>
<th>Constraints Dimension</th>
<th>Min.</th>
<th>Max.*</th>
<th>Mean</th>
<th>SD**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological</td>
<td>1.25</td>
<td>4</td>
<td>2.4417</td>
<td>.52434</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>1</td>
<td>3.25</td>
<td>2.1729</td>
<td>.49024</td>
</tr>
<tr>
<td>Personal attitude</td>
<td>1</td>
<td>3</td>
<td>2.0067</td>
<td>.43458</td>
</tr>
<tr>
<td>Environmental</td>
<td>.60</td>
<td>3</td>
<td>1.6633</td>
<td>.43924</td>
</tr>
<tr>
<td>Financial</td>
<td>0</td>
<td>4</td>
<td>1.5875</td>
<td>.81391</td>
</tr>
<tr>
<td>Time</td>
<td>0</td>
<td>3</td>
<td>1.3306</td>
<td>.49742</td>
</tr>
</tbody>
</table>

*0=very disagree to 4=very disagree
Independent Sample t-test on gender differences

According to the result of independent t-test, there was significant mean difference between males and females in leisure hours per day ($t=2.775$, $p=.014$), and mean of males was 8.64 while 7.75 in females (see Table 11a).

Table 11a

Independent t-test for leisure hours between male and female

<table>
<thead>
<tr>
<th>Leisure Hours</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>56</td>
<td>8.64</td>
<td>2.093</td>
<td>2.775</td>
<td>.014*</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>7.75</td>
<td>1.403</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

However, there was also no significant mean difference in each dimension of perceived leisure constraints (time, perceived financial status, interpersonal, environmental, physiological and personal attitude), total leisure constraint (see table 11b), leisure satisfaction and life satisfaction between male and female (see table 11c).

Table 11 b

Independent t-test for perceived leisure constraints between male and female

<table>
<thead>
<tr>
<th>Perceived leisure</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraints</td>
<td>Gender</td>
<td>n</td>
<td>Mean</td>
<td>S.D</td>
<td>t</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------</td>
<td>----</td>
<td>--------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>Time</td>
<td>Male</td>
<td>56</td>
<td>1.3929</td>
<td>.52071</td>
<td>1.287</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>1.2760</td>
<td>.47348</td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>Male</td>
<td>56</td>
<td>1.6518</td>
<td>.87863</td>
<td>.808</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>1.5313</td>
<td>.75527</td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Male</td>
<td>56</td>
<td>2.1205</td>
<td>.46708</td>
<td>-1.096</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>2.2188</td>
<td>.50885</td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>Male</td>
<td>56</td>
<td>1.5893</td>
<td>.45833</td>
<td>-1.742</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>1.7281</td>
<td>.41460</td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>Male</td>
<td>56</td>
<td>2.4241</td>
<td>.53283</td>
<td>-.342</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>2.4570</td>
<td>.52052</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>Male</td>
<td>56</td>
<td>2.0643</td>
<td>.41623</td>
<td>1.363</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>64</td>
<td>1.9563</td>
<td>.44717</td>
<td></td>
</tr>
<tr>
<td>Total leisure</td>
<td>Male</td>
<td>56</td>
<td>1.9099</td>
<td>.19687</td>
<td>-.102</td>
</tr>
<tr>
<td>constraints</td>
<td>Female</td>
<td>64</td>
<td>1.9137</td>
<td>.20649</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

**Table 11c**

Independent t-test for leisure importance and leisure satisfaction between male and female
Independent Sample t-test on the retired elderly people with and without chronic disease (CD)

There was no significant mean difference between the elderly with chronic diseases (Mean=2.11) and the elderly had no chronic disease (Mean=1.93) in leisure satisfaction, (t=7.12, p=.563). But, there was significant mean difference in life satisfaction (t=2.146, p=.034). (see table 12a).

Table 12a
Independent t-test for leisure and life satisfaction between retired elderly people with and without chronic diseases (CD)

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With CD</td>
<td>44</td>
<td>1.93</td>
<td>1.043</td>
<td>-7.12</td>
<td>.478</td>
</tr>
<tr>
<td>Without CD</td>
<td>76</td>
<td>2.08</td>
<td>1.117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With CD</td>
<td>44</td>
<td>2.80</td>
<td>1.173</td>
<td>2.146</td>
<td>.034*</td>
</tr>
<tr>
<td>Without CD</td>
<td>76</td>
<td>2.29</td>
<td>1.284</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

On the other hand, there were no significant mean differences between them in perceived leisure constraints and
total leisure constraints. (see table 12b).

