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Final Report

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Executive Summary

1. Abstract

Populations around the world are ageing, with a growing proportion of elderly people and a declining proportion of young and working-age people. An important issue for an ageing society is to improve the quality of life of elderly people, which is closely related to how they are able to allocate time to different activities and associated trip-making. However, there is little relevant extant research which can guide the Hong Kong Government on developing policy in this increasingly important area.

The aim of this project is to improve understanding of the activity-travel patterns and social inclusion of the elderly population of Hong Kong, and of the factors which influence them, with a view to providing policy recommendations to the Government. In the end, we aim to provide a more comprehensive and behaviour-focused policy recommendation regarding the elderly's active ageing.

This project consists of two research components. The first component involves the 2002 and 2013 Hong Kong Thematic Household Survey (THS) on time-use patterns. This research has been conducted under an activity-travel behaviour analysis framework, where travel is a derived demand to pursue activities. A multivariate regression model is adopted to estimate the duration of various activities for elderly people with different socio-economic and demographic profiles. The special attention given to the economic activity status of the elderly helps us examine the effect of labour policy on their daily activities if Hong Kong were to raise the retirement age from 60 to 65 in future. The second component consists of a questionnaire survey and focus group interviews in 18 elderly centres, one from each district in Hong Kong, to gain a deeper understanding of the elderly's perceived transport systems that they use often and their level of social inclusion and well-being. While the first research component provides a regional understanding of how the elderly allocate their time for different paid or unpaid activities, the second research component explicates to what extent a satisfactory transport system and travel convenience is associated with the social inclusion of the elderly and their subjective health status and psychological well-being.

The first research component, from a time-use perspective, suggests that economic activity status is positively associated with the duration of out-of-home activities and travel,

in both cross-sections (2003 and 2013), and also considerable change over time (2002-2013). Findings also underscore the role of gender, age, education, household size and income in determining older people's activity-travel patterns. It also suggests that government policies increasing the share of employed people within the 60 years plus age group, and changes in the general sociodemographic makeup of the group due to various economic/societal forces could alter their time-use and out-of-home activity patterns. This could affect consumption behaviours, travel demand, and traffic flow patterns across geographies and times, and consequently alter the built and natural environments in the region.

The second research component addresses the need for data on the way that satisfaction with transport systems affects the social inclusion of elderly people and how it may affect their well-being. Based on the questionnaire survey that we conducted in 2018 in 18 elderly centres in Hong Kong, a structural equation model (SEM) with latent variables is used to estimate the direct and indirect effects on well-being (through social inclusion) of perception of, and satisfaction with, the most commonly used transport systems. Our results show that their perception of transport systems is important to an older adult's sense of community and satisfaction with their neighbourhood, which implies that there is a strong association between transport systems and the level of social inclusion of older people. Moreover, such perception has both direct and indirect effects on an older adult's physical health and psychological well-being. The findings point to a future direction for transport planning for older people. Urban spaces and community building will need to adapt and become more inclusive for older individuals in order to improve well-being in the older population.

2. Layman Summary on Policy Implications and Recommendations

Facing the expected population ageing phenomenon, active policy engagement remains an essential tool for the long-term betterment of the elderly's living standards. Plenty of policy implications and suggestions for modification are articulated in the report and summarised as follows.

Fundamentally, a review on retirement policy is feasible and anticipated as the extension of retirement age is a statistically arguable plan receiving positive public opinion and an increasing old-age labour force participation rate. Corresponding implications for urban planning and policy are discussed. Addressing the potential growth in out-of-home activities

of the elderly induced by their participation in paid activities, alterations to urban services and transport investment decisions are suggested to cater to the change in demand. Differentiations in needs and expectations between the younger and older generations are especially pinpointed as key challenges to planners. Service coverage are also promoted parallel to the aforementioned implication on service intensity, as a way to facilitate the engagement of the non-working elderly in community activities.

A handful of existing policies are proven to be constructive in enhancing the well-being of the elderly and thus the continuation of various elderly welfare schemes is suggested.

Under the general rise in average income and education level among senior citizens, the government's resource allocation towards elderly facilities genuinely stimulated out-of-home activities for recreation purposes between 2002 and 2013 and other social activities like voluntary work, thereby safeguarding the physical and psychological wellness of the elderly as well as their community inclusiveness. To take one step forward, it is recommended that outreach services should be extended to public housing estates to capture more elderly individuals and encourage the thorough utilisation of elderly social services.

The \$2 Concessionary Fare Scheme that aims to build an inclusive society by improving the mobility of elderly received an outstanding level of satisfaction from interviewees. It is recommended that the scheme should continue running to yield prolonged benefit from greater community participation in the silver group. Reinforcements in the mobility and accessibility of the elderly could be realised by strategies like rewards for return trips, extra travel miles in peak- or non-peak hours, and the credit transfer of travel miles to other household members or community groups. Attempts to magnify the programme's significance by expanding the eligible candidates to citizens aged 55 or above could also be examined by relevant government departments.

Following the comments on current policy schemes, two principles in future policy formulation are proposed, concerning the expansions of scope in terms of policy beneficiaries and content of policy discussion.

First, it is acknowledged that younger elders, for instance citizens in their early sixties, may face similar daily challenges regarding their financial ability and physical and psychological health as the older elderly. Yet, it is observed that (1) a lack of coordination between schemes with different age requirements, and (2) a general omission of younger

elderly (aged 60 to 64) from welfare schemes may result in an uneven exposure to welfare benefits among sub-groups of the elderly. Such discrepancies may arouse concerns over social justice and inequalities that the government ought to be wary of in future policy planning, as well as in a review of existing policy agenda. Concrete counter-action could be the lowering of the age boundary for the \$2 Concessionary Fare Scheme as suggested.

Secondly, the indispensable role of transport in determining elderly well-being should be better recognised in the policy discussion process. Findings from the interviews inform us that senior citizens' health and psychological wellness are positively linked to their satisfaction in transport systems. The currently neglected factors of transport facilities and elderly mobility are recommended to be introduced to the policy discussion in response to an ageing society, together with investigations on social security systems, long-term elderly care and other retirement protection measures. Such measures could also alleviate the situation that few policy schemes explicitly devote resources to the travel and activity patterns of older people, despite the close linkage to their well-being and quality of life.

Apart from the policymaking level, the complementation of transport facilities and devices is crucial to creating a sound urban environment with safe and comfortable transport systems on a daily basis, especially considering senior citizens with mobility restrictions.

Following the vision of Street for All, wider pedestrian roads with green elements and street seating could enhance walkability. Replacing brick paving with alternative pavers like stamped concrete prevents injuries caused by protruding bricks and makes city streets more wheelchair and elderly-friendly. Addressing complaints from interviewees concerning the discouraged usage of footbridges and particular MTR exits, escalators going both ways should be installed to allow users from different directions to enjoy road crossing facilities and access MTR services. Construction of lifts of adequate size is another key suggestion to enhance the elderly's travel experiences.

The safety and satisfaction of older citizens when using public transport services are also areas of great concern. Installing seats, improving coverage and activating the Real-time Bus Service Information Display Panel in more bus stations is highly desired by the elderly since they often travel during off-peak hours in which scheduled bus services are less frequent. As for the MTR, it is suggested that publicity targeting the elderly about the newly commissioned lines could promote knowledge and confidence in using the new MTR stations, and further encourage elder community engagement.

A fair share of controversies lies on the usage of road crossing assistance devices. Most interviewees expressed reservation on the practical effectiveness of the Green Light Extension Scheme for the elderly and disabled. Considering the fact that extra time is needed for citizens to tap the device with their Octopus cards, it is suggested that the government should lengthen the green light extension duration for elderly and disabled road users. Additionally, the misclassification of Electronic Audible Traffic Signals (eATS) Pushbutton-cum-Tactile Units and eATS Tactile Units is commonly reflected. The eATS Tactile Unit for visually and hearing-impaired pedestrians with no effect on traffic lights is often misused by the elderly and thus a new design and education programme are proposed to help citizens distinguish the two types of device.

執行摘要

1. 摘要

世界各地的人口正在老齡化，老年人比例越來越高，年輕人和工作年齡人口比例下降。老齡化社會面臨的一個重要問題是提高老年人的生活質素，其中，能夠反映老年人生活質素的重要指標是老年人怎樣分配時間去參加活動及其出行行為。以上研究問題在社會老齡化的領域越來越得到重視。相關研究能引導香港政府在這個日益重要的領域制定政策，惟現有的相關研究較少。

本研究旨在加強對於老年人活動、社會包容及出行行為及其影響因素的理解，並為政府提供政策建議。最後，我們的目標是提供有關老年人積極老齡化的全面且具體的政策建議。

本項目由兩部分組成。第一部分涉及 2002 年和 2013 年香港主題性住戶統計調查（THS）的時間使用模式。本研究將了解活動交通出行行為分析框架，其中交通出行作為追求活動的衍生需求。關於運用時間模式（包括時間分配及參與各類活動的情況）的主題性用戶統計調查多元回歸模型將被用作分析老年人外出活動和社會人口屬性的關係。本專案將著重考慮老年人口的經濟活動狀況，從而檢視香港擬實施的延遲退休年齡的政策可能對出行行為產生的影響。第二部分包括在十八區的焦點小組訪談和問卷調查。問卷結果由香港每區各一個老人中心收集所得，以深入瞭解影響老年人交通出行和社會活動的限制和心理健康的因素，及如何減少社會對於在職或非在職老年人的排斥，從而提供相關政策建議。第一個研究部分提供了對老年人如何為不同的有薪或無薪活動分配時間的區域性理解，第二個研究部分闡明了滿意的交通系統和出行便利與社會排斥老年人及其主觀健康狀況和心理健康有何關聯。

第一個研究部分，從時間使用的角度來看，建議經濟活動狀況與戶外活動和出行的時間長度在兩個橫斷面（2003 年和 2013 年）中呈正相關關係，以及會隨時間而改變（2002 年至 2013 年）。調查結果還強調了性別、年齡、教育、家庭規模和收入在確定老年人活動和出行模式方面的作用。調查結果還表明，政府政策增加 60 歲以上就業人口的比例，以及由於各種經濟/社會力量而導致的一般社會人口構成的變化，可能會改變他們的時間使用和戶外活動模式。這可能會影響不同地理位置和時間的消費行為，出行需求和交通流量模式，從而改變該地區的建築和自然環境。第二個研究部分發表了對運輸系統的滿意度如何影響老年人的社會融合以及如何影響他們的福祉和心理健康的數據需求。根據我們於 2018 年在香港 18 個老人中心進行的問卷調查，使用結構方程模型（SEM）

來估計感知和運輸系統滿意度及健康的直接和間接影響（通過社會包容）。我們的研究結果表明，交通系統的感知對於老年人的社區意識和對社區的滿意度很重要，這意味著交通系統與老年人的社會包容水平之間存在著強烈的聯繫。此外，這種感知對老年人的身體健康和心理健康有著直接和間接的影響。調查結果指出了老年人未來的交通規劃方向。城市空間和社區建設需要適應老年人的包容性，以改善老年人的福祉及健康。

2. 對政策的影響和建議

面對人口老化問題，積極的政策介入對提升長者長遠的生活素質尤為重要。本研究就此提出多項政策影響及建議，現綜合如下。

有鑑日趨上升的老齡勞動人口參與率及整體正面的共眾意見，延後退休年齡實為可行之策。為應對預期的退休政策改變，本研究分析了該政策對城市規劃的相關影響。隨著更多的長者投身勞工市場，預期長者因工作需要的離家活動俱增。故需對現時的社會服務及交通投資決定作一定的調整，以處理交通需求量的上升。在此，長者與較年輕市民對交通服務的需求及期望上的差異有機會成為重新規劃中的難處。除了上述服務強度上的考量，交通服務的覆蓋率亦需要提升，以促進非就業長者參與各類型的社會活動。

數項現有政策對提升長者福祉具正面影響，故建議繼續推行有關措施，詳述如下：

根據 2002 年及 2013 年的數據，在社會整體老年人的平均收入及學歷上升下，政府投放在長者設施的資源有效驅使長者參與離家康樂活動及其他社會活動如義工服務。長者多投入上述活動能提升其生理及心理健康，並有助長者更加融入社區。有見及此，本研究提倡普及長者外展服務至公共屋邨，以接觸多長者及提升長者社會服務的使用度。

受訪者對「兩蚊」公共交通票價優惠計劃甚為讚賞，故提議持續推行計劃以長期地鼓勵長者參與社區活動。計劃可藉着回程獎賞、額外里數及里數積分轉換等優惠進一步提升長者流動力及可達度。相關政府部門亦可檢視推廣計劃年齡下限至 55 歲的可行性，以擴展計劃成效。

在現行政策上，本研究分別就拓展受惠群眾及政策討論內容對未來政策的制定提出兩項建議。

首先，較年輕的長者（60 至 64 歲）很大程度上與 65 歲以上的長者面對相類似的生活困難，如財政能力和心理、生理健康等問題。惟按本研究所得，社會上的長者福利計劃大多忽略 60 至 64 歲人士，且各計劃的年齡範圍相異，缺乏有效協調。此情況可能

導致不同年齡小組的長者獲取不均等福利，繼而引發社會平等相關議題，故於制定政策及重新檢視現行政策時需着手應對有關情況。

其次，交通服務對長者福祉不可或缺的影響需在政策研究過程中更受重視。研究結果指出，長者的身體和精神健康與其對交通服務的滿意度成正比。故本研究建議，在討論人口老化的應對措施時，除了包括現有的社會保障制度、長者護理及其他退休保障的討論外，可引入交通運輸範疇的因素。此舉亦有助制定更多出行方面的長者福利。

除政策制定層面外，交通設施的互補作用對創造良好城市環境亦為關鍵。對行動不便的長者而言，一個安全且舒適的交通網絡對他們的日常福祉甚有裨益。

更寬闊、更綠化及備有路邊座椅的街道能夠提升社區的可步行性，以混凝土物料取代砌磚地面更能避免長者被磚塊絆倒的意外。為減少長者及輪椅使用者因扶手電梯及升降機不足而無法使用行人天橋或地鐵的情況，加快安裝雙向扶手電梯及較寬敞的升降機為推廣長者及輪椅友善社會的重要一環。

長者使用公共交通的安全及滿意度亦是研究關注的重點。由於長者通常於非煩忙時段出行，候車時間相對較長，故巴士公司應盡快普及站內實時服務資訊板，並於各站安裝座椅及有蓋車站。而地鐵公司則應考慮加強新路線的推廣活動，讓長者能更清楚其出行選擇，以持續提升長者的社區參與度。

最後，就日常使用過路設施方面，不少受訪者認為延長綠燈計劃成效不彰。由於長者需以八達通觸及電子控制盒，若燈號延長時間過短，不足以彌補拍卡需時，長者實則難以受惠。故建議進一步增加延時以確保計劃能帶來實際幫助。此外，由於外型相近，交通燈柱上的視障人士震動組件常被誤認作燈號電子控制盒。有關部門可考慮重新設計裝置的外觀及透過推廣活動加強市民對過路裝置的認識。

Chapter 1 Introduction

1.1 Background

The ageing problem has been drawing increasing attention in Hong Kong and has brought challenges to policymakers. That Hong Kong's population is ageing highlights the need for the government to implement a series of policies and strategies to tackle the situation (Chui, 2008), especially on how to improve elderly people's ability to undertake various out-of-home activities, since these are closely related to elderly's well-being and quality of life (Spinney et al., 2009; Schwanen and Wang, 2014).

Although increasing attention is given to the improvement of elderly people's out-of-home activity engagement, little research in Asia has been documented (Cerin et al., 2013). Since the contexts of the areas where most existing research are considerably different from Hong Kong (Rosenbloom, 2001), it might be difficult for local decision makers to design effective policies to meet the mobility and activity needs of the elderly population with such a paucity of evidence. This project aims to fill this gap by providing careful analysis of the daily activity-travel patterns of the elderly and the implications for social inclusion of senior citizens in Hong Kong.

Since the Hong Kong government is considering revising the retirement age from 60 to 65 in response to the shrinking workforce and ageing problem, this research aims quantify the impact of employment status on elderly mobility when controlling the influence of other factors. At the same time, the study has examined the social effects of activity-travel patterns on the well-being of elderly people who are either remaining active or are inactive in the labour market. One of the project goals is to investigate in what ways the out-of-home activities patterns of the elderly could be determined by their work status and family roles. Such findings can enrich our understanding on the meanings of work, family and community to senior members in Hong Kong society from the perspective of the elderly. In turn, this study will be able to make policy suggestions to existing urban planning, transportation networks, labour development, and social security that are most relevant to elderly people who occupy differing roles in the labour force and family structure. The findings of this research are expected to provide policy recommendations for the Hong Kong Government to

manifest positive ageing through improvements in transport mobility and the quality of life of elderly people with reference to diversified needs.

Thus far, the government has launched a series of policies aiming to promote positive ageing in society, some key ones of which are summarised in **Table 1.1**. Few policy schemes (except for the '\$2 Public Transport Fare Concession Scheme') have explicitly paid attention to the travel and activity patterns of older people, despite their close link to well-being and quality of life. This weakness is further compounded by the lack of coordination between different policies that is mainly reflected by their varied target groups (e.g., aged 65 versus 70). In addition, those aged between 60 and 64 are frequently omitted from these schemes, although many of this age group may face similar challenges (e.g., retirement, declining health and economic conditions) as the older elderly (e.g., those aged 65 or above). Age gaps in the above schemes are likely to create (or aggravate) discrepancies in socio-economic status among elders. This, in turn, may result in certain sub-groups of the elderly experiencing more constraints on their activity engagement and ultimately, in the deterioration of their well-being and quality of life. Given this, there remains substantial room to improve the existing policy agenda to be more coordinated and behaviour-focused to ensure sufficient social welfare and care across different sub-groups of the elderly in Hong Kong. Accordingly, ascertaining the elderly's current activity (particularly out-of-home activity) patterns in association with their socio-economic status and well-being under the impacts of existing policies deserves an in-depth study.

Table 1.1: Elderly policy schemes

Year	Policy	Specifics	Implication
1973	Old Age Allowance	Providing a monthly allowance to those aged 70 or above.	Improving elders' economic status.
1998	Elderly Person Priority Scheme/Single Elderly Person Priority Scheme	Giving priority to public renting housing applications from households whose members are aged 58 or above.	Meeting elders' accommodation needs.
2013	\$2 Public Transport Fare Concession Scheme	Allowing those aged 65 or above to travel on public transport at a concessionary fare of HK\$ 2 per trip.	Improving elders' mobility.
2013	Old Age Living Allowance	Providing a monthly allowance to those aged between 65 and 69 and with a monthly income or total asset value under a prescribed limit (e.g., HK\$ 7580 per month for a single household).	Improving elders' economic status.
2015	Elderly Health Care Voucher Scheme	Providing an annual voucher at an amount of HK\$ 2000 to those aged 70 or above for health care service.	Improving elders' health status.
2015	Extension of the Service of Civil Servants	Raising the retirement age of civil servants to 65 (possibly extended to all elderly workers in the near future).	Compensating for decreasing labour force, encouraging economic activity among elderly.

1.2 Research Objectives

There are four objectives in this study, with the last objective as our main goal. The objectives are listed below, all of them have been achieved.

1. To reveal factors affecting out-of-home activities and time use among elderly
2. To examine the differences in activity-travel patterns between working elderly and retired elderly
3. To study the impact of activity engagement on social integration and well-being of the elderly
4. To provide policy recommendations to government units (e.g., Elderly Commission, Transport and Housing Bureau, Labour Department, Planning Department, and

Commission on Poverty) on improving the transport mobility and social inclusion of elderly people with reference to diversified needs of elderly population in Hong Kong.

1.3 Research Components

The research can be divided into two main components to achieve the four aforementioned objectives.

The first research component focuses on the difference in activity-travel patterns between working and retired elderly. We conducted descriptive analysis of the 2002 and 2013 THS time-use surveys to understand the activities of elderly people in Hong Kong. We also study the effect of economic status on the out-of-home activity behaviour of the elderly. The original design of the secondary source dataset did not seek to investigate community relations or strength of association. It provides rich description of travel behaviour only. This research component hopefully establishes a more objective measure of the mobility patterns of older people in Hong Kong and lays the foundation for our second research component, which has a relatively small sample size but covers more subjective and contemporary issues.

The second research component includes questionnaire surveys and focus-group interviews with the elderly across the 18 districts of Hong Kong on their perceptions towards the level of service (LOS) of transport systems and the impact of such LOS on their level of social inclusion and well-being. We also probe the spatial variation on this issue across different parts of Hong Kong by summarising 18 descriptive district profiles based on our site visits.

Based on these two research components, policy recommendations on improving transport mobility and social inclusion of elderly people are presented with reference to the diversified needs of the elderly population in Hong Kong.

1.4 Research Methods

Both quantitative and qualitative methods have been adopted in this study. While details related to the methodology are described in the following chapters, a brief description is first given in this section.

In the first research component, we aim to understand the activity-travel patterns of older people from a time-use perspective, using two relatively large sample datasets – the Hong Kong Thematic Household Survey (THS) in Time Use for 2002 and 2013. The data were collected by the Census and Statistics Department from September to December 2013 regarding information on the residents' participation in various activities and the respective allocation of time. Individuals aged 15 or above from 10,100 households completed a two-day (including one weekday and one weekend) activity diary that recorded all information on their time use: 1) time spent on different activities from 3:00am each day to 3:00am of the following day; 2) the nature of the activities; and 3) the companionship (alone or joint) nature of the activity. Some selected individuals were asked about their satisfaction with their own time use. Due to data constraints, the Census and Statistics Department cannot release the spatial information at any aggregate level. Linear regression models were built to examine the factors affecting different types of out-of-home activities, with special consideration to the economic status (i.e., employed or not) of individual older adults.

In the second research component, we aim to understand how older adults in each of the 18 districts perceive the transport systems that they use most frequently and whether there is any association between such perceptions and the degree of social inclusion and well-being. We conducted questionnaire surveys in 18 elderly centres across the 18 districts of Hong Kong. In each centre, we collected about 15 questionnaires; among these, 5 individuals were invited for an additional semi-structured in-depth interview. Convenience sampling was adopted to recruit the elderly respondents through the social workers affiliated with the centres. The majority of them could read and write, with a small number needing assistance from student helpers in reading the scripts and writing answers for them. The whole period of site visits spanned several months in the first two quarters of 2018. Data collected from the questionnaires was cleaned and analysed using confirmatory factor analysis (CFA) and simultaneous equation models (SEM), while the data collected from the group interviews was transcribed and then summarised into district profiles.

1.5 Structure of the Report

The structure of the report is comprised of four chapters and three appendices. **Chapter 2** covers the first research component described above. **Chapters 3** and **4** cover the second research component; **Chapter 3** is a qualitative/descriptive account of the results of the site visits to elderly centres, covering 18 district profiles; **Chapter 4** is a quantitative analysis of the site visits. **Chapter 5** provides policy implications based on **Chapters 2-4**. The appendices consist of **Appendices I - III**. **Appendix I** presents the questionnaire survey; **Appendix II** presents the semi-structured questions for the in-depth interviews; **Appendix III** presents the deliverables for public dissemination.

Chapter 2 Out-of-home Activity Participation and Time-use

2.1 Introduction

Proportion of world's population aged 60 and above is estimated to increase dramatically from 12% to 22% over the 2015-2050 period, according to World Health Organization (2015). The number of older people (i.e., aged 60 and above) is expected to exceed two billion by 2050, with low- and middle-income countries housing about 80% of the world's elderly population. This demographic transition could affect demand for urban services including healthcare, housing and transportation.

The psychological, physiological, and occupational changes associated with ageing alter the type, number and geographic location of daily activities, the time spent on those activities, and the travel mode choice and pattern of the older people relative to younger cohorts (Buysse et al., 1992; Gauthier and Smeeding, 2001; Krantz-Kent and Stewart, 2007; Sayer, Freedman and Bianchi, 2016). Analysis of the unique activity and travel pattern of older people is necessary to develop an old-age friendly urban environment as well as transportation system that can improve their mobility and accessibility. Studying time-use and activity-travel patterns of elderly is therefore important for planning inclusive cities.

Population ageing in Hong Kong is aligned with global trend. Recent projection shows that people aged 65 and above will constitute about 30% of Hong Kong's population in 2034 (Census and Statistics Department, 2015). Planners should take note of this prediction, not only due to the growing share of elderly population, but also the changing socio-economic characteristics within this group. In fact, government data has witnessed that the labour force participation rate for the 65 plus age group has increased from 5.5% in 2005 to 9.4% in 2015 (Legislative Council Secretariat, 2016). Studies suggest a continuous increase in working life in the future. The Steering Committee on Population Policy proposed that the Hong Kong Government should consider a higher retirement age policy as a means to increase Hong Kong's economic productivity and competitiveness (Steering Committee, 2012).

In this study, we conduct a comparative exploration of the time spent on various daily activities, specifically out-of-home activities including travel, among the elderly population (aged 60 and above) in Hong Kong for the years 2002 and 2013. We also analyse the determinants of time allocation across activities. Our principal hypothesis is that employment

status has a significant impact on daily time spent on out-of-home activities among older persons. Testing the hypothesis is important given that older people are expected to have higher tendency in joining or remaining in the workforce. We also examine whether the average time spent on out-of-home activities, among Hong Kong's elderly population, has changed over time, specifically between 2002 and 2013. A change seems plausible given our hypothesis, since the share of older adults in the workforce has increased over the period.

2.2 Methodology

Data and Sample

Data from the Hong Kong Thematic Household Survey (THS), conducted by the Census and Statistics Department from December 2001 to February 2002 and from September to December 2013, contains information on respondents' participation in various activities and allocation of time over a designated 48-hour period. In 2002, 6,100 households were interviewed whereas in 2013, 10,100 households were interviewed. In both survey years, individuals aged 15 and above were interviewed of: 1) time spent in different activities from 3:00 am each day to 3:00 am of the following day, 2) nature/type of the activities, and 3) companionship (i.e., performed alone or jointly) for the activity. In the 2002 THS, respondents reported their time-use either for weekday or weekend; in the 2013 THS, respondents reported time-use for a weekday and a weekend day. Since this research focuses on the group of older people aged 60 and above, respondents aged 59 and under are excluded from analysis. For 2002, there are 1,519 and 1,579 respondents in the weekday and weekend datasets respectively. For 2013, there are 2,958 respondents in total.

Activity Classification

Activities were classified into: 1) basic necessities (including sleeping), 2) paid work, 3) education and training, 4) unpaid activities, 5) free-time/leisure activities, 6) travel, and 7) activities outside Hong Kong in THS. Since our research focuses on out-of-home activities, the activities are reclassified into five main categories (see **Table 2.1**). Out-of-home activities are defined as activities conducted outside a person's home and involving personal travel. We retrieve relevant information from the question in the survey: "Where is the activity carried

out?” A breakdown of these categories, and the average daily time spent in different types of out-of-home activities by people aged 60 years and above during weekdays and weekends for 2002 and 2013 are summarized in **Table 2.1**.

Table 2.1: Classification and average daily duration (min) of out-of-home activities in 2002 and 2013

Type of activities	2002		2013	
	Weekday	Weekend	Weekday	Weekend
Paid activities	51.0	30.0	70.2	41.4
Unpaid activities	52.2	49.8	30.0	26.4
Purchasing goods and services for oneself or household members	40.8	43.8	27.6	25.2
Unpaid work performed for persons outside the household (including voluntary work performed for voluntary/ welfare organisations/ non-profits-making organisations)	11.4	6.0	2.4	1.2
Free-time / leisure activities	109.8	127.2	108	140.4
Religious, cultural and civic participation	2.4	5.4	1.2	4.8
Social entertainment	43.8	58.8	48.6	78.6
Sports and hobbies	63.6	63.6	58.2	57.0
Travel^δ	-	-	29.4	31.8
Total	213.0	207.0	237.6	240.0

δ: Travel was not a separate category in 2002.

Due to the difference in activity classification scheme in the two reports, travel time, as an individual attribute, could not be compared as the travelling was recorded implicitly in other out-of-home activities in 2002. Therefore, we can only compare total time spent on out-of-home activities, but not the durations of particular activity categories in 2002 and 2013. Considering the marginal role of education and training activities within the older population - only 10 and 3 people participated in such activities in 2002 and 2013 respectively, the education and training activities category is excluded from discussion. In general, average duration of paid activities increased significantly from 2002 to 2013, which could be contributed by various reasons, e.g., percentage of economically active older people was about 18% in 2013 compared to about 14% in 2002. Moreover, for the 60-64 age group, the percentage of older people who reported time use for paid activities was 22% for weekday and 9% for weekend in 2002; while the percentages increased to 31% for weekday and 19% for weekend in 2013. Indeed, a higher proportion of senior citizens were participating in the workforce in 2013 than 2002.

Models

For a given year (2002 and 2013), daily time spent in different categories of out-of-home activities (refer to **Table 2.1**) are separately modelled as functions of various determinants of time allocation. Weekdays and weekends are treated separately. A pooled model (2012 and 2013, and weekdays and weekends combined) is estimated to analyse change in total daily out-of-home activity time.

In this research, we are interested in examining the effect of economic activity status and age on time spent in out-of-home activities by older people in Hong Kong. Economic activity was defined in the surveys as: 1) economically active, 2) economically inactive, 3) students, 4) homemakers, 5) retired, and 6) others. The categories are further simplified into economically active (1) and economically inactive (2-6) in this study. Age was divided into 60-64 and 65 or above in the 2002 THS, while that was categorised in the 2013 THS as: 60-64, 65-69, 70-74, 75-79, and 80 and above. Other independent variables are those related to personal and household characteristics in the THS. Since most of the independent variables have been categorical, they are converted into dummies for regression analysis.

The regression models for cross-sectional analysis (2002 and 2013; weekdays and weekends separately) are expressed in:

$$Y_i = \alpha + \beta_1 E_i + \beta_2 P_i + \beta_3 H_i + \varepsilon_i \quad \text{Eq. (1)}$$

In the pooled regression model (2002 and 2013, and weekdays and weekends combined) for longitudinal analysis, two dummy variables are added to control the difference in time-use pattern between 2002 and 2013, and for weekdays vs. weekends. The pooled model is of the form:

$$Y_i = \alpha + \beta_1 E_i + \beta_2 P_i + \beta_3 H_i + \beta_4 T + \beta_5 W + \varepsilon_i \quad \text{Eq. (2)}$$

Where: Y is duration of out-of-home activity in a day; E is the economic activity status of individual i ; P is a vector of personal attributes of person i ; H is a vector of household attributes of person i ; T and W are year and day-of-week (weekday or weekend) dummies, respectively. ε is the idiosyncratic error term.

We use ordinary least squares (OLS) regression approach for estimating the above models. Descriptions of the dependent and independent variables are included in **Table 2.2**.

Table 2.2: Description of variables

Notation	Variable group	Description
<i>Y</i>	Duration of out-of-home activity	The categories of activities include: all activities, paid activities; unpaid activities; leisure activities; and (for 2013 THS) travel
<i>E</i>	Economic activity status	Economically active or inactive
<i>P</i>	Personal attributes	Age, gender, marital status, type of housing, tenure of accommodation, and educational attainment
<i>H</i>	Household attributes	Household size and income
<i>T</i>	Dummy variable for year	2002 or 2013
<i>W</i>	Dummy variable for week of day	Weekend or weekday

2.3 Descriptive Statistics

Demographic Characteristics

Demographic characteristics of the respondents for 2002 and 2013 are presented in **Table 2.3**. The year 2002 consisted of two sets of individuals – those who provided weekday data (N=1,519), and those who provided weekend data (N=1,579). Characteristics of weekday and weekend respondents were comparable: about 45% was male; 23% was in the age group of 60-64; 67% was married; 77% had primary level education or less, whereas 5% was with post-secondary or higher education, and; 87% was economically inactive. For 2013, 48% of respondents was male, 30% was in the 60-64 age group, and 82% was economically inactive. The proportion of older people with educational level higher than primary was greater in 2013 comparing to 2002. The proportion of economically active individuals was higher in 2013.

Table 2.3: Descriptive statistics of demographic variables

Variable	2002		2013
	Weekday (N=1,519)	Weekend (N=1,579)	Weekday & Weekend (N=2,958)
Age			
60-64	22.6%	22.2%	30.1%
65+	77.4%	77.8%	69.9%
Gender			
Male	45.2%	44.8%	48.0%
Female	54.8%	55.2%	52.0%
Educational attainment			
No schooling/ kindergarten/ primary	77.4%	77.1%	53.9%
Secondary/ Matriculation	18.2%	18.0%	38.2%
Tertiary	4.5%	4.9%	7.9%
Marital status			
Never married	4.1%	4.2%	5.8%
Married	67.0%	67.2%	60.5%
Separated/divorced/widowed	29.0%	28.6%	33.7%
Economic activity status			
Active	13.5%	13.7%	18.1%
Inactive	86.5%	86.3%	81.9%

Note: Mean refers to the proportion of successes (or observations assigned value 1) for dummy variables; weekdays and weekends are combined.

Out-of-home Activity Patterns by Age Group

Table 2.4 shows that in 2002, the average time spent per day in all out-of-home activities by people aged 60-64 years were 4.35 hours and 3.97 hours for weekdays and weekends respectively. For people aged 65 years or more, 3.32 hours and 3.30 hours were recorded for weekdays and weekends respectively. For both weekdays and weekends, time spent in paid activities by people in the age group 60-64 years was higher than that of the age group 65 years and above. The duration of leisure activities was found to be relatively lower for people aged 60-64 years. Total time spent in out-of-home activities by persons in the two age groups was greater in 2013 comparing to 2002 for both weekdays and weekends.

Table 2.4: Classification and daily time spent (min) in out-of-home activities in 2002 and 2013 by age cohort

Type of activities	2002				2013			
	Weekday		Weekend		Weekday		Weekend	
	60-64	65+	60-64	65+	60-64	65+	60-64	65+
Paid activities	127.2	28.8	72.0	18.0	158.4	32.4	91.8	19.8
Unpaid activities	55.2	51.6	58.2	47.4	27.0	31.2	25.8	26.4
Leisure activities	78.6	118.8	108.0	132.6	86.4	117.0	139.8	143.4
Travel ^δ	-	-	-	-	45.0	22.8	45.0	26.4
Total	261.0	199.2	238.2	198.0	316.8	203.4	302.4	216.0

δ: Travel was not categorized as a separate activity in 2002.

Out-of-home Activity Duration by Economic Activity Status

Table 2.5 presents daily time spent in out-of-home activities in 2002 and 2013 by economic activity status. In 2002, economically inactive elderly persons had shorter daily out-of-home activity duration, on average, for both weekdays and weekends, comparing to their working counterparts. The duration of paid activities by the working elderly contributed to over 80% of the out-of-home activity duration for weekdays; for weekends, it contributed to about 62% of the out-of-home activity duration. Time spent in unpaid activities by the economically active elderly was longer on weekends than weekdays. Working persons spent less time in leisure activities than the non-working, on both weekdays and weekends.

In 2013, the economically active elderly spent more time in daily out-of-home activities than the non-working elderly on both weekdays and weekends. The duration of unpaid activities and leisure activities was greater for the economically inactive elderly. Time spent in leisure activities was longer on weekends than weekdays regardless of economic activity status. Economically active persons spent more time travelling than those economically inactive on both weekdays and weekends.

Table 2.5: Classification and daily time spent (min) in out-of-home activities in 2002 and 2013 by economic activity status

Type of activities	2002				2013			
	Weekday		Weekend		Weekday		Weekend	
	Active	Inactive	Active	Inactive	Active	Inactive	Active	Inactive
Paid activities	376.8	0.0	217.2	0.0	385.8	0.6	228.0	0.6
Unpaid activities	22.8	57.0	38.4	51.6	12.6	25.8	14.4	28.8
Leisure activities	55.2	118.2	96.6	132.0	49.8	120.6	110.4	147.0
Travel ^δ	-	-	-	-	75.0	19.2	59.4	25.8
Total	454.8	175.2	352.2	183.6	523.2	166.2	412.2	202.2

δ: Travel was not categorized as a separate activity in 2002.

2.4 Regression Results

We estimate year- and day-of-week-wise OLS regression models of the time spent on various out-of-home activities by the elderly based on Equation 1. Standardized coefficients (Std. Coef.) are reported, representing the number of standard deviation changes in the dependent variables in response to unit standard deviation changes in the independent variables. The weekdays and weekends results in the two years are presented in **Tables 2.6 to 2.9**.

Table 2.6: OLS regression results – Duration (hours) of out-of-home activities in 2002 (Weekday).

Variables	Total out-of-home activities		Paid activities		Unpaid activities		Leisure activities	
	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value
Gender (Ref. = Male)								
Female	-0.079***	0.001	-0.058***	0.001	0.129***	0.000	-0.145***	0.000
Age group (Ref. = 60-64)								
65+	0.039	0.155	0.006	0.769	-0.026	0.406	0.077**	0.013
Marital status (Ref. = Married)								
Never married	-0.060***	0.009	-0.039**	0.024	0.004	0.868	-0.043*	0.100
Separated/ divorced/ widowed	-0.015	0.542	-0.005	0.764	-0.032	0.251	0.005	0.869
Educational attainment (Ref. = Primary or below)								
Secondary	0.039***	0.009	0.021	0.236	0.047*	0.087	-0.014	0.596
Post-secondary or above	-0.003	0.913	0.160	0.361	-0.011	0.667	-0.017	0.517
Economic activity status (Ref. = Inactive)								
Active	0.522***	0.000	0.751***	0.000	-0.116***	0.003	-0.131***	0.001
Type of housing (Ref. = Private housing)								
Public rental housing	0.032	0.397	0.006	0.829	0.049	0.261	-0.011	0.796
Subsidised home ownership housing	-0.015	0.543	0.004	0.825	0.005	0.862	-0.050*	0.077
Tenure of accommodation (Ref. = Owner-occupied)								
Tenant	-0.018	0.620	-0.020	0.447	0.009	0.826	0.004	0.928
Others	-0.016	0.473	0.023	0.172	-0.011	0.680	-0.048*	0.057
Household size	-0.104***	0.001	-0.084***	0.000	-0.033	0.370	-0.024	0.497
Monthly household income (Ref. = Less than \$8000)								
\$8000 or above	0.093***	0.003	0.103***	0.000	0.103***	0.004	-0.075**	0.031
Interaction term								
Active x Aged65+	-0.051	0.111	-0.019	0.433	0.002	0.951	-0.059	0.107
Model summary								
N	1519		1519		1519		1519	
<i>R</i> ²	0.273		0.598		0.044		0.074	

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 2.7: OLS regression results – Duration (hours) of out-of-home activities in 2002 (Weekend).

Variables	Total out-of-home activities		Paid activities		Unpaid activities		Leisure activities	
	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value	Std. Coef.	<i>p</i> value
Gender (Ref. = Male)								
Female	-0.035	0.174	-0.052**	0.019	0.095***	0.000	-0.053**	0.049
Age group (Ref. = 60-64)								
65+	0.030	0.320	-0.004	0.885	-0.049	0.114	0.072**	0.022
Marital status (Ref. = Married)								
Never married	-0.045*	0.069	-0.024	0.261	0.001	0.958	-0.036	0.163
Separated/ divorced/ widowed	-0.060**	0.024	0.010	0.647	-0.010	0.722	-0.081***	0.003
Educational attainment (Ref. = Primary or below)								
Secondary	0.034	0.192	0.011	0.623	0.025	0.349	0.018	0.508
Post-secondary or above	-0.033	0.194	-0.044**	0.046	0.013	0.634	-0.009	0.743
Economic activity status (Ref. = Inactive)								
Active	0.328***	0.000	0.539***	0.000	-0.072*	0.064	-0.044	0.256
Type of housing (Ref. = Private housing)								
Public rental housing	-0.003	0.946	0.002	0.946	-0.001	0.978	-0.005	0.902
Subsidised home ownership housing	-0.036	0.185	0.024	0.297	-0.008	0.769	-0.065**	0.023
Tenure of accommodation (Ref. = Owner-occupied)								
Tenant	-0.012	0.761	-0.012	0.712	0.037	0.355	-0.026	0.520
Others	-0.012	0.624	0.034	0.103	-0.015	0.558	-0.039	0.126
Household size	-0.056	0.105	-0.016	0.596	-0.011	0.761	-0.051	0.160
Monthly household income (Ref. = Less than \$8000)								
\$8000 or above	0.052	0.120	0.025	0.387	0.103***	0.003	-0.019	0.594
Interaction term								
Active x Aged65+	-0.014	0.680	0.041	0.172	0.005	0.886	-0.061*	0.096
Model summary								
N	1579		1579		1579		1579	
R^2	0.119		0.341		0.027		0.031	

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 2.8: OLS regression results – Duration (hours) of out-of-home activities in 2013 (Weekday)

Variables	Total out-of-home activities		Paid activities		Unpaid activities		Leisure activities		Travel	
	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value
Gender (Ref. = Male)										
Female	-0.067***	0.000	-0.029**	0.014	0.176***	0.000	-0.130***	0.000	-0.005	0.791
Age group (Ref. = 60-64)										
65-69	0.008	0.679	0.005	0.713	0.007	0.761	-0.009	0.728	0.023	0.305
70-74	-0.005	0.767	0.004	0.765	-0.025	0.267	0.006	0.809	-0.028	0.188
75-79	0.009	0.602	0.008	0.522	-0.001	0.963	0.018	0.415	-0.036*	0.082
80+	-0.026	0.183	0.017	0.25	-0.084***	0.001	-0.022	0.375	-0.040*	0.08
Marital status (Ref. = Married)										
Never married	0.011	0.466	-0.007	0.506	-0.024	0.231	0.044**	0.022	-0.013	0.464
Separated/ divorced/ widowed	0.004	0.827	-0.011	0.384	-0.029	0.176	0.045**	0.038	-0.03	0.133
Educational attainment (Ref. = Primary or below)										
Secondary	0.003	0.858	-0.005	0.678	0.000	0.984	-0.007	0.733	0.045**	0.015
Post-secondary or above	0.003	0.831	-0.003	0.778	-0.025	0.204	-0.018	0.371	0.086***	0.000
Economic activity status (Ref. = Inactive)										
Active	0.656***	0.000	0.866***	0.000	-0.180***	0.000	-0.264***	0.000	0.425***	0.000
Type of housing (Ref. = Private housing)										
Public rental housing	0.027	0.462	-0.006	0.827	0.015	0.747	0.041	0.376	0.017	0.695
Subsidised home ownership housing	0.003	0.872	0.002	0.898	0.046**	0.023	-0.014	0.493	0.003	0.884
Tenure of accommodation (Ref. = Owner-occupied)										
Tenant	-0.034	0.362	-0.008	0.772	0.022	0.636	-0.037	0.432	-0.033	0.440
Others	-0.028*	0.052	-0.002	0.832	-0.019	0.279	-0.034*	0.06	-0.005	0.784
Household size	-0.041**	0.035	0.003	0.832	-0.03	0.222	-0.049**	0.05	-0.039*	0.091
Monthly household income (Ref. = < \$8000)										
\$8000 or above	0.038**	0.042	0.045***	0.001	0.013	0.58	-0.020	0.393	0.044**	0.049
Interactions										
Active x Aged65-69	-0.053***	0.004	-0.074***	0.000	0.019	0.425	0.032	0.174	-0.048**	0.029
Active x Aged70-74	-0.057***	0.000	-0.099***	0.000	0.016	0.422	0.061***	0.002	-0.043**	0.021
Active x Aged75-79	-0.019	0.216	-0.020	0.077	-0.001	0.963	0.01	0.588	-0.029*	0.095
Active x Aged80+	-0.030**	0.044	-0.041***	0.000	0.015	0.41	0.024	0.191	-0.047***	0.007
Model summary										
N	2958		2958		2958		2958		2958	
R ²	0.418		0.678		0.072		0.075		0.200	

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 2.9: OLS regression results – Duration (hours) of out-of-home activities in 2013 (Weekend)

Variables	Total out-of-home activities		Paid activities		Unpaid activities		Leisure activities		Travel	
	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value	Std. Coef.	p value
Gender (Ref. = Male)										
Female	-0.087***	0.000	-0.037**	0.022	0.173***	0.000	-0.127***	0.000	-0.012	0.525
Age group (Ref. = 60-64)										
65-69	-0.001	0.951	0.000	0.990	-0.005	0.854	0.003	0.901	-0.011	0.650
70-74	-0.042*	0.051	-0.003	0.887	-0.030	0.189	-0.024	0.298	-0.060***	0.008
75-79	-0.031	0.138	-0.001	0.963	-0.021	0.355	-0.010	0.652	-0.070***	0.002
80+	-0.087***	0.000	0.001	0.975	-0.081***	0.001	-0.061**	0.015	-0.096***	0.000
Marital status (Ref. = Married)										
Never married	-0.003	0.869	0.008	0.623	-0.035*	0.067	0.003	0.868	-0.013	0.489
Separated/ divorced/ widowed	0.012	0.559	0.001	0.938	-0.024	0.269	0.030	0.169	-0.024	0.259
Educational attainment (Ref. = Primary or below)										
Secondary	0.009	0.645	-0.030*	0.062	-0.019	0.345	0.030	0.134	0.045**	0.022
Post-secondary or above	-0.006	0.762	-0.049***	0.002	-0.030	0.133	0.011	0.574	0.095***	0.000
Economic activity status (Ref. = Inactive)										
Active	0.363***	0.000	0.631***	0.000	-0.115***	0.000	-0.161***	0.000	0.187***	0.000
Type of housing (Ref. = Private housing)										
Public rental housing	0.000	0.998	-0.023	0.542	-0.013	0.777	0.024	0.614	0.005	0.921
Subsidised home ownership housing	0.018	0.342	0.018	0.292	0.042**	0.040	-0.006	0.768	0.006	0.749
Tenure of accommodation (Ref. = Owner-occupied)										
Tenant	-0.014	0.743	0.034	0.371	0.062	0.189	-0.067	0.160	-0.007	0.884
Others	-0.013	0.448	-0.004	0.795	-0.021	0.253	-0.020	0.283	0.032*	0.074
Household size	-0.036	0.122	-0.007	0.730	-0.018	0.465	-0.029	0.253	-0.026	0.284
Monthly household income (Ref. = Less than \$8000)										
\$8000 or above	0.046**	0.041	0.042**	0.033	0.007	0.777	-0.003	0.894	0.065***	0.006
Interactions										
Active x Aged65-69	-0.023	0.300	-0.059***	0.002	0.008	0.734	0.032	0.193	-0.017	0.463
Active x Aged70-74	-0.009	0.616	-0.030*	0.069	-0.004	0.838	0.020	0.336	-0.004	0.84
Active x Aged75-79	0.022	0.217	0.023	0.142	-0.011	0.560	0.010	0.623	0.005	0.772
Active x Aged80+	-0.020	0.254	-0.027*	0.072	0.008	0.661	0.006	0.771	-0.021	0.254
Model summary										
N	2958		2958		2958		2958		2958	
R ²	0.181		0.381		0.056		0.032		0.088	

* p ≤ 0.1, ** p ≤ 0.05, *** p ≤ 0.01.

Duration of Out-of-home Activities in 2002

Economic activity status has a statistically significant ($p < 0.05$) association with the durations of all out-of-home activity categories, except for unpaid and leisure activities in weekends. Economically active people tend to spend longer time in out-of-home activities compared to the economically inactive ones. The effect, however, varies across activity categories. The economically active group spends more time in paid activities, but less time in unpaid activities and leisure activities, compared to the inactive group on weekdays. Such finding is consistent with previous studies (Páez et al., 2007; Clark et al., 1998; Melzer and Parahyba, 2004; Stobert, Dosman and Keating, 2006; Gauthier and Smeeding, 2000).

Hong Kong is a city with one of the longest working hours among global economies (UBS, 2015). Per a recent report on annual earnings and hours (Census and Statistics Department, 2017b), the median of weekly working hours for full-time employees aged 55 and above was 48 hours in May-June 2017, which intuitively explains the shorter time allocated for unpaid and leisure activities by economically active elderly.

Age has a marginal but statistically significant ($p < 0.05$) impact on the duration of leisure activities among the elderly, for both weekdays and weekends. People aged 65 years and above spend about 5-6 minutes more than people aged 60-64 years in daily leisure activities.

Gender is also a significant factor affecting time spent on out-of-home activities among the elderly. Significant differences ($p < 0.05$) in the durations of all types of out-of-home activities between men and women (except total duration for weekends) are observed. All else equal, compared to men, women spend more time in unpaid activities, and less time in paid and leisure activities. The result is aligned with literature findings (Gauthier and Smeeding, 2001; Lu and Pas, 1999; Truong and Somenahalli, 2011). Although evidence shows an increasing trend in women's involvement in paid work since the 2000's (Oláh, Richter and Kotowska, 2014), the proportion of economically inactive women is still greater than men in our dataset. According to the 2011 population census, among the 14,932 unpaid family workers in Hong Kong, around 68% were female. Women's involvement in out-of-home unpaid activities like purchasing goods for the household may help explain the relatively longer time spent on unpaid activities of female.

The regression models are also capable of providing further insights on the time-use of the elderly. People who are never married spend less time in paid activities and all out-of-home

activities combined on weekdays, when comparing to people with other marital statuses. On weekends, the separated/divorced/widowed group spends less time in leisure and all out-of-home activities combined. People with secondary education level spend more total time in out-of-home activities than people with other education levels on weekdays, while those with post-secondary education level spend less time in paid activities than people with other education levels on weekends. Though type of housing and tenure of accommodation have no statistically significant effect on time-use, elderly living in subsidised housing spend less time in leisure activities on weekends than those living in other housing arrangements. Household size is also associated with time spent in paid activities as well as all out-of-home activities combined, on weekdays. Bigger the household, lower is the duration of paid and all out-of-home activities. This could be accounted for the financial support from children in larger households, which saves time for elderly to earn a living for themselves. Another possible cause is the greater responsibility of older people in housework (such as taking care of grandchildren), which reduces time available for paid activities (Evans, 2001). Monthly household income also shows a statistically significant effect on the duration of total out-of-home activities, paid activities and unpaid activities on weekdays, echoing previous research findings on positive relationship between older people's income and social participation (Marottoli, 1993; Mercado and Páez, 2009).

Duration of Out-of-home Activities in 2013

Economic activity status plays a significant role in determining all types of out-of-home activities for weekdays and weekends in 2013. Specifically, economically active elderly are found to spend more time in paid activities but less time in unpaid activities and leisure activities. The economically active elderly are also found to spend more time travelling than those who do not work. The difference in the composition of activity duration (ratio of paid activities and other out-of-home activities) between working and non-working elderly is smaller on weekends than weekdays.

For weekdays, there is no significant difference between the reference group (age 60-64) and other age groups for most out-of-home activities. Interactions between economic activity status and age show that the difference in time spent in paid activities between working and non-working elderly is relatively smaller in the 65-69 age group, and even smaller in the 70-74 age group. This could be explained by the negative relation of time spent in paid activities

against age (Buysee et al., 1992; Jowsey et al., 2013; Mckenna, Broome and Liddle, 2007). On weekends, time spent on travelling decreases with age. People aged 80 and above spend significantly less time in total out-of-home activities than the reference group (age 60-64 years) on weekends.

For both weekdays and weekends, women are found to spend relatively more time in unpaid activities and less time in paid and leisure activities than men. The total duration of daily out-of-home activities is less for women than men. As in terms of time spent on travelling, there is no gender effect. Senior citizens who are never married, or are separated/divorced/widowed spend significantly more time in leisure activities on weekdays than the married. Married elderly could have a greater responsibility of taking care of the family, restricting out-of-home leisure activity participation. Elderly with higher education attainment tend to spend more time travelling on both weekdays and weekends.

Household size is negatively associated with total time spent in out-of-home activities for weekdays only. Higher household income (\$8000 or above) is positively associated with time spent in paid activities, travel, and total out-of-home activities on both weekdays and weekends.

Comparison of Total Time Spent in Out-of-home Activities between 2002 and 2013

One of the objectives of this research is to understand how total time spent in out-of-home activities among older people has changed over time. Therefore, we combine 2002 and 2013 data for comparison. OLS regression results are shown in **Table 2.10**.

Table 2.10: OLS regression – Duration (hours) of out-of-home activities in 2002 and 2013

Variables	Std. Coef.	p value
Gender (Ref. = Male)		
Female	-0.067***	0.000
Marital status (Ref. = Married)		
Never married	-0.012	0.219
Separated/ divorced/ widowed	-0.016	0.134
Educational attainment (Ref. = Primary or below)		
Secondary	0.020*	0.052
Post-secondary or above	-0.003	0.748
Economic activity status (Ref. = Inactive)		
Active	0.422***	0.000
Type of housing (Ref. = Private housing)		
Public rental housing	0.019	0.311
Subsidised home ownership housing	-0.001	0.929
Tenure of accommodation (Ref. = Owner-occupied)		
Tenant	-0.026	0.152
Others	-0.019**	0.04
Household size	-0.052***	0.000
Monthly household income (Ref. = Less than \$8000)		
\$8000 or above	0.055***	0.000
Day (Ref. = Weekday)		
Weekend	-0.003	0.723
Age group (Ref. = 60-64)		
65+	0.027	0.175
Year (Ref. = 2002)		
2013	0.048**	0.038
Interactions		
Aged65+ x 2013	-0.056**	0.034
Active x 2013	0.080***	0.002
Active x Aged65+	-0.031	0.183
Active x Aged65+ x 2013	-0.111	0.635
N		9014
R ²		0.258

Note: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Similar to the yearly models (**Tables 2.6-2.9**), some of the personal and household variables, including economic activity status, gender, tenure of accommodation, household size and monthly household income are found to be statistically significant factors affecting the total duration (per day) of out-of-home activities among the elderly.

The year dummy variable suggests that older people in Hong Kong spent significantly more time on out-of-home activities on average in 2013. Also, economically active people spent more time out-of-home activities than economically inactive people across the two years.

The parameter coefficient of the interaction between economic activity status and the year dummy suggests that the positive difference in time spent on out-of-home activities between the economically active and inactive groups was widened in 2013. This effect is intriguing

because the median work hours in Hong Kong actually decreased from 48 hours in 2002 to 45 hours in 2013 (Hong Kong SAR Government, 2012; Census and Statistics Department, 2018).

There is no statistically significant difference in total out-of-home activity duration between people aged 60-64 years and people aged 65 years and above. However, the age-year interaction shows that in 2013, people aged 65 years and above spent significantly less time in out-of-home activities than the 60-64 year old group.

Interaction between economic activity status and age group shows that within the 65 years and above age group, economic activity status has no statistically significant effect on the duration of out-of-home activities. Additionally, interaction between economic activity status, age and year suggests that in 2013, there is no significant difference in total out-of-home activity duration between the economically active and inactive groups. This may be resulted by the similar time spent on paid activities among employed elderly and leisure activities for unemployed elderly.

2.5 Conclusion

In this research, we explore time-use and out-of-home activity patterns of older people aged 60 years and above in Hong Kong. Conforming to our hypothesis, it is found that economic activity (i.e., employment) status has a significantly positive effect on the duration of out-of-home activities among older people. Results show that working elderly spend more time on out-of-home activities than the non-working elderly due to longer time spent in paid activities and associated travelling. Economically inactive older people spend relatively more time on leisure activities, suggesting that retired or unemployed persons reallocate time to leisure activities.

On top of the contribution to scholarship on time-use of older people, this research also proposes urban planning and policy implications. Based on the findings, policymakers and urban planners would be able to better incorporate elderly time-use and travel patterns into future planning, for example in the revision of Hong Kong's Comprehensive Transport Studies (CTS). We also demonstrate that longitudinal analysis is useful for understanding changes in time-use pattern of senior citizens in Hong Kong.

As the cohort of older people is expected to grow across cities in the next few decades, targeted projects and public policies need to be implemented to accommodate demands from the elderly. While the efficiency of transport service is critical, planners should also consider inclusiveness and equity issues. Thoughtful policymaking can help older people with or without paid employment to perform out-of-home activities they desire, and subsequently realize self-actualization and continuous contribution to society.

Chapter 3 District Profiles

3.1 Central and Western District

Basic Information

Central and Western District has an area of 12.55 sq. km. The 2017 mid-year population of the district is 244,600. The population density is 19,490 persons per sq. km. (Census and Statistics Department, 2017b). The population has decreased by 2.7% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 16.0% of its whole population aged 65 and above. The district has the highest median monthly income in Hong Kong.

The district joined the WHO Global Network of Age-friendly Cities and Communities in 2018. The Central and Western District Community Concern Group and Central and Western District Age-friendly Work Group have been promoting age-friendliness of the District since 2007 and 2008 (WHO, 2018).

Transport Systems

There are over 170 bus routes serving the district. Among that, 67 bus routes are cross harbour bus routes, 7 are sightseeing bus routes and 17 are residents' service routes. There are also 70 minibus routes, which 30 of them are on scheduled services (green minibus), 9 are non-scheduled services (red minibus) and 31 are residents' services. Those residents' service buses and minibuses are mainly serving the luxury housing estates on mid-levels and the Peak. There are in total 38 bus termini and 19 minibus termini.

The MTR has 7 stations within the district, namely Admiralty, Central, Hong Kong, Sheung Wan, Sai Ying Pun, HKU, and Kennedy Town. These stations lie on the Island Line, Tsuen Wan Line, Tung Chung Line, and Airport Express.

Other public transportation systems include ferry, tram, and the Peak Tram. Central Ferry Piers No.2 to No.6 provide ferry services to outlying islands. Pier No.7 is Star Ferry, which provides harbour crossing service between Central and Tsim Sha Tsui since 1888. Star Ferry was recommended by the National Geographic as one of the "Top 10 City Boat Trips"

in the world (National Geographic, 2010). The Hong Kong Macau Ferry Terminal is located in Sheung Wan Shun Tak Centre.

Hong Kong Tramways provide services along the northern part of Hong Kong Island, running from Kennedy Town to Shau Kei Wan. The Hong Kong Tramway, nicknamed “ding ding”, has been serving the island since 1904. It is the only exclusively double-decker tram system in the world. The Peak Tram is another transportation method between Central and the Victoria Peak. The Peak Tram, opened in 1888, is a funicular railway which used to be a daily form of transportation for residents living at the Peak. It is nowadays a very popular tourist attraction since it offers good views over the city.

Main roads of the district include Route 3 and Route 4. Route 3 runs from Sai Ying Pu to Yuen Long. The Western Harbour Crossing is part of the route. Route 4 runs from Kennedy Town to Chai Wan, which starts from Connaught Road West, and travels east via Rumsey Street Flyover, Connaught Road Central, Harcourt Road and then leads to Wan Chai and Eastern District.

Findings from Interviews

The centre visited is Hong Kong West Point Baptist Church Neighbourhood Elderly Centre in Third Street, Sai Ying Pun. The interview was conducted on 21st March, 2018. The centre is located on the ground floor of a residential building Yuk Ming Tower.

Figure 3.1.1: Entrance of the elderly centre visited (Google, 2018)



Seventeen interviewees participated in the questionnaire section and among that five of them also participated in the focus group discussion. Fifteen (88%) out of seventeen of the interviewees are retired, one (6%) is working part-time and one (6%) is home-maker. Most of them retired between 55 to 65 years old. A majority of the interviewees said that retirement did not cause much financial burden to themselves and their family. They see retirement as a good chance to take a rest and find hobbies. One focus group interviewee is keen on taking courses at different tertiary education institutions. Another interviewee works as a part-time tutor, teaching sign language at different elderly centres.

Over half of the interviewees are living with their spouses, and many of them are also living with their sons and daughters. Most of them have a household size of 2 to 3 persons. All interviewees are living in privately owned apartments. Their monthly household incomes are mainly below \$4,000, under the Old Age Allowance Scheme from the government.

Most popular transport modes are walking (16 chosen), followed by bus (14) and MTR (13), as shown in **Table 3.1.1**. **Figures 3.1.2 to 3.1.4** also show their main trip purpose, daily travel time, and their daily travel cost.

Table 3.1.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	16 (94.1%)	13 (76.5%)	14 (82.5%)	5 (35.7%)	2 (11.8%)	4 (23.5%)	1 (65.9%)	1 (5.88%)	0 (0%)

Figure 3.1.2: Main trip purpose(s)

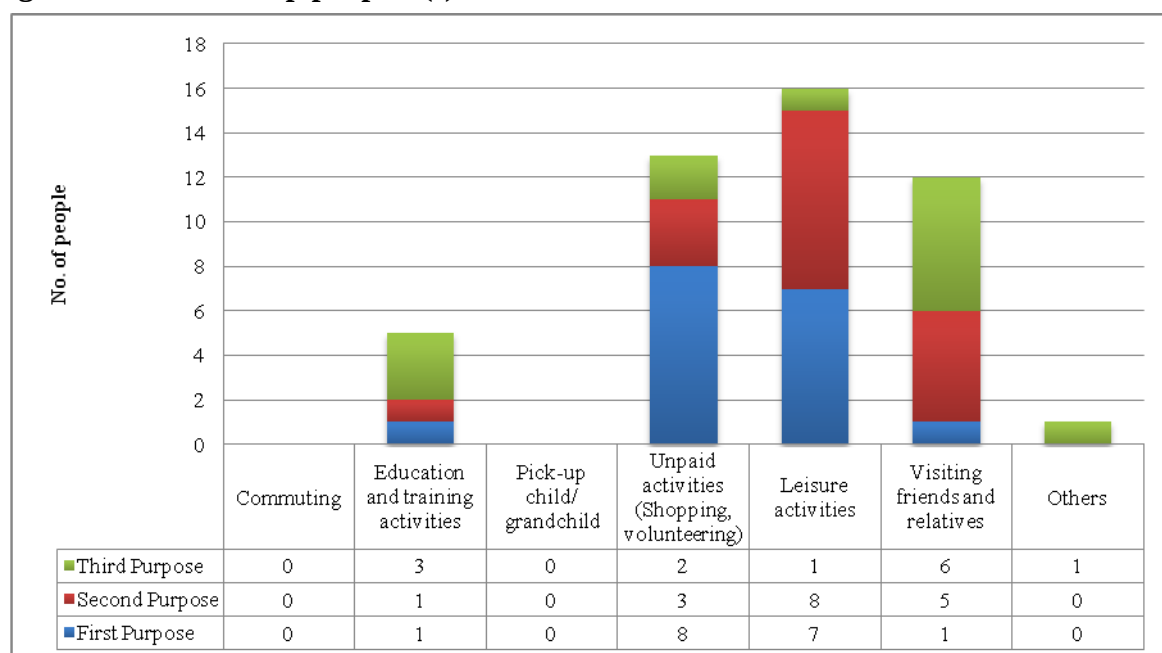


Figure 3.1.3: Daily travel time

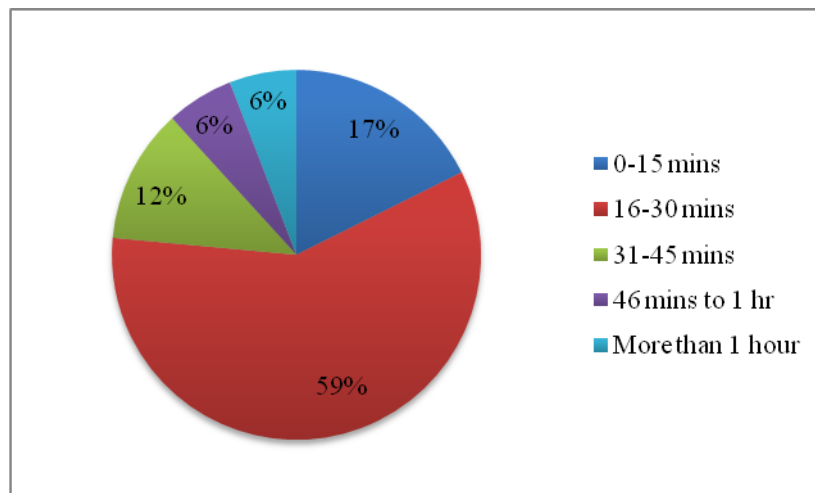
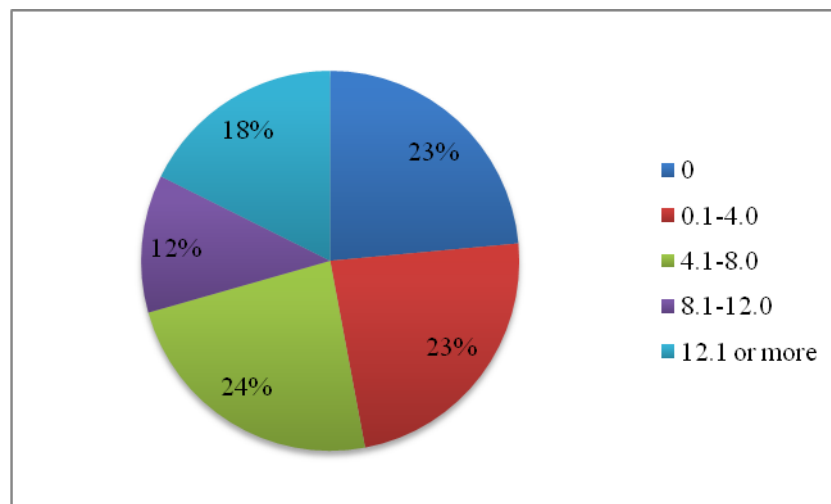


Figure 3.1.4: Daily travel cost (HK\$)



The difference between before and after the MTR West Island Line open was a main theme of the focus group discussion. All focus group participants gave positive comments on having more MTR stations available in the district. Their preferred mode of transportation has also changed since the opening of the West Island Line.

Considering the steep and hilly terrain in Sai Ying Pun, walking around in the district can be challenging to elderlies. The new MTR station exits act as the underground walkway, allowing pedestrian to easily go up and down hill. For example, pedestrian can walk from Des Voeux Road West to Bonham Road through Sai Ying Pun Station, and from Belcher's Street to Pok Fu Lam Road through HKU Station, with the use of escalators and lifts.

Figure 3.1.5: Sai Ying Pun Station street map (MTR, 2018)

(<http://www.mtr.com.hk/archive/ch/services/maps/syp.pdf>)



Figure 3.1.6: HKU Station street map (MTR, 2018)

(<http://www.mtr.com.hk/archive/ch/services/maps/hku.pdf>)



Focus group participants said there are various reasons leading to the change of their preferred mode of transportation. After the opening of the West Island Line, local bus routes were rationalized. Number of runs of various bus routes has been reduced and a few bus routes have been cut. This affects their time management in estimating their travel time. Tram is another common choice of transportation when they are traveling for a short distance, e.g. from Kennedy Town to Sheung Wan. One interviewee travelled from Sai Ying Pun to Admiralty a day before the interview and the tram journey took him 35 minutes. He agreed that MTR is faster in terms of the train journey, but the actual time needed may be doubled when including the time walking from station entrance to the train platform. They still consider bus as the most convenient transportation. The advantages of bus include the variety of bus routes and shorter walking distance to bus stop. In situations like attending class or meeting friends, interviewees would choose to take MTR for easier time management. Overall, they are happy to have the West Island Line as a new choice, but bus, minibuss and tram are still playing an important role in serving the community.

Table 3.1.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, eight (47%) of them answered “Agree” and seven of them answered “Strongly Agree”. In the question “I am satisfied with my community”, twelve (71%) of them answered “Agree” and five (29%) of them answered “Strongly Agree”.

Table 3.1.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (11.8%)	8 (47.06%)	7 (41.18%)
I am satisfied with my community.	0 (0%)	0 (0%)	0 (0%)	12 (70.59%)	5 (29.41%)

Statistics of Variables

Table 3.1.3 presents the interviewees’ levels of satisfaction on the nine travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Central and Western district has lower satisfaction with walking and use of bike, while has higher means of satisfaction levels with MTR, bus, tram, ferry and taxi

systems. The level of satisfaction with minibus is similar to that of Hong Kong as a whole. The means of satisfaction with public transport and satisfaction with overall transport systems are higher than that of Hong Kong as a whole. Participants had highest satisfaction with ferry and tram systems. Tram is another common choice of transportation for elderly participants in this district, as we collected from focus group interviews, and we can see that the mean of the satisfaction level of tram system is higher for this district than the mean of the Hong Kong data in general, representing that elderly participants living in this district are satisfied with the tram system in general. Moreover, from the statistics, elderly individuals living in the Central and Western District are frequent users of MTR and bus systems, and are generally satisfied with the MTR and bus systems (as reflected by a mean of higher than three), which all matched with the results of the focus group interview.

Table 3.1.3: Means of the levels of satisfaction on the nine travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.07	3.21
Satisfaction with MTR System	3.64	3.37
Satisfaction with Bus System	3.51	3.47
Satisfaction with Minibus System	3.37	3.36
Satisfaction with Ferry System	4.13	3.80
Satisfaction with Tram System	4.05	3.68
Satisfaction with Bike	2.73	3.39
Satisfaction with Taxi System	3.10	2.97
Satisfaction with Driving	NA	2.60
Satisfaction with Public Transport	3.62	3.45
Satisfaction with Overall Transport Use	3.44	3.36

Figure 3.1.7: Levels of satisfaction of various travel modes for the participants living in the district

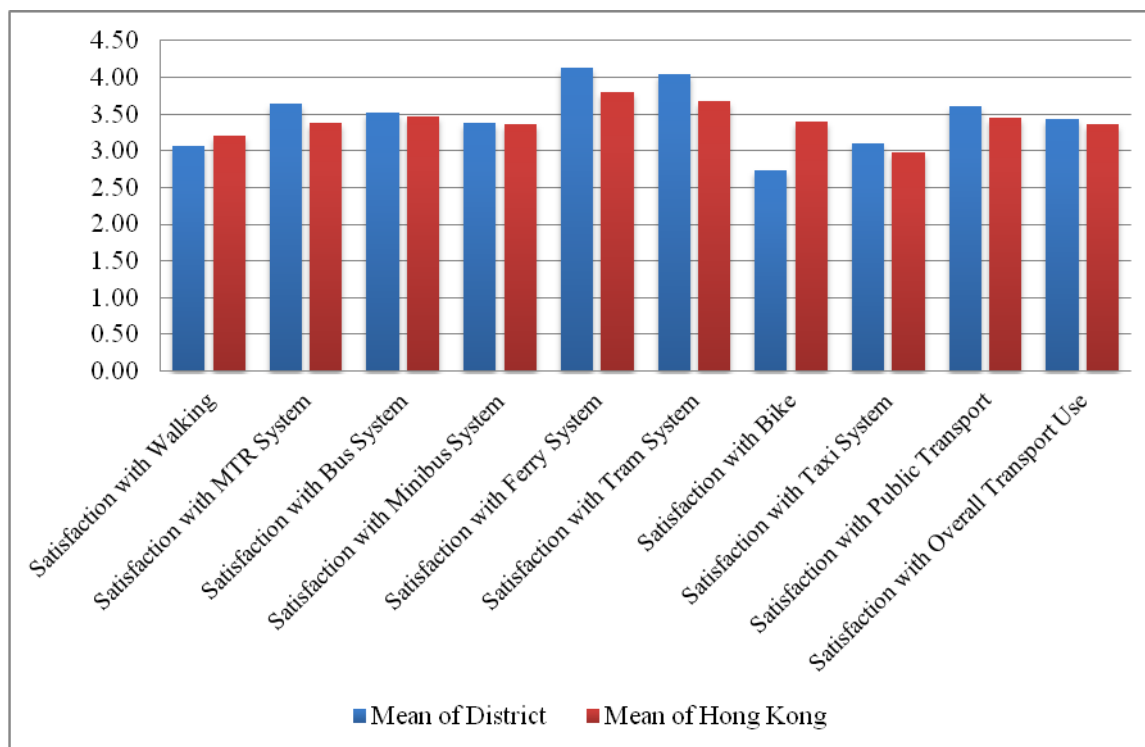


Table 3.1.4 presents the interviewees' levels of community participation of the participants living in the Central and Western District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Central and Western District have a much higher level of community participation as a whole, especially for the entertainment, sports and others activities. For interest classes, the district has a lower mean of community participation than that of Hong Kong.

Table 3.1.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	5.47	3.77
Community Participation: Total Activity Duration in hours (weekly) Overall	20.90	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	7.28	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	8.82	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.61	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	4.46	3.91

Table 3.1.5 presents the interviewees' levels of physical health and psychological well-being of the Central and Western District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have much higher levels of physical health and psychological well-being than that of Hong Kong.

Table 3.1.5: Means of the levels of Physical Health and Psychological Well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.38	2.97
Psychological Well-being	3.97	3.69

Table 3.1.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have higher levels of sense of community and satisfaction with community while having lower levels of overall social relationships than those of Hong Kong. For social relationships, the mean of social relationships with family members of the district is higher than that of Hong Kong, while means of social relationships with friends and neighbours of the district are much lower than that of Hong Kong.

Table 3.1.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.10	7.51
Social Relationships (family)	8.4	8.29
Social Relationships (friends)	7.47	7.78
Social Relationships (neighbours)	5.33	6.5
Sense of Community	4.29	4.06
Satisfaction with Community	4.29	4.02

Table 3.1.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is lower than that of Hong Kong.

Table 3.1.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.50	7.06

Table 3.1.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is lower than that of Hong Kong, representing in general, the elderly individuals in the district travel alone less frequently than that of the general older adults living in Hong Kong.

Table 3.1.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.41	7.07

3.2 Wan Chai District

Basic Information

Wan Chai District has an area of 10.56 sq. km. The 2017 mid-year population of the district is 181,400. The population density is 17,180 persons per sq. km. (Census and Statistics Department, 2017c). The population has decreased by 2.8% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 16.3% of its whole population aged 65 and above. Wan Chai District, together with Sham Shui Po District and Yau Tsim Mong District, has the lowest average household size of 2.6 persons. The district has the second highest median monthly household income of HK\$40,300 (Census and Statistics Department, 2017a).

Wan Chai District became a member of the WHO Global Network of Age-friendly Cities and Communities in 2017. The district has been joining projects led by the Hong Kong Council of Social Service “Age-Friendly Hong Kong” project since 2012, to transform and strengthen Wan Chai as an age-friendly district.

Transport Systems

There are over 120 bus lines serving the district. Among that, 52 bus routes are cross harbour bus routes, 2 are sightseeing bus routes and 26 are residents’ service routes. There are also over 50 minibuses routes, which 32 of them are on scheduled services (green minibus), 11 are non-scheduled services (red minibus) and 9 are residents’ services. There are in total 15 bus termini and 25 minibus termini.

MTR Island Line serves the district with three stations, namely Wan Chai, Causeway Bay and Tin Hau. Tram service is available along King’s Road, Causeway Road, Yee Wo Street, Hennessy Road and Johnston Road, from east to west. The Happy Valley Loop runs around the outside of the Happy Valley Racecourse, serving residents of the area and passengers near Lee Gardens and Morrison Hill.

Main routes in the district include route 1 and route 4. Route 1 connects Aberdeen to Sha Tin, of which the Wong Nai Chung Gap Flyover links up Aberdeen tunnel and Cross Harbour Tunnel. Route 4 runs from Chai Wan to Kennedy Town from east to west.

Gloucester Road, Victoria Park Road and the Island Eastern Corridor are the main roads along the north coast, forming a portion of Route 4. There are two tunnels in Wan Chai District. Aberdeen Tunnel runs through Mount Cameron and connects Southern District and Wan Chai District. Cross Harbour Tunnel is the first cross harbour tunnel of Hong Kong, opened in 1972, connecting Causeway Bay and Hung Hom. It is the busiest vehicular harbour crossing and most congested road in Hong Kong.

Findings from Interviews

The centre visited is Yan Oi Tong Tin Ka Ping Causeway Bay Elderly Centre on Irving Street. The interview was conducted on 18th May 2018.

Fifteen interviewees participated in the questionnaire section and among that 5 of them also participated in the focus group discussion. Eleven out of fifteen interviewees are living within Wai Chai District, two in Eastern District, one in Central and Western District and one interviewee refused to disclose the address. In 2016 the boundaries of Eastern and Wan Chai Districts were adjusted with the transfer of the District Council Constituencies Victoria Park and Tin Hau from Eastern District to Wan Chai District. Two of the interviewees living Electric Road and Merlin Street became residents of Wan Chai District under such change (Hong Kong SAR Government, 2013).

All interviewees are aged 60 or above. Three (20%) out of fifteen interviewees are male and twelve (80%) are female. Over half of the interviewees are married, and the rest are widowed, divorced or separated with their partner. Ten (67%) interviewees are retired and five (33%) are home-makers. Eight (80%) among the ten retired interviewees retired between 60 to 65 years old. Some interviewees feel the financial burden after retirement, mainly on unexpected healthcare expenses, with two (20%) interviewees answered “Agree” in the question “Do you think retirement caused the financial burden to yourself and your family?”. Interviewees commonly see retirement as a change in their social pattern, giving them more time and chances to go out and meet new friends. They do not see retirement causing social pressure, with five (50%) interviewees answered “Agree” and “Strongly Agree” respectively in the question “Do you think retirement caused social pressure to yourself and your family?”.

A majority of the interviewees have a household size comprising 1 to 3 persons, among that, four (27%) interviewees are living alone. One (7%) interviewee is living in Lai Tak

Estate, the only Public Rental Housing Estate in Wan Chai District, and the rest (93%) of the interviewees are living in private housing. Over half (53%) of the interviewees have monthly income of \$4,000 or below, mainly relying on the government's Old Age Allowance Scheme.

Table 3.2.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	12 (80.0%)	5 (33.3%)	8 (53.3%)	1 (6.67%)	2 (13.3%)	11 (73.3%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.2.1: Main trip purpose(s)

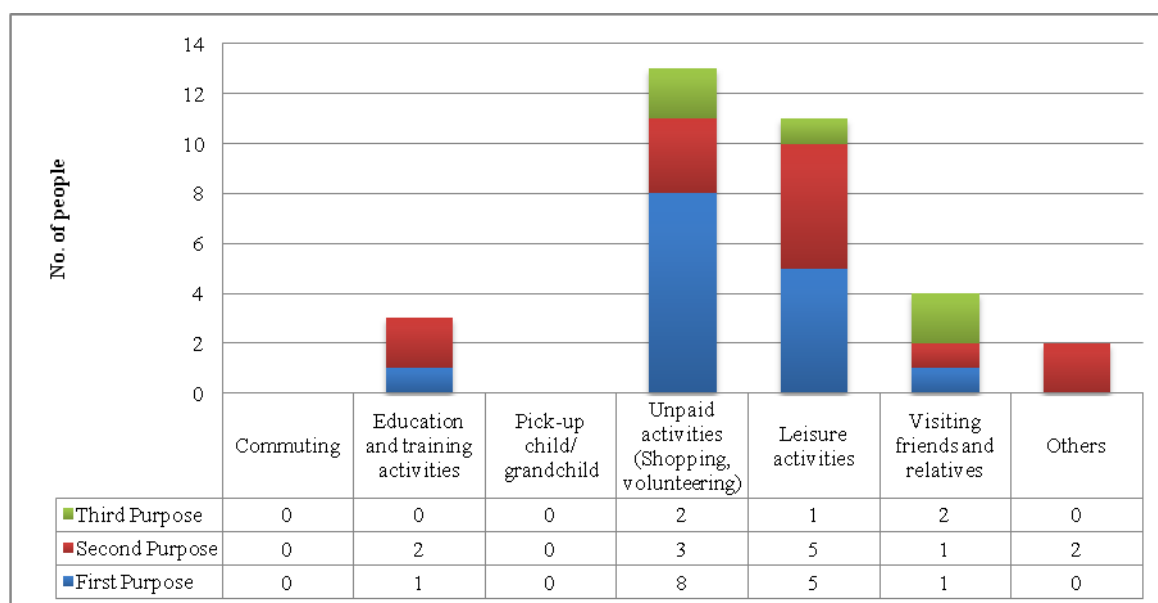


Figure 3.2.2: Daily travel time

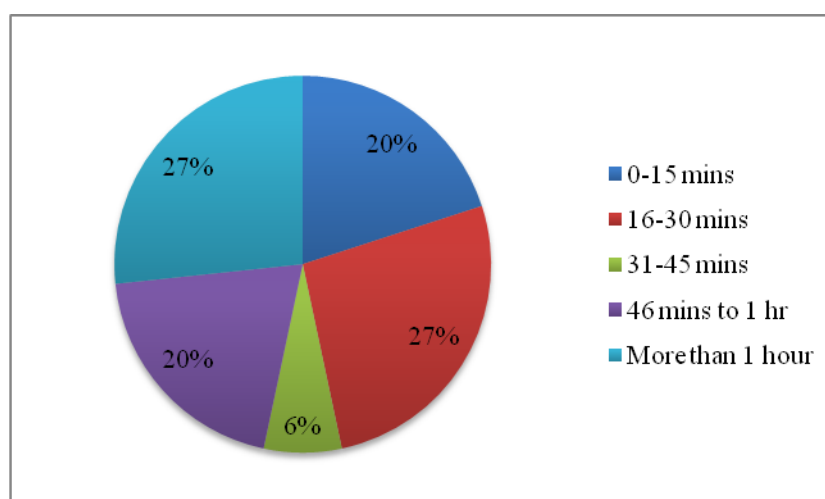
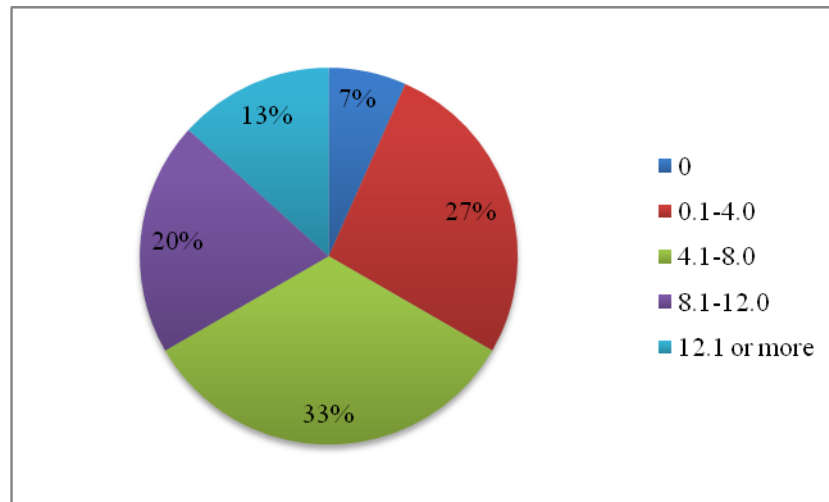


Figure 3.2.3: Daily travel cost (HK\$)



Compared to interviews conducted in other districts, the interview in Wan Chai District is the interview with largest number of interviewees joining the elder centre from other districts. This leads to a relatively longer daily travel time from their home to their most visited place (e.g. elderly centre), as well as a higher daily travel cost for interviewees under 65 years old.

Most popular transport modes are walking (12 chosen), followed by tram (11) and bus (8). The most common trip purposes are joining unpaid activities, leisure activities and visiting friends. Focus group interviewees who are living in Causeway Bay usually choose to walk within the district, saying that Causeway Bay is self-contained and most amenities are within walkable distance from home.

Interviewees discussed about the footbridges in Causeway Bay. Wan Chai District with very busy traffic has many footbridges for pedestrians, including footbridges over Gloucester Road, Hennessey Road, Yee Wo Street, Irving Street and Causeway Road. One focus group interviewee does not like having footbridges instead of road crossing, which is more time consuming and tiring. Two other interviewees showed understanding towards the high traffic volume in Wan Chai District. However, they are concerned about climbing the stairs at footbridges without lifts. One interviewee shared her experience of taking footbridges more often after lifts installation. They are looking forward to having lifts at all footbridges for elderly's convenience.

Interviewees also discussed about the "Smart Device for the Elderly and the Disabled" trail scheme (Transport Department, 2018e). All focus group interviewees have heard of the

trail scheme but none of them have used the device. They agreed that tapping their elder Octopus Card is not very convenient, since taking the Octopus Card out might takes more time than the extended flashing green time. Interviewees suggested modifying existing road crossing facilities instead of adding new device. Some of the interviewees misuse the tactile unit for visually impaired persons as the pushbutton to render the green signal sooner and longer. They believe pressing the vibrating unit located at the bottom of the tactile unit has the same function as the Octopus tapping device.

Figure 3.2.4: Tactile unit for visually impaired persons at road crossing (Transport Department, 2017)

(http://www.td.gov.hk/filemanager/en/content_1403/photo_1s.jpg)



Table 3.2.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	3 (20.00%)	8 (53.33%)	4 (26.67%)
I am satisfied with my community.	0 (0%)	1 (6.67%)	5 (33.33%)	7 (46.67%)	2 (13.33%)

Interviewees showed a high sense of belonging to the community and are satisfied with the community. In the question “I think I am part of the community”, eight (53%) of them answered “Agree” and four (27%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, seven (47%) of them answered “Agree” and two (13%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.2.3 presents the interviewees' levels of satisfaction on the six travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Wan Chai district has higher means of satisfaction levels with walking, MTR and minibus systems. The levels of satisfaction with bus, ferry and tram systems are similar to that of Hong Kong as a whole. The means of satisfaction with public transport and satisfaction with overall transport systems of the district are higher than that of Hong Kong as a whole. Elderly participants in the district did not use bikes, taxis or private cars. Elderly participants in the district had highest satisfaction with minibus systems.

Table 3.2.3: Means of the levels of satisfaction on the six travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.49	3.21
Satisfaction with MTR System	3.50	3.37
Satisfaction with Bus System	3.46	3.47
Satisfaction with Minibus System	4.00	3.36
Satisfaction with Ferry System	3.75	3.80
Satisfaction with Tram System	3.66	3.68
Satisfaction with Public Transport	3.64	3.45
Satisfaction with Overall Transport Use	3.56	3.36

Figure 3.2.5: Satisfaction with travel modes for the district and overall Hong Kong values

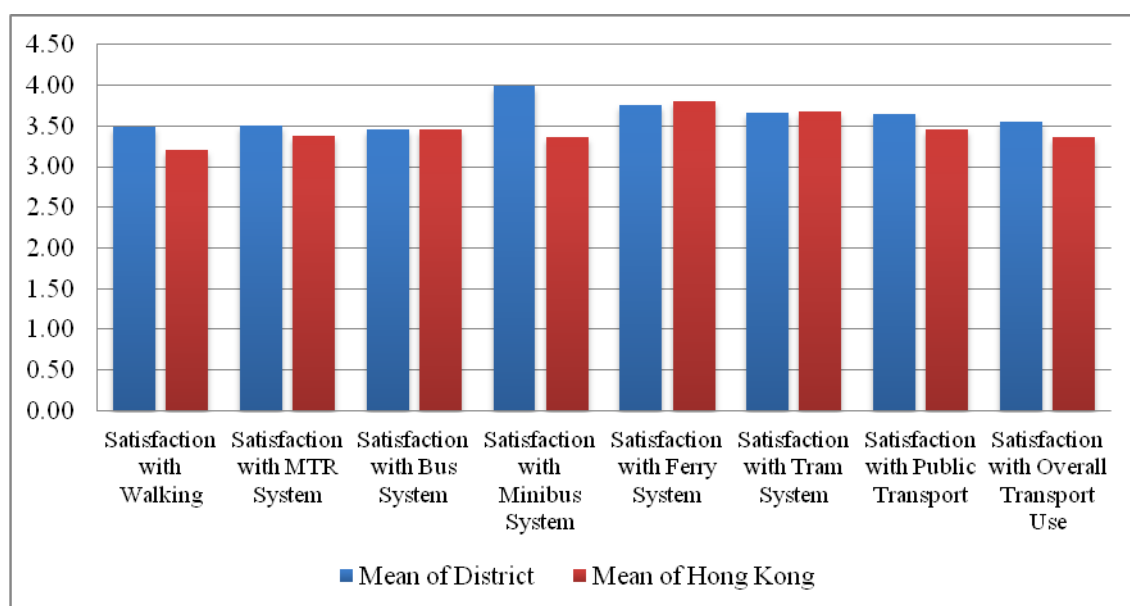


Table 3.2.4 presents the interviewees’ levels of community participation of the participants living in the Wan Chai District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Wan Chai District joined more activities of community participation as a whole, but have fewer overall hours of community participation. Elderly individuals in Wan Chai district generally have fewer hours for the entertainment activities and activities in the “Others” category. For sports activities and interest classes, the district has higher means of community participation than those of Hong Kong.

Table 3.2.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	4.13	3.77
Community Participation: Total Activity Duration in hours (weekly)	12.55	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	3.86	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	5.65	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	1.40	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	1.95	3.91

Table 3.2.5 presents the interviewees’ levels of physical health and psychological well-being of the Wan Chai District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of physical health and psychological well-being that of Hong Kong.

Table 3.2.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.02	2.97
Psychological Well-being	3.53	3.69

Table 3.2.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have similar levels of sense of community while having lower levels of overall social relationships and satisfaction with community than those of Hong Kong. For social relationships, the mean of social relationships with

family members of the district is similar to that of Hong Kong, while means of social relationships with friends and neighbours of the district are lower than those of Hong Kong.

Table 3.2.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	6.98	7.51
Social Relationships (family)	8.20	8.29
Social Relationships (friends)	7.40	7.78
Social Relationships (neighbours)	5.33	6.5
Sense of Community	4.07	4.06
Satisfaction with Community	3.67	4.02

Table 3.2.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is slightly lower than that of Hong Kong.

Table 3.2.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.93	7.06

Table 3.2.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is slightly lower than that of Hong Kong, representing in general, the elderly individuals in the district travel alone less frequently than that of the general older adults living in Hong Kong.

Table 3.2.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.87	7.07

3.3 Eastern District

Basic Information

Eastern District has an area of 17.99 sq. km. The 2017 mid-year population of the district is 551,400. The population density is 30,650 persons per sq. km. (Census and Statistics Department, 2017c). The population has decreased by 0.6% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 16.5% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Transport Systems

There are over 100 bus routes serving the district. Among that, 40 bus routes are cross harbour bus routes and 7 are residents' service routes. There are also over 40 minibuses, which 31 of them are on scheduled services (green minibus), 8 are non-scheduled services (red minibus) and 4 are residents' services. There are in total 32 bus termini and minibus termini respectively.

MTR Island Line serves the district with 8 stations, namely Fortress Hill, North Point, Quarry Bay, Tai Koo, Sai Wan Ho, Shau Kei Wan, Heng Fa Chuen and Chai Wan. North Point and Quarry Bay are also stations of Tseung Kwan O Line, providing harbour crossing service. Hong Kong Tramways provide services along the northern part of Hong Kong Island, running from Shau Kei Wan to Kennedy Town. North Point Ferry Pier provides ferry service to Hung Hom, Kowloon City and Kwun Tong. Sai Wan Ho Ferry Pier provides to Lei Yue Mun and Kwun Tong.

Main roads of the district include Route 2 and 4. Route 2 connects Kai Koo Shing to Ma Liu Shui through the East Harbour Crossing. Route 4 runs from Chai Wan to Kennedy Town, which starts from Island East Corridor, then leads to Wan Chai and Central & Western District.

Findings from Interviews

The elderly centre visited is Hong Kong & Kowloon Kaifong Women's Association Tsang Hui Yuk Wan Social Centre for the Elderly, located in Shau Kei Wan. The interview was

conducted on 14th May 2018. Fifteen interviewees participated in the questionnaire section and among that five of them also participated in the focus group discussion. All of the interviewees are living in Eastern District, twelve (80%) of them are living near Sai Wan Ho and Shau Kei Wan, two (13%) in Tai Koo, and one (7%) in Chai Wan.

All of the interviewees are over 60 years old, and a majority of them are over 80 years old. None of the interviewees are never married but over half (60%) of them are widowed, divorced or separated with their partner. Two third of the interviewees are retired and the other one third are home-makers.

Nearly half (40%) of the interviewees retired between the age of 60 to 65. Interviewees come across very few financial burden or social pressure after retirement. Only two (20%) and one (10%) interviewees answered “Agree” in the question “Do you think retirement caused the financial burden to yourself and your family?” and “Do you think retirement caused social pressure to yourself and your family?” respectively. Focus group interviewees discussed about their change in lifestyle after retirement. They commonly agree that attending different activities and finding hobbies give themselves a sense of fulfilment. The largest concern after retirement is on their physical well-being.

Seven (46%) out of fifteen interviewees are living in a household comprising 2 persons. Three (20%) interviewees are living alone. Ten (67%) interviewees are living in private housing estates or buildings, three (20%) in Home Ownership Scheme Estates and two (13%) in Public Rental Housing Estates. A majority of the interviewees have monthly income of \$4,000 or below, mainly relying on the government’s Old Age Allowance Scheme.