Table 12b

Independent t-test for total leisure constraints between retired elderly people with and without chronic diseases (CD)

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>With CD</td>
<td>44</td>
<td>1.37</td>
<td>.591</td>
<td>.807</td>
<td>.421</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>1.30</td>
<td>.436</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>With CD</td>
<td>44</td>
<td>1.54</td>
<td>.819</td>
<td>-.429</td>
<td>.669</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>1.61</td>
<td>.814</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>With CD</td>
<td>44</td>
<td>2.17</td>
<td>.524</td>
<td>.957</td>
<td>.957</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>2.17</td>
<td>.472</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>With CD</td>
<td>44</td>
<td>2.17</td>
<td>.524</td>
<td>.957</td>
<td>.957</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>2.17</td>
<td>.472</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>With CD</td>
<td>44</td>
<td>1.69</td>
<td>.434</td>
<td>.608</td>
<td>.544</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>1.64</td>
<td>.443</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>With CD</td>
<td>44</td>
<td>2.40</td>
<td>.508</td>
<td>-.516</td>
<td>.607</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>2.46</td>
<td>.535</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>With CD</td>
<td>44</td>
<td>2.05</td>
<td>.465</td>
<td>1.006</td>
<td>.317</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>1.97</td>
<td>.415</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total leisure</td>
<td>With CD</td>
<td>44</td>
<td>1.92</td>
<td>.189</td>
<td>.657</td>
<td>.512</td>
</tr>
<tr>
<td></td>
<td>Without CD</td>
<td>76</td>
<td>1.90</td>
<td>.208</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

One-way ANOVA comparing on the retired elderly people financial status and leisure constraints

In this part, when comparing 3 types of financial status (below average, average and above average) with different aspects of leisure constraints, One-Way ANOVA was used. There was no significant mean difference between elderly who had
different financial status. (see table 13)

Table 13

One-way ANOVA comparing on the retired elderly people financial status and leisure constraints

<table>
<thead>
<tr>
<th>Leisure Constraints</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>.856</td>
<td>.428</td>
<td>1.752</td>
<td>.178</td>
</tr>
<tr>
<td></td>
<td>28.587</td>
<td>.244</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29.444</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>.551</td>
<td>.276</td>
<td>.412</td>
<td>.663</td>
</tr>
<tr>
<td></td>
<td>78.280</td>
<td>.669</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>78.831</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.178</td>
<td>.089</td>
<td>.366</td>
<td>.694</td>
</tr>
<tr>
<td></td>
<td>28.422</td>
<td>.243</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28.599</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>.740</td>
<td>.370</td>
<td>1.950</td>
<td>.147</td>
</tr>
<tr>
<td></td>
<td>22.218</td>
<td>.190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>.292</td>
<td>.146</td>
<td>.526</td>
<td>.592</td>
</tr>
<tr>
<td></td>
<td>32.425</td>
<td>.277</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32.717</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Attitude</td>
<td>.676</td>
<td>.338</td>
<td>1.815</td>
<td>.167</td>
</tr>
<tr>
<td></td>
<td>21.798</td>
<td>.186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.475</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

Mean correlation of the retired elderly people perceived leisure constraints on their personal background
In this study, the relationships among the retired elderly people between different personal background and perceived leisure constraints were examined by mean correlation analysis. Relationship between leisure satisfaction and perceived leisure constraints were also investigated.

The result showed that age was positive correlated with leisure hours the retired elderly people had ($r = .210, p = .021$). The older age, the more leisure time respondents had. (see Table 14a and 14b)

Table 14a
Correlation between age and leisure constraints

<table>
<thead>
<tr>
<th>Age</th>
<th>Pearson Correlation</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constraints</td>
<td>-.148</td>
<td>.106</td>
</tr>
<tr>
<td>Interpersonal Constraints</td>
<td>.140</td>
<td>.126</td>
</tr>
<tr>
<td>Environmental Constraints</td>
<td>-.084</td>
<td>.362</td>
</tr>
<tr>
<td>Physiological Constraints</td>
<td>-.008</td>
<td>.933</td>
</tr>
<tr>
<td>Financial Constraints</td>
<td>-.039</td>
<td>.669</td>
</tr>
<tr>
<td>Personal Attitude</td>
<td>.019</td>
<td>.833</td>
</tr>
<tr>
<td>Leisure Time</td>
<td>.210</td>
<td>.021*</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

Table 14b
Correlation between leisure hours and leisure constraints

<table>
<thead>
<tr>
<th>Leisure Time</th>
<th>Pearson Correlation</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constraints</td>
<td>.035</td>
<td>.706</td>
</tr>
</tbody>
</table>
Interpersonal Constraints  -.021  .820
Environmental Constraints  -.047  .608
Physiological Constraints  -.058  .526
Financial Constraints  .047  .609
Personal Attitude  -.012  .895

* Correlation is significant at the 0.05 level (2-tailed).

One-way ANOVA test for perceived leisure constraint between the retired elderly in different age groups

In this study, the result showed that there were no significant mean differences between different age groups of the retired elderly people in all constraint dimensions. (see table 15) 

Table 15

One-way ANOVA test for perceived leisure constraint between the retired elderly people in different age groups

<table>
<thead>
<tr>
<th>Age Group</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constraints</td>
<td>Between Groups</td>
<td>.922</td>
<td>.461</td>
<td>1.892</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>28.521</td>
<td>.244</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29.444</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>Between Groups</td>
<td>.770</td>
<td>.385</td>
<td>5.77</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>78.061</td>
<td>.667</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>78.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Between Groups</td>
<td>.547</td>
<td>.274</td>
<td>1.141</td>
</tr>
</tbody>
</table>
One-way ANOVA for perceived leisure constraint between the retired elderly people in different marital status

The result indicated that there were no significant mean differences among single, married and divorce/widow groups in most of dimensions of the perceived constraints. There were a significant mean differences among them in environmental constraints ($F=3.687$, $P=.028$). (see table 16a)

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td></td>
<td>28.052</td>
<td>0.240</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28.599</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.656</td>
<td>0.328</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.722</td>
<td>0.183</td>
</tr>
<tr>
<td>Physiological</td>
<td></td>
<td>22.302</td>
<td>0.191</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.959</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.571</td>
<td>0.285</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.039</td>
<td>0.357</td>
</tr>
<tr>
<td>Personal Attitude</td>
<td></td>
<td>32.146</td>
<td>0.275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32.717</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.057</td>
<td>0.028</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.148</td>
<td>0.863</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.418</td>
<td>0.192</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.475</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05
retired elderly people in different martial status

<table>
<thead>
<tr>
<th>Martial Status</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.913</td>
<td>.456</td>
<td>1.87</td>
<td>.158</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28.531</td>
<td>.244</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29.444</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.992</td>
<td>.996</td>
<td>1.51</td>
<td>.224</td>
</tr>
<tr>
<td>Within Groups</td>
<td>76.839</td>
<td>.657</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>78.831</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.038</td>
<td>.019</td>
<td>.079</td>
<td>.924</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28.561</td>
<td>.244</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28.599</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.361</td>
<td>.681</td>
<td>3.68</td>
<td>*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>21.597</td>
<td>.185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiological Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.332</td>
<td>.166</td>
<td>.600</td>
<td>.551</td>
</tr>
<tr>
<td>Within Groups</td>
<td>32.385</td>
<td>.277</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32.717</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.326</td>
<td>.163</td>
<td>.862</td>
<td>.425</td>
</tr>
<tr>
<td>Within Groups</td>
<td>22.148</td>
<td>.189</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.475</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05
Post Hoc test (Scheffe) of environmental constraints among three groups of martial status retired elderly people

Furthermore, in environmental constraints, there was no significant mean difference between single group and married group and there was no significant mean difference between married group and divorce/widow group. The mean for divorce/widow group (mean=1.87) was slightly larger than single group (mean=1.5355). Divorce/widow group perceived larger environmental constraints than single group. (see table 16b)

Table 16b
Post Hoc test (Scheffe) of environmental constraints among three groups of martial status retired elderly people

<table>
<thead>
<tr>
<th>Martial Status</th>
<th>N</th>
<th>Subset for alpha = .05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Single</td>
<td>31</td>
<td>1.5355</td>
</tr>
<tr>
<td>Married</td>
<td>69</td>
<td>1.6609</td>
</tr>
<tr>
<td>Divorce/widow</td>
<td>20</td>
<td>1.8700</td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
<td>.519</td>
</tr>
</tbody>
</table>

One-way ANOVA on the leisure time, leisure satisfaction and life satisfaction scores for retired elderly people

In this part, the result showed that there were no significant mean differences between different leisure time (5 hours below, 6-10 hours and 11 hours or above/ per day)
of the retired elderly people in leisure and life satisfaction (see table 17).

Table 17

One-way ANOVA on the leisure time, leisure satisfaction and life satisfaction scores for retired elderly people

<table>
<thead>
<tr>
<th>Leisure Time</th>
<th>SS</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>4.383</td>
<td>2.192</td>
<td>1.878</td>
<td>.157</td>
</tr>
<tr>
<td>Within Groups</td>
<td>136.542</td>
<td>1.167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.925</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>3.393</td>
<td>1.696</td>
<td>1.064</td>
<td>.348</td>
</tr>
<tr>
<td>Within Groups</td>
<td>186.532</td>
<td>1.594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>189.925</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

Correlation between leisure satisfaction and other aspects

Lastly, there was no significant correlation between leisure satisfaction and other aspects (age, leisure hours, time constraints, financial constraints, interpersonal constraints, interpersonal constraints environmental constraints, physiological constraints, personal attitude and total constraints) (see table 18a)

Table 18a

Correlation between leisure satisfaction and other aspects
Leisure Satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.048</td>
<td>.602</td>
</tr>
<tr>
<td>Leisure Hours</td>
<td>.126</td>
<td>.170</td>
</tr>
<tr>
<td>Time constraints</td>
<td>-.031</td>
<td>.737</td>
</tr>
<tr>
<td>Financial</td>
<td>.111</td>
<td>.226</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>-.083</td>
<td>.367</td>
</tr>
<tr>
<td>Environmental</td>
<td>-.102</td>
<td>.269</td>
</tr>
<tr>
<td>Physiological</td>
<td>.161</td>
<td>.079</td>
</tr>
<tr>
<td>Personal attitude</td>
<td>.010</td>
<td>.911</td>
</tr>
<tr>
<td>Total constraints</td>
<td>.023</td>
<td>.799</td>
</tr>
<tr>
<td>Total leisure importance</td>
<td>.039</td>
<td>.669</td>
</tr>
</tbody>
</table>

*p<0.05

The leisure satisfaction had a significant positive correlation with life satisfaction (r=.193, p=.035). The higher leisure satisfaction level the retired elderly people perceived, the higher life satisfaction level they had. (see table 18b).