Table 3.3.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	13 (86.7%)	8 (53.3%)	13 (86.7%)	2 (13.3%)	0 (0%)	5 (33.3%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.3.1: Main trip purpose(s)

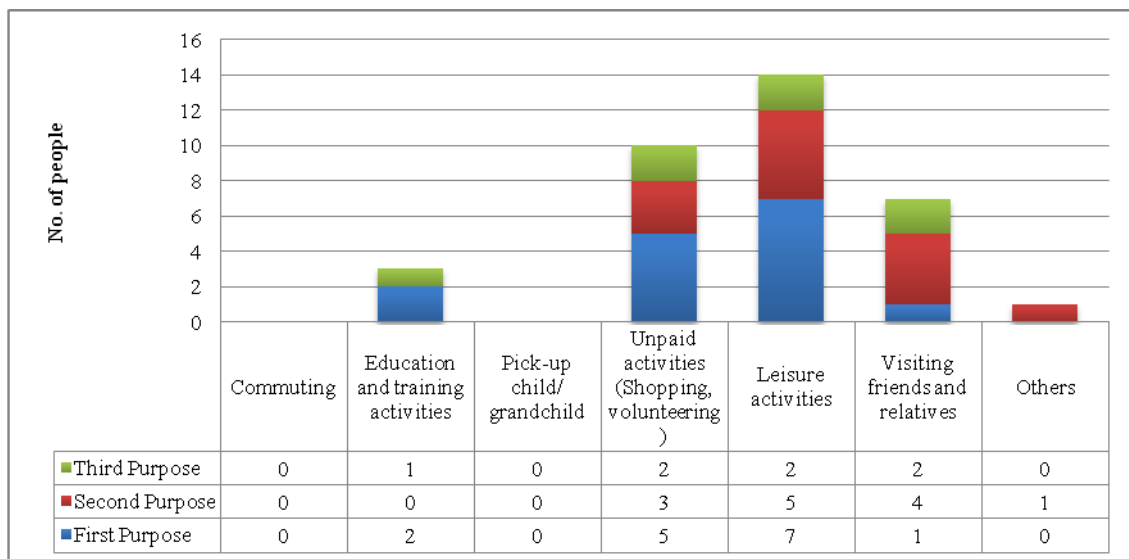


Figure 3.3.2: Daily travel time

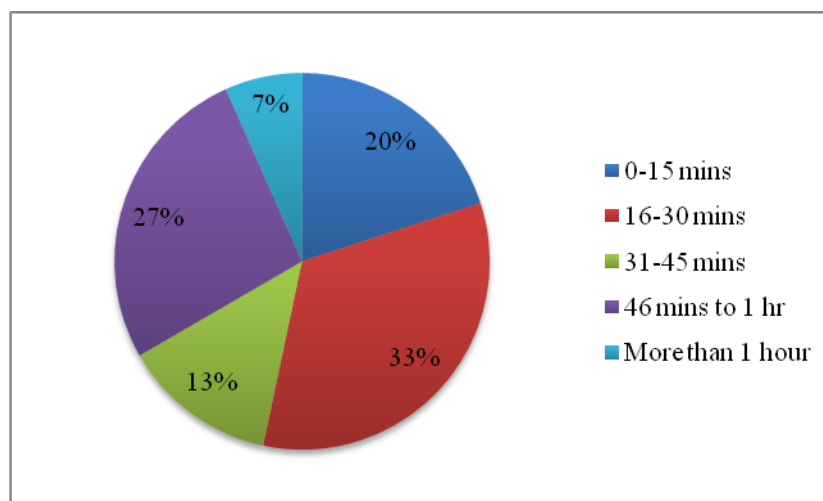
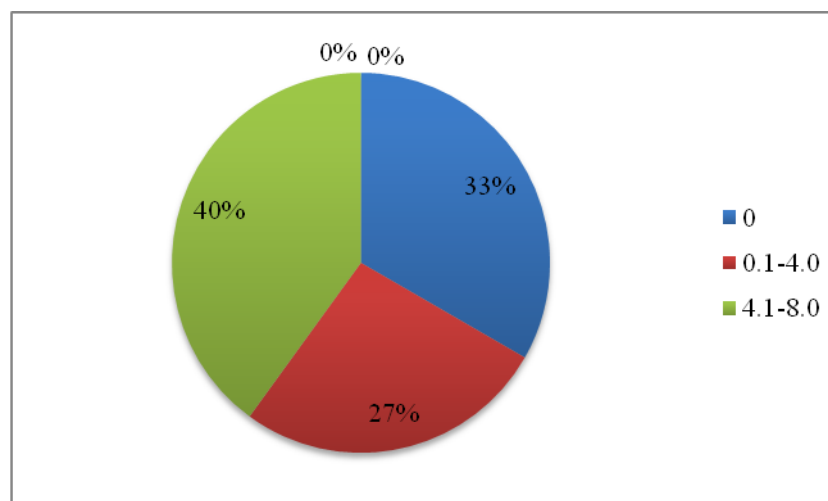


Figure 3.3.3: Daily travel cost (HK\$)



Most popular transport modes are walking (13 chosen) and bus (13), followed by MTR (8). The most common trip purposes are joining leisure activities, unpaid activities and visiting friends.

Bus is the most popular public transport among the interviewees. Interviewees reflected that the waiting areas at bus stations are not very decent. Many street facing shops put their products display stands on pedestrian road, leading to even narrower pedestrian road. Some people are forced to walk on the traffic road when the pedestrian road is too crowded, which can be very dangerous.

Bus stations located along the pedestrian road do not provide a decent environment for passengers. Interviewees reflected that many bus stops do not have shelter. They have to stand under the sun or in the rain. However, interviewees do not prefer having seats at bus stops, since they think seating in between the bust traffic and crowded pedestrian road will not be comfortable.

MTR is another commonly chosen mode of public transport by the interviewees. Interviewees usually choose to take MTR when they are attending certain activities. They take MTR when they want to have a better control on their traffic time. One interviewee mentioned about the lift at Shau Kei Wan Station. There is only one lift at the station. Once the interviewee took MTR with suitcases, but had to cross two traffic roads to the other side of the station for the lift, suggesting the station is sometimes not so accessible.

Tram is another important public transport on Hong Kong Island. Interviewees only prefer taking the tram at night, in order to avoid traffic jam. Interviewees also said it is too hot and uncomfortable to take a tram without air-conditioning in summer daytime.

Focus group interviewees discussed about the effectiveness of the Transport Fare Concession Scheme for the Elderly. One interviewee thinks the most significant change after qualifying for the concession fare is being able to try more bus routes without caring about the bus fare. He can jump onto any bus, including the cross-harbour routes which the full fare cost over \$10, and ride for only a very short distance. Another focus group participant agrees the concession fare encourages elderlies to go out more and travel outside their communities. She is more willing to take public transport whenever and wherever she wants to go. The public transport fare no longer limits her daily activity area within Eastern District. Other focus participants took MTR as an example as well. The trip from Shau Kei Wan to Sheung

Shui takes over an hour but still cost only \$2. They are happy to be able to go anywhere in their free time without concerning the fare anymore.

Table 3.3.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (13.33%)	6 (40.00%)	7 (46.67%)
I am satisfied with my community.	0 (0%)	0 (0%)	2 (13.33%)	7 (46.67%)	6 (40.00%)

Interviewees showed a high sense of belonging to the community and are satisfied with the community. In the question “I think I am part of the community”, six (40%) of them answered “Agree” and seven of them answered “Strongly Agree”. In the question “I am satisfied with my community”, seven (47%) of them answered “Agree” and six (40%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.3.3 presents the interviewees’ levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Eastern District has higher means of satisfaction levels with MTR, bus and minibuses systems. The levels of satisfaction with walking and tram system are similar to that of Hong Kong as a whole. The means of satisfaction with public transport and satisfaction with overall transport systems of the district are higher than that of Hong Kong as a whole. Elderly participants in the Eastern District are not frequent users of ferry and taxi systems and do not travel by bikes or private cars. The satisfaction levels were the highest for MTR and tram systems among the frequently used travel modes for this District. Although interviewees had opinions about the bus and MTR systems, from the statistics, elderly participants in the Eastern District are generally more satisfied with these two systems as compared to the Hong Kong data in general.

Table 3.3.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.23	3.21
Satisfaction with MTR System	3.74	3.37
Satisfaction with Bus System	3.62	3.47
Satisfaction with Minibus System	3.55	3.36
Satisfaction with Tram System	3.73	3.68
Satisfaction with Public Transport	3.65	3.45
Satisfaction with Overall Transport Use	3.47	3.36

Figure 3.3.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system as compared with those of Hong Kong as a whole

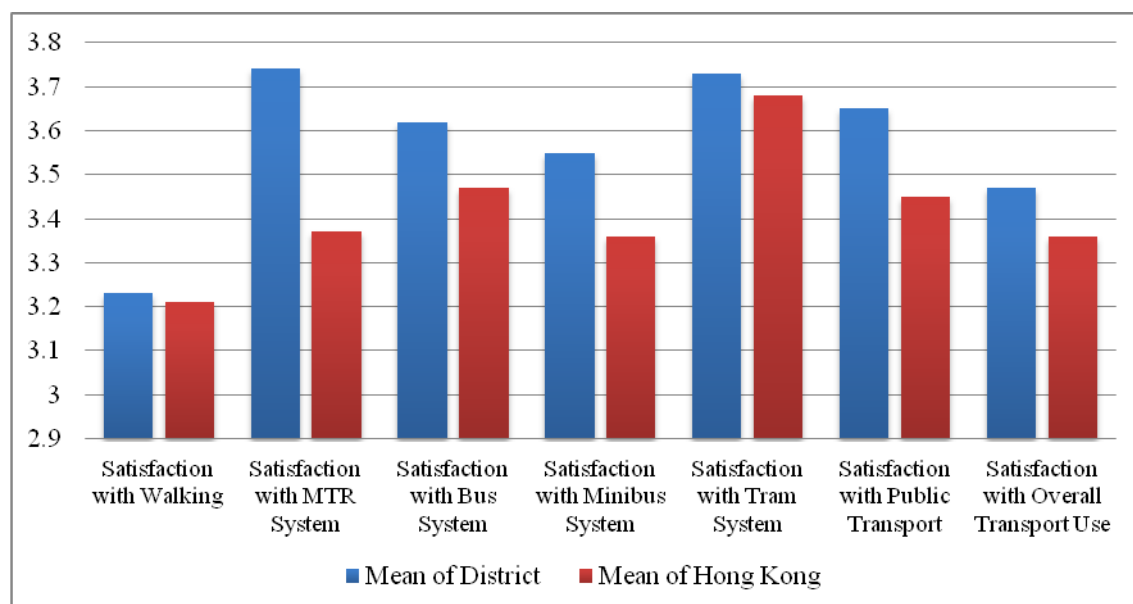


Table 3.3.4 presents the interviewees' levels of community participation of the participants living in the Eastern District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Eastern District joined fewer activities of community participation, and also have fewer overall hours of community participation than the Hong Kong generally. Elderly individuals in Eastern district generally have much longer hours for the entertainment activities. For sports activities, interest classes, and activities in the "Others" category, the district has lower means of community participation than those of Hong Kong in general.

Table 3.3.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.13	3.77
Community Participation: Total Activity Duration in hours (weekly) Overall	13.43	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	6.80	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.67	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.87	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	2.09	3.91

Table 3.3.5 presents the interviewees' levels of physical health and psychological well-being of the Eastern District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of psychological well-being to that of Hong Kong, but have lower levels of physical health compared to the general population in Hong Kong.

Table 3.3.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.37	2.97
Psychological Well-being	3.67	3.69

Table 3.3.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have higher levels of sense of community and satisfaction with community than those of Hong Kong, but have lower levels of overall social relationships. For social relationships, the mean of social relationships with family members of the district is higher than that of Hong Kong, while means of social relationships with friends and neighbours of the district are much lower than those of Hong Kong.

Table 3.3.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.07	7.51
Social Relationships (family)	8.40	8.29
Social Relationships (friends)	7.47	7.78
Social Relationships (neighbours)	5.33	6.50
Sense of Community	4.33	4.06
Satisfaction with Community	4.27	4.02

Table 3.3.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much lower than that of Hong Kong. However, in focus group interview, interviewees reflected that concession fare encourages elderlies to go out more and travel outside their communities and they are generally satisfied with the concessionary scheme. This part of data from qualitative and quantitative parts of the study do not match with each other

Table 3.3.7: Means of effectiveness of \$2 concessionary travel scheme.

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.13	7.06

Table 3.3.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is similar to that of Hong Kong, representing in general, the elderly individuals in the district travel alone as frequently as that of the general older adults living in Hong Kong.

Table 3.3.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.07	7.07

3.4 Southern District

Basic Information

Southern District has an area of 38.84 sq. km. The 2017 mid-year population of the district is 271,000. The population density is 6,980 persons per sq. km. (Census and Statistics Department, 2017c). The population has decreased by 0.1% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 15.7% of its whole population aged 65 and above. Southern District, together with Tai Po District and Sai Kung District, has the highest average household size of 3.0 persons (Census and Statistics Department, 2017a).

Southern District has been implementing a series of projects under the Hong Kong Plan of Action on Aging since 2008. The district then became a member of the WHO Global Network of Age-friendly Cities and Communities in 2016 (WHO, 2018).

Southern District is located on the southern part of Hong Kong Island, facing the Pacific Ocean. Main locations include Pok Fu Lan, Wah Fu, Aberdeen, Ap Lai Chau, Wong Chuk Hang, Shouson Hill, Repulse Bay, Chung Hom Kok, Stanley, Tai Tam and Shek O. Among that, Aberdeen, Wong Chuk Hang, Ap Lei Chau and Stanley have developed into an industrial, commercial and residential area. Shouson Hill, Repulse Bay and Chung Hom Kok are popular locations for luxury homes. A number of beaches and barbecue sites are located along the coastal area, famous ones include Deep Water Bay Beach, Turtle Cove Beach, Big Wave Bay Beach, etc.

Transport Systems

The District is linked up, from west to east, by Pok Fu Lam Road, Shek Pai Wan Road, Ap Lei Chau Bridge Road, Wong Chuk Hang Road, Island Road, Repulse Bay Road, Stanley Gap Road, Tai Tam Road, and Shek O Road. Route 1 connects Aberdeen to Sha Tin, starting from Aberdeen Praya Road and leave Southern District through Aberdeen Tunnel.

There are over 100 bus routes serving the district. Among that, 17 bus routes are cross harbour bus routes and 3 are residents' service routes. There are also almost 90 minibuses routes, which 62 of them are on scheduled services (green minibus), 9 are non-scheduled

services (red minibus) and 18 are residents' services. There are in total 37 bus termini and 41 minibus termini.

MTR South Island Line was opened in 2016. The new line serves the district with four stations, namely Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. Southern District is the last district to be covered by the railway service.

The government is continuing to develop Hong Kong's transportation system into a railway-based network. Railways are promoted as safe, efficient, reliable, comfortable and environmentally friendly mass carriers, accounting for about 41% of all trips made on public transport each day (Transport Department, 2017). In Southern District, after the opening of the South Island Line, the government is proposing to further reduce vehicle allocation in the district through the rationalization of bus services (Transport Department, 2018a).

Findings from Interviews

The centre visited is Southern District Elderly Community Centre in Wong Chuk Hang. The centre is located on the ground floor of South Wave Court. The interview was conducted on 9th April 2018. Fourteen interviewees participated in the questionnaire section and among that, four of them also participated in the focus group discussion. Ten (71%) out of fourteen interviewees live near the elderly centre in Wong Chuk Hang, two (14%) in Ap Lei Chau, one (7%) in Shek Pai Wan, and one (7%) in Wah Fu.

Thirteen (93%) out of fourteen interviewees are female, and a majority of them are over 80 years old. All interviewees are no longer working as full-time or part-time. Except one (7%) interviewee who is home-maker, other retired interviewees mainly retired between the age of 60 to 65 years old. In the question "Do you think retirement caused the financial burden to yourself and your family?", four (16%) of the interviewee answered "Strongly Agree". Also in the question "Do you think retirement caused social pressure to yourself and your family?", five (39%) of the interviewees answered "Strongly Agree". According to the focus group discussion, the reason for feeling financial and social pressure after retirement is mainly due to their health problems. One interviewee says it is demanding taking care of her husband who needs long-term care. Another interviewee is a wheelchair user. She claims that the city design is not very wheelchair user-friendly, which limits the places she can go.

Eleven (79%) out of fourteen interviewees are living alone. Their monthly incomes are mainly below \$4,000, relying on the Old Age Allowance Scheme from the government. Many of the interviewees are living in the housing estates near the elderly centre, for instance South Wave Court and Broadview Court, which are both Home Ownership Scheme Courts.

According to **Table 3.4.1**, most popular transport modes are walking (13 chosen) and bus (13), followed by MTR (8) and minibus (6). **Figures 3.4.1 to 3.4.3** also show their main trip purpose, daily travel time, and their daily travel cost.

One of the focus group interviewees, as a wheelchair user, talked about her travel pattern. She has to go to Ap Lei Chau, Causeway Bay, or Wan Chai for shopping since the market in Aberdeen is not wheelchair accessible. She prefers taking MTR because most stations are equipped with lifts and Wheelchair Aids. Wheelchair users taking bus still need assistant from bus drivers, leaving the driver's seat to lower the ramp for wheelchairs to board or alight. She says most bus drivers are friendly and willing to help. However as a passenger she does not want to bother the driver and other passengers

Other focus group participants who have to walk to the MTR station complained about the poor pedestrian road walkability between the elderly centre and Wong Chuk Hang Station. The station is not located close to the residential area. They have to walk for around 20 minutes uphill along Nam Long Shan Road from the station to the centre. Also they talked about the wayfinding signage at the station. The signage is wordy and has very few icons. Interviewees who are unable to read may encounter difficulties finding their way.

Table 3.4.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	13 (92.9%)	8 (57.1%)	13 (92.9%)	6 (42.9%)	0 (0%)	2 (14.3%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.4.1: Main trip purpose(s)

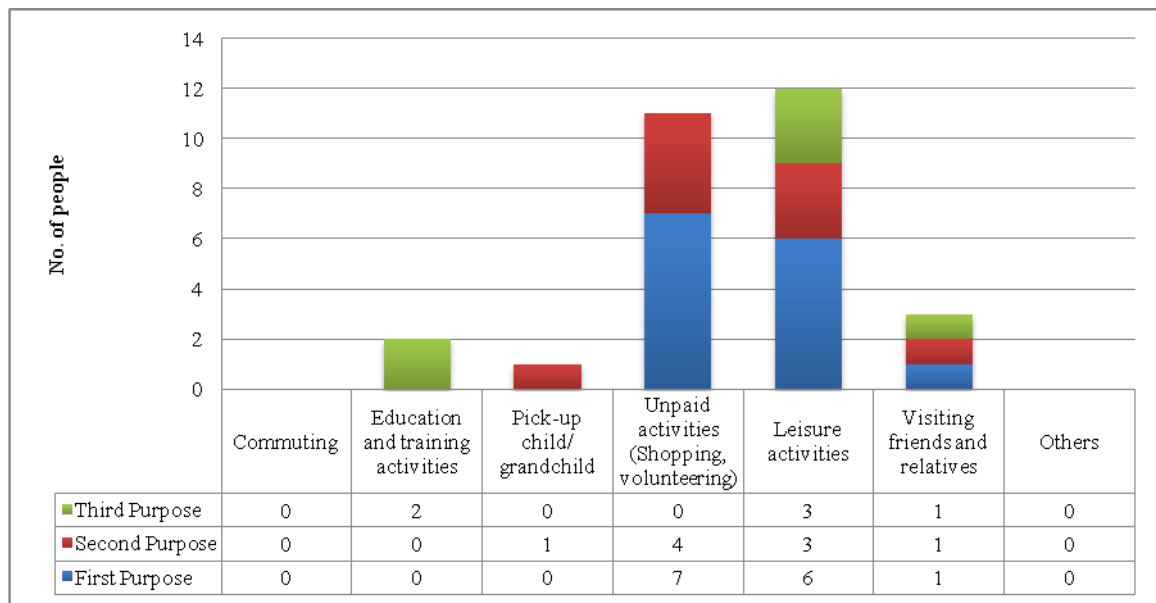


Figure 3.4.2: Daily travel time

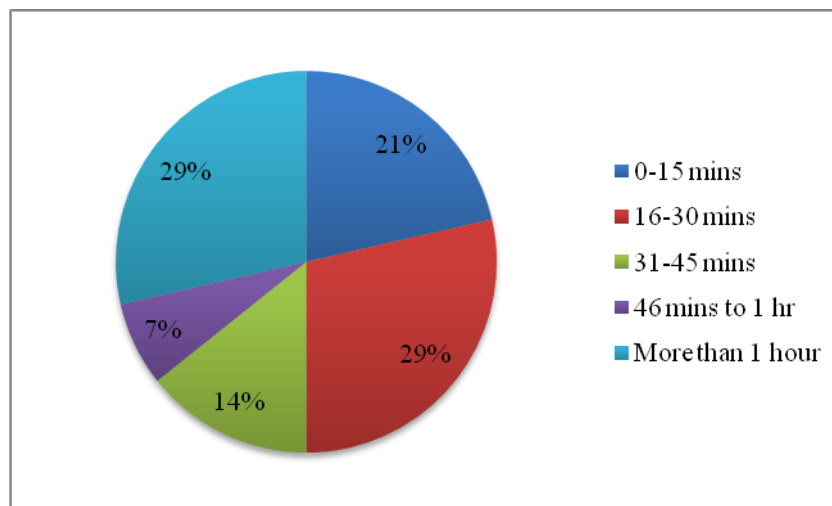


Figure 3.4.3: Daily travel cost (HK\$)

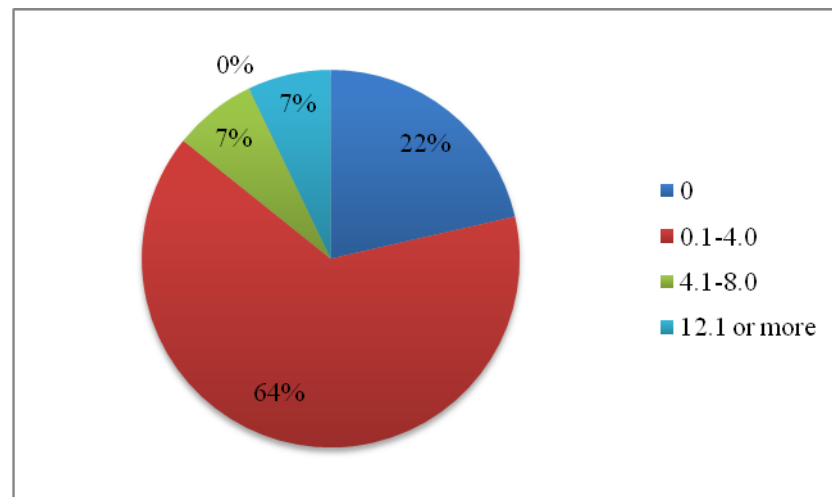


Figure 3.4.4: Nam Long Shan Road outside Wong Chuk Hang Station (photo taken by Tang)



Table 3.4.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belonging to the community and are satisfied with the community. In the question “I think I am part of the community”, seven (50%) of them answered “Agree” and two (14%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, seven (50%) of them answered “Agree” and two (14%) of them answered “Strongly Agree”.

Table 3.4.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	5 (35.71%)	7 (50.00%)	2 (14.29%)
I am satisfied with my community.	0 (0%)	0 (0%)	5 (35.71%)	7 (50.00%)	2 (14.29%)

Statistics of Variables

Table 3.4.3 presents the interviewees’ levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Southern District has lower means of satisfaction levels with walking, MTR, bus and tram systems. The level of satisfaction with minibuss system is similar to that of Hong Kong as a whole. The means of satisfaction with public transport and satisfaction with overall transport systems of the district are lower than that of Hong Kong as a whole. Elderly

participants in the Eastern District are not frequent users of ferry and taxi systems and do not travel frequently by bikes or private cars. The satisfaction level was the highest for tram system among the frequently used travel modes for this District.

Table 3.4.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	2.76	3.21
Satisfaction with MTR System	3.11	3.37
Satisfaction with Bus System	3.16	3.47
Satisfaction with Minibus System	3.38	3.36
Satisfaction with Tram System	2.64	3.68
Satisfaction with Public Transport	3.29	3.45
Satisfaction with Overall Transport Use	3.09	3.36

Figure 3.4.5: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

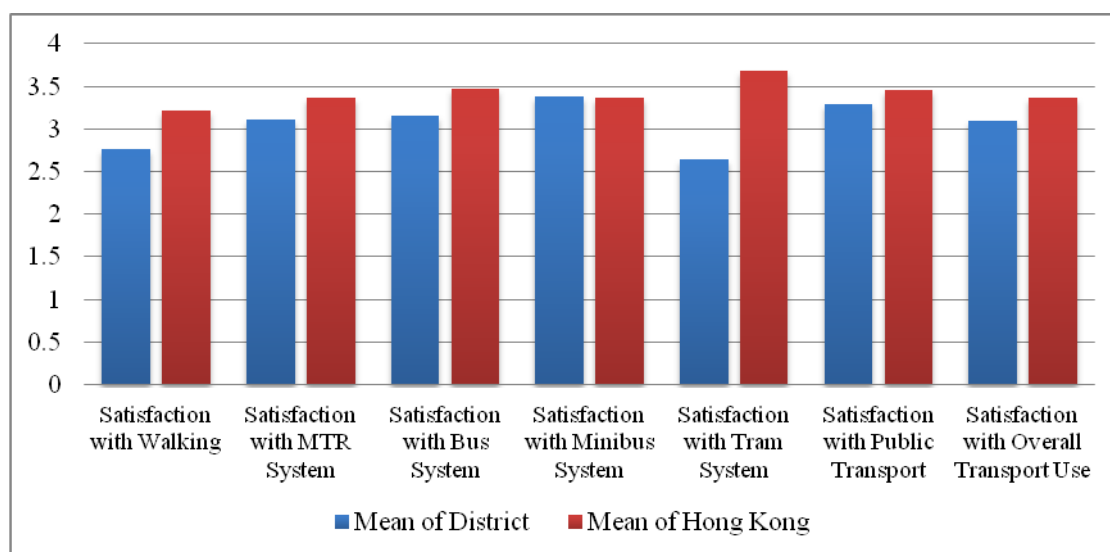


Table 3.4.4 presents the interviewees' levels of community participation of the participants living in the Southern District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Southern District joined fewer community activities than those of Hong Kong in general, and also have fewer overall hours of community participation than the Hong Kong generally. Elderly individuals in Southern district generally have much fewer hours for entertainment activities,

sports activities, interest classes, and activities in the “Others” category than those of Hong Kong in general.

Table 3.4.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	2.64	3.77
Community Participation: Total Activity Duration in hours (weekly)	10.24	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	3.02	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	4.15	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.00	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	3.31	3.91

Table 3.4.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.45	2.97
Psychological Well-being	3.33	3.69

Table 3.4.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have lower levels of sense of community, overall social relationships, and satisfaction with community than those of Hong Kong. For social relationships, the means of social relationships with family members, friends and neighbours were all much lower than that of Hong Kong, representing that participants living in the Southern District generally have poorer social relationships with community and family members than those of Hong Kong as a whole.

Table 3.4.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	6.71	7.51
Social Relationships (family)	7.43	8.29
Social Relationships (friends)	7.00	7.78
Social Relationships (neighbours)	5.71	6.50
Sense of Community	3.79	4.06
Satisfaction with Community	3.79	4.02

Table 3.4.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much lower than that of Hong Kong. Elderly participants in this district are generally satisfied with the concessionary travel scheme.

Table 3.4.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.36	7.06

Table 3.4.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is much higher than that of Hong Kong, representing in general, the elderly individuals in the district travel alone more frequently than that of the general older adults living in Hong Kong.

Table 3.4.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	8.14	7.07

3.5 Kowloon City District

Basic Information

Kowloon City District has an area of 10.02 sq. km. The 2017 mid-year population of the district is 417,800. The population density is 41,700 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 15.5% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 15.2% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Kowloon City District includes Kowloon Tong, Ho Man Tin, Kai Tak, To Kwa Wan and Hung Hom. After the closure of the Kai Tak Airport in 1998, the area is transforming into a huge metro area development project of over 320 hectares. The area will accommodate a mix of land use including housing, commercial, tourism and infrastructural uses.

Transport Systems

Two Mass Transit Railway lines, Kwun Tong Line and East Rail Line have stations within the Kowloon City District. There are only 3 stations in total but includes a busy transit hub, Kowloon Tong. The Shatin to Central Link, expected to commission in 2019, will add three new stations to the district, namely Kai Tak, Song Wong Toi and To Kwa Wan Stations.

There are over 60 bus routes serving the Kowloon City District. Among that, 5 bus routes are cross harbour bus routes, 13 are residents' service routes and 3 are cross-border coach. There are also over 50 minibuses routes, which 39 of them are on scheduled services (green minibus) and 3 are non-scheduled services (red minibus). There are in total 16 bus termini and 40 minibus termini.

Major roads Route 1, 5 and 7 run through Kowloon City District and as the middle part of the north-south corridor and east-west corridor. The only tunnel within the district is Kai Tak Tunnel, also known as the Old Airport Tunnel, connects To Kwa Wan and Kwun Tong.

Findings from Interviews

The Elderly centre visited is Senior Citizen Centre (Kowloon City) in To Kwa Wan. This centre is under Hong Kong Family Welfare Society. Target groups of the centre are Kowloon City residents aged 60 or above. The interview was conducted on 4th April 2018.

Fifteen interviewees took part in the questionnaire section, and among that, five of them also took part in the focus group discussion. Most of the interviewees are in their seventies. Thirteen (87%) of them live within 400m radius walkable distance (Azmi, et al., 2012) from the elderly centre, and the other two of them live within 500m air-distance from the centre. Eleven (73%) of them live in private housing, while four (27%) of them live in public rental housing. A majority of the interviewees are living on their own.

To Kwa Wan can be described as a pedestrian-friendly community with very few footbridges and subways. The community has two main traffic roads, Ma Tau Wai Road and To Kwa Wan Road. Ma Tau Wai Road mainly serves cross-harbour bus routes as part of the east Kowloon Corridor. To Kwa Wan Road runs through the industrial and residential area within To Kwa Wan. Buses and minibuses to Hong Kong Island, East Kowloon and East New Territories can be found along Ma Tau Wai Road. Going to West Kowloon and West New Territories, one can take buses and minibuses along To Kwa Wan Road. There is also ferry service between To Kwa Wan and North Point at Kowloon City Pier that operates with a 30-minute interval (First Ferry, 2018).

Figure 3.5.1: Kowloon City Pier (Photo taken by Tang)



Table 3.5.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	15 (100%)	4 (26.7%)	13 (86.7%)	8 (53.3%)	1 (6.67%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.5.2: Main trip purpose(s)

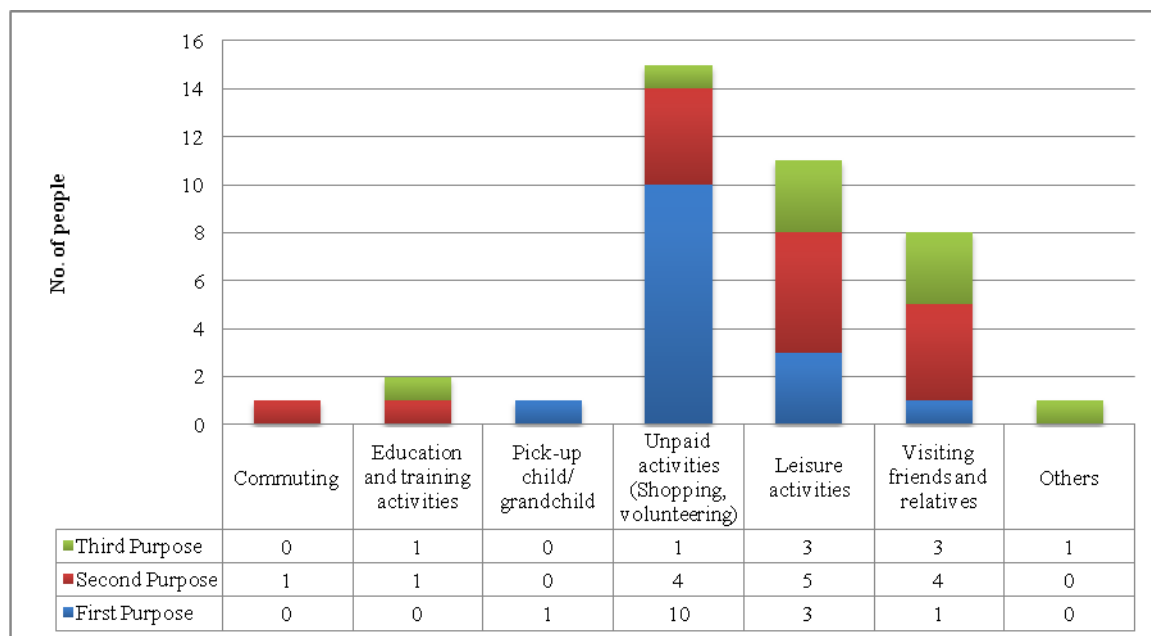


Figure 3.5.3: Daily travel time

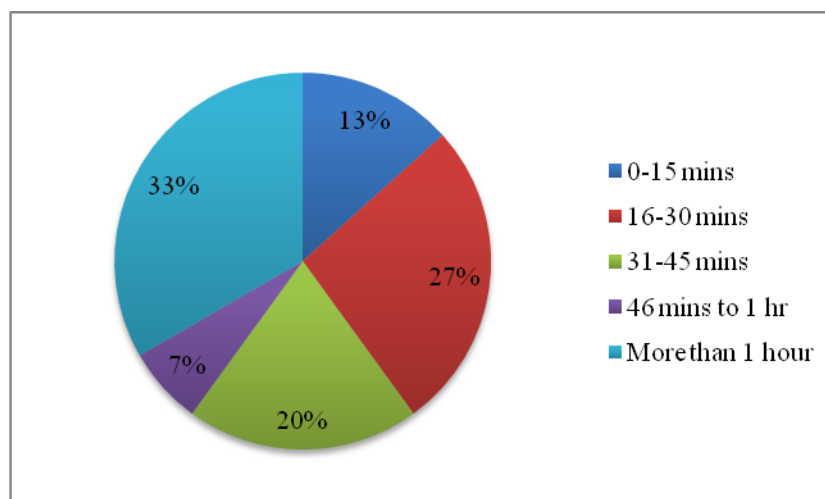
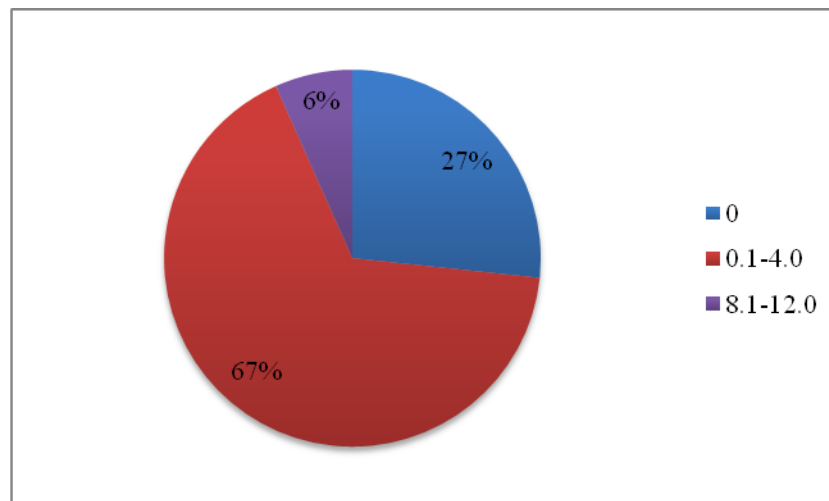


Figure 3.5.4: Daily travel cost (HK\$)



All interviewees selected walking as their frequently used transport mode, followed by bus (13) and minibus (8), as shown in **Table 3.5.1**. **Figures 3.5.2 to 3.5.4** also show their main trip purposes, daily travel time and daily travel cost.

Five interviewees who also took part in the focus group discussion selected buses and minibuses as their most used public transport modes. This can be explained by the absence of MTR service within To Kwa Wan. To Kwa Wan as a popular route for cross-harbour bus routes provides bus routes to Hong Kong Island, Kowloon and the New Territories. However, they reflected that it is faster to walk if they are going to destinations nearby, for example Kowloon Hospital.

All interviewees from the discussion group live near bus stops. It takes only less than 10 minutes for them to reach the nearest bus station from home. They usually take buses at off peak hours. One of them reflected that the “Automatic Bus Stop Announcement System” and the “Motion Bus stop Display Panel” (First Bus, 2013) do not work on some of the buses, making it very inconvenient to passengers. All of them do not use smartphone application for estimated time of arrival. They agreed that it would be much more convenient if the bus stops can all equip with “Real-time Bus Service Information Display Panel”, so that they do not have to stand at the bus stop waiting. They prefer spending the waiting time for casual shopping or finding a seat nearby, if the bus stop is not sheltered.

Figure 3.5.5: Example of “Automatic Bus Stop Announcement System” not working
(Oriental Daily, 2013)
(<http://orientaldaily.on.cc/cnt/news/20130118/photo/0118-00196-003b1.jpg>)



Some of the focus group participants also take minibus. They agreed that bus is safer than minibus in terms of speed. Minibuses speed up especially at night. They observed that some minibuses are not equipped with seat belts.

Other opinions towards different transport modes concern safety and convenience. Buses and minibuses have high steps, and some bus drivers do not stop close to the pedestrian road, making it difficult to board for elderly with walking difficulty. Taking MTR also involves a lot of walking from station entrance to platform. It is difficult to find escalators and lifts as well. They want to avoid the chance of going to exits with only stairs, since climbing up and down stairs is a difficult task for some of them.

Figure 3.5.6: Example of elderly with walking difficulty getting off a bus (The Sun Hong Kong, 2010)

(<http://the-sun.on.cc/cnt/news/20100718/photo/0718-00410-097b1.jpg>)



All the fifteen interviewees are retired. Most of them retired between the age of 60 to 65. Most of them do not think retirement causes social pressure to themselves and their families, but retirement allows them to spend more time on different activities and meeting new friends. Four (27%) out of fifteen answered “Strongly Agree” and seven (47%) answered “Agree” in the question “I think I am part of the community”. Two (13%) out of fifteen answered “Strongly Agree” and eight (53%) answered “Agree” in the question “I am satisfied with my community”.

Table 3.5.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	4 (26.67%)	7 (46.67%)	4 (26.67%)
I am satisfied with my community.	0 (0%)	0 (0%)	5 (33.33%)	8 (53.33%)	2 (13.33%)

Temporary traffic management schemes are happening on main traffic roads in To Kwa Wan due to the MTR Ma Tau Wai Station construction work. Some bus and minibus stops are relocated outside To Kwa Wan Market since March 2013 (MTR, 2013). Also, sightseeing tours and their large coaches are said to create traffic jam and other potential danger within the district (HK01, 2017; Inmedia, 2017; DAB, 2017). Increased potential danger to

pedestrians will affect the walkability within the district. Increased number of coaches and traffic jam also affect the air quality and noise level. A community overcrowded with tourists is also unhealthy as this may affect residents' daily life.

Figure 3.5.7: Temporary Traffic Management Scheme on Ma Tau Wai Road (Photo taken by Tang)



Figure 3.5.8: Relocation of bus stops on Ma Tau Wai Road (Photo taken by Tang)



Figure 3.5.9: Temporary traffic management scheme in To Kwa Wan (Photo taken by Tang)



Statistics of Variables

Table 3.5.3 presents the interviewees' levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Kowloon City District has lower means of satisfaction levels with walking and MTR system. The levels of satisfaction with bus and minibus systems are higher than that of Hong Kong as a whole. Satisfaction with ferry system is similar to that of Hong Kong in general. The mean of satisfaction with public transport of the district is higher than that of Hong Kong as a whole, while satisfaction with overall transport systems is of similar level to Hong Kong in general. Elderly participants in the Kowloon City District are not frequent users of tram and taxi systems and do not travel frequently by bikes or private cars. The satisfaction level is the highest for ferry system among the frequently used travel modes for this District.

Table 3.5.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.09	3.21
Satisfaction with MTR System	3.27	3.37
Satisfaction with Bus System	3.66	3.47
Satisfaction with Minibus System	3.45	3.36
Satisfaction with Ferry System	3.75	3.80
Satisfaction with Public Transport	3.57	3.45
Satisfaction with Overall Transport Use	3.37	3.36

Figure 3.5.10: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

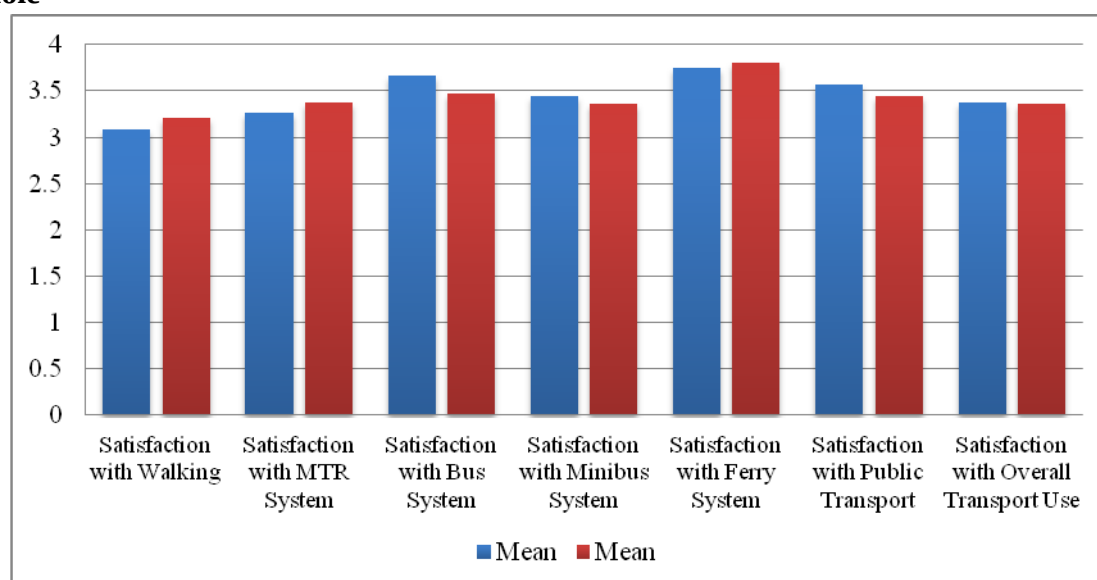


Table 3.5.4 presents the interviewees' levels of community participation of the participants living in the Kowloon City District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Kowloon City District joined many more community activities than those of Hong Kong in general, and also have much longer overall hours of community participation than the Hong Kong generally. Elderly individuals in Kowloon City district generally have much longer hours for entertainment activities, sports activities and interest classes than those of Hong Kong in general, but have fewer hours for activities in the "Others" category than that of Hong Kong generally.

Table 3.5.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	5.07	3.77
Community Participation: Total Activity Duration in hours (weekly)	21.49	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	7.57	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	10.30	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	1.18	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	2.62	3.91

Table 3.5.5 presents the interviewees' levels of physical health and psychological well-being of the Kowloon City District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have slightly lower levels of physical health and psychological well-being than that of Hong Kong.

Table 3.5.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.82	2.97
Psychological Well-being	3.67	3.69

Table 3.5.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have lower levels of satisfaction with community than that of Hong Kong, while having similar levels of sense of community, overall social relationships as compared to Hong Kong in general. For social relationships, the mean of social relationships with family members is higher than that of Hong Kong, while the means of social relationships with friends and neighbours are lower than the means of Hong Kong as a whole.

Table 3.5.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.49	7.51
Social Relationships (family)	8.93	8.29
Social Relationships (friends)	7.2	7.78
Social Relationships (neighbours)	6.33	6.50
Sense of Community	4.00	4.06
Satisfaction with Community	3.80	4.02

Table 3.5.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much higher than that of Hong Kong. Elderly participants in this district are generally satisfied with the concessionary travel scheme.

Table 3.5.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.80	7.06

Table 3.5.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing in general, the elderly individuals in the district travel alone more frequently than that of the general older adults living in Hong Kong.

Table 3.5.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.73	7.07

3.6 Wong Tai Sin District

Basic Information

Wong Tai Sin District has an area of 9.30 sq. km. The population density is 45,670 persons per sq. km. (Census and Statistics Department, 2017c). Wong Tai Sin District has a median age of 45 years old, which is highest among all districts. The district also has the highest percentage of elderlies. The population has increased by 0.4% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 17.6% of its whole population aged 65 and above. Wong Tai Sin district ranks the third in lowest median monthly household income at HKD\$22,600 (Census and Statistics Department, 2017a).

Wong Tai Sin District is named after the Wong Tai Sin Temple, Shrine of Red Pine Hill Deity. On the north side of the district are Lion Rock and Tate's Crain; and on the east side is the Kowloon Peak. The district is the only district in Hong Kong without a coastline. It is surrounded by four other administrative districts, which are Sha Tin, Sai Kung, Kwun Tong and Kowloon City. The district is mainly residential, with the Wong Tai Sin Temple and Chi Lin Nunnery as religious tourist attractions. Industrial buildings are mainly located in San Po Kong, eastern part of the district.

Transport Systems

There are over 70 bus routes in Wong Tai Sin District, among that, 13 are harbour crossing routes and 8 are residents' routes. There are also 50 minibuses in the district, including 41 scheduled services (green minibuses) and 9 non-scheduled services (red minibuses). There are 18 bus termini and 41 minibus termini in the district.

Two main routes run through the district. Route 2 connects Kowloon and Sha Tin via Kwun Tong Bypass and Tate's Cairn Tunnel. Route 7 connects East and West New Territories via Lung Cheung Road. MTR Kwun Tong Line serves the district with four stations, namely Lok Fu, Wong Tai Sin, Diamond Hill and Choi Hung respectively. The Shatin to Central Link, expected to complete in 2019, will serve the district with Diamond Hill Station. The existing station is being expanded and will become an interchange station for the two lines.

Findings from Interviews

The elderly centre visited is Caritas Tung Tau Elderly Centre, located in Tung Tau Estate. Tung Tau Estate is one of the 22 public housing estates in Wong Tai Sin District. Target groups of the centre are Wong Tai Sin residents aged 60 or above. The interview was conducted on 23rd March 2018.

Fifteen interviewees took part in the questionnaire section, and among that five of them also took part in the focus group discussion. Eleven (73%) interviewees are retired. Most of them retired between the age of 60 to 65. Thirteen (81%) interviewees live in public rental housing estates, nine (60%) of them live in Tung Tau Estate, where the centre is located. One (7%) of the interviewees lives in private housing estate 400m away from the centre, and one (7%) interviewee preferred not to disclose the home address.

Fourteen (93%) out of the fifteen interviewees selected bus as their frequently used transport mode, followed by walking (12) and minibus (11), as shown in **Table 3.6.1**. **Figures 3.6.1 to 3.6.3** also show their main trip purpose, daily travel time and cost.

Table 3.6.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	12 (80.0%)	8 (53.3%)	14 (93.3%)	11 (73.3%)	0 (0%)	0 (0%)	0 (0%)	1 (6.67%)	0 (0%)

Figure 3.6.1: Main trip purpose(s)

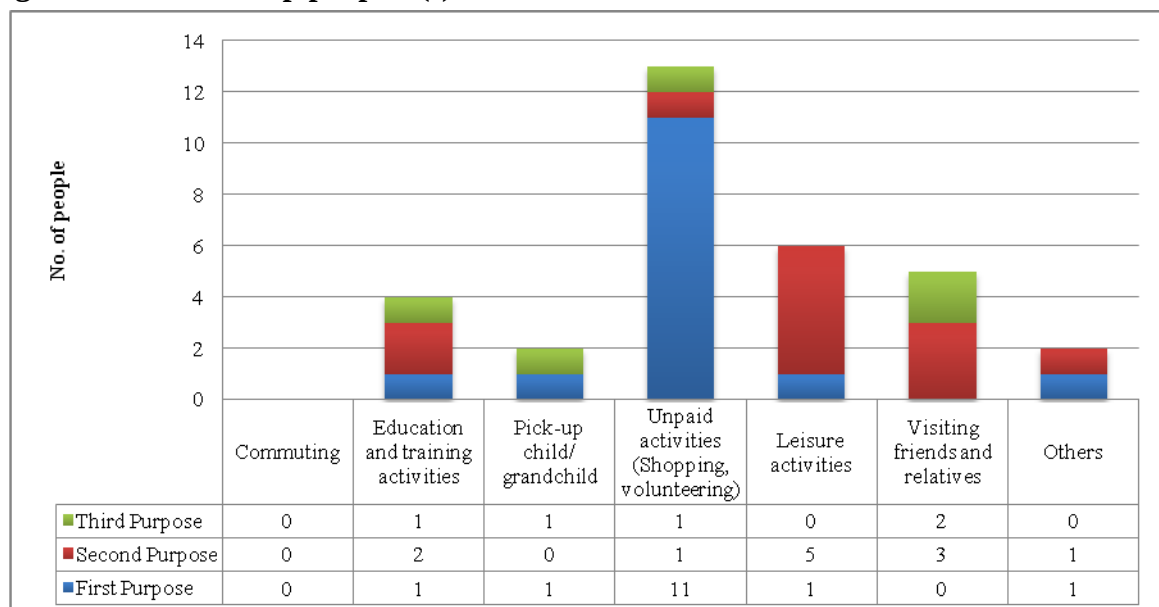


Figure 3.6.2: Daily travel time

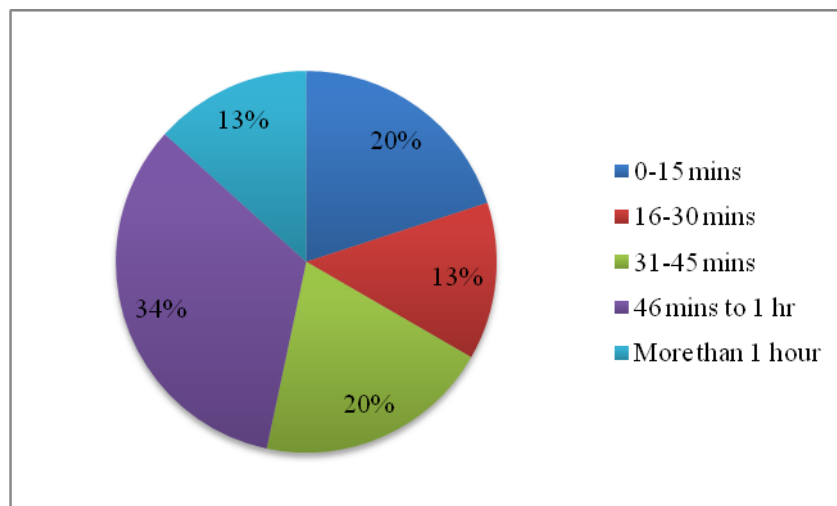
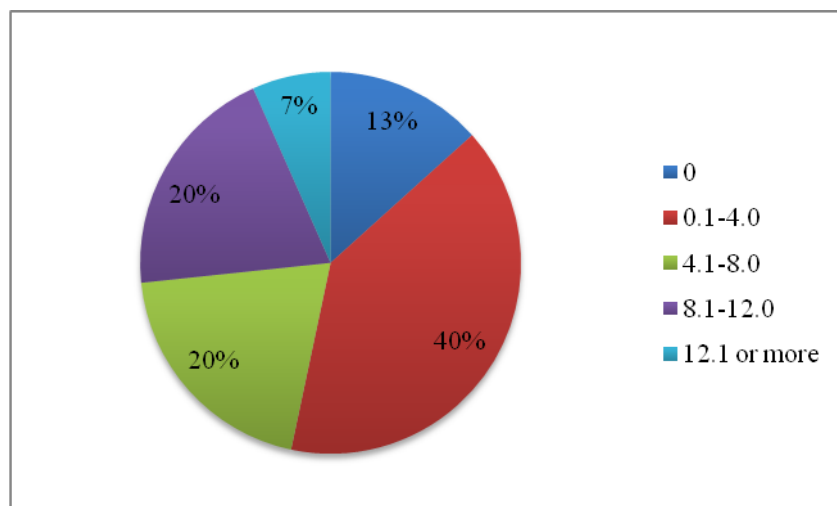


Figure 3.6.3: Daily travel cost (HK\$)



Four (80%) out of five interviewees who participated in the focus group discussion chose MTR as their preferred transport mode. One (20%) of them preferred taking bus. This could be explained by their walking distance from home to MTR or bus stations. MTR Wong Tai Sin Station is located about 500m north from the nearest building in Tung Tau Estate, and Lok Fu Station is located about 500m north-west from the estate as well. Even residents living on the south side of the estate might have to take more than 20 minutes to walk from their home to the nearest MTR station.

Residents walking to MTR Wong Tai Sin Station could take pedestrian road along Tung Tau Tsuen Road. Residents walking to Lok Fu Station usually take the route through Morse Park No.4 and Lok Fu Recreation Ground. Considering own safety, residents preferred taking bus at night instead of walking through the parks. Focus group participants reflected that

MTR station exits with lifts and escalators are difficult to find. It is also common to have exits with only upward-moving escalator, while others have to go down the stairs.

Focus group participants all agreed that the community is convenient in terms of public transport availability near the estate. Residents could choose from a number of bus routes which stop by at Tung Tau Estate. They usually choose to take bus during off-peak hours and when they do not have a tight schedule. Three (60%) out of five in focus group use smartphone application to check estimated time of arrival, but they prefer having the “Real-time Bus Service Information Display Panel” at bus stops. Another opinion towards bus waiting area was about the shelter design. Some covered bus stops are not large enough to keep wind and rain off passengers.

Residents could choose to take minibus 25M from Tung Tau Estate Bus Terminus to Kowloon Tong (Suffolk Road) Public Transport Interchange, and then interchange for MTR. There had been another minibus line 85 that had stop at Morse Park No. 2 and terminates at Festival Walk Public Transport Interchange. However, the line was replaced by 85B in March 2018. The new line still runs from Sun Po Kong to Kowloon Tong, but does not have stops in Wong Tai Sin and Lok Fu anymore. One focus group participate, who used to take 85 minibus often, said that the sudden disappearance of the minibus line is confusing and inconvenient. The information at minibus stops is not enough, and is always covered by advertisements and posters.

Figure 3.6.4: Bus Stop outside Tung Tau Estate (Google, 2016)

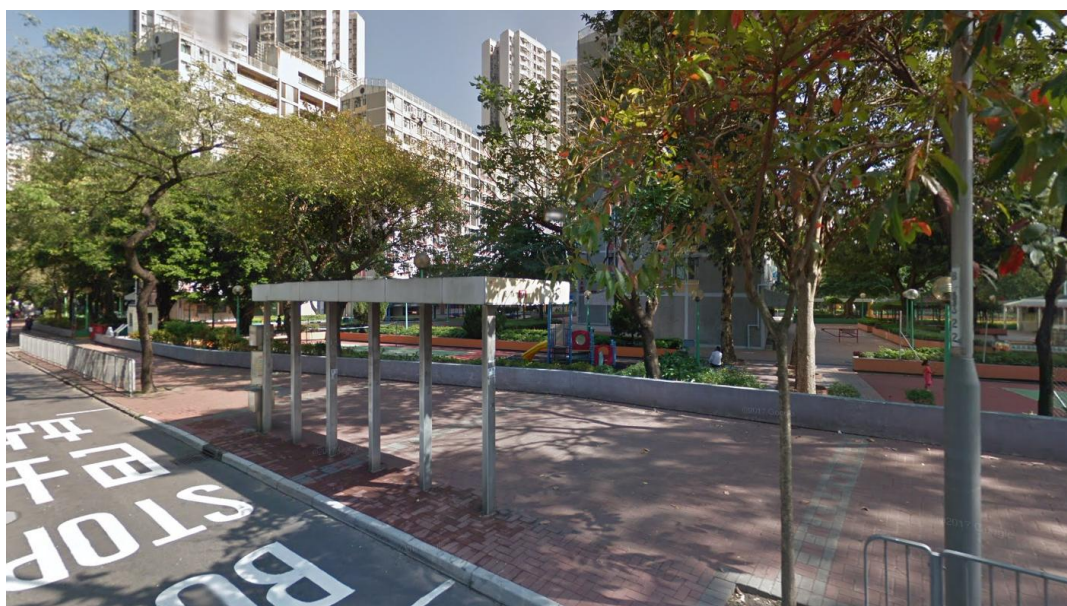


Figure 3.6.5: One of the entrances to Morse Park No. 4 (Google, 2016)



The community is relatively pedestrian friendly, with considerations that inside the public housing estates are mainly pedestrianised. Between building blocks there are covered walkways which can lead them to the amenities downstairs, such as the elderly centre.

Table 3.6.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	1 (6.67%)	12 (80.00%)	2 (13.33%)
I am satisfied with my community.	0 (0%)	0 (0%)	0 (0%)	11 (73.33%)	4 (26.66%)

Eleven (73%) out of fifteen interviewees are retired. Most of them retired between the age of 55 and 65. A majority of them disagreed that retirement causes social pressure to themselves and their families. There are several elderly centres in Wong Tai Sin and provide a great variety of activities to elderly of the district. Focus group participants are very satisfied with the centres and activities.

In the question “I think I am part of the community”, twelve (80%) out of fifteen answered “Agree”. In the question “I am satisfied with my community”, eleven (73%) out of fifteen answered “Agree”.

Statistics of Variables

Table 3.6.3 presents the interviewees' levels of satisfaction on the five frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Wong Tai Sin District has higher means of satisfaction levels with walking and MTR system. The levels of satisfaction with bus and minibus systems are of similar levels to the means of Hong Kong as a whole. Satisfaction with taxi system is lower than that of Hong Kong in general. The means of satisfaction with public transport of the district is similar to that of Hong Kong as a whole, while satisfaction with overall transport systems is slightly higher than that of Hong Kong in general. Elderly participants in the Wong Tai Sin District are not frequent users of ferry and tram systems and do not travel frequently by bikes or private cars. The satisfaction levels on the transport systems are of similar levels, except for the satisfaction with taxi system, it is the lowest among the frequently used travel modes for this District. The satisfaction level with public transport systems for elderly participants living in the Wong Tai Sin District is higher (i.e. higher than the score of three) and is similar to that of Hong Kong in general, which matches the results from focus group interview that participants all agreed that the community is convenient in terms of public transport availability near the estate and are generally satisfied with the public transport systems. Although focus group interviewees had opinions on bus system, the satisfaction level from the statistics is still high.

Table 3.6.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.32	3.21
Satisfaction with MTR System	3.45	3.37
Satisfaction with Bus System	3.47	3.47
Satisfaction with Minibus System	3.39	3.36
Satisfaction with Ferry System	2.60	3.30
Satisfaction with Public Transport	3.44	3.45
Satisfaction with Overall Transport Use	3.44	3.36

Figure 3.6.6: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

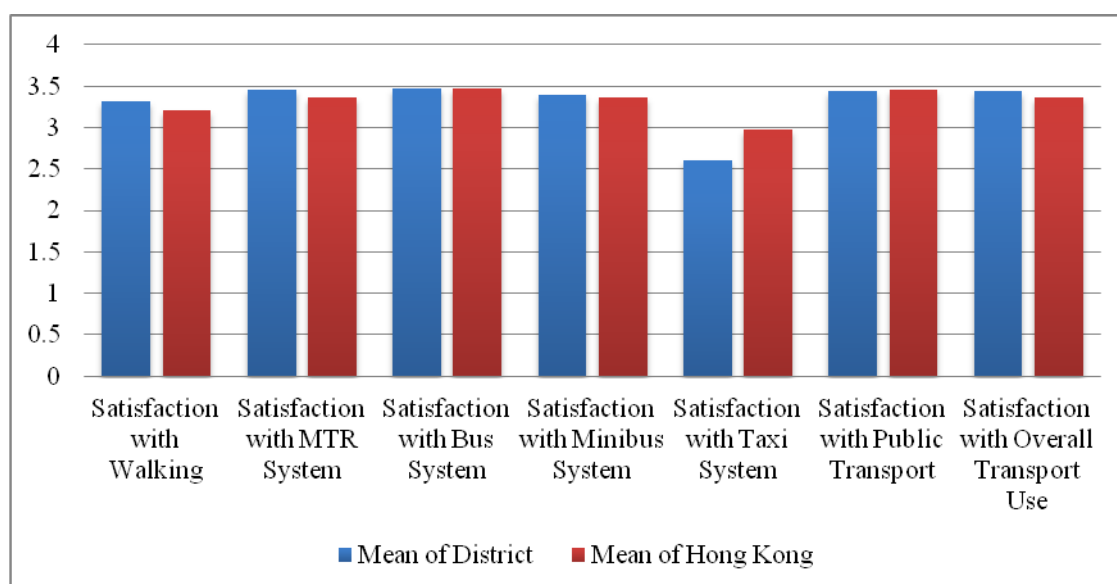


Table 3.6.4 presents the interviewees’ levels of community participation of the participants living in the Wong Tai Sin District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Wong Tai Sin District joined slightly more community activities than those of Hong Kong in general, but have fewer overall hours of community participation than the Hong Kong data generally. Elderly individuals in Wong Tai Sin district generally have slightly longer hours for the sports activities, but have slightly fewer hours for entertainment activities, interest classes and activities in the “Others” category than that of Hong Kong in general.

Table 3.6.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	4.20	3.77
Community Participation: Total Activity Duration in hours (weekly)	11.79	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	4.76	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	5.24	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.56	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	1.20	3.91

Table 3.6.5 presents the interviewees' levels of physical health and psychological well-being of the Wong Tai Sin District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have slightly lower levels of physical health but have similar levels of psychological well-being as compared to that of Hong Kong.

Table 3.6.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.77	2.97
Psychological Well-being	3.63	3.69

Table 3.6.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have higher levels of satisfaction with community than that of Hong Kong, while having similar levels of sense of community as compared to Hong Kong in general and having slightly lower level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members, friends and neighbours are all lower than the means of Hong Kong as a whole.

Table 3.6.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	6.93	7.51
Social Relationships (family)	7.53	8.29
Social Relationships (friends)	6.93	7.78
Social Relationships (neighbours)	6.33	6.50
Sense of Community	4.07	4.06
Satisfaction with Community	4.27	4.02

Table 3.6.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is slightly higher than that of Hong Kong. Elderly participants in this district are generally satisfied with the concessionary travel scheme.

Table 3.6.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.13	7.06

Table 3.6.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is slightly lower than that of Hong Kong, but is still higher than six, representing in general, the elderly individuals in the district travel alone frequently.

Table 3.6.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.93	7.07

3.7 Kwun Tong District

Basic Information

Kwun Tong District has an area of 11.27 sq. km. The 2017 mid-year population of the district is 669,400. The population density is 59,400 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 10.4% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 17.1% of its whole population aged 65 and above. The district has the lowest median monthly household income of HKD\$21,100 (Census and Statistics Department, 2017a). The district joined the WHO Global Network of Age-friendly Cities and Communities in 2017 (WHO, 2018).

Kwun Tong District is one of the industrial areas since 1950s. The district comprises area including Kowloon Bay, Ngau Tau Kok, Kwun Tong Town Centre, Sau Mau Ping, Cha Kwo Leng, Lam Tin and Lei Yue Mun. Large part of the district is reclaimed land, including Kowloon Bay, Kwun Tong Town Centre and Lam Tin.

Transport Systems

There are over 180 bus routes in the district, among that, 15 are harbour crossing routes, 18 are residents' routes and 11 are shuttle buses. There are also almost 100 minibuses in Kwun Tong District, including 59 scheduled services (green minibus) and 38 non-scheduled services (red minibus). There are 38 bus termini and 43 minibus termini in Kwun Tong District. MTR Kwun Tong Line and Tseung Kwan O Line serve the district with 5 stations, namely Kowloon Bay, Ngau Tau Kok, Kwun Tong, Lam Tin and Yau Tong.

Route 2, Route 5 and Route 7 are the main routes of the district. Route 2 connects Kai Koo Shing and Ma Liu Shui, through Lei Yue Mun Road and Kwun Tong Bypass. Route 5 connects Ngau Tau Kok and Tsuen Wan, starting from Kai Fuk Road. Route 7 connects Tseung Kwan O and Kwai Chung, through Tseung Kwan O Road, Kwun Tong Road and Lung Cheung Road.

Kwun Tong Public Pier and Kwun Tong Ferry Pier are located at Kwun Tong Typhoon Shelter. They provide services to Sai Wan Ho and North Point respectively. Sam Ka Tsuen Ferry Pier at Lei Yue Mun provides services to Sai Wan Ho and Tung Lung Chau.

Findings from Interviews

The centre visited is Sai Cho Wan Lutheran Centre for the Elderly - Kwun Tong, located next to Laguna Plaza in Lam Tin. The interview was conducted on 5th February 2018.

Twelve (80%) of the interviewees are female and three (20%) are male. All of the interviewees are at the age of 65 or above. One third (33%) of them are between 75 to 79 years old and another one third of them are 80 years old or above. Ten (67%) out of fifteen interviewees are retired, and the other five (33%) interviewees are home-makers. A majority of them retired between the age of 60 to 65. Fourteen (93%) out of fifteen interviewees are living within Kwun Tong District, and the other interviewee did not disclose the home address but is living in Yau Tsim Mong District. Three (20%) interviewees are living alone. Other interviewees are mainly living with their children and/or spouse. Five (33%) out of fifteen interviewees have monthly household income from \$8,000 to \$19,000, which includes the Old Age Allowance Scheme from the government and housekeeping money from other family members.

Table 3.7.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	14 (93.3%)	13 (86.7%)	15 (100.0%)	10 (66.7%)	1 (6.67%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.7.1: Main trip purpose(s)

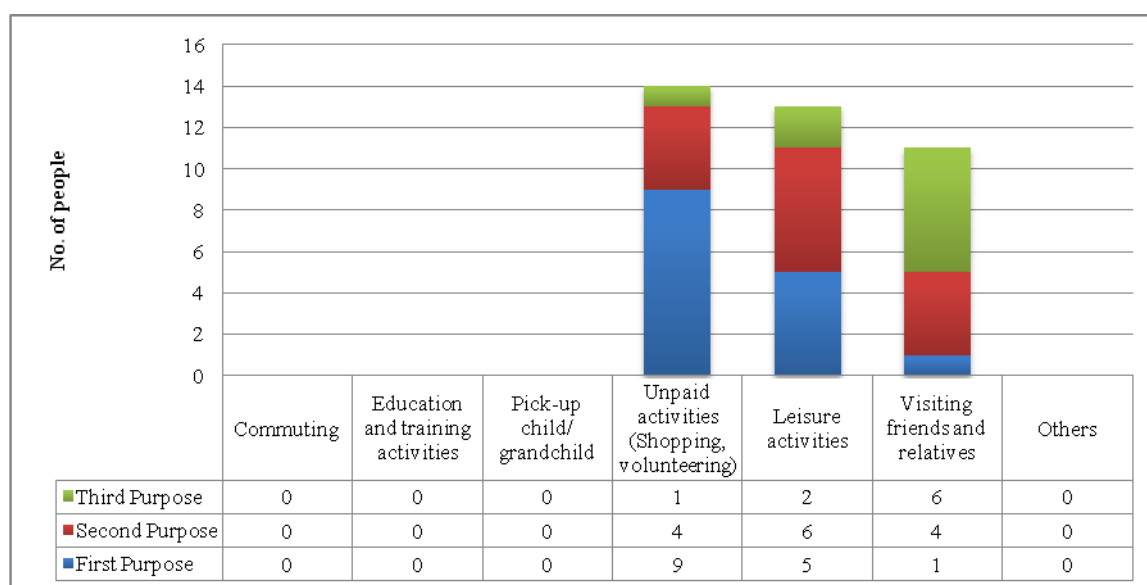


Figure 3.7.2: Daily travel time

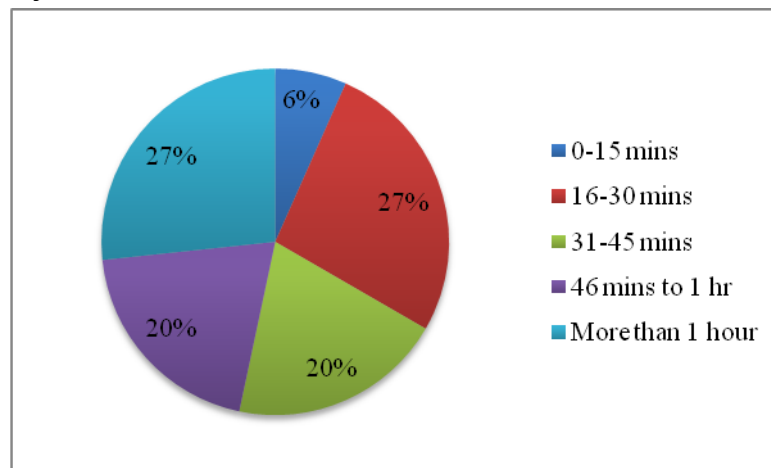
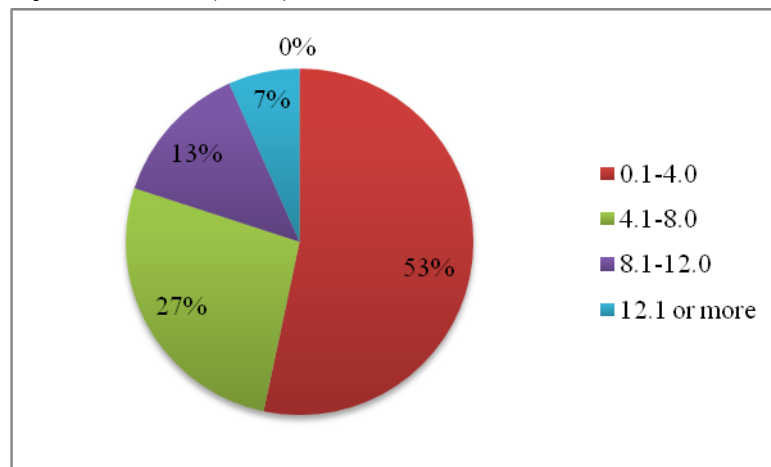


Figure 3.7.3: Daily travel cost (HK\$)



Most popular transport modes are bus (15 chosen), followed by walking (14) and MTR (13). The most common trip purposes are unpaid activities and leisure activities. Most of the interviewees are living very close to the elderly centre and only need a 10-minute walk to arrive at the centre. Therefore, over half of the interviewees spend less than \$4.0 per day on travel cost.

Focus group interviewees discussed about the traffic congestion in Kwun Tong District. Three of them complained about the prolonged nuisance to the residents caused by the situation. Time management is difficult for them even if they always go out almost half an hour earlier. One interviewee shared her experience which once she took 45 minutes to travel from Kowloon Bay to Kwun Tong due to traffic jam caused by a multi-vehicle accident. Another interviewee said it is common to wait for friends for over half an hour when they are coming to Kwun Tong by land transport. They agreed that MTR is more reliable in terms of

the guaranteed journey time. However, interviewees preferred point-to-point transport service and choose to take buses more often.

Table 3.7.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (13.33%)	9 (60.00%)	4 (26.67%)
I am satisfied with my community.	0 (0%)	1 (6.67%)	0 (0%)	10 (66.67%)	4 (26.67%)

In the question “I think I am part of the community”, respectively nine (60%) and four (26.67%) out of fifteen interviewees answered “Agree” and “Strongly Agree”. In the question “I am satisfied with my community”, respectively ten (66.67%) and four (26.67%) out of fifteen answered “Agree” and “Strongly Agree”.

Statistics of Variables

Table 3.7.3 presents the interviewees’ levels of satisfaction on the five frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Kwun Tong District has higher means of satisfaction levels with bus and minibus systems. The levels of satisfaction with walking, MTR and ferry systems are of similar levels to the means of Hong Kong as a whole. Satisfaction with taxi system is lower than that of Hong Kong in general. The means of satisfaction with public transport of the district and satisfaction with overall transport systems are similar to that of Hong Kong in general. Elderly participants in the Kwun Tong District are not frequent users of tram system and do not travel frequently by bikes or private cars. The satisfaction levels on ferry and bus systems were the highest among the frequently used travel modes for this District. Focus group interviewees agreed that MTR is more reliable in terms of the guaranteed journey time, and this high level of satisfaction matches the statistics from the quantitative part of the current study.

Table 3.7.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.20	3.21
Satisfaction with MTR System	3.32	3.37
Satisfaction with Bus System	3.59	3.47
Satisfaction with Minibus System	3.52	3.36
Satisfaction with Ferry System	3.75	3.30
Satisfaction with Taxi System	2.10	2.97
Satisfaction with Public Transport	3.44	3.45
Satisfaction with Overall Transport Use	3.39	3.36

Figure 3.7.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

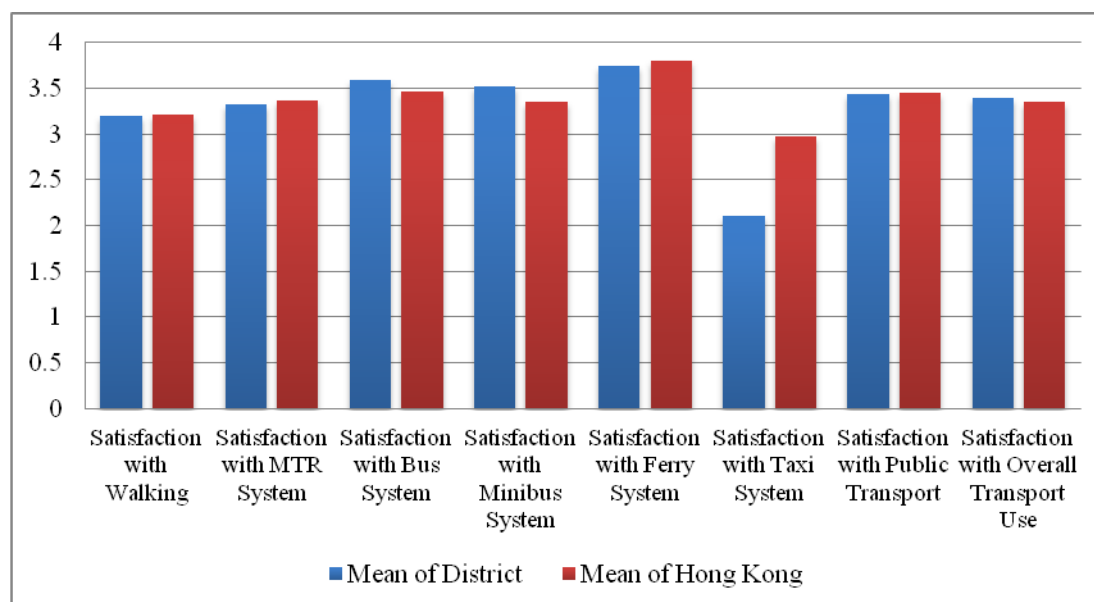


Table 3.7.4 presents the interviewees' levels of community participation of the participants living in the Kwun Tong District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Kwun Tong District joined much fewer community activities than those of Hong Kong in general, and have much fewer overall hours of community participation than the Hong Kong data generally. Elderly individuals in Kwun Tong district generally spent much fewer hours for entertainment activities, sports activities, interest classes and activities in the "Others" category than that of Hong Kong in general.

Table 3.7.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	2.67	3.77
Community Participation: Total Activity Duration in hours (weekly)	9.48	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	2.10	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	4.37	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.28	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	3.08	3.91

Table 3.7.5 presents the interviewees' levels of physical health and psychological well-being of the Kwun Tong District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of physical health and psychological well-being as compared to those of Hong Kong.

Table 3.7.5: Means of the levels of physical health and psychological well-being of participant

	Mean of District	Mean of Hong Kong
Physical Health	3.02	2.97
Psychological Well-being	3.71	3.69

Table 3.7.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have slightly higher levels of satisfaction with community and sense of community than those of Hong Kong, while having much higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members, friends and neighbours are all much higher for this district than the means of Hong Kong as a whole, representing that elderly participants in this district generally have better social relationships with family members and people in the community than the general population of Hong Kong.

Table 3.7.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	8.27	7.78
Social Relationships (family)	8.6	8.29
Social Relationships (friends)	8.67	7.78
Social Relationships (neighbours)	7.53	6.5
Sense of Community	4.13	4.06
Satisfaction with Community	4.13	4.02

Table 3.7.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is slightly lower than that of Hong Kong. Elderly participants in this district are generally satisfied with the concessionary travel scheme.

Table 3.7.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.93	7.06

Table 3.7.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is lower than that of Hong Kong, but still higher than six, representing in general, the elderly individuals in the district travel alone frequently.

Table 3.7.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.80	7.07

3.8 Yau Tsim Mong District

Basic Information

Yau Tsim Mong District has an area of 6.99 sq. km. The 2017 mid-year population of the district is 337,200. The population density is 48,230 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 22.3% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 14.8% of its whole population aged 65 and above. Yau Tsim Mong District, together with Wan Chai District and Sham Shui Po District, has the lowest average household size of 2.6 persons (Census and Statistics Department, 2017a). The concept of Age-Friendly Cities has been promoted in the district since 2011, preparing to become a member of the WHO Age-friendly Cities and Communities (WHO, 2018).

Yau Tsim Mong district is the smallest district in Hong Kong in terms of land area. The district was formerly Yau Tsim District and Mong Kok District before 1994. The district is situated in the southern part of Kowloon Peninsula. The district opens to the Yau Ma Tei Typhoon Shelter to the west and Victoria Harbour to the South. MTR East Rail Line separates the district from Kowloon City District to the east. Boundary Street separates the district from Sham Shui Po District to the north.

Transport Systems

The district is the focal point of the traffic arteries of the city. Major transport hub includes Hung Hom Station, Cross Harbour Tunnel, Western Harbour Crossing, Hong Kong China Ferry Terminal, Austin Road Cross Boundary Coach Terminus, etc.

MTR has 6 lines serving the district. Kwun Tong Line serves the district with 3 stations, namely, Yau Ma Tei, Mong Kok and Prince Edward Station. Tsuen Wan Line also stops at these three stations, together with Tsim Sha Tsui Station and Jordan Station. Tung Chung Line has Kowloon Station and Olympic Station, which Airport Express is also stopping at Kowloon Station. West Rail Line has two stations in the district, namely Austin Station, East Tsim Sha Tsui Station and Hung Hom Station, where passengers can transfer to East Rail Line. East Rail Line serves the district with Hung Hom Station and Mong Kok East Station. Hung Hom Station does not only serve the MTR system, it is also the terminus for the

Cross-border train to Mainland China. The Express Rail Link West Kowloon Terminus will be the terminus of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, opening in September 2018.

There are over 190 bus routes serving the district. Among that 8 bus routes are cross harbour bus routes, 5 are sightseeing bus routes and 7 are cross boundary coaches. There are also 90 minibus routes, which 50 of them are on scheduled services (green minibus) and 40 are non-scheduled services (red minibus). There are in total 32 bus termini and 23 minibus termini.

Main roads of Yau Tsim Mong District include Nathan Road, Jordan Road, Canton Road, Waterloo Road, Prince Edward Road West, Boundary Street, etc. Route 1, Route 3 and Route 5 are three main routes of the district. Route 1 connects Aberdeen to Sha Tin, through Hong Chong Road, Princess Margaret Road and Waterloo Road. Route 3 connects Sai Ying Pun to Yuen Long, through West Kowloon Highway. Route 5 connects Ngau Tau Kok to Tsuen Wan, through Chatham Road, Gascoigne Road and West Kowloon Corridor.

Findings from Interviews

The centre visited is The Mong Kok Kai Fong Association Chan Hing Social Services Centre on Fuk Tsun Street. The interview was conducted on 6th March 2018.

Fifteen interviewees participated in the questionnaire session and among that five interviewees also participated in the focus group discussion. Ten (67%) interviewees are female and five (33%) are male. Over half (53%) of them are 75 years old or above. All interviewees have a household size of 4 persons or less. Five (33%) out of fifteen interviewees are living alone. Others are living with their children and/or spouses. Over half (60%) of them have a monthly income less than \$4,000.

Table 3.8.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	12 (80.0%)	12 (80.0%)	11 (73.3%)	4 (26.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.8.1: Main trip purpose(s)

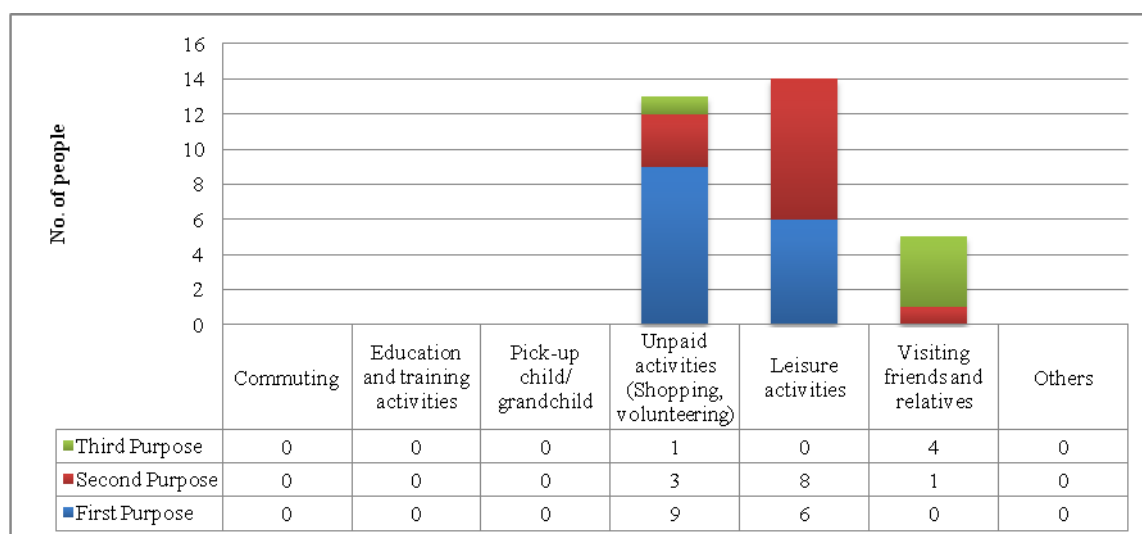


Figure 3.8.2: Daily travel time

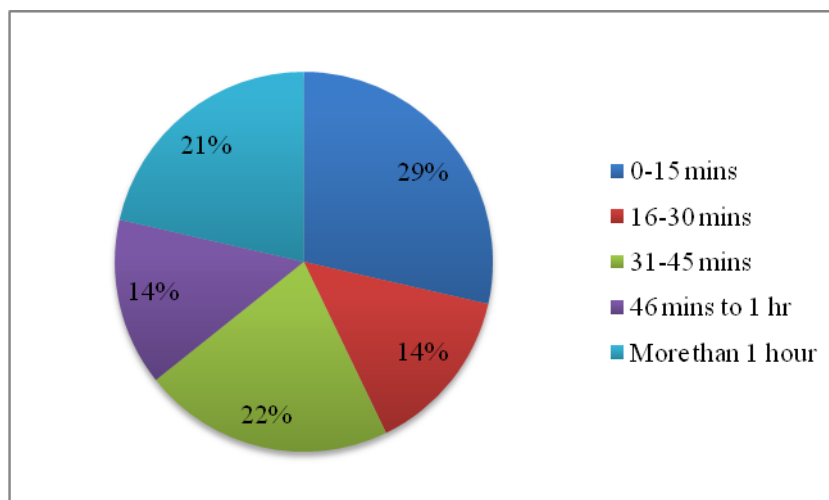
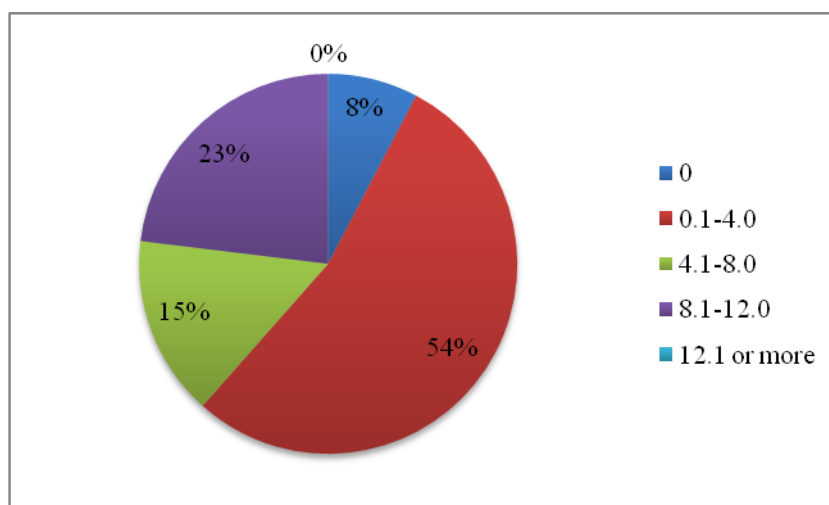


Figure 3.8.3: Daily travel cost (HK\$)



The most popular modes of transport are walking (12 chosen) and MTR (12), followed by bus (11) and minibus (4). The three most common trip purposes are leisure activities, unpaid activities, and visiting friends and relatives. Thirteen (87%) interviewees are over 65 years old and can enjoy the concessionary fare of \$2 per trip. Over half (62%) of the interviewees averagely spend less than \$4.0 per day for transportation. All interviewees are living in Yau Tsim Mong District. Since most of them are living in Tai Kok Tsui, they choose to walk to the centre.

Fourteen (93%) out of fifteen interviewees are retired, and one (7%) interviewee is home-maker. They mainly (79%) retired between the age of 55 to 65, and are all retired before 70.

Focus group interviewees discussed about the traffic congestion of the district. Not only is the land traffic very busy and crowded, the plan of MTR Mong Kok Station is also complicated. Interviewees walking to Mong Kok Station have to cross several traffic roads, which takes them some extra time to reach the station. Some interviewees prefer walking to Olympic Station. Olympic Station is further away from their home, but the footbridges provide a more enjoyable walking environment avoiding the busy traffic and polluted air.

Table 3.8.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (13.33%)	12 (80.00%)	1 (6.67%)
I am satisfied with my community.	0 (0%)	0 (0%)	2 (13.33%)	11 (73.33%)	2 (13.33%)

Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, twelve (80%) of them answered “Agree” and one (7%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, eleven (73%) of them answered “Agree” and two (13%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.8.3 presents the interviewees’ levels of satisfaction on the four frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Yau Tsim Mong District has higher means of satisfaction

levels with bus and minibus systems. The levels of satisfaction with walking and bus system are lower than the means of Hong Kong in general. Satisfaction levels with MTR and minibus systems are similar to those of Hong Kong in general. The means of satisfaction with public transport of the district and satisfaction with overall transport systems are lower than those of Hong Kong in general. Elderly participants in the Kwun Tong District are not frequent users of ferry, tram and taxi systems, and do not travel frequently by bikes or private cars. The satisfaction levels on MTR and minibus systems were the highest among the frequently used travel modes for this District. Although focus group interviewees from this district commented of the complicated design of MTR system in Mongkok, the mean of satisfaction level with MTR system in this district is still high and is similar to the overall satisfaction level of MTR system by Hong Kong residents in general.

Table 3.8.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.02	3.21
Satisfaction with MTR System	3.40	3.37
Satisfaction with Bus System	3.08	3.47
Satisfaction with Minibus System	3.38	3.36
Satisfaction with Public Transport	3.21	3.45
Satisfaction with Overall Transport Use	3.12	3.36

Figure 3.8.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

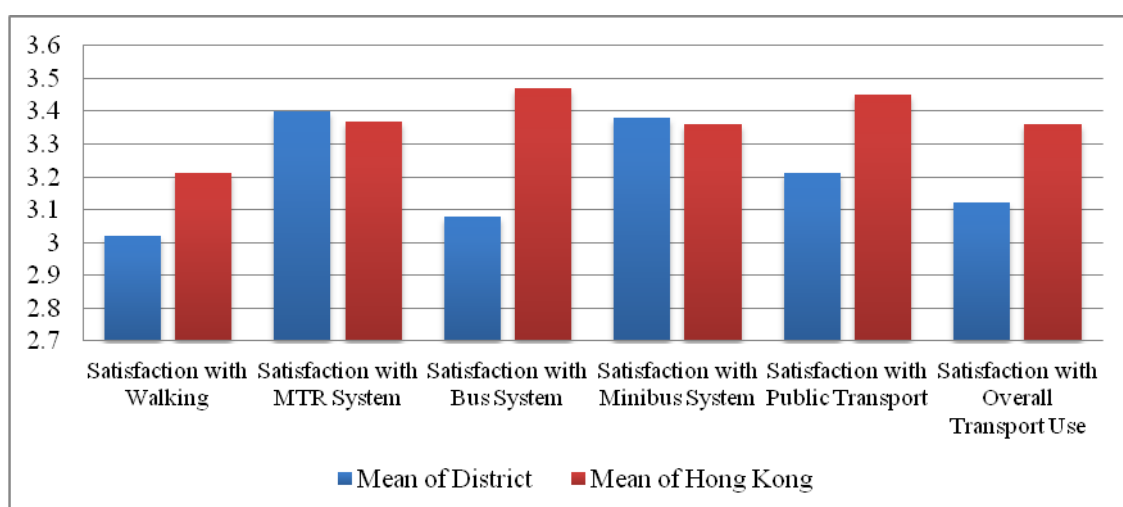


Table 3.8.4 presents the interviewees’ levels of community participation of the participants living in the Yau Tsim Mong District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Yau Tsim Mong District joined much fewer community activities than those of Hong Kong in general, and have much fewer overall hours of community participation than the Hong Kong data generally. Elderly individuals in Yau Tsim Mong district generally spent much fewer hours for entertainment activities, sports activities, interest classes and activities in the “Others” category than those of Hong Kong in general.

Table 3.8.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	2.67	3.77
Community Participation: Total Activity Duration in hours (weekly)	7.23	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	1.70	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	2.54	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.57	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	2.65	3.91

Table 3.8.5 presents the interviewees’ levels of physical health and psychological well-being of the Yau Tsim Mong District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have higher level of physical health and similar level of psychological well-being as compared to those of Hong Kong.

Table 3.8.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.38	2.97
Psychological Well-being	3.68	3.69

Table 3.8.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have slightly lower level of sense of community

than those of Hong Kong, while having similar levels of overall social relationships and satisfaction with community as compared the means of Hong Kong in general. For social relationships, the means of social relationships with friends and neighbours are higher for this district than the means of Hong Kong as a whole, representing that elderly participants in this district generally have better social relationships with people in the community than the general population of Hong Kong. The mean of social relationships with family members is slightly lower than that of Hong Kong overall data.

Table 3.8.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.60	7.51
Social Relationships (family)	8.00	8.29
Social Relationships (friends)	8.46	7.78
Social Relationships (neighbours)	7.15	6.50
Sense of Community	3.93	4.06
Satisfaction with Community	4.00	4.02

Table 3.8.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much higher than that of Hong Kong. Elderly participants in this district are generally highly satisfied with the concessionary travel scheme.

Table 3.8.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	8.87	7.06

Table 3.8.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is much lower than that of Hong Kong, representing in general, the elderly individuals in the district do not frequently travel alone and usually travelled with a companion.

Table 3.8.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	4.31	7.07

3.9 Sham Shui Po District

Basic Information

Sham Shui Po District has an area of 9.36 sq. km. The 2017 mid-year population of the district is 406,900. The population density is 43,480 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 11% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 15.4% of its whole population aged 65 and above. The district has the second lowest median monthly household income of HKD\$22,000, following Kwun Tong District. Sham Shui Po District, together with Wan Chai District and Yau Tsim Mong District, have the lowest average household size of 2.6 persons (Census and Statistics Department, 2017a).

Sham Shui Po literally means ‘deep water pier’. There was a Sham Shui Po Pier located at the junction of Tung Chau Street and Pei Ho Street, and was later relocated to Yen Chow Street. The pier provided ferry service until 1992. The coastline was pushed from Tung Chau Street to the Cheung Sha Wan Wholesale Market, and connected with the Stonecutters Island. Sham Shui Po District includes Mei Foo, Lai Chi Kok, Cheung Sha Wan, Sham Shui Po, So Uk, Shek Kip Mei, West Kowloon Reclamation Area and Stonecutters Island.