Table 18b

Correlation between leisure satisfaction and life satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life satisfaction</td>
<td>.193*</td>
<td>.035*</td>
</tr>
</tbody>
</table>
Discussion

The aim of this study was to investigate the perceived leisure constraints of the retired elderly people in Aldrich Bay. Aging become an important issue which all people need to concern in Hong Kong, it is necessary for the leisure providers (e.g. LCSD, community centre) to know the constraints of retired elderly people in order to plan more variety of leisure activities, programs and facilities for elderly people.

The result showed that the most common disease among the elderly people was high blood pressure, followed by rheumatic and back pain. It was similar to the result of Health and Welfare Bureau Report in Hong Kong (2007), which showed 75% of the Hong Kong elderly people had chronic diseases and the top rank was high blood pressure, 48%.

The result also reflected that most of the elderly people participated in leisure activities when they had a lot of leisure time. There was a relationship between leisure times and age as what Wong, et al. suggested (1999). In this study, the older age, more leisure time the retired elderly people had, so less time constraint they perceived. However, leisure time was related to gender. It may mainly because the responsibility of female in family was more. For example, most of the female need to take care their family members (e.g.
prepare meals) and supposed to have more housework than men. To encourage women participate more leisure activities, programs need to be held at time when will not hinder their housework time (e.g. hold the program in the afternoon or early morning).

In this study, all respondents would participate in leisure activities. The result showed that the most common leisure activity among the elderly people was morning exercise, followed by tai chi and gardening. This reflected that most of the respondents engaged in physical activities. It was different from the SDB survey result in 2000, which only 20% of the elderly people participated in physical activities. The result was different may due to the sampling errors. The data collected by the SDB was through telephone interview which who were sedentary might be involved. However, the data of this study was collected through face-to-face interview in the parks and other public areas (e.g. estate shopping mall and community centers). Those elderly found in these public areas might be more active. Moreover, those elderly people were found in parks and in elderly centers might be active indeed. Thus, they would participate in physical activity and had high participation rate in leisure activities. The low physical participation rate in the SDB findings indicated that there might have some factors inhibited elderly people from engaging in leisure activities.

Furthermore, the married elderly people had a high
proportion than single and divorce/widow group. It did not
found out which group of elderly people had a higher level
of leisure activities. However, Satariano, Haight and Tager
(2002) indicated that older adults who lived alone were less
likely to engage in a leisure activity than those living with
their spouses. It indicated that there should have a
relationship between martial status and level of
participating in leisure activities.

Verbrugge, Gruber-Baldini and Fozard (1996) found that
older women in the Baltimore Longitudinal Study were likely
to participate in leisure activities then older men. But, in
this study, there was no gender difference in leisure
participation style. This was the same as what Singapore
survey found (Wong, et al., 1999). This indicated that elderly
people in different countries would have some different
behavior between genders. Both male and female of the retired
people in Aldrich Bay would like to do morning exercise and
tai chi as their leisure activities. It was different from
the result from Hutchison (1994), which 64.4% of all elderly
groups were in “stationary activities” (e.g. primarily
sitting on park benches) in their leisure time. The result
may different due to the geographical factor in Aldrich Bay,
there are lots of opening areas which gave an opportunity for
the retired elderly people to do group exercise like Tai Chi.
Implicated that the leisure participation rate of the retired
elderly people was not an issue, but the kind of leisure
activities they joined need to be concerned. They like group activities neither than individual activities. Thus the leisure providers should think more about creating more active and social activity. Leisure education (e.g. workshop and seminar) might be helpful to deliver right and positive message to both elderly people and especially their family.

On the other hand, understanding the perceived leisure constraints of the retired elderly people is critical and important. From the study result, the most important leisure constraint among the retired elderly people was physiological constraints. Previous studies also indicated that poor health (e.g. low back pain) was the most important factors obstructing elderly people from leisure engagement (Dunpal & Barry, 1999; Godbey, 1997; Mannell & Zuzanek, 1991).

Physical health is correlated to leisure participation. A decline in functional capacity was associated in a Quebec study with lower rate of participation in some leisure activities (Lefrancois, Leclerc and Poulin, 1998), for example arthritis, chronic disease was found to have a negative effect on participation in later life (Zimmer, Hickey and Searle, 1997). Although another study found no relationship between leisure pursuits and self-rated health (Bevil, O’Connor and Mattoon, 1993), Godbey (1997) pointed out that health rather than age would shape more influencing to leisure behavior.

The next important constraint was interpersonal
constraint (inadequate family and peer support). Some researches (Buchanan & Allen, 1985, Dunpal & Barry, 1999) also found that the families may fear of injury of the elderly people and discourage them to do more leisure activities. They would like the elderly chatting with their friends rather than doing leisure activities. This was due to the misconception of the mass public. There was a positive relationship between leisure activities and health condition (Simmon, Scott & Zoernick, 1977). If the rate of leisure activities was higher, the elderly would be healthier. The third common constraint was personal attitude (interest, discomfort and skills perception), and several researchers suggested that personal attitude (interests and motivation on leisure) was the common constraints among the elderly people, the subjects responded “feeling too tired” was common personal attitude constraints toward leisure (Scott & Zoernick, 1977 and Simmons, Dunpal & Barry, 1999).

In some studies, transportation (Mannell & Zuzanek, 1991), environmental (lack of access ad unfavorable weather) (Jackson & Scott, 1999), facilities (Simmons, Scott & Zoernick, 1977), fear of crime (Buchanan & Allen, 1985) and financial (Teaff, 1985) was found to be common constraints. However, they are not the common constraints found in this study. This study reflected that the environmental constraint included transportation and facilities, was in low importance level. It indicated that environmental constraint is not important
among the elderly in Hong Kong and it does not affect the elderly in participating leisure activities so much. A recent research indicated that the types and number of leisure activities in which older people participate are highly diverse. This diversity is associated not only with personal characteristics, but also with those of the environment in which old people live. The cross sectional data selected in 2002-2003, differences are presented between regions, cities and villages, and between prosperous and deprived neighborhoods. The characteristics of the region and of the urban or rural environment show a clear relationship with the intrinsic orientation in leisure. The diversity is smallest among older adults who live in deprived neighborhoods and among the very old. They take part in fewer activities (contraction), which leads to a more similar activity pattern in and around the home (Meer, 2008). However, this was not the case in Hong Kong. The result was different from previous studies mentioned above. It was because Hong Kong is a small city, the accessibility of everywhere is not difficult, for example there are bus stops and MTR in Aldrich Bay. It is so easy for them traveling to another destinations. Therefore, the environmental constraint is not serious in Hong Kong. Moreover, this study reflected that the time constraint was at the lowest importance level. The retired elderly people have pretty much of spare time per day and it does not affect their leisure participation so much. Time is not an important
factor they need to have a serious concern.

However, Hong Kong Police Force (2006) had reported that the total of 81,125 cases of crime were recorded, representing a rise of 4.8 per cent when compared with the 77,437 cases in 2005. Results showed the crime rate increasing in Hong Kong, the fear of crime may be the future constraint for the Hong Kong elderly people. The government must start to concern this issue to prevent it from coming true.

By the fact that the common perceived leisure constraint among retired elderly people are similar between male and female and different age group of elderly. Previous researches have not shown great difference between male and female in perceived leisure constraints. Both sex of elderly people experienced the similar levels of constraint in six constraint dimensions and total constraints. These findings agree with that of Jack and Scott (1999), the participation rate and leisure style of different gender were not affected by constraints.

As the perceived leisure constraints of the retired elderly people were knew, the relationship between constraints and satisfaction will be discussed. Results showed that those who had suffered from chronic diseases and those who had lower satisfaction levels of financial status, would have lower level in leisure satisfaction. Besides, leisure satisfaction was correlated with perceived leisure constraints. The more perceived leisure constraints, the lower leisure satisfaction.
level of the retired elderly people perceived. The result was similar to previous studies (Edginton, et al., 2002; Jackson & Scott, 1999) that constraints affect leisure satisfaction. This study showed that the leisure satisfaction would help to bring about the life satisfaction of the elderly. It agreed what Palmore and Kivett (1977) found was that the higher social participation rate, the higher the life satisfaction of elderly people for both sexes. This is correlated with "Active Theory", the greater activity, the greater life satisfaction elderly people got (Teaff, 1985), and was correlated with Iso-Ahola Mannell (1985) statement, which stated that quality of life was related to removal of leisure constraints. The lower constraints level, the happier leisure activities would be and brought a higher level of life satisfaction to the elderly people.
Chapter 5

SUMMARY AND CONCLUSIONS

This chapter is divided into 3 main parts. They were (1) Summary of results, (2) Conclusion and (3) Recommendations for further studies.

Summary of results

Most of the elderly people had lots of leisure hours and engaged in leisure activities. The aim of this study was to investigate the leisure constraints of the elderly in Aldrich Bay. The results of this study are concluded as follow:

Background information

1. 46.7% (n=56) of the respondents were male while 53.3% (n=64) were female.
2. Age ranged from 60 to 90, and their age mean was 77.68.
3. For their education level, 82.5% primary educational level
or below \((n = 99)\), 10.8% completed secondary school \((n = 13)\), while only 6.7% university educational level or above \((n = 8)\).

4. 45.75\% \((n=57)\) of the respondents had no chronic diseases while 52.5\% \((n=63)\) had. High blood pressure was the most common disease, 39.5\% \((n=32)\).