Transport Systems

Over 90 bus and 30 minibus routes provide services in Sham Shui Po District. There are 23 bus termini and 21 minibus termini in total. MTR Tsuen Wan Line, Tung Chung Line and West Rail Line serve the district with 5 stations, namely Sham Shui Po Station, Cheung Sha Wan Station, Lai Chi Kok Station, Mei Foo Station and Nam Cheong Station. Main traffic routes of the district include the West Kowloon Corridor, West Kowloon Highway Cheung Sha wan Road and Ching Cheung Road.

Findings from Interviews

The centre visited is Mr Kwok Hing Kwan Neighbourhood Elderly Centre, located in Hoi Lai Estate in Cheung Sha Wan. Target groups of the centre are Sham Shui Po residents aged 60 or above. The interview was conducted on 20th April 2018.

Most of the interviewees live in Hoi Lai Estate, which takes them less than 10 minutes walking to the elderly centre. The only two interviewees who live outside the estate are living in Liberté, a private housing estate nearby.

Fifteen interviewees participated in the questionnaire part, of which five of them also participated in the focus group discussion. Fourteen (93%) out of fifteen of them are 70 years old or above. Ten (67%) of the interviewees' marital status are separated/divorced/widowed, but most of them are living with their children or grandchildren. Only two (13%) out of the fifteen interviewees are living alone.

Table 3.9.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	13 (86.7%)	5 (33.3%)	9 (60.0%)	9 (60.0%)	0 (0%)	3 (20.0%)	0 (0%)	1 (6.67%)	0 (0%)

Figure 3.9.1: Main trip purpose(s)

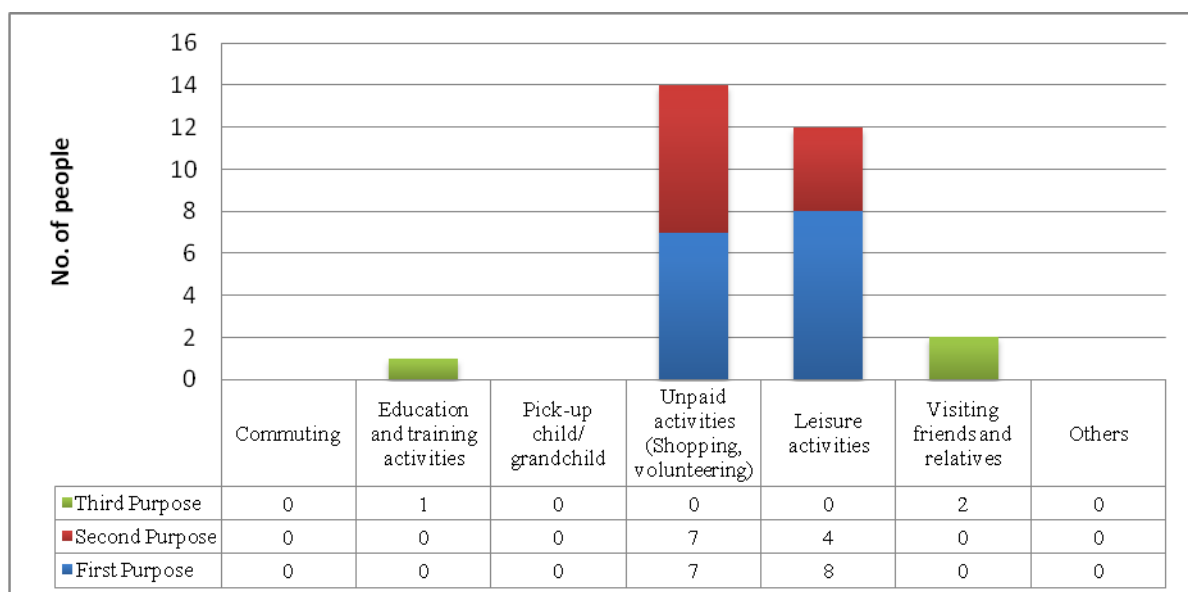


Figure 3.9.2: Daily travel time

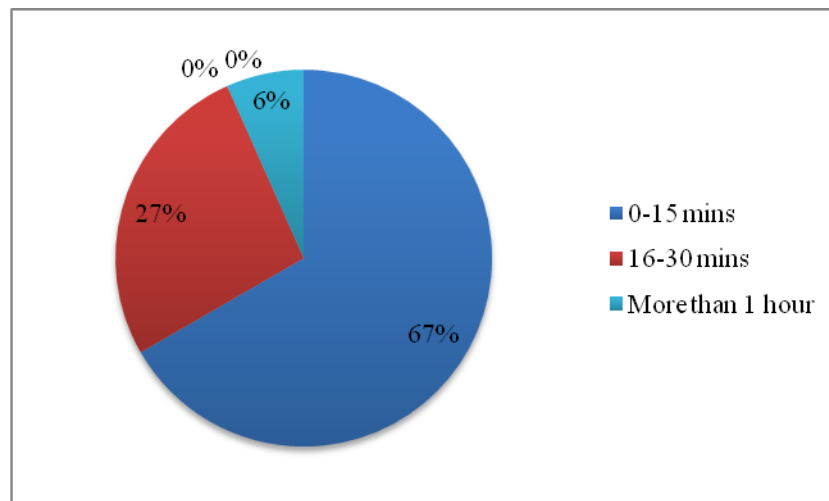
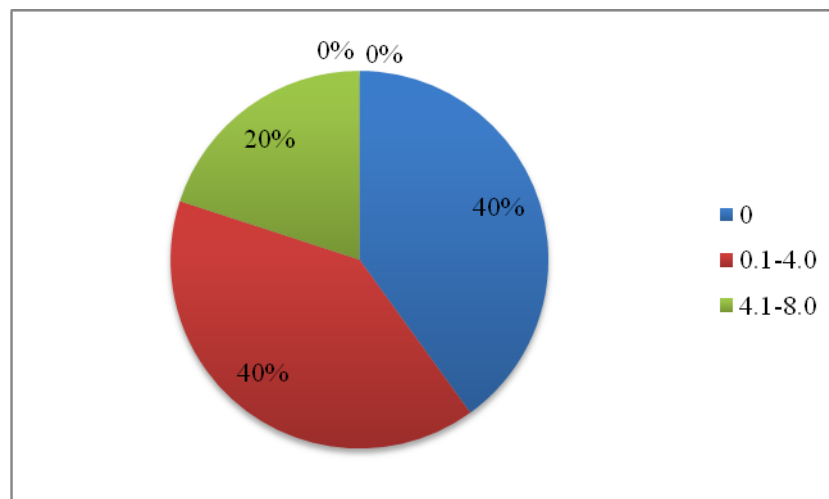


Figure 3.9.3: Daily travel cost (HK\$)



Common daily activities of the interviewees mainly include shopping in wet markets and visiting the elderly centre. Since there is no wet market in the estate, the interviewees have to go to the Sham Shui Po Market, Ki Lung Street, or So Uk Estate. They usually take bus to Sham Shui Po from the Hoi Lai Estate Public Transport Interchange.

The questionnaire shows a majority of interviewees preferring bus and minibus over MTR. The nearest MTR station is a 15 minute-walk from the estate. They have to walk pass a footbridge to Sham Shing Road, then take another footbridge or cross the road at a road crossing without traffic light. The shopping malls of the private housing estates along Sham Shing Road are connected, namely Banyan Mall, Liberté Place, and Pacifica Mall. After crossing the road they can enter the shopping mall walk to the MTR station through the

connected route. Those choose to take MTR instead of bus mentioned about interchanging within MTR stations being more convenient than the bus-bus interchange.

Those who choose to take bus mainly consider about convenience. Only 15 minutes is needed travelling to Sham Shui Po, including the time needed to walk to the bus stop. Even if they are travelling to Hong Kong Island, bus is still more convenient comparing to MTR, due to less line interchanges.

Eleven (73%) out of the fifteen interviewees are retired. Nine (60%) out of fifteen of the interviewees reported to have monthly household income between \$8,000 to \$39,999, which includes allowance from the government and housekeeping money from their children. Among the retired interviewees, four (36%) out of eleven of them find no financial burden after retirement, while three (27%) and one (9%) of them answered “Agree” and “Strongly Agree” separately in the question “Do you think retirement caused the financial burden to yourself and your family?”. In the question “Do you think retirement caused social pressure to yourself and your family?”, three (27%) and four (36%) of the interviewees answered “Disagree” and “Strongly Disagree” respectively, showing a majority of the them thinking retirement as a good chance to expend their social circle. The focus group interviewees all agree the best daily activities are joining activities and meeting friends in the elderly centre. Volunteering and joining interest classes make their daily life more meaningful and interesting.

Table 3.9.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (13.33%)	8 (53.33%)	5 (33.33%)
I am satisfied with my community.	1 (6.67%)	0 (0%)	0 (0%)	6 (40.00%)	8 (53.33%)

Table 3.9.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, eight (53%) of them answered “Agree” and five (33%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, six (40%) of them answered “Agree” and eight (53%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.9.3 presents the interviewees' levels of satisfaction on the six frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Shum Shui Po District has higher means of satisfaction levels with MTR, minibus, tram, and taxi systems. The levels of satisfaction with walking and bus system are similar to the means of Hong Kong in general. The means of satisfaction with public transport of the district and satisfaction with overall transport systems are similar to the overall Hong Kong statistics. Elderly participants in the Shum Shui Po District are not frequent users of ferry system, and do not travel frequently by bikes or private cars. The satisfaction level on tram system is the highest among the frequently used travel modes for this District.

Table 3.9.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.27	3.21
Satisfaction with MTR System	3.57	3.37
Satisfaction with Bus System	3.47	3.47
Satisfaction with Minibus System	3.50	3.36
Satisfaction with Tram System	4.09	3.68
Satisfaction with Taxi System	3.20	2.97
Satisfaction with Public Transport	3.52	3.45
Satisfaction with Overall Transport Use	3.40	3.36

Figure 3.9.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

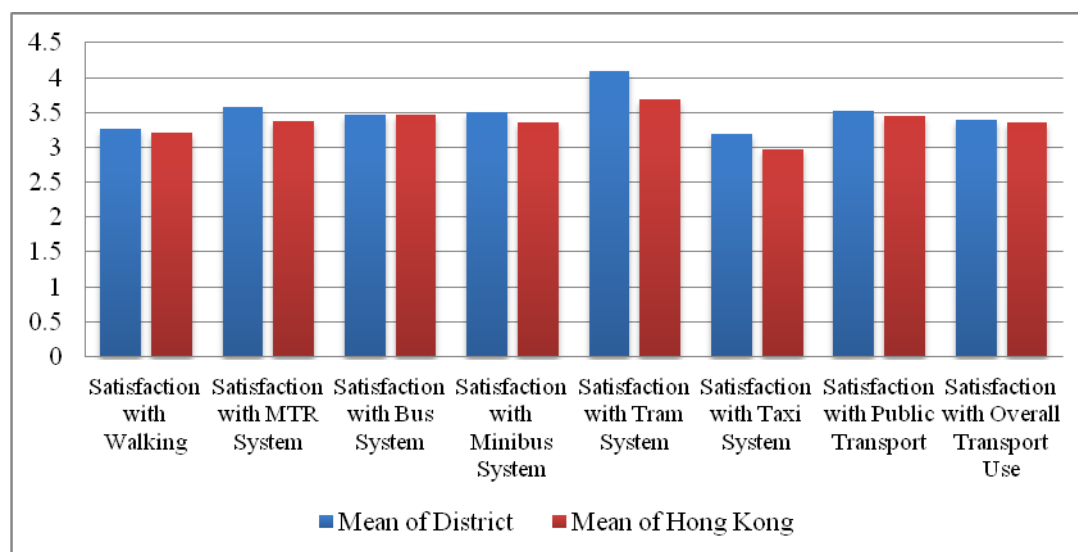


Table 3.9.4 presents the interviewees’ levels of community participation of the participants living in the Shum Shui Po District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Shum Shui Po District joined much fewer community activities than those of Hong Kong in general, but have much longer overall hours of community participation than the general Hong Kong data. Elderly individuals in Shum Shui Po district generally spent much longer hours for entertainment activities, and slightly longer hours for interest classes, as well as fewer hours for sports activities and activities in the “Others” category than those of Hong Kong in general.

Table 3.9.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	2.87	3.77
Community Participation: Total Activity Duration in hours (weekly)	21.99	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	14.06	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	4.14	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	1.29	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	0.87	3.91

Table 3.9.5 presents the interviewees' levels of physical health and psychological well-being of the Shum Shui Po District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of physical health and psychological well-being as compared to the those of Hong Kong.

Table 3.9.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.05	2.97
Psychological Well-being	3.76	3.69

Table 3.9.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have higher levels of sense of community and satisfaction with community than those of Hong Kong, while having lower level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members and neighbours are lower for this district than the means of Hong Kong as a whole. The mean of social relationships with friends is slightly higher than that of Hong Kong overall data.

Table 3.9.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.20	7.51
Social Relationships (family)	7.93	8.29
Social Relationships (friends)	7.93	7.78
Social Relationships (neighbours)	5.73	6.50
Sense of Community	4.20	4.06
Satisfaction with Community	4.33	4.02

Table 3.9.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much lower than that of Hong Kong. Elderly participants in this district are generally dissatisfied with the concessionary travel scheme with a mean of lower than five.

Table 3.9.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	4.71	7.06

Table 3.9.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is similar to that of Hong Kong, representing in general, the elderly individuals in the district frequently travel alone.

Table 3.9.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.00	7.07

3.10 Tsuen Wan District

Basic Information

Tsuen Wan District has an area of 61.94 sq. km. The 2017 mid-year population of the district is 317,100. The population density is 5,120 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 10.5% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 14.7% of its whole population aged 65 and above. The district has the lowest median monthly household income of HKD\$21,100 (Census and Statistics Department, 2017a).

“Tsuen Wan District Age-friendly Community Scheme” was initiated in 2013, and joined the WHO Global Network of Age-friendly Cities and Communities in 2015 (WHO, 2018).

Tsuen Wan District is situated in the western part of the New Territories. Tai Mo Shan and its ridge bounded the district to the north. It is also bounded by Tsing Lung Tao to the west and by Wo Yi Hop Road and Texaco Road to the east.

The District includes Tsing Lung Tau, Sham Tseng, Tsuen Wan Town Centre, Ma Wan and part of North Lantau Island. Part of Tai Tam, Shing Mun, and Tai Mo Shan Country Park are located in Tsuen Wan District. Tsuen Wan District acts as a connection between west New Territories and Kowloon, and also is a major link between Lantau Island and the urban area.

Tsuen Wan, as the first new town in Hong Kong, was first developed as an industrial area. Most of the factories are relocated to Mainland China in recent years, and the remaining industrial buildings have been adapted for other purposes. Tsuen Wan District has evolved into a residential and commercial area.

Transport Systems

There are over 130 bus routes serving the district. Among that, 6 bus routes are cross harbour bus routes and 38 are residents' service routes. There are also over 70 minibus routes, which 52 of them are on scheduled services (green minibus) and 20 are non-scheduled services (red minibus). There are in total 25 bus termini and 33 minibus termini.

MTR Tsuen Wan Line Serves the District with Tai Wo Hau and Tsuen Wan Station. West Rail Line serves the district with Tsuen Wan West Station. Tung Chung Line and Disneyland Line also serve the district with Sunny Bay and Disneyland Resort Station.

Route 3, Route 5, Route 8 and Route 9 run through the district. Route 3 connects Sai Ying Pun to Yuen Long, through Ting Kau Bridge and Tai Lam Tunnel as part of Tsing Long Highway. Route 5 connects Ngau Tau Kok to Tsuen Wan ending at Tsuen Wan Road. Route 8 connects Sha Tin to Chek Lap Kok, through Tsing Ma Bridge, Kap Shui Mun Bridge and North Lantau Highway as the Lantau Link. Route 9 is the New Territories Circular Road, with Shing Mun Tunnel Road, Cheung Pei Shan Road and Tuen Mun Road in Tsuen Wan District.

Findings from Interviews

The centre visited is Fong Yock Yee Neighbourhood Elderly Centre in Yan Chai Hospital Multi-services Complex in Tsuen Wan. Target groups of the centre are Tsuen Wan residents aged 50 or above. The interview was conducted on 21st February 2018.

Sixteen interviewees participated in the questionnaire session and among that four of them also participated in the focus group discussion. Eleven (69%) of the interviewees are living in the Tsuen Wan New Town, while four (25%) of them live near Lei Muk Shue and one (6%) lives near Tsuen King Circuit. Twelve (75%) interviewees are female and four (25%) are male. All interviewees are 65 years old or above. Thirteen (81%) interviewees are retired and three (9%) are home-makers. All interviewees retired before 65 years old and over half (62%) of them retired between the age of 60 to 65. Near half (46%) of the interviewees do not agree that retirement is causing social pressure to them and their families. They enjoy joining leisure activities and meeting friends. A few interviewees feel social pressure after retirement, mainly because of spending more time taking care of their grandchildren, which they think is more tiring than working. This may also limit their choice of leisure activities.

Near half (44%) of the interviewees are living in public rental housing estate, including Lei Muk Shue Estate, Tai Wo Hau Estate and Cheung Shan Estate. Other interviewees are living in private housing buildings or estates. Seven (44%) out of sixteen interviewees are living alone, other mainly live with their spouses and/or children. Over half (56%) of the interviewees have a household income below \$4,000, mainly relying on the government's

Old Age Allowance Scheme. Others who have higher monthly household income receive housekeeping money from their children.

Table 3.10.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	15 (93.8%)	9 (56.3%)	10 (62.5%)	6 (37.5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.10.1: Main trip purpose(s)

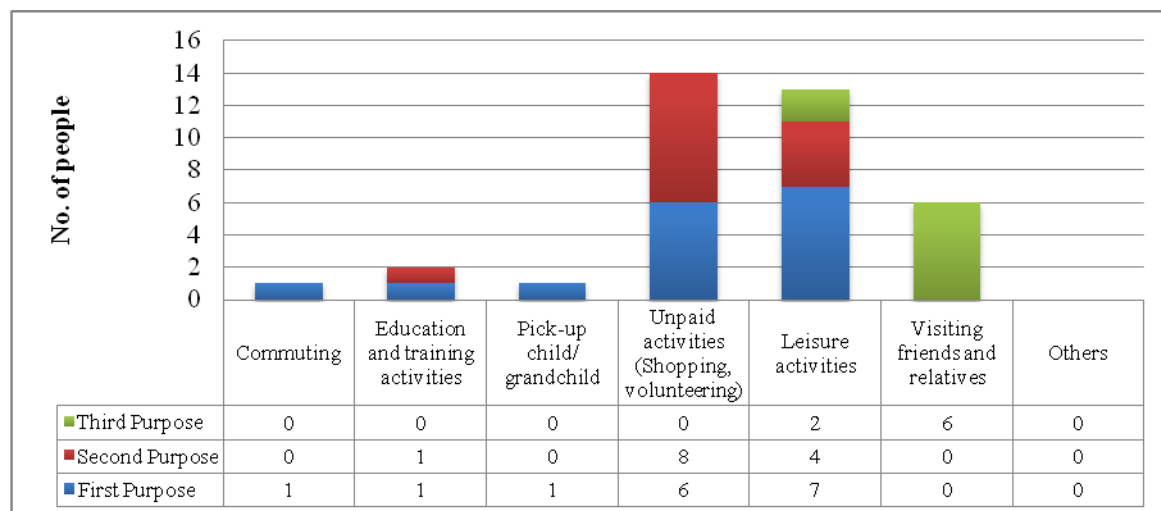


Figure 3.10.2: Daily travel time

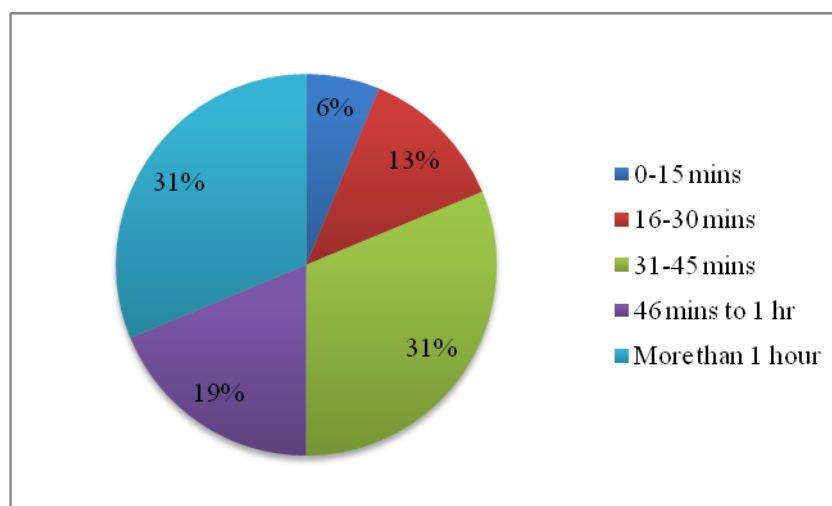
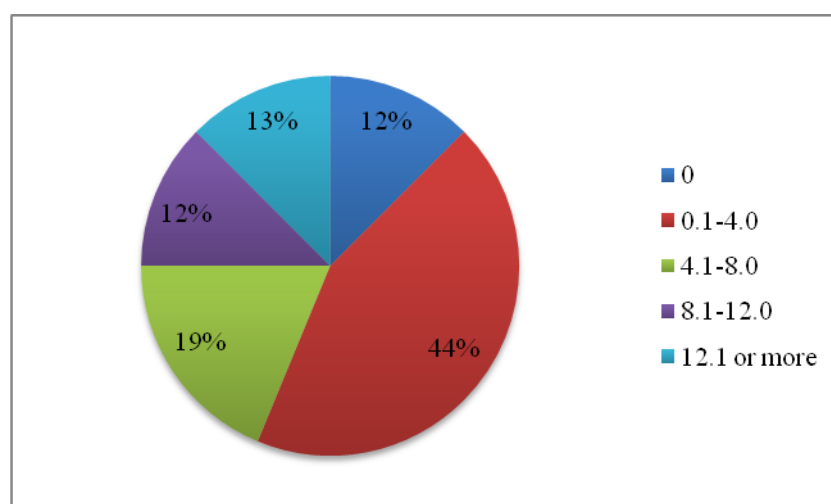


Figure 3.10.3: Daily travel cost (HK\$)



Most popular transport mode is walking (15 chosen), following by bus (10) and MTR (9). Their main trip purposes are unpaid activities and leisure activities. Five (31%) interviewees spend 31 to 45 minutes to reach their daily activity destination, where another five (31%) interviewee spend more than 1 hour. Since all interviewees are over 65 years old and can enjoy the concession fare, almost half (44%) of them spend only \$0.1 to \$4.0 per day on transportation.

One focus group interviewee mentioned her experience of taking \$2.0 bus trips to Tsim Sha Tsui Promenade to visit the Christmas lights in December. She thinks cheap bus trips like this helped her feel festive and was a very good way to keep oneself active and in good spirit.

Focus group interviewees also discussed about the safety concern of the priority seats on buses. Priority seats are located near the bus door, for the convenience of passengers getting off the bus. However, the seats are not equipped with seat belts. Interviewees worry about getting hurt when the bus stops suddenly (Oriental Daily News, 2016).

Table 3.10.2: Sense of Belonging and Satisfaction to the Community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	1 (6.25%)	1 (6.25%)	1 (6.25%)	11 (68.75%)	2 (12.5%)
I am satisfied with my community.	0 (0%)	3 (18.75%)	3 (18.75%)	9 (56.25%)	1 (6.25%)

Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, eleven (69%) of them answered “Agree” and two (13%) answered “Strongly Agree”. In the question “I am satisfied

with my community”, nine (56%) of them answered “Agree” and one (6%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.10.3 presents the interviewees’ levels of satisfaction on the four frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Tsuen Wan District has lower means of satisfaction levels with MTR, bus and minibus systems. The levels of satisfaction with walking are similar to the mean of Hong Kong in general. The means of satisfaction with public transport systems and satisfaction with overall transport systems are lower than the overall Hong Kong statistics. Elderly participants in the Tsuen Wan District are not frequent users of ferry, tram and taxi systems, and do not travel frequently by bikes or private cars. The satisfaction levels on walking and bus system are the highest among the frequently used travel modes for this District.

Table 3.10.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.20	3.21
Satisfaction with MTR System	3.19	3.37
Satisfaction with Bus System	3.21	3.47
Satisfaction with Minibus System	3.15	3.36
Satisfaction with Public Transport	3.26	3.45
Satisfaction with Overall Transport Use	3.27	3.36

Figure 3.10.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

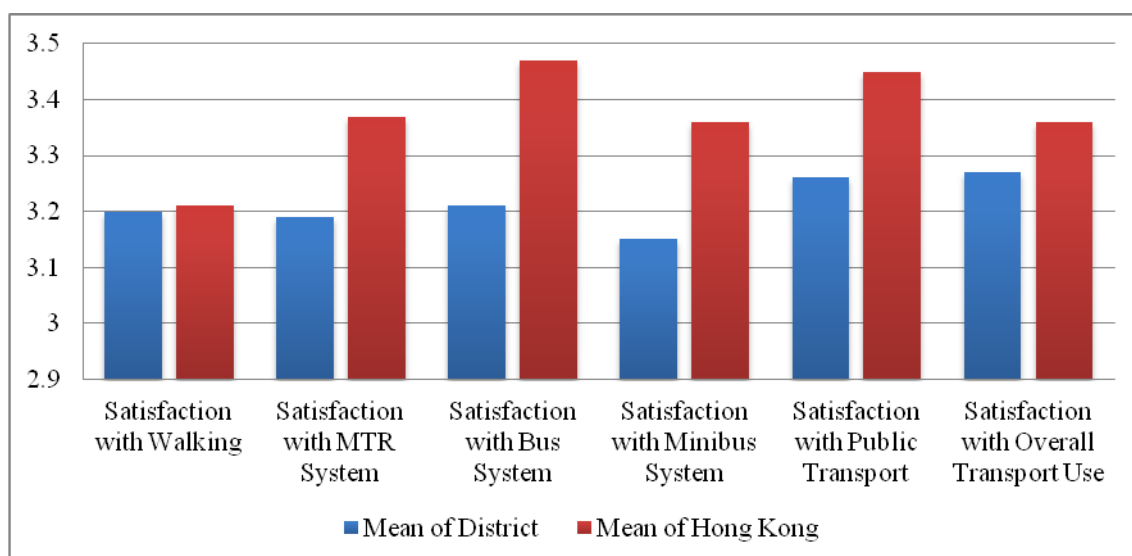


Table 3.10.4 presents the interviewees' levels of community participation of the participants living in the Tsuen Wan District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Tsuen Wan District joined similar numbers of community activities as compared to those of Hong Kong in general, but have fewer overall hours of community participation than the general Hong Kong data. Elderly individuals in Tsuen Wan district generally spent fewer hours for sports activities and activities in the "Others" category, and longer hours for interest classes, as well as similar numbers of hours for entertainment activities as compared to those of Hong Kong in general.

Table 3.10.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.69	3.77
Community Participation: Total Activity Duration in hours (weekly)	12.75	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	4.98	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.15	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	2.88	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	1.78	3.91

Table 3.10.5 presents the interviewees' levels of physical health and psychological well-being of the Tsuen Wan District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of physical health and slightly lower levels of psychological well-being as compared to those of Hong Kong

Table 3.10.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.89	2.97
Psychological Well-being	3.56	3.69

Table 3.10.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have lower levels of sense of community and satisfaction with community than those of Hong Kong, while having similar level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with friends and neighbours are slightly lower for this district than the means of Hong Kong as a whole. The mean of social relationships with family members is higher than that of Hong Kong overall data.

Table 3.10.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.52	7.51
Social Relationships (family)	8.69	8.29
Social Relationships (friends)	7.56	7.78
Social Relationships (neighbours)	6.31	6.50
Sense of Community	3.75	4.06
Satisfaction with Community	3.50	4.02

Table 3.10.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is higher than that of Hong Kong. Elderly participants in this district are generally satisfied with the concessionary travel

scheme with a mean of higher than six. It matches with the results from focus group interview as focus group interviewees are satisfied generally with the concessionary scheme.

Table 3.10.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.56	7.06

Table 3.10.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing in general, the elderly individuals in the district frequently travel alone.

Table 3.10.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.31	7.07

3.11 Kwai Tsing District

Basic Information

Kwai Tsing District has an area of 23.34 sq. km. The 2017 mid-year population of the district is 515,600. The population density is 22,090 persons per sq. km. (Census and Statistics Department, 2017c). The population has decreased by 0.5% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 16.3% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Kwai Tsing District includes Kwai Chung and Tsing Yi Island. The district plays an important role as the transportation and logistics hub. The Kwai Tsing Container Terminals are located along the Rambler Channel, which Container Terminals 1 to 8 on the side of Kwai Chung and Terminal 9 on the side of Tsing Yi Island. The container terminals have a total area of 279 hectares, which is over 10% of the land area of the district.

Kwai Tsing District was accredited by the World Health Organisation as Health City and Health Community in 2002 and 2003 respectively (Home Affairs Department, 2018). The district also becomes a member of the Global Network of Age-friendly Cities and Communities in 2014 (WHO, 2018).

Transport Systems

Kwai Tsing connects the Lantau Island and Ma Wan to the New Territories West and Kowloon West. The Lantau Link is the only land passageway connecting Lantau Island to other parts of Hong Kong. The Lantau Link consists of Kap Shui Mun Bridge, Tsing Ma Bridge and Am Wan Viaduct. Upper level of the link is a highway for vehicles, and the lower level is the railway line Airport Express and Tung Chung Line. The Tsing Ma Bridge is the longest suspension bridge with both rail and road traffic in the world (Discover Hong Kong, 2018). Ting Kau Bridge, Tsing Yi North Bridge, Cheung Tsing Bridge, Tsing Yi Bridge and Stonecutters Bridge connect Tsing Yi Island to Tsuen Wan, Kwai Chung and Stonecutters Island.

There are over 100 bus routes and over 60 minibuses routes serving the district. There are a total of 24 bus termini and 37 minibuses termini in the district. MTR Tsuen Wan Line, Tung

Chung Line and Airport Express have 4 stations in the district, namely Lai King, Kwai Fong, Kwai Hing, and Tsing Yi. Residents of the district mainly live along the MTR Tsuen Wan Line and on the north-east Tsing Yi Island.

Findings from Interviews

The elderly centre visited is Light and Love Kwai Fong Neighbourhood Elderly Centre, located in Kwai Fong Estate. The interview was conducted on 27th March 2018.

Fifteen interviewees took part in the questionnaire section, and among that six of them also took part in the focus group discussion. Thirteen (87%) among the fifteen interviewees are retired. Most of them retired between the age of 60 to 65. Twelve (80%) interviewees live in Public Rental Housing Estates, among that eleven (73%) of them live in Kwai Fong Estate, where the centre is located. One (7%) interviewee lives in Sun Po Kong, and the rest (20%) of them live in private housing estates within the district.

Kwai Fong Estate is located very close to the MTR Kwai Fong Station. The elderly centre is only 180m away from the nearest station exit. Residents from Kwai Fong Estate and other housing estates nearby can have access to the MTR station via footbridges. Several bus termini and minibus termini are located near the Kwai Fong MTR station as well. Residents can also choose to walk to Kwai Hing MTR Station, which the shortest distance from the nearest station exit to the nearest residential block is only 170m. However, interviewees who live in Kwai Fong Estate prefer walking to Kwai Fong Station instead of Kwai Hing Station. The route to Kwai Hing Station involves a number of traffic road crossings. The duration of the green light is relatively short for elderlies to cross the road. All interviewees agree that it is more comfortable, convenient and safe to walk between shopping centres via footbridges. However, some of the footbridges only have upward-moving escalators. People leaving the footbridges can only walk downstairs. Elderlies with weak legs usually find it more difficult to walk downstairs than walking upstairs. They all look forward to having lifts in the future.

Most popular transport mode is walking (13 chosen), following by MTR (9) and bus (8), shown in **Table 3.11.1**. **Figures 3.11.1 to 3.11.3** also show their main trip purpose, daily travel time and daily travel cost.

Table 3.11.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	13 (86.7%)	9 (60.0%)	8 (53.3%)	2 (13.3%)	0 (0%)	0 (0%)	0 (0%)	1 (6.67%)	1 (6.67%)

Figure 3.11.1: Main trip purpose(s)

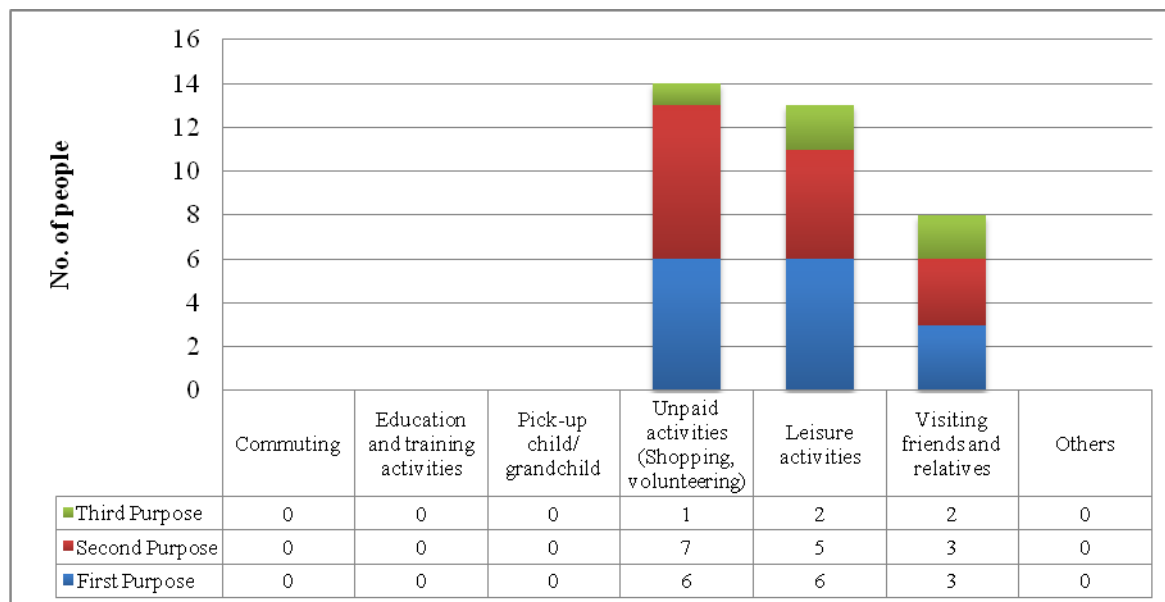


Figure 3.11.2: Daily travel time

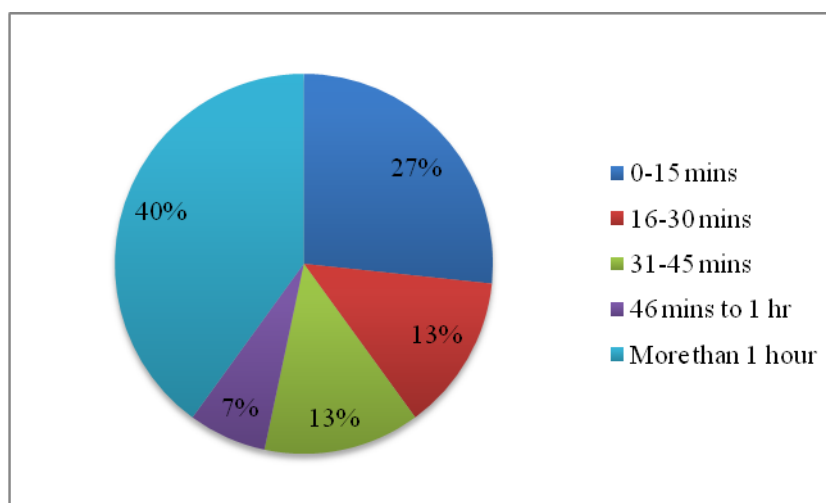


Figure 3.11.3: Daily travel cost (HK\$)

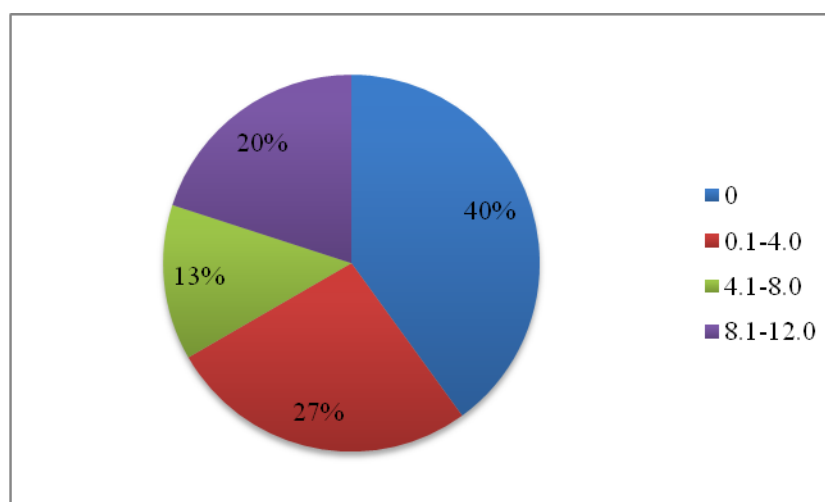


Table 3.11.2 presents the interviewees' sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question "I think I am part of the community", nine (60%) of them answered "Agree". In the question "I am satisfied with my community", seven (47%) of them answered "Agree" and four (27%) of them answered "Strongly Agree".

Table 3.11.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	1 (6.67%)	5 (33.33%)	9 (60.00%)	0 (0%)
I am satisfied with my community.	0 (0%)	0 (0%)	4 (26.67%)	7 (46.67%)	4 (26.67%)

Statistics of Variables

Table 3.11.3 presents the interviewees' levels of satisfaction on the four frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Kwai Tsing District has slightly lower means of satisfaction levels with walking and minibus systems. The levels of satisfaction with bus system is similar to the mean of Hong Kong in general, while the satisfaction levels of MTR and taxi systems are higher than the means of Hong Kong overall data. The means of satisfaction with public transport systems and satisfaction with overall transport systems are of similar levels as compared with the overall Hong Kong statistics. Elderly participants in the Kwai Tsing District are not frequent users of ferry and tram systems, and do not travel

frequently by bikes. The satisfaction levels on bus, minibus and MTR systems are the highest among the frequently used travel modes for this District.

Table 3.11.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.13	3.21
Satisfaction with MTR System	3.45	3.37
Satisfaction with Bus System	3.46	3.47
Satisfaction with Minibus System	3.25	3.36
Satisfaction with Taxi System	3.40	2.97
Satisfaction with Driving	3.00	2.60
Satisfaction with Public Transport	3.47	3.45
Satisfaction with Overall Transport Use	3.34	3.36

Figure 3.11.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

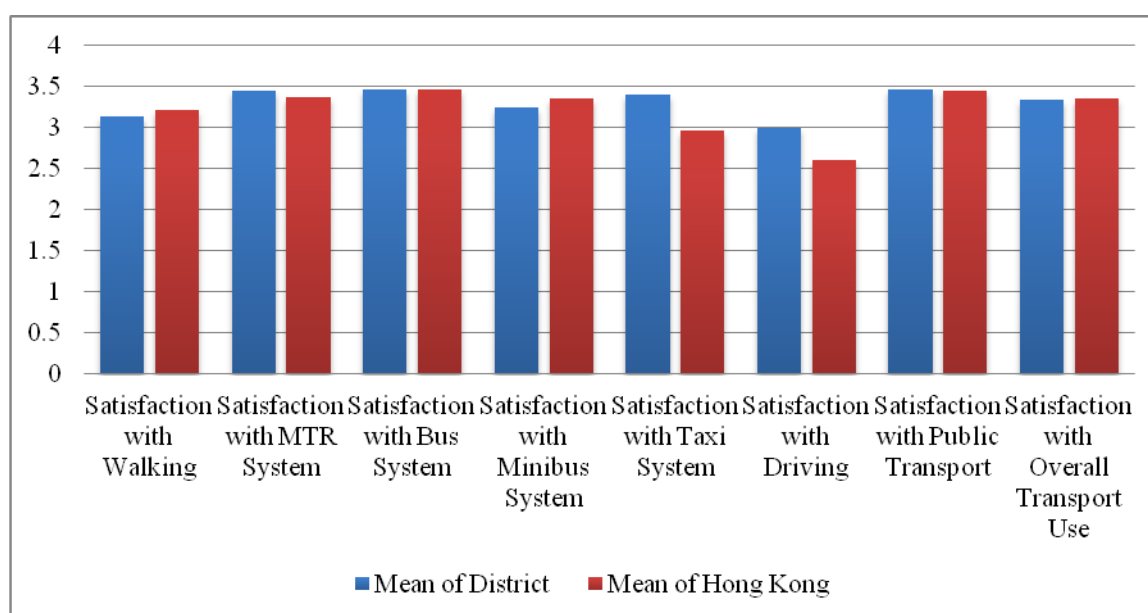


Table 3.11.4 presents the interviewees' levels of community participation of the participants living in the Kwai Tsing District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Kwai Tsing District joined fewer numbers of community activities as compared to those of Hong Kong in general, but have much higher overall hours of community participation than the general Hong Kong data. Elderly individuals in Kwai Tsing district generally spent higher hours for

sports activities and activities in the “Others” category, and fewer hours for interest classes and entertainment activities as compared to those of Hong Kong in general.

Table 3.11.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	2.87	3.77
Community Participation: Total Activity Duration in hours (weekly)	20.41	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	4.64	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	4.95	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.88	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	9.92	3.91

Table 3.11.5 presents the interviewees’ levels of physical health and psychological well-being of the Kwai Tsing District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have lower levels of physical health and psychological well-being as compared to those of Hong Kong.

Table 3.11.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.30	2.97
Psychological Well-being	3.43	3.69

Table 3.11.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have lower level of sense of community and similar level of satisfaction with community as compared to those of Hong Kong, while having slightly higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with friends and neighbours are higher for this district than the means of Hong Kong as a whole. The mean of social relationships with family members is lower than that of Hong Kong overall data.

Table 3.11.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong.

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.66	7.51
Social Relationships (family)	7.92	8.29
Social Relationships (friends)	8.13	7.78
Social Relationships (neighbours)	6.87	6.50
Sense of Community	3.53	4.06
Satisfaction with Community	4.00	4.02

Table 3.11.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much lower than that of Hong Kong. Elderly participants in this district are generally feeling neutral about the concessionary travel scheme with a mean of lower than six.

Table 3.11.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	5.27	7.06

Table 3.11.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing in general, the elderly individuals in the district frequently travel alone.

Table 3.11.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.53	7.07

3.12 Sai Kung District

Basic Information

Sai Kung District has an area of 129.64 sq. km. It is the fifth largest district on Hong Kong. The 2017 mid-year population of the district is 466,500. The population density is 3,600 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 13.6% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 15.5% of its whole population aged 65 and above. Sai Kung District, together with Southern District and Tai Po District, has the highest average household size of 3.0 persons (Census and Statistics Department, 2017a). The district became a member of the WHO Global Network of Age-friendly Cities and Communities in 2015 (WHO, 2015).

Sai Kung District consists of Sai Kung and Tseung Kwan O new town. A majority of the population of the district lives in the Tseung Kwan O New Town, which developed in the 1980s. Sai Kung town centre remains as a small town surrounded by a number of villages, with a low population density. Sai Kung is well known as the “Back Garden of Hong Kong”. The Sai Kung town centre is a popular sightseeing spot and seafood restaurant hub. The district is surrounded by country parks. On the southeast side of the district is the Port Shelter. A number of country parks can be found in the district, including Kiu Tsui country Park, Clear Water Bay Country Park, Sai Kung East country Park, and part of Ma On Shan Country Park. The Hong Kong UNESCO Global Geopark is also located in Sai Kung District.

Transport Systems

The common public transportation modes in Sai Kung District are bus and minibus. There are over 90 bus routes and over 53 minibus bus routes in total. There are 26 bus termini and 38 minibus termini in Sai Kung District as well. MTR Tseung Kwan O Line and Kwan Tong Line serve the district with 5 stations, namely Tiu Keng Leng Station, Tseung Kwan O Station, Hang Hau Station, Po Lam Station, and LOHAS Park Station.

There are 8 bus routes and 20 minibus routes serving the Sai Kung town centre. Other than those routes which only provide services within Sai Kung, residents mainly take buses or minibuses to either Choi Hung/Diamond Hill or Tseung Kwan O new town (Sai Kung District Council, 2011). There are a number of piers providing service “Kaito” Ferry Services

between different camping sites. There are also several yacht clubs located on the south side of the Sai Kung town centre.

Findings from Interviews

The elderly centre visited is Caritas Sai Kung Elderly Centre in Sai Kung town centre. This centre is under Caritas Hong Kong Service for the Elderly. Target groups of the centre are Sai Kung residents aged 60 or above. The interview was conducted on 14th May 2018.

Thirteen interviewees took part in the questionnaire section, and among that four of them also took part in the focus group discussion. They do not live near the centre and all of the interviewees have to take bus or minibus to the centre.

Focus group interviewees expressed their concern about the safety issue when taking minibuses. Many minibus drivers do not wait until passengers are seated and drive off. Passengers, especially elderlies who have weaker legs, may easily fall down and get hurt. Sometimes the minibus drivers even leave the door not completely closed when driving. One focus group interviewee mentioned a case when a member of the centre was sent to hospital in a minibus accident. That person was getting off a minibus and the driver drove off too early before he could stand firm on the ground. He fell off and was injured.

Hiram's highway is the main road that connects Sai Kung town centre to Clear Water Bay Road. The road is a single lane dual carriageway which traffic jam is easy to occur, especially on weekends and holidays. At the same time, the two-lane traffic road makes it easier for pedestrians to cross the road. However, bus and minibus is still their first choice when travelling between their home and the elderly centre.

Table 3.12.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	11 (73.3%)	4 (30.8%)	5 (38.5%)	13 (100.0%)	0 (0%)	0 (0%)	0 (0%)	3 (23.1%)	0 (0%)

Figure 3.12.1: Main trip purpose(s)

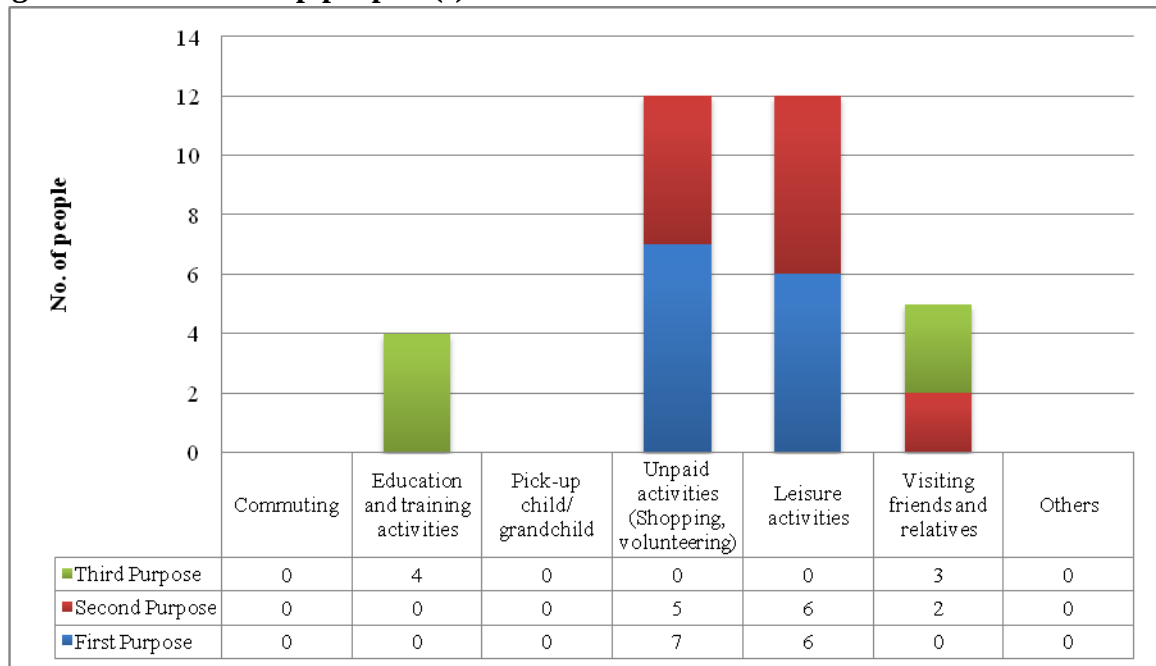


Figure 3.12.2: Daily travel time

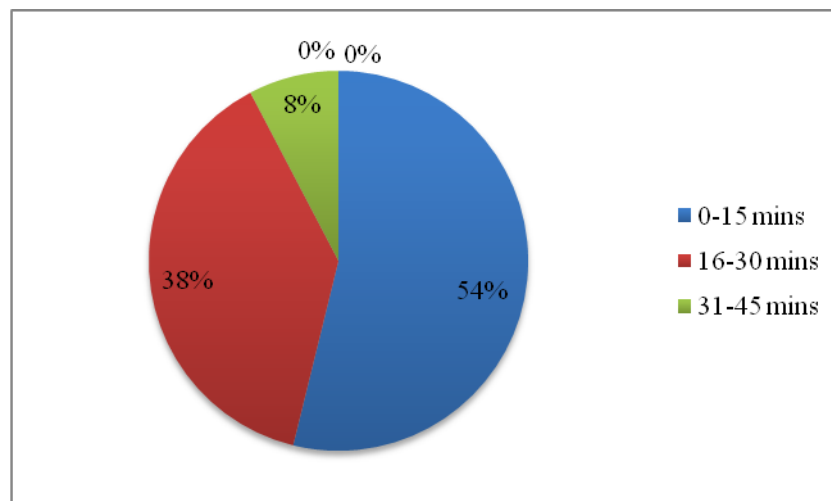
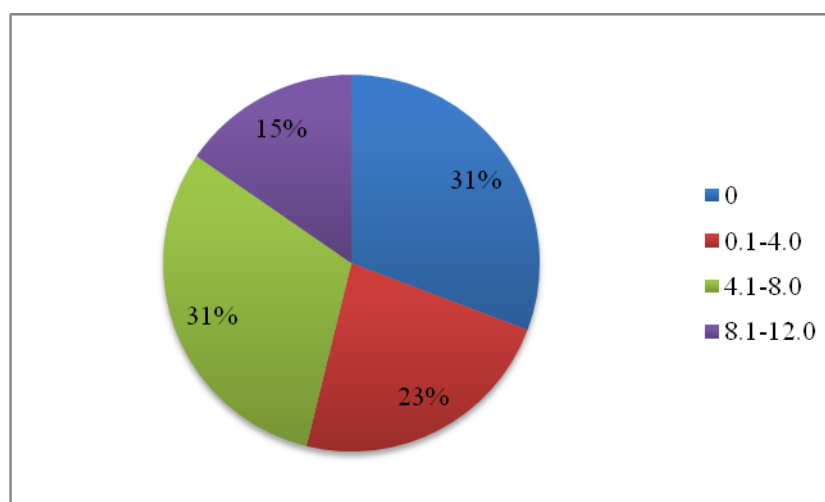


Figure 3.12.3: Daily travel cost (HK\$)



All interviewees are 70 years old or above, twelve (92%) out of thirteen of them are retired and one (8%) is housewife. Most of them are living in the village house near Sai Kung town centre, within 15-minute driving distance. Two interviewees from focus group have been living in Sai Kung for over 50 years and the other two focus group participants have been living in Sai Kung for 15 years. They feel a strong sense of belonging to the community. People within the village form a small community and have good relationship with neighbours.

The elderly centre has set up a “Men’s Club”, providing activities especially for male members. A higher percentage of male members can be found in this centre. All interviewees are satisfied with the number of activities the centre is providing.

Table 3.12.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, five (38%) of them answered “Agree” and five (38%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, five (38%) of them answered “Agree” and five (38%) of them answered “Strongly Agree”.

Table 3.12.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	3 (23.08%)	5 (38.46%)	5 (38.46%)
I am satisfied with my community.	0 (0%)	0 (0%)	3 (23.08%)	5 (38.46%)	5 (38.46%)

Statistics of Variables

Table 3.12.3 presents the interviewees' levels of satisfaction on the five frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Sai Kung District has slightly lower means of satisfaction levels with MTR system. The levels of satisfaction with walking is similar to the mean of Hong Kong in general, while the satisfaction levels of bus, minibus and taxi systems are higher than the means of Hong Kong overall data. The means of satisfaction with public transport systems and satisfaction with overall transport systems are of similar levels as compared with the overall Hong Kong statistics. Elderly participants in the Sai Kung District are not frequent users of ferry and tram systems, and do not travel frequently by bikes or private cars. The satisfaction levels on bus and minibus systems are the highest among the frequently used travel modes for this District.

Table 3.12.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.19	3.21
Satisfaction with MTR System	2.93	3.37
Satisfaction with Bus System	3.55	3.47
Satisfaction with Minibus System	3.44	3.36
Satisfaction with Taxi System	3.13	2.97
Satisfaction with Public Transport	3.42	3.45
Satisfaction with Overall Transport Use	3.33	3.36

Figure 3.12.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

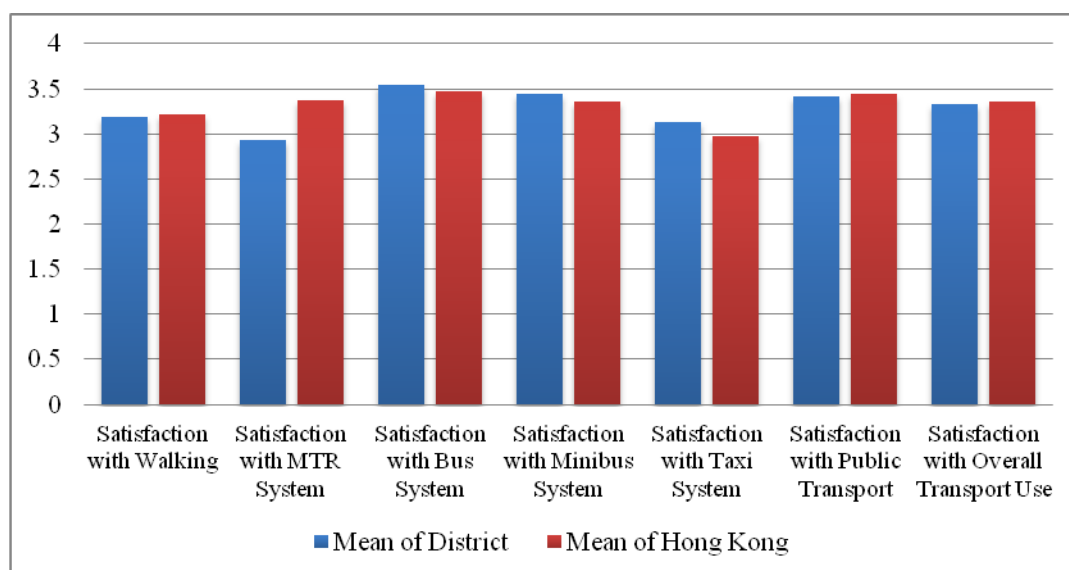


Table 3.12.4 presents the interviewees' levels of community participation of the participants living in the Sai Kung District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Sai Kung District joined fewer numbers of community activities as compared to those of Hong Kong in general, and also have fewer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for an average of 12.47 hours each week. Elderly individuals in Sai Kung district generally spent more hours for entertainment and interest classes, and fewer hours for sports activities and activities in the "Others" category as compared to those of Hong Kong in general.

Table 3.12.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.38	3.77
Community Participation: Total Activity Duration in hours (weekly)	12.47	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	6.66	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.40	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	1.12	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	1.29	3.91

Table 3.12.5 presents the interviewees' levels of physical health and psychological well-being of the Kwai Tsing District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have similar levels of physical health and higher levels of psychological well-being as compared to those of Hong Kong.

Table 3.12.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.02	2.97
Psychological Well-being	3.97	3.69

Table 3.12.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have higher levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having slightly lower level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with friends and family members are higher for this district than the means of Hong Kong as a whole. The mean of social relationships with neighbours is lower than that of Hong Kong overall data, representing that the perceived quality of social relationships of elderly participants living in the district is poorer than the general populations in Hong Kong.

Table 3.12.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.44	7.51
Social Relationships (family)	8.69	8.29
Social Relationships (friends)	7.92	7.78
Social Relationships (neighbours)	5.69	6.50
Sense of Community	4.15	4.06
Satisfaction with Community	4.15	4.02

Table 3.12.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is much lower than that of Hong Kong.

Elderly participants in this district are generally feeling neutral and do not feel satisfied with the concessionary travel scheme with a mean of lower than six.

Table 3.12.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	5.77	7.06

Table 3.12.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is lower than that of Hong Kong, however in general, the elderly individuals in the district frequently travel alone as the mean is higher than five.

Table 3.12.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.69	7.07

3.13 Sha Tin District

Basic Information

Sha Tin District has an area of 68.71 sq. km. In 2017, Sha Tin District continues to be the most populous district in Hong Kong, with a population of 682,100. The population density is 9,602 persons per sq. km. (Census and Statistics Department, 2017c). Sha Tin District also ranks third, following Yuen Long and Sai Kung Districts, in districts with largest projected population increased by 80,200 persons (13.2%), from 2006 to 2016. The district has 16.3% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Centre of the district is a well-developed new town, including Sha Tin, Tai Wai and Ma On Shan area. The new town develops along the Shing Mun River. The River opens to Tide Cove, which was largely reclaimed in the 1970s. The reclaimed land becomes the Sha Tin Town Centre. The district had a population of about 30,000 people back in early 1970s when the new town planning took place. Nowadays over 60% of the population is living in public housing, mainly built on the reclaimed land. About 29,000 people are living in some 48 indigenous villages within the district.

Sha Tin became one of the World Health Organisation Global Network of Age-friendly Cities and Communities in 2017. District Council have set up working group to tailor programmes for elderly since 2010 (WHO, 2018).

Transport Systems

Two Mass Transit Railway lines, East Rail Line and Ma On Shan Line, runs along two sides of Shing Mun River. Fourteen stations in total are located within the district. There are over 190 bus lines serving the district. Among that 23 bus lines are cross harbour bus routes and 39 are residents' service routes. There are also over 60 minibuses routes, which 59 of them are on scheduled services (green minibus) and 2 are non-scheduled services (red minibus). There are in total 53 bus termini and 51 minibus termini.

Main routes include Tolo Highway, Sai Sha Highway, Fo Tan Road, Tai Po Road and Ma On Shan Bypass. Six main tunnels include Lion Rock Tunnel, Tate's Cairn Tunnel, Shing Mun Tunnel and Route 8. These main routes and tunnels connect Sha Tin to Kowloon, Tai Po

and Sai Kung. Cycling track in Sha Tin District can be found along Tolo Highway. The cycle track was opened in 1981 to connect Sha Tin and Tai Po, and has been extended to Ma On Shan.

Findings from Interviews

The elderly centre visited is Sha Tin Multi-Service Centre for the Golden-Aged, located in Lek Yuen Estate. The centre started to provide elderly services in 1995. Target groups of the centre are Sha Tin residents aged 60 or above. The interview was conducted on 30th January 2018.

Lek Yuen Estate, where is elderly centre is located, is the first public housing estate in Sha Tin District. Sha Tin was planned to be a self-contained community. The estate was design to human scale with a lower population density and large area for public space. The estate is built along Shing Mun River and has a water fountain as the centre of the estate to attract people, and cool down the open area during summer. Walking around the estate will find various amenities including sports ground, shopping mall, restaurants, community centre, elderly centre, bank, carpark, bus stops and schools. About 400m from the centre is the Shing Mun River and Yuen Wo Playground. About 500m from the Estate is the Sha Tin MTR Station, which then connects to a number of shopping malls and housing estates.

Fourteen (88%) of the interviewees live in Sha Tin Town Centre, respectively one in Shatin Centre, nine (56%) in Lek Yuen Estate, two (13%) in Pok Hong Estate, one (6%) in Wo Che Estate, and one (6%) in Sha Kok Estate. The other two (13%) interviewees live in The Castello in Ma On Shan, and Kwai Hing Estate in Kwai Tsing District respectively.

Sixteen interviewees took part in the questionnaire section, and among that six of them also took part in the focus group discussion. Fifteen (94%) interviewees are retired. Most of them retired between the age of 60 to 65. Fourteen (87%) interviewees live in Public Rental Housing Estates, nine (56%) of them live in Lek Yuen Estate, where the centre is located. The rest of them live in private housing estates, located in Sha Tin Town Centre and Ma On Shan respectively.

Most popular transport mode is walking (16 chosen), following by bus (13), MTR (9) and taxi (7), shown in **Table 3.13.1. Figures 3.13.1 to 3.13.3** also show their main trip purpose, daily travel time and daily travel cost.

Table 3.13.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	16 (100%)	9 (56.3%)	13 (81.3%)	4 (25.0%)	2 (12.5%)	1 (6.25%)	1 (6.25%)	7 (34.8%)	1 (6.25%)

Figure 3.13.1: Main trip purpose(s)

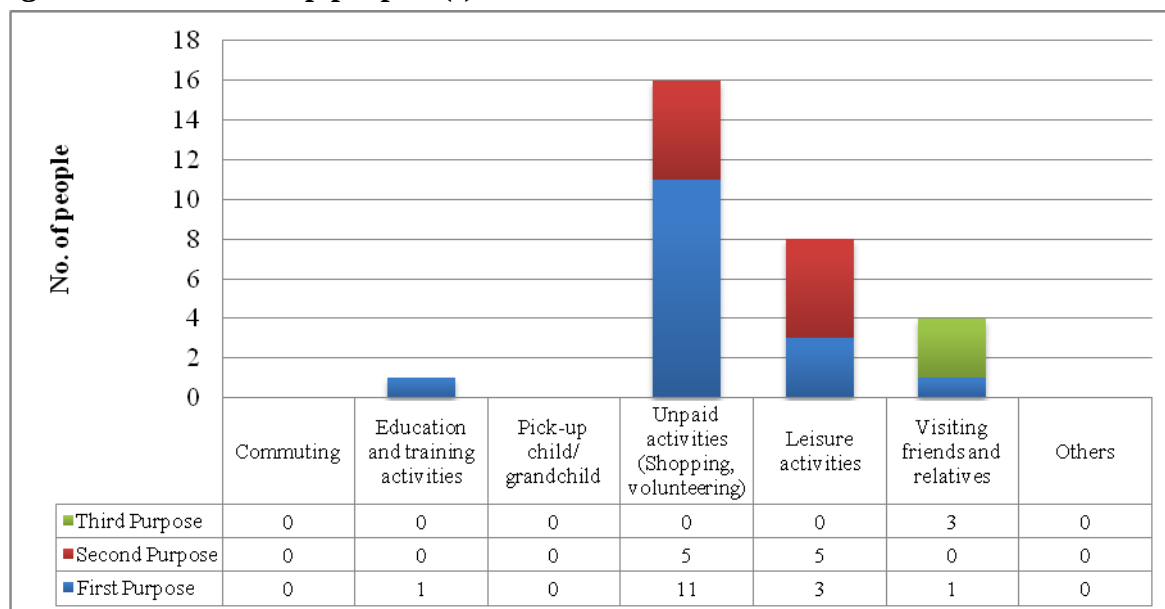


Figure 3.13.2: Daily travel time

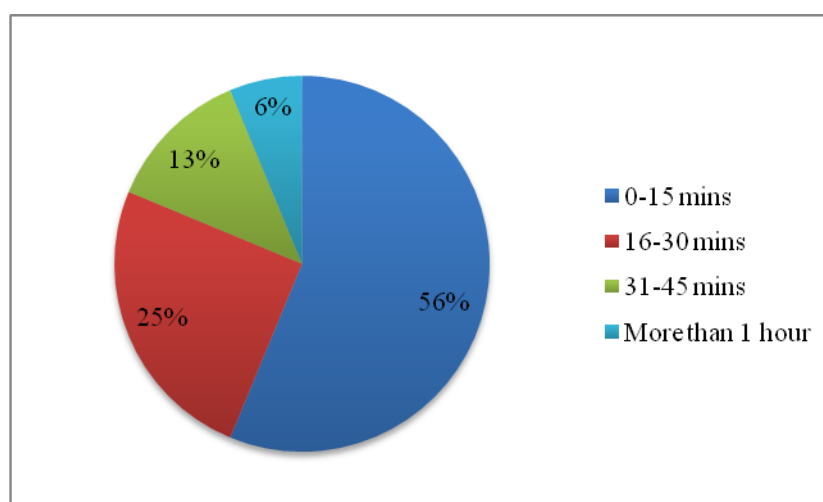
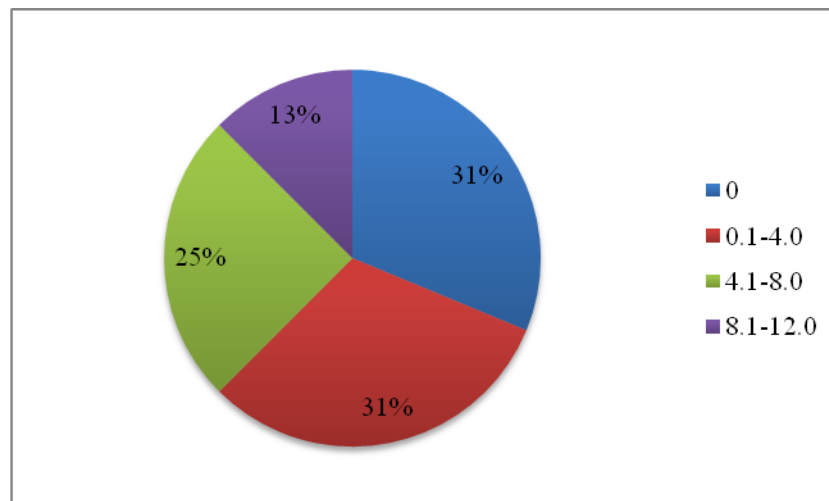


Figure 3.13.3: Daily travel cost (HK\$)



All of the six focus group participants live near the elderly centre. They walk to the centre and do not have to take public transportation to places they go every day, such as markets and shopping malls. All of them are satisfied with the transportation system of Sha Tin, which MTR and buses connects Sha Tin to all other districts. Sha Tin is also very pedestrian friendly, which the pedestrian roads, bridges, and indoor connections are convenient, clean and safe.

A few of the interviewees reflected that MTR systems are getting complicated with new lines. Three interviewees complained about the arrival information on MTR, especially the East Rail Line with no real-time route maps with flashing lights. Passengers have to rely on listening to the announcement, or looking at the in-train TV showing the station name only when the train has reached the station. Elderlies may find it difficult to see and hear since they do not have very good eyesight and hearing. Two interviewees found MTR as a reliable transport mode, and they can count the time need to reach destination without the chance of getting into traffic jam. Some of them found bus more convenient than MTR, with considerations of the ease of entering the station and the time needed.

Sha Tin is built in a way similar to the concept of radiant city proposed by Le Corbusier, which mainly have residential buildings elevated from the street level. A few storeys from ground floor are usually for commercial use. Elevated podiums of each housing estates and shopping malls are connected with footbridges, forming different layers of activity. Pedestrians can easily go from one destination to another through these elevated routes without going outdoor and meeting the traffic.

Table 3.13.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, fourteen (88%) of them answered “Agree” and two (13%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, twelve (75%) of them answered “Agree” and four (25%) of them answered “Strongly Agree”.

Table 3.13.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	0 (0%)	14 (87.5%)	2 (12.5%)
I am satisfied with my community.	0 (0%)	0 (0%)	0 (0%)	12 (75.0%)	4 (25.0%)

Statistics of Variables

Table 3.13.3 presents the interviewees’ levels of satisfaction on the nine frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Sha Tin District has higher means of satisfaction levels with walking. The levels of satisfaction with bus and taxi systems and usage of private cars are similar to the mean of Hong Kong in general, while the satisfaction levels of MTR, minibuses, ferry, and tram systems and usage of bikes are lower than the means of Hong Kong overall data. The mean of satisfaction with overall transport systems is of similar levels as compared with the overall Hong Kong statistics. The satisfaction with public transport systems is lower than that of the mean of Hong Kong data. The satisfaction levels on bus and minibus systems are the highest among the frequently used travel modes for this District. Elderly participants in the Sha Tin District are generally satisfied with the public and overall transport systems, and this matches with the focus group interviews as the focus group interviewees are satisfied with the transport systems in Sha Tin. Focus group interviewees are also satisfied with walking and find the roads pedestrian friendly. This matches with the high level of satisfaction with walking from the statistics gathered from quantitative part of the present study.

Table 3.13.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.37	3.21
Satisfaction with MTR System	3.26	3.37
Satisfaction with Bus System	3.46	3.47
Satisfaction with Minibus System	2.55	3.36
Satisfaction with Ferry System	2.94	3.80
Satisfaction with Tram System	2.91	3.68
Satisfaction with Bike	3.18	3.39
Satisfaction with Taxi System	3.00	2.97
Satisfaction with Driving	2.60	2.60
Satisfaction with Public Transport	3.28	3.45
Satisfaction with Overall Transport Use	3.34	3.36

Figure 3.13.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

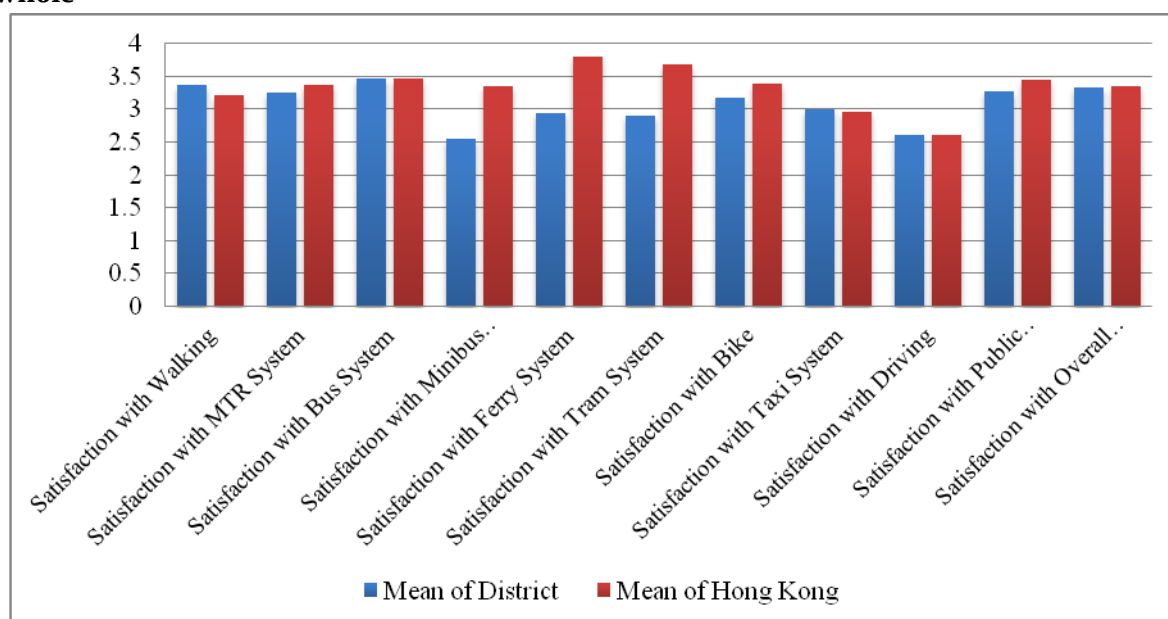


Table 3.13.4 presents the interviewees' levels of community participation of the participants living in the Sha Tin District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Sha Tin District joined slightly fewer numbers of community activities as compared to those of Hong Kong in general, and also have fewer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for an average of 13.19 hours each week. Elderly individuals in Sha Tin district generally spent

fewer hours for entertainment and sports activities, and longer hours for interest classes and activities in the “Others” category as compared to those of Hong Kong in general.

Table 3.13.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.50	3.77
Community Participation: Total Activity Duration in hours (weekly)	13.19	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	2.66	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	2.27	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	1.32	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	7.41	3.91

Table 3.13.5 presents the interviewees’ levels of physical health and psychological well-being of the Sha Tin District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have slightly higher levels of physical health and slightly lower levels of psychological well-being as compared to those of Hong Kong.

Table 3.13.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.08	2.97
Psychological Well-being	3.58	3.69

Table 3.13.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have slightly higher levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the mean of social relationships with family members is higher for this district than the means of Hong Kong as a whole. The means of social relationships with friends and neighbours are similar to those of Hong Kong overall data. The mean scores ranged from 6.50 to 8.81 which are all above six, representing that the elderly participants living in the district have good perceived quality of social relationships in the community.

Table 3.13.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.71	7.51
Social Relationships (family)	8.81	8.29
Social Relationships (friends)	7.81	7.78
Social Relationships (neighbours)	6.50	6.50
Sense of Community	4.13	4.06
Satisfaction with Community	4.25	4.02

Table 3.13.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is lower than that of Hong Kong. Elderly participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than six.

Table 3.13.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	6.50	7.06

Table 3.13.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is slightly higher than that of Hong Kong, representing that, the elderly individuals in the district frequently travel alone as the mean is higher than six.

Table 3.13.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.25	7.07

3.14 Tai Po District

Basic Information

Tai Po District has an area of 136.11 sq. km. It is the fourth largest district on Hong Kong. The 2017 mid-year population of the district is 306,500. The population density is 2,250 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 3.5% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 14.6% of its whole population aged 65 and above. It is the district with the lowest percentage of population aged 65 and above. Tai Po District, together with Southern District and Sai Kung District, has the highest average household size of 3.0 persons (Census and Statistics Department, 2017a).

Tai Po's rapid development did not occur until the 1960s, which the new development site was known as Tai Po Central Area. Then in early 1970s the first industrial estate was decided to be built in Tai Po. At the same time, the government announced a number of public housing projects on the reclaimed land adjacent to the industrial estate. The status of Tai Po was upgraded to New Town in 1979 for the development of a self-contained community. Only minor improvement works are implemented to the remaining rural area, in order to sustain the village type development.

The district joined the WHO Global Network of Age-friendly Cities and Communities since 2017. Projects include setting up an "age-friendly community group" bringing stakeholders together to make suggestions on transforming the district into a more age-friendly community (WHO, 2017).

Transport Systems

There are over 100 bus lines serving the district. Among that 8 bus routes are cross harbour bus routes and 37 are residents' service routes. There are also over 30 minibus routes, which 30 of them are on scheduled services (green minibus) and 4 are non-scheduled services (red minibus). There are in total 21 bus termini and 31 minibus termini.

MTR East Rail Line serves the district with Tai Po Market and Tai Wo Station. Route 9 is the main highway of the district. Tolo Highway and Fanling Highway connect the North District to Sha Tin District, forming part of the New Territories Circular Road.

Findings from Interviews

The centre visited is Tai Po Baptist Church Au Cheung Sau Fong Neighbourhood Elderly Centre (Chung Chun Clubhouse). The interview was conducted on 6th April 2018. The centre is located in Chung Nga Court, northern part of the Tai Po New Town. Around the centre is a home ownership scheme housing estate Chung Nga Court, a public rental housing estate Fu Heng Estate, and a local village Nam Hang Tsuen. About 100m southeast from the centre is Fu Heng Sports Centre; 100m to the southwest is Chung Nga Road Children's Playground; and 230m to the east is Chuen On Road Park.

Fifteen interviewees took part in the questionnaire section, and among that four of them also took part in the focus group discussion. Most of the interviewees live near the centre, nine in Fu Heng Estate, three in Chung Nga Court and one in Nam Hang Tsuen. The other two interviewees live in another local village and private housing estate in Tai Po New Town respectively.

Ten (67%) female and five (33%) male interviewees took part in the questionnaire part. Among that four interviewees also took part in the focus group discussion. A majority of the interviewees are aged 70-74. Fourteen (93%) out of fifteen interviewees are retired. Large number of interviewees thinks that retirement provides chance for them to go out and meet new friends, find new hobbies and learn new skills.

Most popular transport modes are walking (12 chosen) and bus (12), followed by minibus (6) and MTR (5), shown in **Table 3.14.1**. **Figures 3.14.1** to **3.14.3** also show their main trip purpose, daily travel time, and daily travel cost.

Table 3.14.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	12 (80.0%)	5 (33.3%)	12 (80.0%)	6 (40.0%)	0 (0%)	0 (0%)	1 (6.67%)	1 (6.67%)	0 (0%)

Figure 3.14.1: Means of the levels of independent travel mobility

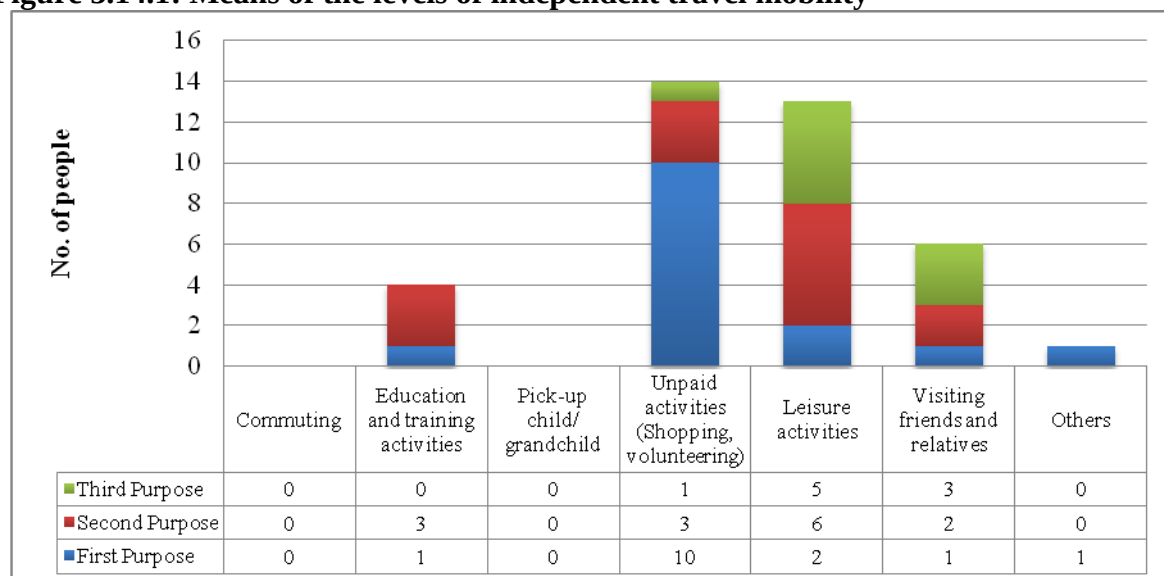


Figure 3.14.2: Daily travel time

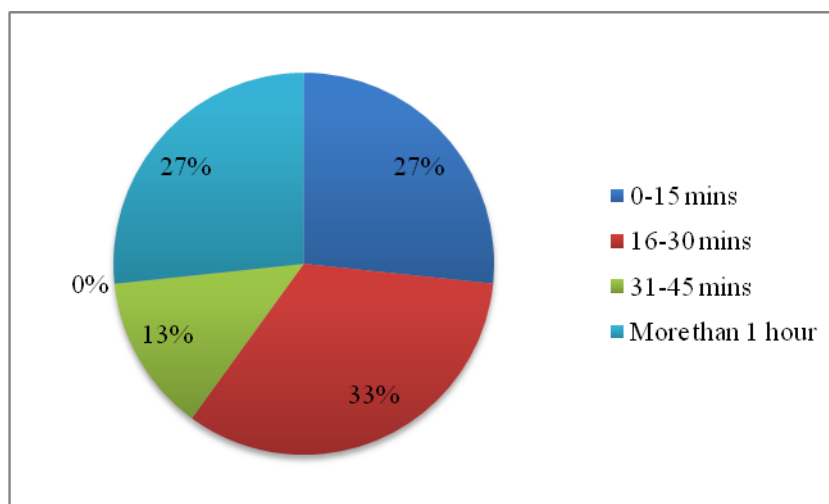
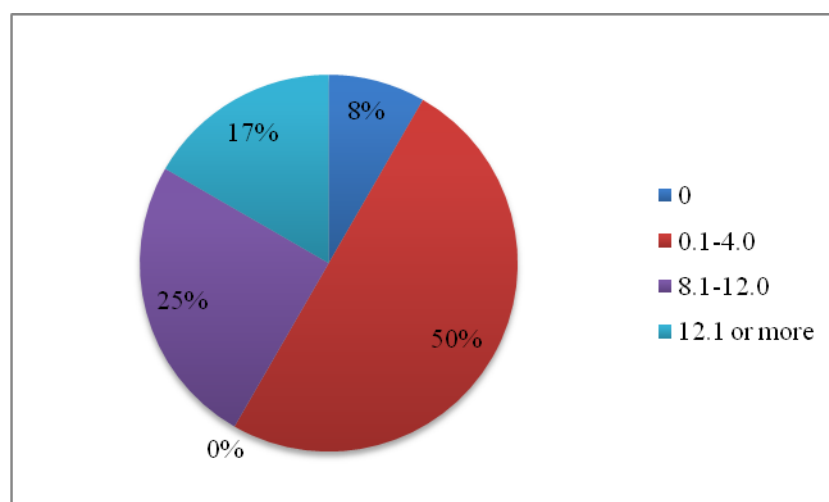


Figure 3.14.3: Daily travel cost (HK\$)



Interviewees living in Fu Heng Estate and Chung Nga Court usually visit the market in Tai Yuen Estate for cheaper goods. They have to cross the Ting Kok Road using the footbridge. The lift construction works at the existing footbridge was confirmed as early as 2014 (Legislative Council, 2014, p.16; 2016; 2018, p.3). However, the construction work still has not finished until April 2018 when the interview took place. According to the interviewees, the construction work has been ongoing for at least two to three years. Also, due to the lift construction work part of the cycle track along Ting Kok Road have been closed for years. Not only have the footbridge users waited for years, but also the cyclists are affected (Transport Department, 2018b; 2018c).

Figure 3.14.4: Lift construction work at Ting Kok Road footbridge near Tai Yuen Estate (Highways Department, 2017)

(https://www.hyd.gov.hk/en/publications_and_publicity/publications/hyd_factsheets/doc/e_Footbridges_and_Subways.pdf)



Table 3.14.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, twelve (80%) of them answered “Agree” and two (13%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, nine (60%) of them answered “Agree” and three (20%) of them answered “Strongly Agree”.

Table 3.14.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	1 (6.67%)	12 (80.00%)	2 (13.33%)
I am satisfied with my community.	0 (0%)	0 (0%)	3 (20.00%)	9 (60.00%)	3 (20.00%)

Statistics of Variables

Table 3.14.3 presents the interviewees' levels of satisfaction on the six frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Tai Po District has higher means of satisfaction levels with MTR, minibus and taxi systems as well as travelling by bikes. The levels of satisfaction with walking and bus systems are similar to the mean of Hong Kong in general. The mean of satisfaction with overall transport systems is of similar levels as compared with the overall Hong Kong statistics. Elderly participants in the Tai Po District are not frequent users of ferry and tram systems, and do not travel frequently by private cars. The satisfaction levels with public transport systems and overall transport system are both similar to the means of Hong Kong data. The satisfaction levels on MTR and bus systems are the highest among the frequently used travel modes for this District.

Table 3.14.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.26	3.21
Satisfaction with MTR System	3.51	3.37
Satisfaction with Bus System	3.53	3.47
Satisfaction with Minibus System	3.45	3.36
Satisfaction with Bike	3.45	3.39
Satisfaction with Taxi System	3.40	2.97
Satisfaction with Public Transport	3.40	3.45
Satisfaction with Overall Transport Use	3.32	3.36

Figure 3.14.5: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

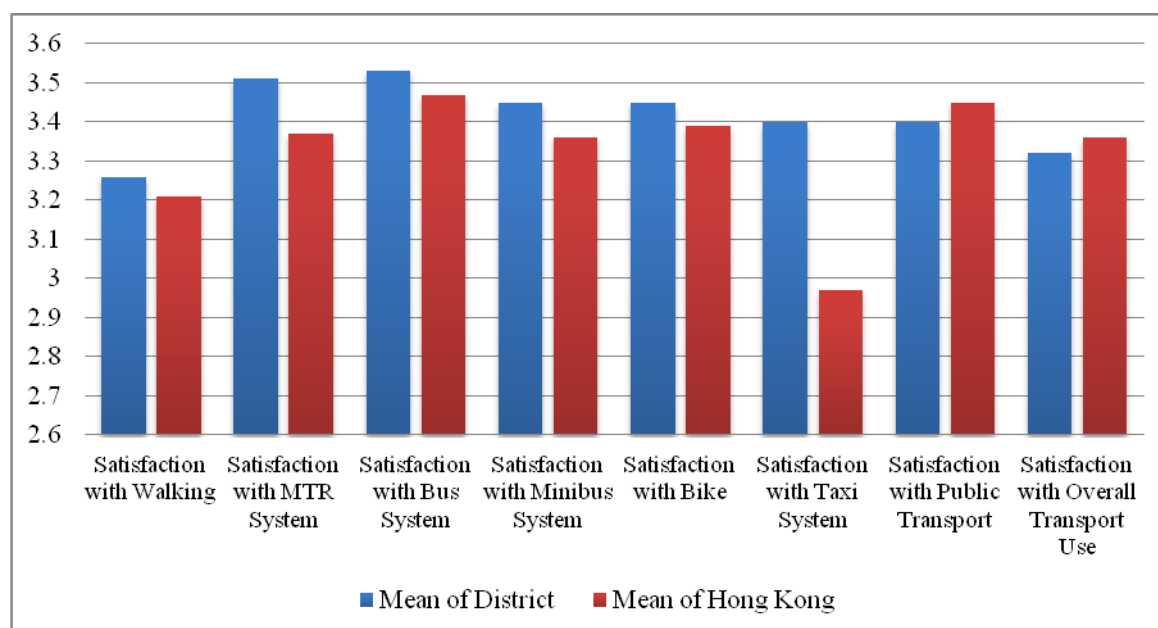


Table 3.14.4 presents the interviewees’ levels of community participation of the participants living in the Tai Po District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Tai Po District joined fewer numbers of community activities as compared to those of Hong Kong in general, and also have fewer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for an average of 13.38 hours each week. Elderly individuals in Tai Po district generally spent fewer hours for entertainment activities, sports activities and interest classes, and much longer hours for activities in the “Others” category as compared to those of Hong Kong in general.

Table 3.14 4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.20	3.77
Community Participation: Total Activity Duration in hours (weekly)	13.38	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	2.76	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	2.97	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.80	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	6.86	3.91

Table 3.14.5 presents the interviewees' levels of physical health and psychological well-being of the Tai Po District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have slightly lower levels of physical health and psychological well-being as compared to the those of Hong Kong.

Table 3.14.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.82	2.97
Psychological Well-being	3.60	3.69

Table 3.14.6 presents the interviewees' levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have similar levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members and friends are lower for this district than the means of Hong Kong as a whole. The mean of social relationships with neighbours is higher than those of Hong Kong overall data. The mean scores ranged from 7.67 to 7.93 which are all above seven, representing that the elderly participants living in the district have good perceived quality of social relationships in the community.

Table 3.14.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.84	7.51
Social Relationships (family)	7.86	8.29
Social Relationships (friends)	7.67	7.78
Social Relationships (neighbours)	7.93	6.50
Sense of Community	4.07	4.06
Satisfaction with Community	4.00	4.02

Table 3.14.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is similar to that of Hong Kong. Elderly

participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than six.

Table 3.14.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.00	7.06

Table 3.14.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing that, the elderly individuals in the district frequently travel alone as the mean is higher than six.

Table 3.14.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.53	7.07

3.15 North District

Basic Information

North District has an area of 136.48 sq. km. It is the third largest district on Hong Kong. The 2017 mid-year population of the district is 316,800. The population density is 2,320 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 12.3% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 15.3% of its whole population aged 65 and above (Census and Statistics Department, 2017a). North District joined the WHO Global Network of Age-friendly Cities and Communities in 2017, through the Jockey Club Age-friendly City Project (WHO, 2017).

North District can be divided into four parts, namely Sheung Shui, Fanling, Sha Tau Kok and Ta Kwu Ling. Under each area has a rural committee to manage the 117 villages in the district. About 80% of the residents are living in the Fanling/Sheung Shui New Town. The North District used to be traditional market towns before 1970s. The Fanling/Sheung Shui New Town started to develop in early 1980s and transformed the area to accommodate 290,000 people upon full development.

Transport Systems

There are over 80 bus lines serving the district. Among that 9 bus routes are cross harbour bus routes and 22 are residents' service routes. There are also over 30 minibus routes, which 26 of them are on scheduled services (green minibus) and 9 are non-scheduled services (red minibus). There are in total 19 bus termini and 10 minibus termini.

MTR East Rail line serves the district with 4 stations, namely Fanling, Sheung Shui, Lo Wu and Lok Ma Chau. Fanling Station was opened in 1910. Sheung Shui Station and Lo Wu Station were opened in 1930. Route 9 is the main highway of the district. Fanling Highway connects the Yuen Long District to Tai Po District, forming part of the New Territories Circular Road.

Findings from Interviews

The centre visited is Ellen Li District Elderly Community Centre in South Fanling. Target groups of the centre are North District residents aged 50 or above. The interview was conducted on 22nd February 2018.

Fourteen interviewees took part in the questionnaire section, and among that three of them also took part in the focus group discussion. All of the interviewees are living in North District. Nine (64%) of the interviewees are living in public rental housing estates, among that eight (57%) of them are living in Wah Ming Estate and Wah Sum Estate within walking distance from the elderly centre, and one (7%) is living in Choi Yuen Estate in Sheung Shui. Two (14%) interviewees are living alone, while five (36%) and four (29%) interviewees have a household size comprising two and three persons respectively.

Thirteen (93%) female and one (7%) male interviewees took part in the questionnaire part. Half (50%) of the interviewees are between 60 to 65 years old. All interviewees are retired, and they are all retired before the age of 65. Over two third (77%) of the interviewees disagree on the question “Do you think retirement caused social pressure to yourself and your family?”, saying retirement gives them freedom and time to do join activities depending on their own interest.