5. The proportion of respondents with their economical status were 75 out of 120 \((62.5\%)\) below average, 40 \((33.3\%)\) were average and the rest 5 \((4.2\%)\) were above average.

6. The leisure hours ranged from 0 to 15 each day and the mean of the leisure hours per day was 8.08.

7. In the chosen leisure activities, the three most popular were morning exercise 36.3\% \((n=57)\), Tai Chi 15.27\% \((n=24)\) and gardening 8.28\% \((n=13)\) were reported to do these leisure activities within a month respectively.

8. For their marital status, while 25.8\% participants were single \((n=31)\), 57.5\% were married \((n=69)\); the rest 16.7\% were divorced and widow \((n=20)\).

Leisure Constraints affecting the retired elderly people in participating in leisure activities

1. The most important leisure constraints among the retired elderly people were psychological constraints, followed by interpersonal constraints and personal attitude; while the least important one was the time constraints.

2. There was no difference in the perception of total leisure
constraints between male and female. But, male had more leisure hours than female and female suffered more time constraints then male.

3. Those retired elderly had no chronic disease had higher life satisfaction level then those who had chronic disease.

4. The leisure hours had positive relationship with age. The older people, more leisure time they had. It was consistent to the result of time constraints. The older people had less time constraints. The age was also positive correlated with physiological constraints they perceived.

5. The leisure and life satisfaction had positive relationship with each other among the elderly people. The increase in leisure satisfaction was associated with an increase in the life satisfaction among the retired elderly people.

Conclusion

Based on the findings of the study, the conclusions are viewed as follows:

1. The leisure activities of retired elderly people in Aldrich Bay were based on physical activity. The rate is high for physical, social active activities (morning exercise and tai chi).

2. The total leisure constraint is not related to the gender, health condition and leisure style. But among the leisure constraints, physiological constraint is the most important constraint for the retired elderly people,
especially for those who are older in age among Aldrich Bay.

3. The gender only determined the leisure hours among the retired elderly people, male has more leisure time than female. Gender had no different in leisure constraints, leisure and life satisfaction for retired elderly people.

4. The leisure satisfaction contributes to the life satisfaction of the retired elderly people, the higher leisure satisfaction, the higher life satisfaction the respondents have.

Recommendations for further study

Based on the results of the study, and because better research enhanced the development and implementation of practical solutions (Jack & Scott, 1999), some recommendations are made for the future.

1. Past experiences may have an effect on people’s later behavior. Thus, it will be better if the past experience of the elderly people can be considered to be a factor of leisure constraints in further studies.

2. Choices and items on perceived leisure constraints of this study were limited. It may not able to reflect all factors affecting the retired elderly people of leisure constraints. It is recommended that more detailed questionnaire should be made in further study.

3. Since the elderly people contact most frequently with their families and friends after retirement, but the influence
of families and friends on elderly people leisure participation is not studied deeply in this study. Future studies may investigate the influence of families and peers in perceived leisure constraints, leisure and life satisfaction.

4. The influence of isolation on both the peer group and family among the elderly people can be investigated. This is because isolation may become increasingly important to the elderly adulthood (Edginton, et al., 2002). It may influence the elderly people not to participate or even drop out.

5. According to the respondents’ conversation, community centers seem to be affecting elderly leisure pattern by encouraging the elderly in leisure participation, providing leisure activities and delivering leisure benefits which motivate the elderly people to join in leisure activities. Further study can study the leisure constraint between those who are the members of social organizations and those who are not in order to learn if there is any influences come from these organizations acting on elderly leisure participation.

6. Further study can investigate the difference between those who are very active and passive attitudes towards participating in leisure activities in contribution of leisure participation.

7. Leisure and life satisfaction of the elderly should be studied in more advance as more and more elderly people are
educated. To be more understanding leisure and life satisfaction enable new leisure and life style evoke which help elderly to have better life.

8. Access leisure needs of the elderly can be included in further studies in order to provide more informative and concrete recommendations.

10. The small sample size cannot reflect the entire situation in Aldrich Bay. Therefore, it is desired that a large sample size can be fulfilled in further study.

11. Further study can investigate the difference between those retired elderly people who participate in leisure activities regularly and those were not.

12. It is suggested that qualitative study conducted in further study.
References


people and the soon to be old people, HKSAR.


Appendix A

**Perceived Leisure Constraints of the Elderly People in Aldrich Bay Questionnaire**

Hello! My name is Leung Ho Yin. I am a year 3 student who majoring in Physical Education and Recreation Management in the Hong Kong Baptist University. Recently, I am doing a research project on the "Perceived leisure constraints of retired elderly people in Aldrich Bay".

The aim of my research is to understand the perceived leisure constraints of the elderly people in Aldrich Bay. I hope that through the research project, I can raise the public awareness of the leisure participation of the elderly, to help the government to evaluate and improve the existent policy and situation, and thus let more general public understand the needs of the elderly people. Your participation in this research project will have a great influence on the decision making of the government in foresee future. Thus, if you are a retired elderly people who age 65 or above, hope that you can spend about ten minutes to answer this questionnaire. Your name is not required and all the information will be kept confidential.