Table 3.15.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	14 (100%)	13 (92.9%)	14 (100%)	8 (57.1%)	3 (21.4%)	1 (7.14%)	1 (7.14%)	0 (0%)	0 (0%)

Figure 3.15.1: Main trip purpose(s)

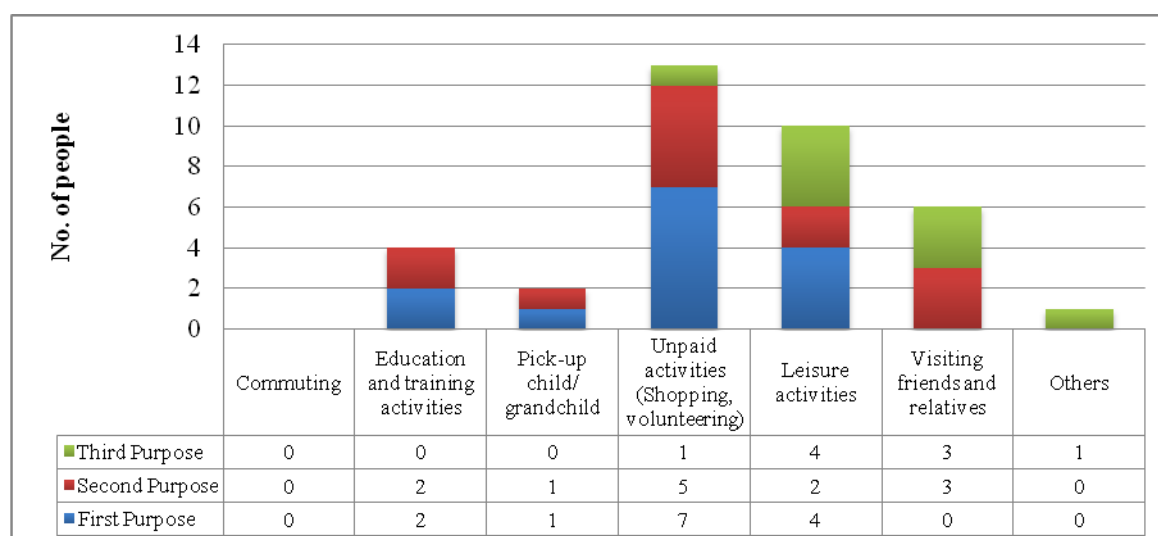


Figure 3.15.2: Daily travel time

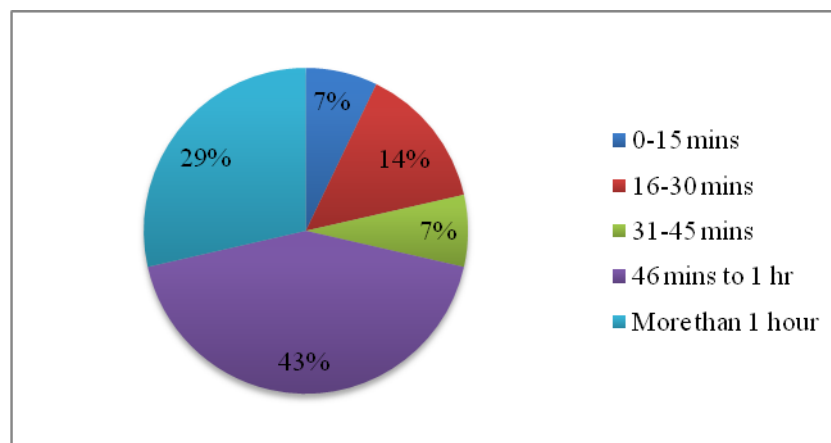
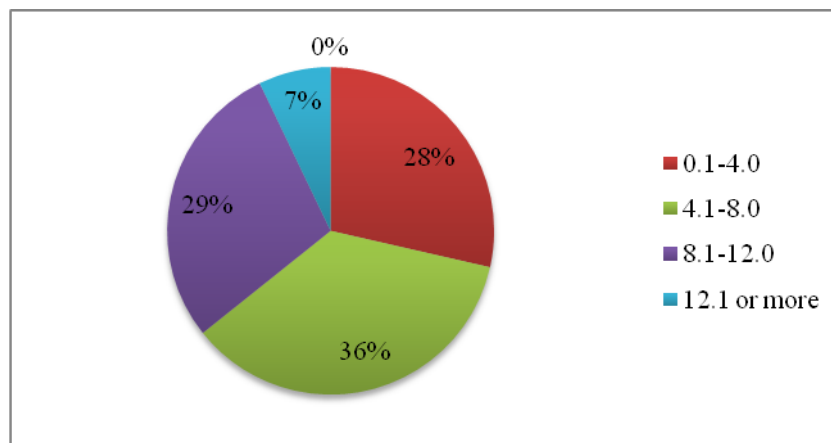


Figure 3.15.3: Daily travel cost (HK\$)

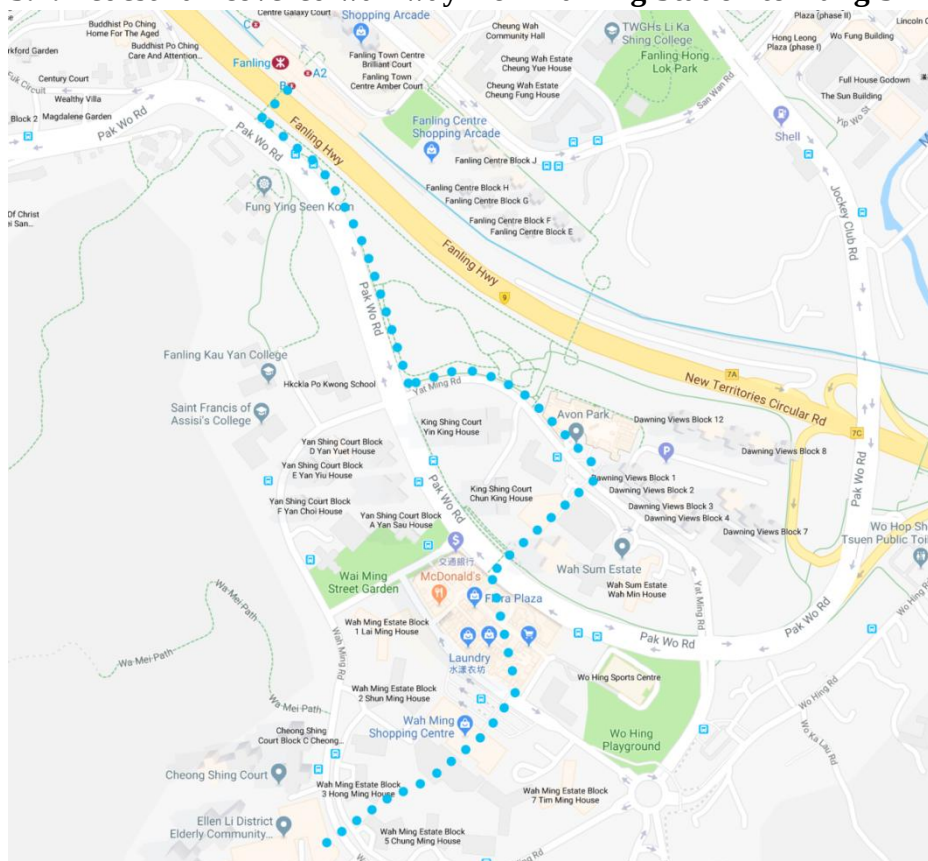


The most popular modes of transport are walking (14 chosen) and bus (14), followed by MTR (13) and minibus (8). The three most common trip purposes are unpaid activities, leisure activities, and visiting friends and relatives. Five (36%) out of fourteen of the interviewees averagely spend \$4.1 to \$8.0 per day. Since half of the interviewees are below 65 years old and cannot enjoy the concessionary fare of \$2 per trip, five (36%) interviewees are averagely spending \$8.1 and over on transport every day.

Focus group interviewees discussed about the pedestrian covered walkways from MTR Fanling Station to Yung Shing Court, where the elderly centre is located. Pedestrians can walk along Pak Wo Road under the covered walkway and entre Avon Park. Then all housing estates are connected with covered footbridges. Pedestrians can walk via Avon Park, Dawning Views, Wah Sum Estate, Flora Plaza, Wah Ming Estate and finally reaching Yung Shing Court (Lands Department, 2018). Pedestrian can walk back home under all-weather with the completed pedestrian walkway network. Even though the covered walkway along

Pak Wo Road is not very wide and may not provide enough protection under strong sun and heavy rain, interviewees still find the covered walkway useful and are happy to have the all-weather walkway system.

Figure 3.15.4: Pedestrian covered walkway from Fanling Station to Yung Shing Court



The focus group interviewees also discussed about the problem of having not enough bus routes in the district. Taking bus to Kowloon is more expensive and slower than taking MTR. In the case of travelling to Hong Kong Island, it is still more convenient to take buses with fewer changes. However, there is only one bus route 673, together with route 373 which only provide service on peak hours from Monday to Saturday as a very similar route, running from Sheung Shui to Central. One interviewee compared North District with Tai Po District, thinking that Tai Po has more choice of bus routes. Residents in Fanling/Sheung Shui only have direct bus route to Tsuen Wan, Lam Tin and Central. Two of the focus group interviewees often travel to Hong Kong Island to meet friends and relatives. They all agreed that without the elderly concession fare they would not go out that often, especially to Hong Kong Island which a round trip would cost about \$50. One interviewee enjoys eating out and exploring new restaurants with a group of friends living in different districts. One interviewee

enjoys taking his camera and travel around Hong Kong under the concession fare, which photography is his new hobby after joining elderly centre’s photography class.

Table 3.15.2 presents the interviewees sense of belonging and satisfaction to the community. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, thirteen (93%) of them answered “Agree” and one (7%) of them answered “Strongly Agree”. In the question “I am satisfied with my community”, eleven (79%) of them answered “Agree” and two (14%) of them answered “Strongly Agree”.

Table 3.15.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	0 (0%)	13 (92.9%)	1 (7.14%)
I am satisfied with my community.	0 (0%)	0 (0%)	1 (7.14%)	11 (78.57%)	2 (14.29%)

Statistics of Variables

Table 3.15.3 presents the interviewees’ levels of satisfaction on the seven frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, North District has higher means of satisfaction levels with walking and tram systems as well as travelling by bikes. The level of satisfaction with bus system is similar to the mean of Hong Kong in general, while the satisfaction levels of travelling by MTR, minibus and ferry systems are lower than the means of Hong Kong in general. The mean of satisfaction with public transport system is slightly lower than the mean of Hong Kong data, while satisfaction level for overall transport systems is slight higher as compared with the overall Hong Kong statistics. Elderly participants in the North District are not frequent users of taxi system, and do not travel frequently by private cars. The satisfaction levels with travelling by bikes and tram systems are the highest among the frequently used travel modes for this District. Although focus group interviewees thought that there were not enough bus routes in the district, the level of satisfaction of elderly participants in the North District is still as high as the mean of Hong Kong as can be seen by the statistics from quantitative part of the study.

Table 3.15.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.50	3.21
Satisfaction with MTR System	3.29	3.37
Satisfaction with Bus System	3.50	3.47
Satisfaction with Minibus System	3.22	3.36
Satisfaction with Ferry System	3.57	3.80
Satisfaction with Tram System	4.09	3.68
Satisfaction with Bike	4.82	3.39
Satisfaction with Public Transport	3.38	3.45
Satisfaction with Overall Transport Use	3.42	3.36

Figure 3.15.5: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

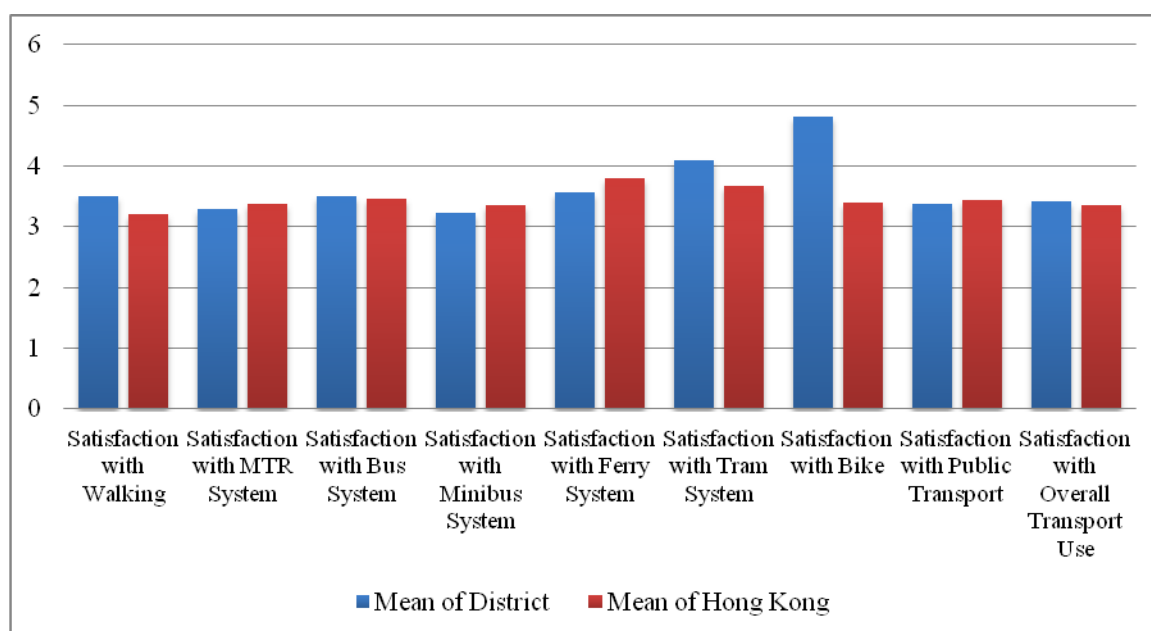


Table 3.15.4 presents the interviewees' levels of community participation of the participants living in the North District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the North District joined higher numbers of community activities as compared to those of Hong Kong in general, and also have longer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for an average of 15.35 hours each week. Elderly individuals in North district generally spent fewer hours for

entertainment activities and sports activities, and much longer hours for interest classes and activities in the “Others” category as compared to those of Hong Kong in general.

Table 3.15.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	4.86	3.77
Community Participation: Total Activity Duration in hours (weekly)	15.35	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	3.76	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.46	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	3.00	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	5.13	3.91

Table 3.15.5 presents the interviewees’ levels of physical health and psychological well-being of the North District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have higher levels of physical health and psychological well-being as compared to those of Hong Kong.

Table 3.15.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.21	2.97
Psychological Well-being	3.96	3.69

Table 3.15.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have similar levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with neighbours and friends are higher for this district than the means of Hong Kong as a whole. The mean of social relationships with family members is similar to that of Hong Kong overall data. The mean scores ranged from 7.14 to 8.57 which are all above seven, representing that the elderly participants living in the district have good perceived quality of social relationships in the community.

Table 3.15.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	8.00	7.51
Social Relationships (family)	8.29	8.29
Social Relationships (friends)	8.57	7.78
Social Relationships (neighbours)	7.14	6.50
Sense of Community	4.07	4.06
Satisfaction with Community	4.07	4.02

Table 5.15.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is higher than that of Hong Kong. Elderly participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than eight.

Table 3.15.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	8.93	7.06

Table 3.15.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is slightly lower than that of Hong Kong, representing that, the elderly individuals in the district frequently travel alone as the mean is higher than six.

Table 3.15.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.86	7.07

3.16 Tuen Mun District

Basic Information

Tuen Mun District has an area of 83.01 sq. km. The 2017 mid-year population of the district is 488,400. The population density is 5,880 persons per sq. km. (Census and Statistics Department, 2017c). The population has decreased by 2.5% between 2006 and 2016 (Census and Statistics Department, 2016). The district has 14.9% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Tuen Mun District is situated in the north-western part of New Territories. The district is opened to the South China Sea on the west, and surrounded by Castle Park and Tai Tam Hills.

Tuen Mun New Town started to develop rapidly in 1970s. It is one of the earliest developed new towns in Hong Kong. It is mainly built on the reclaimed land at Castle Peak Bay and on the flat land at the Tuen Mun valley. Tuen Mun was first planned to be a self-contained district with industrial area located in West Tuen Mun. Tuen Mun River is located in the middle of the town centre, separating East and West Tuen Mun. East Tuen Mun has a higher concentration of commercial activities.

Transport Systems

MTR West Rail Line serves the district with Siu Hong Station and Tuen Mun Station. Light Rail is the main mode of transportation in the district. There are 8 routes and 42 stations in total. Tuen Mun Ferry Pier also provides ferry service between Tuen Mun, Sha Lo Wan and Tai O.

There are over 120 bus routes serving the district. Among that 14 bus routes are cross harbour bus routes and 57 are residents' service routes. There are also over 20 minibus routes, which 20 of them are on scheduled services (green minibus) and 2 are non-scheduled services (red minibus). There are in total 26 bus termini and 22 minibus termini.

Route 9 and route 10 are the main routes of the district. Route 9 is the New Territories Circular Road, with Tuen Mun Road and Yuen Long Highway in Tuen Mun District. Route 10 is the newest trunk route in Hong Kong. It is connected to Route 9 at Lam Tei, and leads

to Shenzhen Bay Port. It is consist of Kong Sham Western Highway and the Hong Kong-Shenzhen Western Corridor.

Findings from Interviews

The centre visited is Woo Chung District Elderly Community Centre. Target groups of the centre are Tuen Mun residents aged 60 or above. The centre is located in Tune Mun Town Centre. Fifteen interviewees participated in the questionnaire session, and among that five of them also participated in the focus group discussion. The interview was conducted on 8th February 2018.

All interviewees are over 60 years old. Over half (53%) of the interviewees are between the age of 65 to 69. Eleven (73%) interviewees are retired, and they are retired by the age of 65. Near half (46%) of the interviewees disagreed retirement bring them social pressure. A few focus group interviewees used to have a fixed schedule before retirement. They are now even busier than before retirement, joining leisure activities and interest classes.

Table 3.16.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	15 (100%)	13 (86.7%)	13 (86.7%)	6 (40.0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.16.1: Main trip purpose(s)

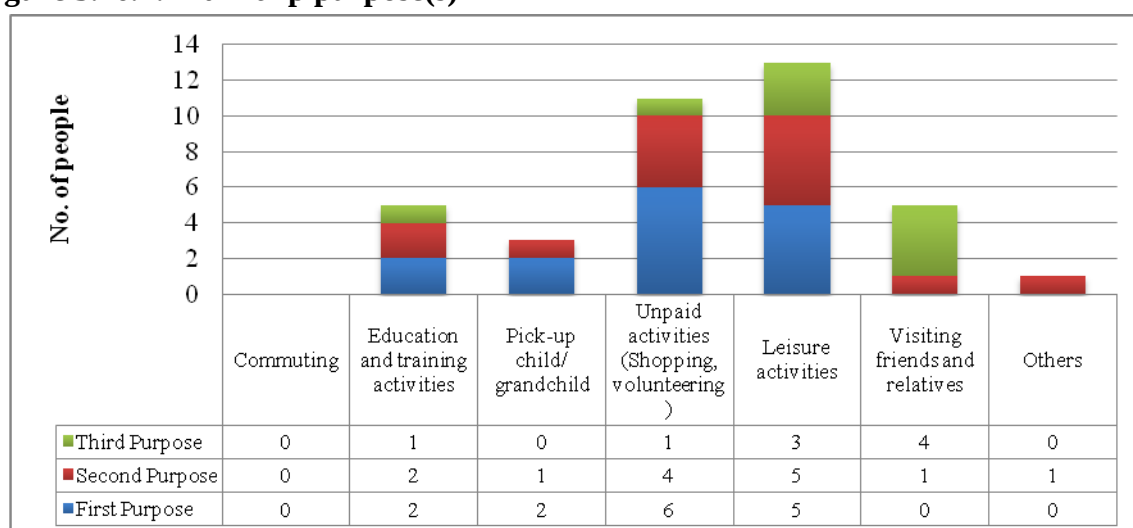


Figure 3.16.2: Daily travel time

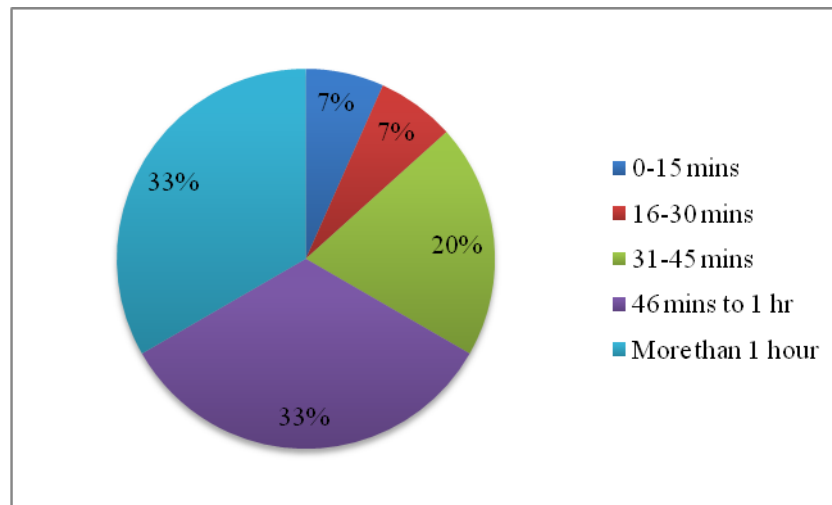
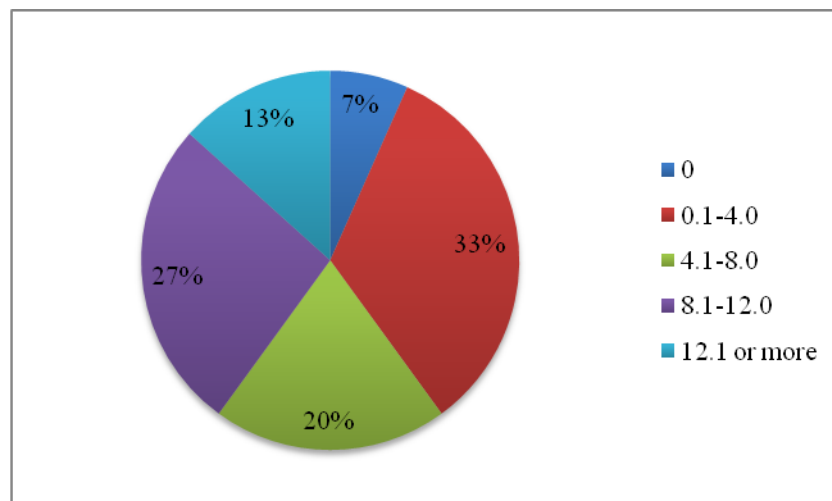


Figure 3.16.3: Daily travel cost (HK\$)



Most popular transport mode is walking (15 chosen), following by MTR (13, including Light Rail) and bus (13). Their main trip purposes are leisure activities and unpaid activities. 5 interviewees averagely spend 46 minutes to 1 hour travelling to their daily destination, while other 5 interviewees spend more than an hour on transport. A significant number of participants are spending over \$4.0 per day on travel cost. This may be caused by a longer travel time with interchanges, and a few interviewees are younger than 65 years old.

Light Rail is the major mode of transport in Tuen Mun District. Focus group interviewees agree that the Light Rail is convenient with sufficient stations within the town centre. However, the light Rail is always crowded but interviewees can only choose to take it since it is almost the only choice available, comparing to bus, minibus and MTR which are

less convenient to them. Light rail can provide better point-to-point transport between interviewee's home and their daily activity destinations.

Focus group interviewees also discussed about the air-conditioning on buses. Some focus group interviewees reflected that the air-conditioning on buses is usually very strong. They have to bring a jacket with them whenever they are planning to take bus. Then one interviewee shared her experience on travelling on stuffy and hot buses. She once boarded a very stuffy bus which caused her bus sickness. She even vomited after getting off the bus. All focus group interviewees said they have tried to talk to the bus driver about the problems of air-conditioner on bus. However, the driver could only provide them the complaint hotline, since the driver cannot control the air-conditioning system.

Table 3.16.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	1 (6.25%)	1 (6.25%)	1 (6.25%)	11 (68.75%)	2 (12.5%)
I am satisfied with my community.	0 (0%)	3 (18.75%)	3 (18.75%)	9 (56.25%)	1 (6.25%)

Over half (57%) of the interviewees are living in private housing buildings/estates. Six (40%) interviewees are living alone and eight (53%) of them are living with their spouse. Interviewees all have a high sense of belongings to the community and are satisfied with the community. In the question “I think I am part of the community”, eleven (69%) of them answered “Agree” and two (13%) answered “Strongly Agree”. In the question “I am satisfied with my community”, nine (56%) of them answered “Agree” and one (6%) of them answered “Strongly Agree”.

Statistics of Variables

Table 3.16.3 presents the interviewees' levels of satisfaction on the four frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Tuen Mun District has slightly lower means of satisfaction levels with walking, MTR, bus and minibus systems. The means of satisfaction with public transport system and overall transport systems are slightly lower than the means of Hong Kong data. Elderly participants in the Tuen Mun District are not frequent users of ferry, tram and taxi systems, and do not travel frequently by bikes or private cars. The

satisfaction level with travelling by bus system is the highest among the frequently used travel modes for this District. Although the focus group interviewees were dissatisfied with the bus system, the interviewees from quantitative part of the study were generally satisfied with the bus system as the mean of district is 3.33 and is close to mean of Hong Kong.

Table 3.16.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.09	3.21
Satisfaction with MTR System	3.14	3.37
Satisfaction with Bus System	3.33	3.47
Satisfaction with Minibus System	3.22	3.36
Satisfaction with Public Transport	3.21	3.45
Satisfaction with Overall Transport Use	3.17	3.36

Figure 3.16.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

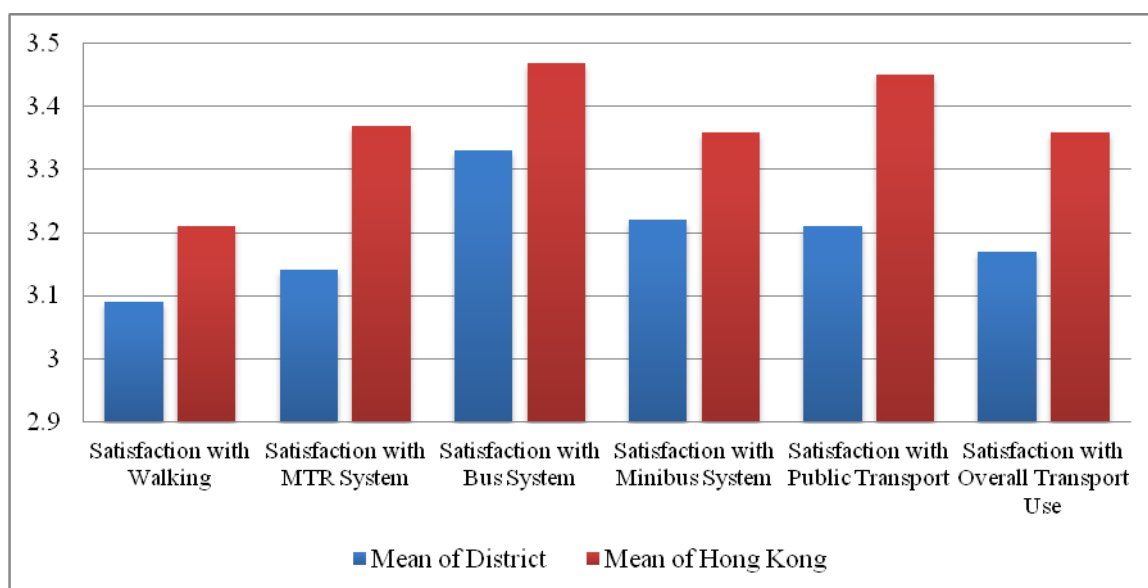


Table 3.16.4 presents the interviewees' levels of community participation of the participants living in the Tuen Mun District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Tuen Mun District joined higher numbers of community activities as compared to those of Hong Kong in general, and also have slightly longer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for

an average of 15.85 hours each week. Elderly individuals in Tuen Mun district generally spent fewer hours for entertainment activities, sports activities and interest classes, and much longer hours for activities in the “Others” category as compared to those of Hong Kong in general.

Table 3.16.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	4.27	3.77
Community Participation: Total Activity Duration in hours (weekly)	14.85	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	3.41	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.40	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.73	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	7.82	3.91

Table 3.16.5 presents the interviewees’ levels of physical health and psychological well-being of the Tuen Mun District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have lower level of physical health and slightly higher level of psychological well-being as compared to those of Hong Kong.

Table 3.16.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	2.63	2.97
Psychological Well-being	3.75	3.69

Table 3.16.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with community. Older adults living in the district have similar levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having lower level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members, neighbours and friends are all lower for this district than the means of Hong Kong as a whole. The mean scores ranged from 6.07 to 7.73 which are all above seven, representing that the elderly participants living in the district have good perceived quality of social relationships in the community.

Table 3.16.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	6.96	7.51
Social Relationships (family)	7.73	8.29
Social Relationships (friends)	7.07	7.78
Social Relationships (neighbours)	6.07	6.50
Sense of Community	4.13	4.06
Satisfaction with Community	3.93	4.02

Table 3.16.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is higher than that of Hong Kong. Elderly participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than eight.

Table 3.16.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	8.80	7.06

Table 3.16.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing that, the elderly individuals in the district frequently travel alone as the mean is higher than seven.

Table 3.16.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	7.53	7.07

3.17 Yuen Long District

Basic Information

Yuen Long District has an area of 138.48 sq. km. The 2017 mid-year population of the district is 630,200. The population density is 4,550 persons per sq. km. (Census and Statistics Department, 2017c). The population has increased by 15.0% between 2006 and 2016 (Census and Statistics Department, 2016). Median age of the district is 41 years old, which is, together with Islands District, the lowest among all districts. The district has 15.1% of its whole population aged 65 and above (Census and Statistics Department, 2017a).

Yuen Long District is situated in the north western part of the New Territories. It contains the largest alluvial plain in Hong Kong. The district covers Lau Fau Shan, Ping Shan, Wang Chau, Shap Pat Heung, Nam Sang Wai, Kam Tin, Pat Heung, Tin Shui Wai and Yuen Long Town Centre. The District has a long history and many traditional villages can be found in Yuen Long. The earliest significant settlements can be traced back to Sung Dynasty. Yuen Long District is the only district with more than one new town. Yuen Long New Town and Tin Shui Wai New Town are both located within the district.

Yuen Long District became a member of the WHO Global Network of Age-friendly Cities and Communities in 2018 (WHO, 2018), and gained the certification of WHO Alliance for Healthy Cities in 2015. The district has been holding community activities in enhancing the age-friendliness of the district since 2005 (Yuen Long District Healthy City, 2016).

Transport Systems

MTR West Rail Line serves the district with 4 stations, namely Kam Sheung Road, Yuen Long, Long Ping and Tin Shui Wai. East Rail Line Lok Ma Chau Station is also located in Yuen Long District. Light Rail serves the district with 7 routes and 26 stations.

There are over 130 bus lines serving the district. Among that 17 bus lines are cross harbour bus routes and 45 are residents' service routes. There are also over 60 minibuses routes, which 50 of them are on scheduled services (green minibus) and 15 are non-scheduled services (red minibus). There are in total 38 bus termini and 54 minibus termini.

Route 3, Route 9 and route 10 are the main routes of the district. Route 3 connects Yuen Long to Sai Ying Pu, starting at Tsing Long Highway. Route 9 is the New Territories Circular Road, with Yuen Long Highway, San Tin Highway and Fanling Highway in Yuen Long District. Route 10 connects the district to Shenzhen, through Kong Sham Western Highway and Shenzhen Bay Bridge.

Findings from Interviews

The centre visited is Mrs. Wong Tung Yuen District Elderly Community Centre. It is located in Yuen Long Town Centre. Fifteen interviewees participated in the questionnaire part and among that five of them also participated in the focus group discussion. The interview was conducted on 6th February 2018.

A majority of the interviewees are between the age of 60 to 64. Twelve (80%) out of fifteen interviewees are retired, and one (7%) is working part-time. Among the twelve retired interviewees, half of them retired between the age of 60 to 65. All of them are retired by 65 years old. Over half (59%) of the interviewees disagree retirement is causing social pressure to them and their families. One focus group interviewee mentioned about her retirement life. Other family members may working full time and she feels bored staying at home. After joining activities at elderly centre and knowing new friends, she finds the retired life now is much happier than before.

Household sizes of all interviewees are less than 4 persons. Seven (46%) out of fifteen interviewees have a household size of 2 persons, while four (27%) interviewees are living alone. Interviewees are mainly living with their spouses and children. They all have a high sense of belonging to the community and are satisfied with the community. In the question “I think I am part of the community”, thirteen (87%) of them answered “Agree”. In the question “I am satisfied with my community”, twelve (80%) of them answered “Agree”.

Table 3.17.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	15 (100%)	12 (80.0%)	13 (86.7%)	2 (13.3%)	1 (6.67%)	0 (0%)	1 (6.67%)	0 (%)	0 (%)

Figure 3.17.1: Main trip purpose(s)

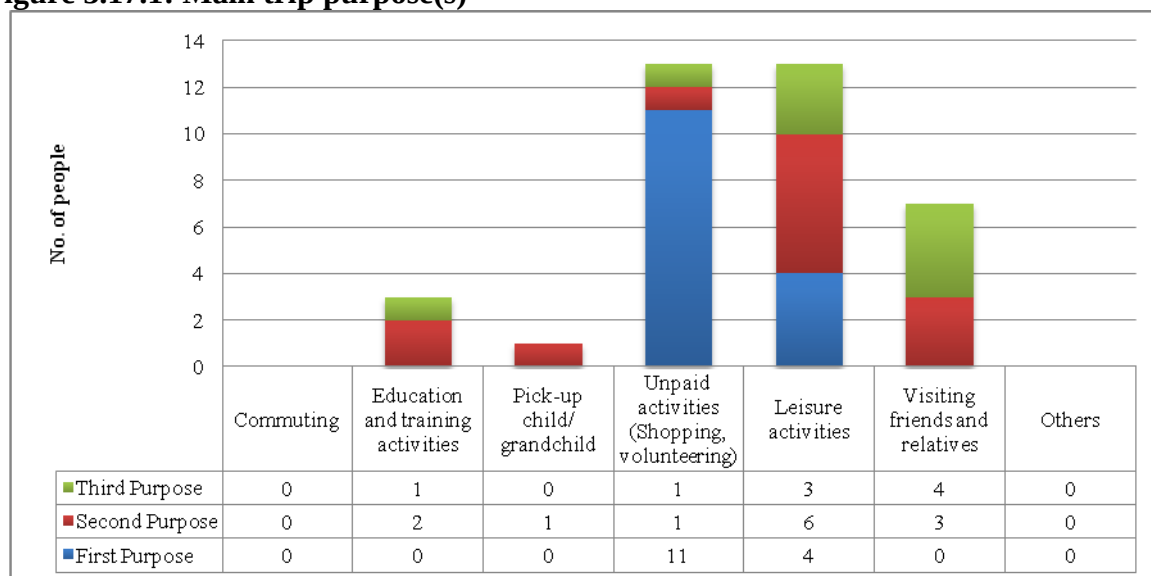


Figure 3.17.2: Daily travel time

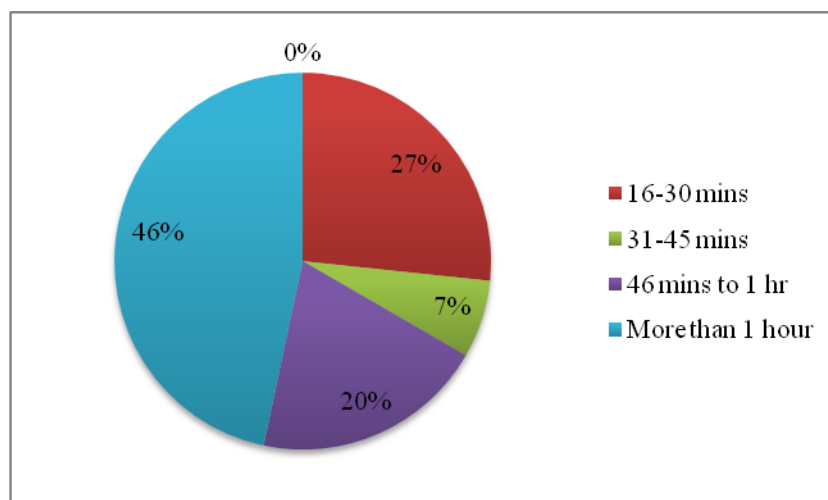


Figure 3.17.3: Daily travel cost (HK\$)

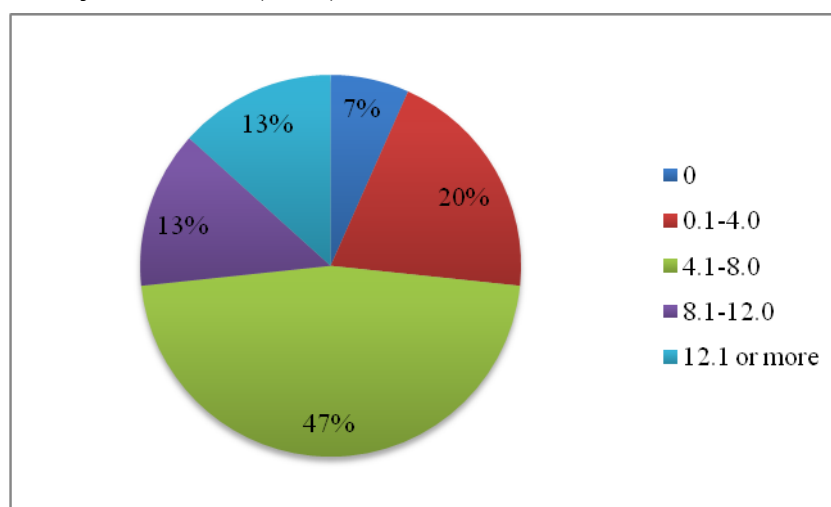


Table 3.17.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	2 (13.33%)	13 (86.67%)	0 (0%)
I am satisfied with my community.	0 (0%)	1 (6.67%)	2 (13.33%)	12 (80.00%)	0 (0%)

Most popular transport mode is walking (15 chosen), following by bus (13) and MTR (13, including Light Rail). Their main trip purposes are unpaid activities and leisure activities. All interviewees take over 15 minutes to reach their daily activity destination, and near half of them spend more than 1 hour per day on transportation. Near half (47%) of the interviewees are spending \$4.1 to \$8.0 on daily travel cost.

Focus group interviewees discussed about the problems when taking bus at Tung Lok Street Station. The street has 8 bus poles, serving 26 bus routes and 7 minibus routes. Interviewees complained about the crowded station, where passenger can hardly find the correct queue. They may easily queue up at a wrong line and miss the bus.

Focus group interviewees then discussed about the street facing shops taking up pedestrian road spaces. Newspaper stalls along the narrow pedestrian road easily cause congestion. Other street facing shops usually put their products display stands on pedestrian road, taking up about 3 feet of the pedestrian road.

Focus group interviewee also discussed about the lift construction work at footbridges in Yuen Long District. Many of the often-used footbridges by the interviewees can only be accessed by stairs. They have to walk across the footbridge to access to the MTR station. Interviewees have discussed with the Director Officers of Yuen Long District Office in the past 10 years, but the construction work has a very slow progress and they can only wait for their community's turn for the lifts.

Statistics of Variables

Table 3.17.3 presents the interviewees' levels of satisfaction on the nine frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Yuen Long District has lower means of satisfaction levels with walking and travelling by bikes and private cars. The levels of satisfaction with travelling by MTR and minibus systems are similar to those of Hong Kong as a whole, while

levels of satisfaction with travelling by bus, ferry and trams systems are higher than the means of Hong Kong in general. The mean of satisfaction with public transport system is similar to the mean of Hong Kong in general, while the mean of satisfaction with overall transport systems is slightly lower than the mean of Hong Kong data. The satisfaction levels with travelling by ferry and tram systems are the highest among the frequently used travel modes for this District. Although focus group interviewees were dissatisfied with the bus systems and the narrowness of pedestrians, the means of satisfaction levels for the district for these two travel modes (collected from quantitative part of the study) are high.

Table 3.17.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.04	3.21
Satisfaction with MTR System	3.42	3.37
Satisfaction with Bus System	3.58	3.47
Satisfaction with Minibus System	3.33	3.36
Satisfaction with Ferry System	4.00	3.80
Satisfaction with Tram System	4.18	3.68
Satisfaction with Bike	3.18	3.39
Satisfaction with Taxi System	3.00	2.97
Satisfaction with Driving	2.40	2.60
Satisfaction with Public Transport	3.45	3.45
Satisfaction with Overall Transport Use	3.25	3.36

Figure 3.17.4: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole.

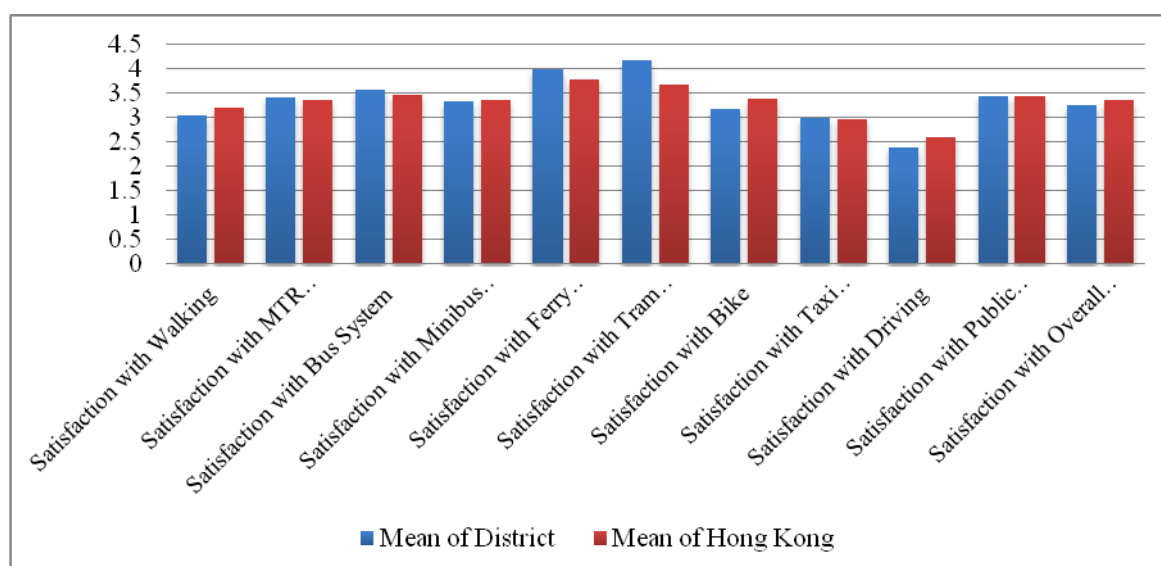


Table 3.17.4 presents the interviewees’ levels of community participation of the participants living in the Yuen Long District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Yuen Long District joined higher numbers of community activities as compared to those of Hong Kong in general, and also have longer overall hours of community participation than the general Hong Kong data. Elderly participants in this district participate in the community for an average of 15.81 hours each week. Elderly individuals in Yuen Long district generally spent longer hours for entertainment activities and activities in the “Others” category, but fewer hours for sports activities and interest classes as compared to those of Hong Kong in general.

Table 3.17.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	5.07	3.77
Community Participation: Total Activity Duration in hours (weekly)	15.81	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	6.38	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	3.54	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.60	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	5.67	3.91

Table 3.17.5 presents the interviewees’ levels of physical health and psychological well-being of the Yuen Long District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have higher level of physical health and similar level of psychological well-being as compared to those of Hong Kong.

Table 3.17.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.70	2.97
Psychological Well-being	3.67	3.69

Table 3.17.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with

community. Older adults living in the district have lower levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having slightly higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with neighbours and friends are slightly higher for this district than the means of Hong Kong as a whole. The mean of social relationships with family members is lower than the mean of Hong Kong in general. The mean scores ranged from 6.60 to 8.13 which are all above six, representing that the elderly participants living in the district have good perceived quality of social relationships in the community.

Table 3.17.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong.

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	7.60	7.51
Social Relationships (family)	8.07	8.29
Social Relationships (friends)	8.13	7.78
Social Relationships (neighbours)	6.60	6.50
Sense of Community	3.87	4.06
Satisfaction with Community	3.73	4.02

Table 3.17.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is higher than that of Hong Kong. Elderly participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than seven.

Table 3.17.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.87	7.06

Table 3.17.8 presents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is lower than that of Hong Kong, representing that, the elderly individuals in the district frequently travel alone as the mean is higher than six.

Table 3.17.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	6.67	7.07

3.18 Islands District

Basic Information

Islands District, has an area of 176.97 sq. km., is the largest district by land area. In 2017, Islands District has an estimated population of 162,900. It is the least populated district and has the lowest population density of 920 people per sq. km. (Census and Statistics Department, 2017c). Median age of the district is 41 years old, which is, together with Yuen Long District, the lowest among all districts. The district has 15.0% of its whole population aged 65 and above (Census and Statistics Department, 2017a). In 2017, Islands District joined the WHO Global Network of Age-friendly Cities and Communities, through the Jockey Club Age-friendly City Project (WHO, 2017).

Islands District consists of more than 20 outlying islands, including Lantau Island, Chek Lap Kok, Lamma Island, Po Toi and Cheung Chau. The majority of the population lives in Tung Chung New Town. The rest of the population mainly live on other parts of Lantau Island, and other outlying Islands. Residents living on other outlying islands have to rely on ferry travelling to Central or Aberdeen. General vehicle traffic is forbidden on these islands.

As the most populated community of Islands District, Tung Chung New Town was planned as part of the Airport Core Programme project. The Tung Chung New Town Extension project was commenced in 2016 to double the total population and increase the new town by 245 ha in total. (Civil Engineering and Development Department, 2016)

Transport Systems

Islands district is the only district without minibuss service. Public transport services available on Lantau Island include bus, ferry, MTR Tung Chung Line and Airport Express, and cable car Ngong Ping 360. Main route in the district is Route 8, which connects Lantau Island to Tsing Yi Island, Cheung Sha Wan and Sha Tin. Speed limit of the North Lantau Highway section of Route 8 is 110 km per hour, the highest in Hong Kong. The only tunnel in the district is the Discovery Bay Tunnel on North Lantau Island, which links Discovery Bay to Siu Ho Wan.

There are a total of 15 bus termini on Lantau Island, mainly serving residents of Tung Chung New Town, and staff and travellers of the Hong Kong International Airport. There are over 150 bus routes serving the Lantau Island, among that 38 are airport bus, 26 are New Lantau Bus and 17 are Discovery Bay bus.

MTR Tung Chung Line and Airport Express connect Lantau Island to Tsing Yi Island, West Kowloon and Central Hong Kong Island. Cable car Ngong Ping 360 connects Tung Chung and Ngong Ping. Ngong Ping is where the Big Buddha and the Po Lin Monastery are located, which are very famous tourist attraction of Hong Kong.

Findings from Interviews

The elderly centre visited is Wan Ho Kan Neighbourhood Elderly Centre in Cheung Chau. The centre is located in North Cheung Chau. It is about 600m walk from the Cheung Chau Pier. The interview was conducted on 27th March 2018.

Sixteen interviewees took part in the questionnaire section, and among that six of them also took part in the focus group discussion. Five out of six interviewees in the focus group are retired, and one is working as part-time domestic helper. Two of them are under 65 years old and are not yet target beneficiaries of the Government Public Transport Fare Concession Scheme. Focus group participants usually take ferry once every 1 to 2 weeks. The main purposes to leave the island is for follow-up consultation, shopping, and visiting friends and family members.

Cheung Kwai Estate is the only public housing estate on Cheung Chau. Two (13%) of the interviewees live in Cheung Kwai Estate and the other 14 interviewees live in private housing. Thirteen (81%) out of sixteen interviewees are retired. Interviewees of this district tend to retire earlier. Twelve (75%) of them retired at age 65 or before, among that, five (31%) of them retired at age 54 or before.

Fourteen (88%) out of the sixteen interviewees selected walking as their frequently used transport mode, followed by ferry (12) and bus (6), as shown in **Table 3.18.1. Figures 3.18.1 to 3.18.3** also show their main trip purpose, daily travel time and daily travel cost.