If you have any queries, please do not feel hesitate to call me at 92082409.

Yours faithfully,
Erica Leung Ho Yin

*If you wish to know the result of the research project, please fill in the below information. The copy of the research project will be distributed to you about the middle of June, 2008.*

---

Reply Slip

Name: _________________________
Contact no: ___________________
Address: ____________________________________________________________
APPENDIX B

Department of Physical Education Leisure
Hong Kong Baptist University

Questionnaire for Constraints of the Retired Elderly People in Aldrich Bay

This questionnaire is divided into 5 parts. The first part is about the personal information; the second part is about the sport pattern of the Muslim female and the third part is about the sport constraints perceived by Muslim female.

A. Personal Details

1. Gender M ○ F ○

2. Age: ______

3. Education level
   uneducated ○ Primary school ○
   Secondary school ○ University ○
   Above university (Master or doctor) ○

4. Health Condition
   No Chronic diseases ○

   Others (you can choose more than one)
   Rheumatic ○ arthrosis ○ gout ○
   oestoroposis ○
   back pain ○ shoulder arthrosis ○ high blood pressure ○
   heart disease ○
   diabetes ○ pulmonary tbcerculosis ○ cataract ○
   stroke ○
   depression ○ dementia ○ anemia ○
   limbs recurring barrier ○ muscle degeneracy ○ infantile paralysis ○
   others: ________

5. What is your perception of your economical status?
   Extremely worst ○
   Below average ○
6. How much free time do you have each day? ________ hours

7. What will you do in your free time?  
   Please choose the leisure activity (ies) you had participated in the last month below.

   Morning walking ○ tai chi ○ chi gong ○ dancing ○ jogging ○
   Swimming ○ hiking ○ drawing ○ musical instrument ○ singing ○
   Gardening ○ calligraphy ○ reading ○ Cantonese opera (audience) ○

8. Your marriage status is:
   Unmarried ○
   Married ○
   Divorce ○
   Widow ○

B. Barriers to leisure time physical activity

9. The following questions examine the factors that influence you participate in leisure time physical activity. Please indicate the extent to what these factors influence your participating in leisure.

*Please circle the number that best describes your situation, using the following rating scale:*
0 = Extremely unimportant, 1 = Slightly important, 2 = average, 3 = important, 4 = Extremely important

1. Too inconvenient
2. Need to do other things/work in spare time
3. Lack of encouragement from spouse
4. Feeling tired
5. Too busy with housework
6. Lack of time
7. Too stressed
8. Lack of necessary skills
9. Lack of partners

0 1 2 3 4
10. Financial cost
11. Problems of family expenditure
12. Lack of encouragement from family members
13. Lack of equipment/facilities
14. Low motivation
15. Transportation problems
16. Did not know what is available
17. Lack of encouragement from friends
18. Weather
19. Lack of energy
20. Age (e.g. being too old)
21. Lack of interest
22. Health problems
23. Do not think I’ll enjoy the new activities

C. Influence of others on the participants
10. Our participation in leisure activities are sometimes influenced by other people’s encouragement or discouragement. Indicate how the following people or groups influence you on participating in leisure activity.

0 = strongly influence 1 = discourage 2 = neutral/no influence 3 = encourage 4 = strongly encourage

Family 0 1 2 3 4 no family ○
Friends 0 1 2 3 4 no friends ○
Social groups 0 1 2 3 4 no social groups ○
Professional advice (e.g. doctors) 0 1 2 3 4 no Profession Advise ○

D. Leisure Satisfaction and Life Priorities
11. This part asks about your feeling of the importance of leisure and other aspects of life, and how satisfied you are with your leisure activities.

Please rate the extent to which you agree or disagree with each of the following statements.

0 = Strongly disagree 1 = disagree 2 = neutral/neither 3 = agree 4 = strongly agree

1. Leisure activity is enjoyable in my life
2. Leisure activity is unimportant of my life
3. Leisure activity is boring

12. How importance of the following items?
   
   0=strongly important  1=few important  2=fair important  3=important  4=very important
   
   My family
   My health
   My leisure activity

13. After consider other factors, please indicate the extent of your leisure satisfaction.

   Very satisfied    satisfied    uncertain    unsatisfied    very unsatisfied

   0       1      2       3          4

E. Life Satisfaction

14. This part asks about your feeling of the life satisfaction. Please indicate the extent to your life satisfaction.

   Very satisfied    satisfied    uncertain    unsatisfied    very unsatisfied

   0       1      2       3          4

Thank you very much!

-END-

Modified from Questionnaires of Tsai and Coleman, 1999.
APPENDIX C
香港浸會大學
體育學系

愛秩序灣耆英參與閒暇活動的限制之問卷調查

問卷填寫方式
問卷共四頁，包括本頁在內，請順序作答。此問卷分為五部分。第一部分為個人資料；第二部分為耆英參與閒暇活動所遇到的限制；第三部分為耆英參與閒暇活動的所受到其他人士的影響；第四部分為閒暇活動的滿足感；第五部分為生活滿足感。

保密性
你所提供的資料絕對保密。

甲．受訪者資料
1. 性別　男 ○ 女 ○

2. 年齡　_________

3. 學歷
0年 ○ 小學程度 ○
中學程度 ○ 大專 ○
大專以上(碩士或博士) ○

4. 健康狀況
沒有任何長期慢性病 ○
其他症狀: (可選多於一項)
風濕 ○ 關節炎 ○ 痛風症 ○ 骨質疏鬆症 ○
腰酸背痛 ○ 肩周炎 ○ 高血壓 ○ 心臟病 ○
糖尿病 ○ 肺結核 ○ 白內障 ○ 中風 ○
抑鬱症 ○ 老人癡呆症 ○ 貧血 ○ 肢體循環障礙 ○
肌肉退化 ○ 小兒麻痺 ○ 其他 ○ ______________

5. 你覺得你現在的經濟狀況是怎麼樣？
極差 ○
中下 ○
中等 ○
中上 ○
6. 你每日有多少小時的空餘時間？ _____小時

7. 在空閒時間會做什麼？
   請在下列項目中選出你過去一個月內曾參加的活動
   （可選多於一個）
   ● 晨運   ○ 太極   ○ 氣功   ○ 跳舞   ○ 緩步跑   ○ 游泳   ○ 行山   ○
   ● 繪畫   ○ 樂器   ○ 唱歌   ○ 園藝   ○ 寫大字   ○ 閱讀   ○ 大戲欣賞   ○
   其他： ____________

8. 你目前的婚姻情況？
   未婚  ○
   已婚  ○   -> 與什麼人同住？ _____
   離婚  ○
   喪偶  ○
   分居  ○ （因工作關係兩地分居者不在此列）

乙. 受訪者參與閒暇活動所遇到限制

9. 以下一些問題是希望找出有機會影響人們參與閒暇活動的因素，請指出
   以下因素對你做成的影響程度。

   0= 極不重要，1= 輕度重要，2= 中等重要，3= 很重要，4= 極度重要

   地方不便   0 1 2 3 4
   時間用來做其他工作   0 1 2 3 4
   配偶支持不足   0 1 2 3 4
   運動令我感到疲勞   0 1 2 3 4
   家務工作太忙碌   0 1 2 3 4
   缺乏時間   0 1 2 3 4
   活動使我感到壓力   0 1 2 3 4
   技術不足   0 1 2 3 4
   缺乏同伴一起參與   0 1 2 3 4
活動費用太貴: 0 1 2 3 4
家庭經濟支出有問題: 0 1 2 3 4
家人支持不足: 0 1 2 3 4
設備不足: 0 1 2 3 4
缺乏參與動機: 0 1 2 3 4
交通不便: 0 1 2 3 4
不知道有什麼活動可以參與: 0 1 2 3 4
缺乏朋友支持: 0 1 2 3 4
天氣問題: 0 1 2 3 4
體力不足: 0 1 2 3 4
年齡問題: 0 1 2 3 4
欠缺興趣: 0 1 2 3 4
健康問題: 0 1 2 3 4
不喜歡參與新活動: 0 1 2 3 4

丙. 受訪者閒暇活動的所受到其他人士的影響

10. 人們參與閒暇活動會受到他人的鼓勵所影響，現請指出下列人士對你參與閒暇活動的鼓勵程度。

0=極不鼓勵 1=不鼓勵, 2=中立 3=鼓勵 4=極鼓勵

家人: 0 1 2 3 4 沒有家人: ○
朋友: 0 1 2 3 4 没有朋友: ○
社交群(如社區中心): 0 1 2 3 4 沒有社交群: ○
傳媒(如電視報章): 0 1 2 3 4 沒有傳媒資訊: ○
專業建議(如醫生): 0 1 2 3 4 沒有專業建議: ○

丁. 受訪者閒暇活動的滿足感

11. 這部份是有關閒暇活動對你的重要性及滿足感。請問下列各項描述，你
有何等程度的認同？
0=極不同意, 1=不同意, 2=稍為同意, 3=同意, 4=極同意

在我的生活中，閒暇活動充滿樂趣
0 1 2 3 4

閒暇活動在我生活中並不重要
0 1 2 3 4

我的閒暇活動是沉悶的
0 1 2 3 4

12. 請問下列哪項目在你生活裏有多重要？
0=極不重要, 1=輕度重要, 2=中等重要, 3=很重要, 4=極度重要

我的家庭
0 1 2 3 4

我的身體是否健康
0 1 2 3 4

我的閒暇活動
0 1 2 3 4

13. 考慮所有因素後，請指出你對自己閒暇活動的滿意程度。

很滿意  滿意  不肯定  不滿意  很不滿意
0 1 2 3 4

戊. 受訪者的生活滿足感

14. 這部份是有關你的生活滿足感。請指出你對自己整體生活的滿意程度。

很滿意  滿意  不肯定  不滿意  很不滿意
0 1 2 3 4

謝謝！

-完-  問卷參考 (Tsai and Coleman, 1999)