Table 3.18.1: Commonly used mode of transport

	Walk	MTR	Bus	Minibus	Ferry	Tram	Cycle	Taxi	Private Car
Frequency (%)	14 (87.5%)	2 (12.5%)	6 (37.5%)	0 (0%)	12 (75.0%)	1 (6.25%)	1 (6.25%)	0 (0%)	0 (0%)

Figure 3.18.1: Main trip purpose(s)

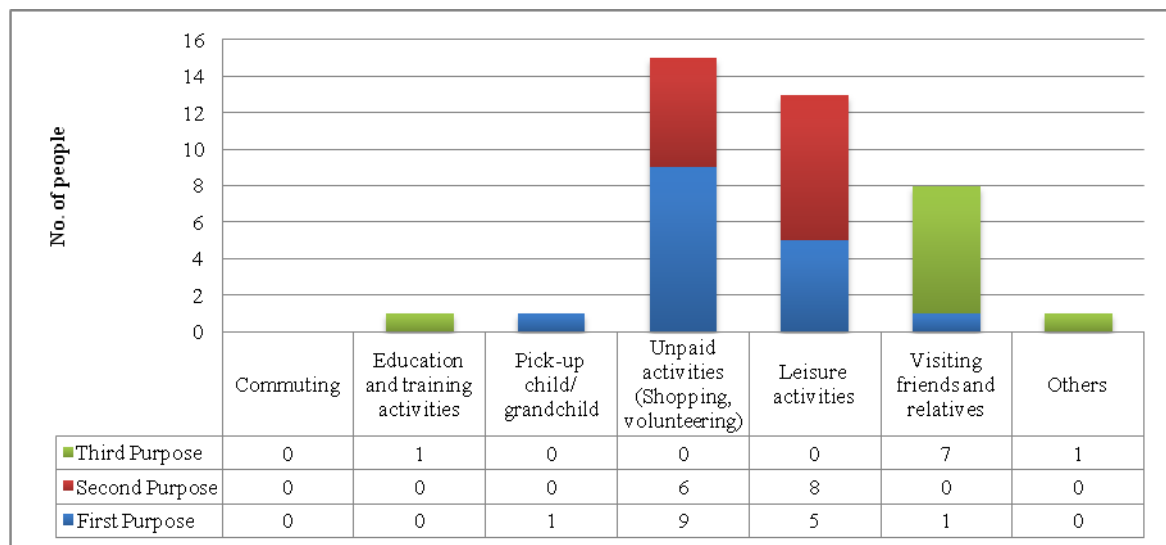


Figure 3.18.2: Daily travel time

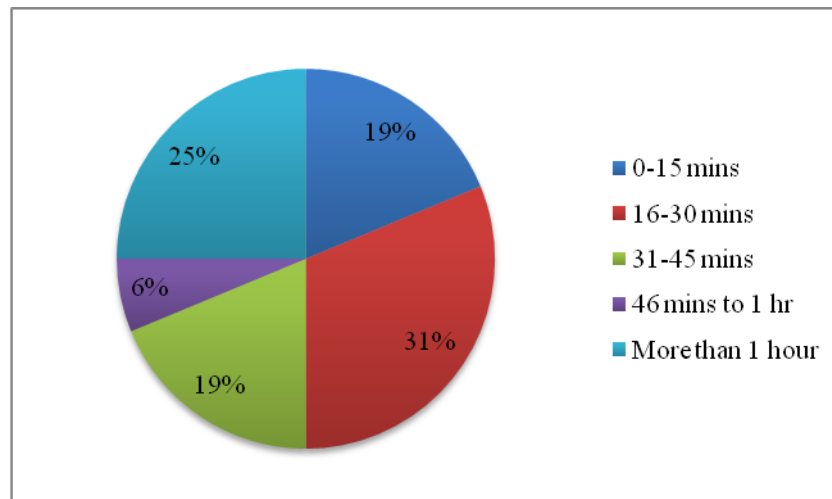
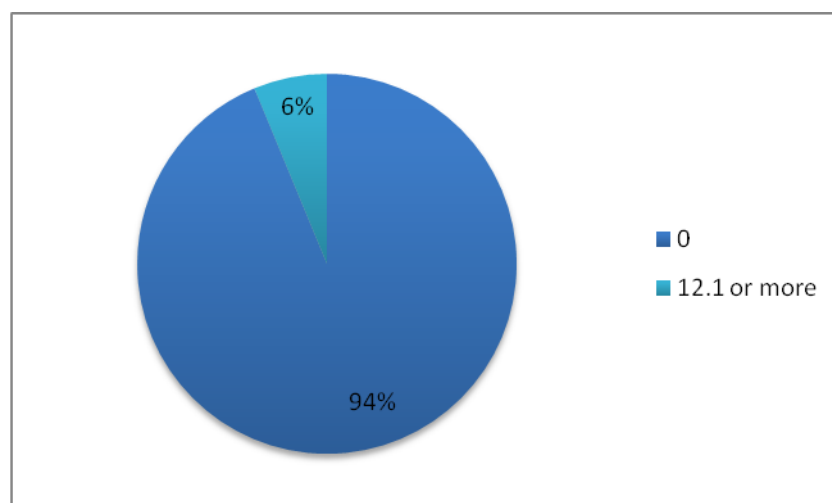
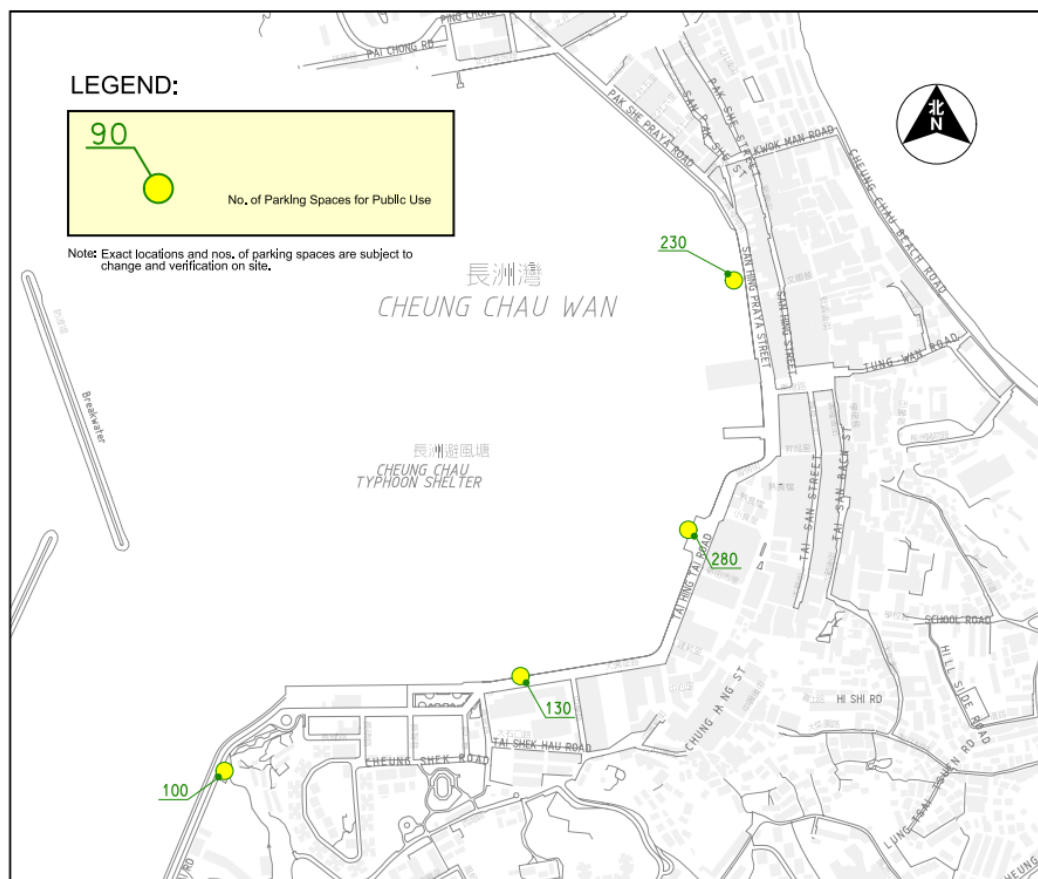


Figure 3.18.3: Daily travel cost (HK\$)



Interviewees reflected that cyclist is one of the potential dangers to pedestrians, especially during weekends and holidays. Elderly with weak ears and slow reaction might not notice the coming bicycles and would easily be knocked down. Roads in Cheung Chau are narrow and have no designated cycle tracks. Some sections of roads on the island are blocking out vehicles and cycles on weekends and holidays. However, interviewees said that the current regulation is not effective since many people do not notice the sign. Over 300 public cycle parking spaces are located along the Praya Street near the pier, leading to increasing vehicle-pedestrian conflicts in the area.

Figure 3.18.4: Public cycle parking sites (Transport Department, 2014)
http://www.td.gov.hk/mini_site/cic/files/map_pdf/Cheung_Chau_en_170412.pdf



Interviewees travelling to Central by ferry would then interchange for MTR or bus. Some interviewees prefer taking MTR due to the high frequency schedule. Some choose to take bus due to more routes available, lower fare, as well as a higher chance to get a seat, since many bus routes have their bus termini at Central Ferry Pier. Reasons not taking MTR include complicated station structure, as Central and Hong Kong Station is one of the largest

interchange stations in Hong Kong. They also mentioned that very few people are willing to give a seat to the elderly. Taking bus can be dangerous when the bus drivers usually drive off before passengers are seated.

Walking is the most common transport mode in Cheung Chau. Three focus group interviewees take around 10 minutes to walk from their home to Cheung Chau Pier, while two other focus group interviewees take around 20 minutes. The last focus group interviewee lives in Cheung Kwai Estate choose to take a 10 minutes bike ride to the pier. Some focus group interviewees suggested setting up a shuttle bus route between Cheung Kwai Estate and the pier / Pak Tai Temple. That would more convenient since the 30 minutes' walk to Cheung Kwai Estate becomes much more challenging when residents are coming back from Hong Kong after shopping. They worried that the long and challenging walk are discouraging elderly from going out.

Ferry is the only available public transport between Cheung Chau and Hong Kong Island, and interviewees are satisfied with the ferry service so far.

Table 3.18.2: Sense of belonging and satisfaction to the community

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think I am part of the community.	0 (0%)	0 (0%)	0 (0%)	9 (56.25%)	7 (43.75%)
I am satisfied with my community.	0 (0%)	0 (0%)	1 (6.25%)	11 (68.75%)	4 (25.00%)

In **Table 3.18.2**, Interviewees all show a strong sense of belongings to the community. In the question “I think I am part of the community”, nine (56%) out of sixteen answered “Agree” and seven (44%) answered “Strongly Agree”. In the question “I am satisfied with my community”, eleven (69%) out of 15 answered “Agree” and four (25%) answered “Strongly Agree”.

Statistics of Variables

Table 3.18.3 presents the interviewees' levels of satisfaction on the six frequently used travel modes, public transport and overall transport systems for the district and Hong Kong as a whole. Higher scores reflect higher satisfaction with the travel modes. Compared to the statistics of Hong Kong as a whole, Islands District has lower mean of satisfaction level with travelling by bikes. The level of satisfaction with travelling by tram system is similar to that of Hong Kong as a whole, while levels of satisfaction with travelling by walking, MTR, bus

and ferry systems are higher than the means of Hong Kong in general. The mean of satisfaction with public transport system and overall transport systems are higher than the mean of Hong Kong data. The residents in this district are not frequent users of minibuses and taxi systems, and do not travel frequently by private cars. The satisfaction levels with travelling by ferry and bus systems are the highest among the frequently used travel modes for this District. From the focus group interviews, interviewees expressed that they frequently travel by walking, ferry and bikes as they live in Islands District. The satisfaction levels from quantitative part of the study for these three travel modes are high with means all higher than the score of three, representing that interviewees are generally satisfied with these three travel modes.

Table 3.18.3: Means of the levels of satisfaction on the five travel modes, public transport and overall transport systems for the district and Hong Kong as a whole

	Mean of District	Mean of Hong Kong
Satisfaction with Walking	3.57	3.21
Satisfaction with MTR System	3.50	3.37
Satisfaction with Bus System	3.84	3.47
Satisfaction with Ferry System	3.90	3.80
Satisfaction with Tram System	3.60	3.68
Satisfaction with Bike	3.18	3.39
Satisfaction with Public Transport	3.94	3.45
Satisfaction with Overall Transport Use	3.67	3.36

Figure 3.18.5: Levels of satisfaction with five travel modes, public transport systems and overall transport system for the district as compared with those of Hong Kong as a whole

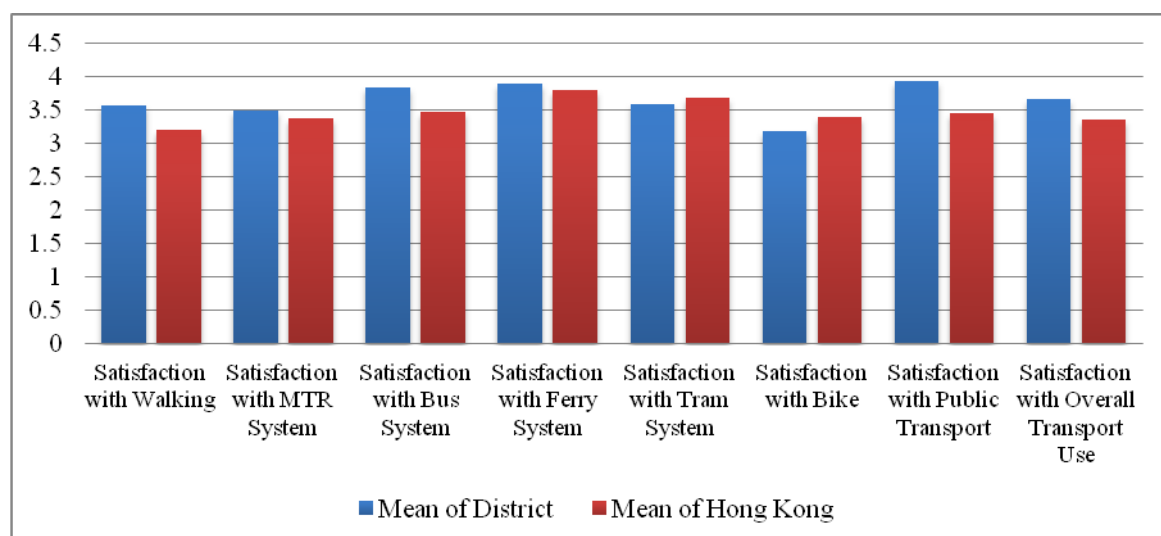


Table 3.18.4 presents the interviewees’ levels of community participation of the participants living in the Islands District as compared to the means of levels of community participation of Hong Kong. Higher values denote more hours spent on activities of community participation. Results showed that elderly participants living in the Islands District joined slightly higher numbers of community activities as compared to those of Hong Kong in general, and have the same overall hours of community participation as compared to the general Hong Kong population. Elderly participants in this district participate in the community for an average of 14.58 hours each week. Elderly individuals in Islands district generally spent fewer hours for entertainment activities, interest classes and activities in the “Others” category, but much longer hours for sports activities as compared to those of Hong Kong in general.

Table 3.18.4: Means of the levels of community participation of participants

	Mean of District	Mean of Hong Kong
Community Participation: Total activity number	3.94	3.77
Community Participation: Total Activity Duration in hours (weekly)	14.58	14.58
Community Participation: Total Activity Duration in hours (weekly) Cat 1 Entertainment Activities	3.50	4.99
Community Participation: Total Activity Duration in hours (weekly) Cat 2 Sports	8.88	4.77
Community Participation: Total Activity Duration in hours (weekly) Cat 3 Interests Classes	0.57	1.04
Community Participation: Total Activity Duration in hours (weekly) Cat 4 Others	1.97	3.91

Table 3.18.5 presents the interviewees’ levels of physical health and psychological well-being of the Islands District and that of Hong Kong. Higher values represent better health and well-being. Statistics showed that elderly individuals living in the District have higher levels of physical health and psychological well-being as compared to those of Hong Kong.

Table 3.18.5: Means of the levels of physical health and psychological well-being of participants

	Mean of District	Mean of Hong Kong
Physical Health	3.42	2.97
Psychological Well-being	3.89	3.69

Table 3.18.6 presents the interviewees’ levels of social relationships, satisfaction with community and sense of belonging and community of the District and Hong Kong. Higher values represent better social relationships, sense of community and satisfaction with

community. Older adults living in the district have higher levels of sense of community and satisfaction with community as compared to those of Hong Kong, while having much higher level of overall social relationships as compared the mean of Hong Kong in general. For social relationships, the means of social relationships with family members, neighbours and friends are all higher for this district than the means of Hong Kong as a whole. The mean scores ranged from 8.87 to 9.38 which are all above eight and are among the highest in Hong Kong, representing that the elderly participants living in the district have the best quality of social relationships in the community in Hong Kong. It matches with the simple and fulfilling lives of the people living in the Islands District which is the farthest parts of Hong Kong.

Table 3.18.6: Means of the levels of social relationships, satisfaction with community and sense of belonging and community of the district and Hong Kong

	Mean of District	Mean of Hong Kong
Social Relationships (overall)	9.06	7.51
Social Relationships (family)	9.38	8.29
Social Relationships (friends)	8.94	7.78
Social Relationships (neighbours)	8.87	6.50
Sense of Community	4.44	4.06
Satisfaction with Community	4.19	4.02

Table 3.18.7 presents the interviewees' views of how much the \$2 concessionary travel scheme in Hong Kong encouraged them to travel more. Higher values represent higher effectiveness of the scheme. The mean of the district is higher than that of Hong Kong. Elderly participants in this district are generally feeling satisfied with the concessionary travel scheme with a mean of higher than seven.

Table 3.18.7: Means of effectiveness of \$2 concessionary travel scheme

	Mean of District	Mean of Hong Kong
Concessionary Scheme	7.75	7.06

Table 3.18.8 resents the interviewees' levels of independent travel mobility and how frequently they travel alone. Higher values represent higher levels of independent travel mobility and higher frequencies of travelling alone. The mean of the district on independent travel mobility is higher than that of Hong Kong, representing that, the elderly individuals in the districts travel alone very frequently as the mean is higher than eight.

Table 3.18.8: Means of the levels of independent travel mobility

	Mean of District	Mean of Hong Kong
Independent Travel Mobility	8.25	7.07

Chapter 4 Satisfaction with Transport Systems, Social Inclusion and Well-being

4.1 Introduction

Travel mobility and community participation have an inseparable relationship. For older adults who participate in activities at places outside walkable distance, a good transport system is one that supports their community participation. Convenient transport, comfortable walking, as well as familiar places and transportation means can enhance community participation and usage of public amenities, and ultimately contribute to physical health and psychological well-being of older people. Previous research suggested that pattern of transport use and transport mode choice have different associations with participation in community and society for older people (Dahan-Oliel et al., 2010). For example, drivers, public transport users and walkers were found to have higher levels of community participation as compared to taxi users (Dahan-Oliel et al., 2010).

Community participation is closely related to social inclusion. Previous studies have supported the role of social inclusion in physical and psychological well-being in a community (Correa-Velez et al., 2010; Sempik, Aldridge & Becker, 2005). Leisure and the community may affect the social integration process of older people in the community (Ruble & Shaw, 1991). Community participation builds up a sense of belonging and psychological safety which secures social inclusion of residents (Milner and Kelly, 2009). People find their place through contributions to the community in form of community participation. These all match with the policies and visions in different parts of the world in the 21st century where there is an emphasis in assisting elderly people to live full and purposeful lives in the progress of building a fully inclusive society (Department of Health, 2001).

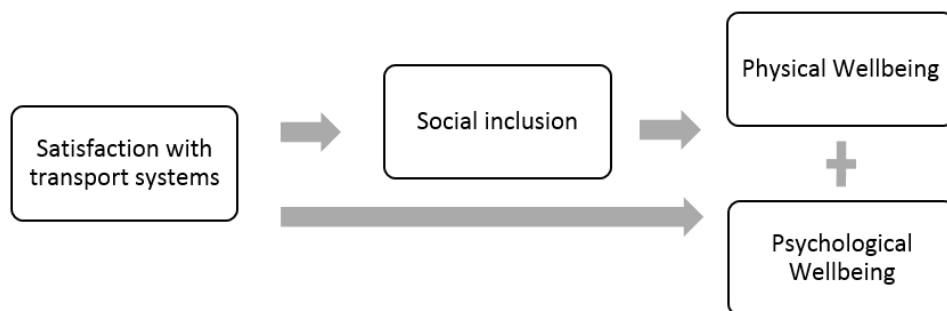
In this study, we investigate older people's satisfaction with various transport modes and its relationships with social inclusiveness and well-being. We adopt a structural equation model (SEM) to examine the impact of satisfaction with transport systems on well-being, with social inclusion acting as the mediator between perception on transport systems and well-being. We propose that transport use and travelling (perception on travel system, travel mobility, travel convenience) affect community participation and social inclusion, which in

turn are associated with physical health and psychological well-being of older people. Specifically, we hypothesize that:

- H1: Satisfaction with transport systems is positively associated with social inclusion;
- H2: Social inclusion is positively associated with physical and psychological well-being of elderly people; and
- H3: Satisfaction with transport systems is positively associated with physical health and psychological well-being, both directly and indirectly.

Our conceptual framework is illustrated in **Figure 4.1**.

Figure 4.1: Conceptual framework



4.2 Methodology

Data Collection and Sample

A questionnaire survey (including mapping exercise in most centres) was completed with N=271 participants from 18 districts in Hong Kong. One elderly centre was selected from each of the 18 districts to draw a representative sample of elderly residents for the current study. The research team sent invitations to the selected elderly centres for participation and a half-day data collection visit was made upon confirmation. In each elderly centre, the research team recruited around 15 elderly individuals who were frequent and regular users of the services and facilities from the corresponding elderly centres. Participants were asked to complete questionnaire on travel mobility, social inclusion, community participation, well-being and demographics information. Trained research assistants assisted participants to

fill in questionnaires particularly on transportation means and community participation parts of the questionnaire.

The sample consists of 83.6% female and 16.4% male. Approximately two thirds (67.5%) are 70 years old or above (old olds). The educational level of a vast majority (97%) of participants is secondary school or below. Nearly half are married (49.6%) while 45.1% are widowed, divorced or separated from the spouse. Participants' household districts spread widely in the 18 districts of Hong Kong, with percentages ranging from 3.1% to 5.4%. Half of the participants live in private housing (50.8%), while over one third (37.8%) live in public rental housing estates from the government. Around one third of them live alone (31.7%) while close to one third live with a spouse (29.9%). One third of participants are from households of 3 to 5 persons, usually living with children and grandchildren. Nearly half have household income of less than \$4000 (49%), while one fifth (20.0%) have household income of \$4000-\$7999. About 14.9 percent have household income of \$8000-\$19999, while 10.2 percent have household income of \$20000 to \$39999. Only a minority have household income of over \$40000 (5.9%). Only 5.9 percent of participants have driving license, and only 6.7 percent of participants own a private car. The measures of each construct and their scale as appeared in the questionnaire survey are summarised in **Appendix I**.

Perception and Satisfaction with Travel Modes

Ettema et al. (2016) developed the multi-item Satisfaction with Travel Scale (STS), which has good psychometric properties and is suitable for any travel modes (see also Olsson et al., 2013; Suzuki et al., 2014; Friman et al., 2013). For the present study, we use a similar scale to investigate satisfaction with travel modes such as subway, bus, minibus, ferry, tram and taxi systems as well as cycling, walking and driving with private cars or as passengers of private cars. We collected participants' views, satisfaction and opinions on transportation systems in terms of convenience, ease of access, fees, routes, trustworthiness of service, distance from home or destinations to transport stops, waiting time for the transportation services, drivers' attitude and behaviours, difficulties in getting into the transport device, crowdedness, cleanness of transportation device, number of seats, transport safety and so forth.

We also looked into participants' experience of walking from their homes to their destinations in details, and collected views on satisfaction of the interviewed older adults with the following elements: Directness of the route, continuity of the route, pavement surface, crossing facilities (marked crossings, pedestrian lights), crossing time, convenience of

footbridges/subways, wayfinding signage, sheltering, roadside air quality and noise level, sense of security, street lighting, street cleanliness, urban greenery, public toilets, street seats and sitting-out areas.

For accessing elderly participants' experience as private car drivers or passengers, we gathered opinions on driving expenses (e.g. gas, parking), ease of finding parking space, road signs, ease of finding gas stations and road traffic. For the experience of taking taxis, we gathered views of passengers on the taxi fees, ease of getting a taxi on street as well as through the Internet or mobile phone, taxi drivers' attitude and behaviour, as well as the cleanliness of the taxis from the inside. For the experience of cycling, we asked participants about cycling routes, availability, quality and smoothness of cycling roads, road signs, road-side air quality and noise levels, road traffic along the cycling tracks, road safety, parking places and devices for bicycles, lighting, cleanness of cycling roads, greenness of the two sides along the tracks, and the availability of seating and resting places.

Social Inclusions and Relationships

To assess social relationships, Correa-Velez et al. (2010) utilized the 26-item World Health Organization Quality of Life-Bref (WHOQOL-BREF) questionnaire, which included questions on social relationships of participants. In our study, social inclusiveness and relationships were assessed with questions such as the number of trusted friends, relationships with family members, friends, and neighbours, sense of belonging to the community, and satisfaction in the community which the elderly participants live in and belong to. The research team also looked into the elderly participants' social connections with family and community, relationship with spouse and family, self-perception of roles and responsibilities in the family, and perception of community and neighbourhood.

Physical Health

Physical well-being was measured with a short 4-item scale from McCloy and Young (1954) to assess participants' ability to walk 360 meters with or without assistance, whether they have chronic illnesses, whether they experience regular pains or illnesses that limit their social activities, and whether they experience intense pain that they cannot bear or stand. The score of this variable for descriptive analysis and modelling is derived from a transformed sum of the four questions. Higher scores represent better physical health.

Psychological Well-being

To assess the construct of psychological well-being, we used a brief measure, which is similar to the ones utilized by previous researchers (Martin, Goryakin and Suhrcke, 2014; Goldberg & Williams, 1991; Cramm et al., 2012; Nieboer, Lindenberg, Boomsma, & van Bruggen, 2005). Elderly participants' psychological well-being were accessed through their experience in the past two weeks, with questions like whether they felt happy, refreshed, relaxed, calm and energetic, whether they felt they have rested well after sleeps at nights, and whether they felt that their daily lives are interesting every day.

Demographic Information

Demographic information was also registered, such as gender, age, education level, marriage status, living district, type of living apartment (i.e. private or public), number and relationship of persons living under the same households, family income, ownership of car and driving license.

Descriptive Statistics

Participants were on average neither very satisfied nor very dissatisfied with the nine travel modes, the mean satisfaction scores ranging from 2.50 to 3.80 (see **Table 4.1**). For walking and public transport systems as well as cycling, participants are generally neutral, while they are generally dissatisfied with their car use and support for driving. Mean score for satisfaction with public transport systems is 3.46, while for satisfaction on overall transport use, mean score is 3.35. Hence, participants are generally fairly satisfied with public transport systems and overall transport use. The mean score for physical health is 2.94, which is neutral, while mean score for psychological well-being is 3.68, suggesting a fairly high well-being.

Table 4.1: Means and standard deviations for the variables in the study

	N	Mean	Std. Deviation
Satisfaction with Walking	246	3.21	0.53
Satisfaction with MTR System	148	3.37	0.45
Satisfaction with Bus System	205	3.47	0.46
Satisfaction with Minibus System	107	3.36	0.46
Satisfaction with Ferry System	23	3.80	0.52
Satisfaction with Tram System	27	3.68	0.57
Satisfaction with Bike	7	3.39	0.67
Satisfaction with Taxi System	20	2.97	0.42
Satisfaction with Driving	4	2.60	0.28
Social Relationships	270	7.51	1.86
Sense of Community	271	4.06	0.66
Satisfaction with the Community	271	4.02	0.69
Physical Health	270	2.94	0.97
Psychological Well-being	271	3.68	0.65

Note: These variables are measured on a 5-point Likert scale except for “social relationships” (on a 10-point Likert scale) and “physical health” (a transformed tallied number of the original measures).

Note also that some public transport modes, such as ferry and trams, are rarely used by these elderly participants, which is consistent with these modes accounting for only 1% and 2% of boarding of all trip purposes in 2011 according to the Hong Kong Travel Characteristics Survey (TCS) (2011). Bikes, taxi, and driving/car are also not popular travel modes among the older people, due to the fact that biking is physically demanding for older people and the other two modes are more costly in Hong Kong, with taxi and private vehicle accounting for 6% and 12% of all boarding (Hong Kong TCS, 2011).

4.3 Models

Structural equation modelling (SEM) was adopted to analyse the complex relationships between satisfaction with travel systems, social inclusiveness, physical health and psychological well-being. Satisfaction with travel systems were modelled as exogenous variables, social inclusiveness, sense of community and satisfaction with community as intermediate, endogenous variables, and physical health and psychological well-being as final endogenous variables. In the model, the exogenous variables are assumed to be antecedents of all other variables, while intermediate, endogenous variables are assumed to be antecedents of final endogenous variables. Among the advantages of structural equation modelling are that it allows researchers to model complex hypothesized relationships simultaneously and provides measures of fit between the hypothesized model and observed data.

We estimate an SEM model expressed as follows.

$$\bar{S} = f(\bar{T}) \quad \text{Eq. (1)}$$

$$\bar{W} = f(\bar{T}, \bar{S}, X) \quad \text{Eq. (2)}$$

Where: $\bar{S}$ is a latent variable of social inclusion, and it is influenced by a latent variable $\bar{T}$, the satisfaction with the respondent's most commonly used transport mode(s) for out-of-home activities; $\bar{W}$ is a latent variable for well-being, which is affected by $\bar{T}$ and $\bar{S}$ as well as a number of sociodemographic variables X .

For satisfaction with transport modes, we limited the measurement model to the four most popular transport modes among participants in our survey (see **Table 4.1**): walking, rail (MTR), bus, and minibus:

$$\begin{aligned} T_w &= f(\bar{T}) \text{ for walking satisfaction;} \\ T_R &= f(\bar{T}) \text{ for rail system satisfaction;} \\ T_B &= f(\bar{T}) \text{ for bus system satisfaction;} \\ T_M &= f(\bar{T}) \text{ for minibus system satisfaction.} \end{aligned} \quad \text{Eq. (3)}$$

For social inclusion, we drop the variable social relationship due to relatively weak relationship with the other two variables and keep two variables:

$$\begin{aligned} S_{soc} &= f(\bar{S}) \text{ for sense of community;} \\ S_c &= f(\bar{S}) \text{ for satisfaction with community.} \end{aligned} \quad \text{Eq. (4)}$$

For well-being, we have:

$$\begin{aligned} W_{phy} &= f(\bar{W}) \text{ for physical well-being;} \\ W_{psy} &= f(\bar{W}) \text{ for psychological well-being.} \end{aligned} \quad \text{Eq. (5)}$$

4.4 Results

Due to a relatively large number of missing values, the number of observations that have valid values in all variables in the model is 59. The main reason for missing values is the collection of data regarding satisfaction with the most commonly used transport modes, which vary among participants. Many participants picked only 1-3 modes (out of 9) that they used most frequently. Due to the many missing values, we estimate the models in SPSS AMOS using Full Information Maximum Likelihood with the full sample of 271 participants.

Construct and Discriminant Validities

The construct and discriminant validities were estimated by means of confirmatory factor analysis (CFA). The correlations between latent variables, construct reliabilities (CR), and average variance extracted (AVE) are reported in **Table 4.2**. The CR of satisfaction with transport satisfies the normally accepted threshold of 0.7; the CR of social inclusion satisfies the threshold of 0.6 normally accepted for exploratory studies, which the CR of well-being being close to this threshold as well (Malhotra et al., 2012). An important reason why the two latter CRs are relatively low is the small number of items. The AVEs are all close to the 0.5 threshold value. Hence, we judge that the measures possess acceptable construct validity. The square root of the AVE of each construct are larger than the correlation between the construct and the other constructs, fulfilling the criteria for discriminant validity proposed by Fornell and Larcker (1981).

Table 4.2: Validity measures: Correlations between latent variables, construct reliabilities (CR), and average variance extracted (AVE)

	CR	AVE	Satisfaction with transport	Social inclusion	Well-being
Satisfaction with transport (T)	0.78	0.47	0.69		
Social inclusion (S)	0.67	0.51	0.43	0.71	
Well-being (W)	0.56	0.44	0.45	0.51	0.66

Note: Diagonal values are the square root of the AVE.

The Structural Models

The details of estimation results are reported in **Table 4.3**. The model accounts for 47% of the variance in well-being (W). In the first structural model, which is about the relationship between satisfaction with transport systems and social inclusion, the coefficient is highly

significant ($p < 0.001$). In the second structural model, which is about the affecting factors on well-being, the effect of social inclusion remains highly significant ($p = 0.004$). The direct effect of satisfaction with transport on well-being is statistically significant ($p = 0.012$) with a standardized coefficient of 0.37. For the socio-demographic variables, only household size is statistically significant ($p = 0.031$), suggesting a larger household is associated with a higher level of well-being, while background factors such as age, being married, and educational level do not seem to significantly influence well-being. The result regarding age seems to echo a previous study finding that ageing and the degree of well-being do not advance in a linear pattern (Blanchflower & Oswald, 2008).

The decomposition analysis reveals that the indirect effect of satisfaction with transport on well-being is 0.193, and the standardized total (direct and indirect) effect of this variable on well-being is 0.581. That is, when satisfaction with transport systems goes up by 1 standard deviation, well-being goes up by 0.581 standard deviations.

Table 4.3: Structural equation model regressing well-being on transport and social inclusion

	<i>B</i>	S.E.	β	C.R.	<i>p</i>
<i>Structural models</i>					
Social inclusion <--- Satisfaction with transport	0.50	0.14	0.45	3.693	<0.001
Well-being <--- Social inclusion	0.41	0.14	0.41	2.937	0.003
Well-being <--- Household size	0.05	0.02	0.20	2.209	0.027
Well-being <--- Education level	0.05	0.05	0.09	1.131	0.258
Well-being <--- Married	-0.01	0.06	-0.01	-0.139	0.890
Well-being <--- Age	-0.02	0.02	-0.08	-0.920	0.358
Well-being <--- Satisfaction with transport	0.43	0.17	0.39	2.623	0.009
<i>Measurement models</i>					
Minibus <--- Satisfaction with transport	1		0.70		
Bus <--- Satisfaction with transport	1.08	0.16	0.79	6.585	<0.001
Rail <--- Satisfaction with transport	0.87	0.15	0.65	5.768	<0.001
Walking <--- Satisfaction with transport	0.99	0.16	0.63	6.159	<0.001
SOC <--- Social inclusion	1		0.56		
Satisfaction with community <--- Social inclusion	1.60	0.31	0.85	5.162	<0.001
Physical well-being <--- Well-being	1		0.38		
Psychosocial well-being <--- Well-being	1.32	0.33	0.74	3.975	<0.001

Note: *B* is the unstandardized and β is the standardized regression weights. Chi-square = 73.238, 41 df. CFI = .93. RMSEA = .054 (LO 90 = .033, HI 90 = .074). $R^2_S = .20$. $R^2_W = .49$.

Estimation results appear to confirm that older people's satisfaction with the available transport systems is important for encouraging their social inclusion and for their physical and psychological well-being. The strong effect of the two exogenous variables in the structural equations, compared to the statistically insignificant effects of socio-demographic

variables (for example, the insignificant effect of age) suggests a need to reconsider the external factors that would promote mobility and community participation as part of the agenda for promoting active ageing and older people's well-being.

4.5 Conclusion

Well-being has been suggested an important health and psychological measure of older people (Steptoe, Deaton & Stone 2015; Cho et al., 2011). In this study, we focus on the potential influential factors of transport systems, which can affect older people's mobility and hence their participating in community activities, which would eventually affect the extent to which an older person stays socially connected and embraced. When an older person feels more socially accepted, s/he may feel a stronger sense of community and beyond, as well as more satisfied with their neighbourhood, which would help with ageing in place. Our findings show that the satisfaction with the most frequently used transport modes has both direct and indirect impacts on physical health and psychological well-being of older people. Policymakers should formulate policies which promote travelling and transport use as they can improve and enhance well-being of senior citizens. Future researchers may look at how new local travel and transport policies such as travel concessionary and local long-distance travel subsidies are related to the physical health and psychological well-being of older adults as well as citizens from other age-groups.

The results of this study should be interpreted with the reservation that the study is based on a cross-sectional survey only. Hence, the found relationships do not necessarily imply causalities. Longitudinal studies that trace the relationships can potentially yield more affirmative conclusion.

Governments and officials from all kinds of organizations at all levels can make a difference in the lives of older adults in their communities. According to World Health Organization (2007), efforts to encourage and motivate older people to participate in the community can make the difference between participation and isolation among elderly populations. The current research informs policymakers to consider the patterns of transport use and satisfaction and perception on different travel modes as they are directly and indirectly related to level of social inclusion as well as the physical health and psychological well-being of senior citizens. In this way, active ageing would be realized with the

assumption that elderly people are not passive recipients receiving help and support from society. They are active players who take active role of integrating into society. Community building and integration shall bridge the link between two policy extremes that either incline to individual care on one side or city infrastructure on another. With such policy implication, this study responds to the international policy agenda of active ageing that seeks to enhance elderly population's quality of life in terms of physical and mental wellness, community participation and social protection (World Health Organization, 2002).

Chapter 5 Policy Implications and Recommendations

5.1 Time-use Perspective

Economic activity status and age, which are relevant considering the proposed extended retirement age policy in Hong Kong, are the two principal factors we investigate in **Chapter 2** of this report, within the context of older people's daily time spent in various out-of-home activities. We find economic activity status to strongly determine time-use and out-of-home activity participation. Since 2014, the government has considered changing the official retirement age for civil servants to 65 (Civil Service Bureau, 2014). If the government continues to promote an extended retirement age, employers may be willing to offer employment, and people may be encouraged to remain employed until 65 years or beyond. In a telephone survey of 803 individuals aged 18 years and above conducted in 2014 by the Hong Kong Institute of Asia-Pacific Studies at The Chinese University of Hong Kong, about 40% of respondents agreed that 65 years is a suitable retirement age (Communications and Public Relations Office, 2014). Given evidence that the labour-force participation rate within the older population shows an increasing trend (Steering Committee, 2012), a consequence of both supply and demand increases, a new retirement policy could result in boosting the share of working elderly.

Our study finds that economically active older people spend more time in out-of-home activities compared to the economically inactive elderly. The effect is attributed to engagement in paid activities. An increase in the number and share of working older people would result in a corresponding increase in the average time spent in out-of-home activities among older people, which, in turn, may alter the demand for urban activities, services, and travel in Hong Kong. This has implications for urban planning and policy.

We also find that economically inactive (unemployed/retired) older persons spend more time in unpaid activities and leisure activities compared to the working old. Surveys show that they are highly likely to be volunteers in non-profit organisations, and in the Social Welfare Department (Information Services Department, 2016). The government should provide more opportunities to encourage non-working older people to participate in community activities and physical activities. Planners should facilitate access to these facilities across space and time.

Expansion of the older population cohort along with increasing social and economic activity participation among the elderly could increase commutes and other trips, resulting in greater demand for transportation systems. Since paid activities and travel are closely linked, transportation investment decisions should consider, among other factors, future demand generated by older people. This could be particularly challenging for planners, since it is possible that transportation needs and satisfaction criteria are different between older and younger population groups. We observe, however, that government agencies and public transport operators in Hong Kong are implementing several measures to enhance older people's accessibility to public transport services such as the Mass Transit Railway (MTR) and franchised bus systems by equipping stations with escalators and lifts, using low floor vehicles with ramps, etc. ICT applications, such as elderly pedestrian actuated signal crossing facilities, are also being tested.

Our analysis shows that older people in Hong Kong spent more time in out-of-home activities in 2013 than in 2002. This could be due to increases in paid and leisure activities among the elderly. Both government and private sector employers in Hong Kong have been encouraging older people to stay longer in the job market. The education levels of older people, on average, are relatively higher now than in the past; consequently, the elderly have more job opportunities. An increase in average income is associated with greater engagement in leisure and recreation.

Survey data shows an increase in the daily time spent in leisure activities from 2002 to 2013. Leisure includes social and entertainment activities, sports, and other hobbies. More frequent leisure activities may be attributed to the Hong Kong Government's recent efforts at allocating resources and developing facilities to encourage older people to conduct more social activities. For example, in 2012, the government allocated \$900 million to elderly centres (Information Services Department, 2016). This has provided more opportunities for older people to join community activities and volunteer work.

The Hong Kong Government's "Transport for All" vision illustrates the city's commitment towards improving mobility for older people. The Public Transport Fare Concession Scheme for the Elderly has been implemented since 2013 and provides a travel subsidy to older people. The concession fare targets people aged 65 years and above travelling on the MTR, franchised buses, ferries, and green mini buses. This scheme

supported 858,000 trips made by older people in 2016, a total subsidy of \$1 billion (Information Services Department, 2016).

We find that people aged 65 years or more conducted slightly fewer out-of-home activities in 2013 than in 2002. The results may imply that the travel concession/subsidy scheme is not associated with more out-of-home trips in this group. We think that the THS-2013 may not be able to capture the full effect of the scheme as it was implemented in the first quarter of 2013, just a few months prior to the survey. It takes time for scheme uptake and changes in travel behaviour to develop. Moreover, the concession scheme initially did not cover all transport modes; coverage was expanded in phases. For example, the green mini bus, which is a popular travel mode among older people, was only included in the scheme in March 2015. We recommend that the existing concession scheme should be improved to further improve mobility and increase accessibility among older people in Hong Kong. Rewards for return trips, extra travel miles in peak- or non-peak hours, and credit transfer of travel miles to household members or community groups they often visit and volunteer in are a few examples.

5.2 District-profile Based Perspective

The urban environment has an impact on people's travel patterns, affecting their physical and psychological well-being. Environmental impacts on older people, who commonly have mobility restrictions, are the strongest. They choose their mode of transport considering their own safety and comfort. A good quality urban environment can encourage older people to conduct more out-of-home activities and keep themselves healthy. Opinions and suggestions from interviewees are summarised in **Chapter 3** of this report. A number of transport mode-based recommendations are summarised in this section.

Streets for All

Streets should serve users of all age groups. Streets should be wide enough to accommodate different street furniture and pedestrians at different walking speeds. Pedestrian streets in older districts are relatively narrower, e.g. in Sai Wan Ho, Wan Chai. These districts usually have street-facing shops with product display stands on pedestrian road. A more decent walking environment should be provided by having a wider pedestrian roadway and creating

areas as places for people to stop by and relax. Street facades should be active by having street-facing shops and green elements along the pedestrian road.

Making Street Paving Wheelchair- and Elderly-friendly

Many pedestrian roads in Hong Kong have brick paving. The bricks can easily pop out when water comes in under the bricks, especially after raining. On top of the difficulty in maintenance, people with walking difficulties, especially elderly people who are not completely mobile or simply at risk for falls, might be easily tripped over by the bricks and potentially suffer severe injuries. The brick paving can be replaced with alternative pavers such as stamped concrete.

Enhancing Walkability through Providing More Street Seating

Walking distance and time needed are main concerns that stop elderly people from doing out-of-home activities. Those who have suffered a decrease in physical fitness or mobility cannot walk continuously for long distances. Fatigue and hypotension due to long walking distances would increase the risk of falling. Street seating becomes an important item to protect older citizens from getting injured, and reduces their risk of developing new walking difficulties.

Green Light Extension Scheme (Smart Device for the Elderly and the Disabled)

A 2011 study showed that healthy persons aged 40 to 99 have a walking speed ranging from 0.94 m/s to 1.43 m/s (Bohannon, 2011). Another study showed 76% of elders walk more slowly than the estimated 1.2 m/s normal walking speed (Asher et al., 2012). Older age groups are expected to make increasing use of walking aids, which further decrease their walking speed. The time required to take the Octopus card out of their bag and tap on the device should also be considered. Therefore, the government should further extend the duration of the flashing green light.

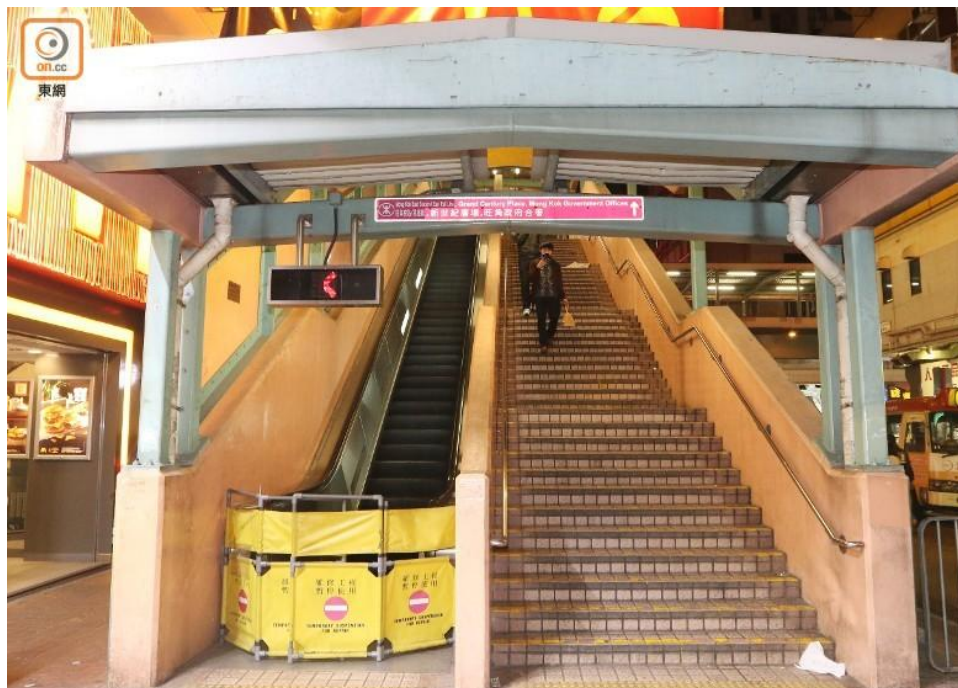
Lifts and Escalators

Escalators at footbridges and MTR stations often have only a single-way escalator (usually going up), and people have to descend by foot (**Figure 5.2.1**). Some people, especially the

elderly, who may have weak knees and legs, find walking downstairs very difficult. Interviewees reported that the presence of stairs is the biggest problem holding them back from using footbridges and taking the MTR. Escalators going both ways should be installed in order to make them convenient to all. Lift construction at footbridges and MTR stations is relatively slow. The newly built lifts are also relatively small, perhaps even as small as fitting only one wheelchair user. Larger lifts can shorten the waiting time, reducing the time needed to cross a footbridge or enter the MTR station.

Figure 5.2.1: Footbridge with single-way escalator and stairs (Oriental Daily News, 2016)

(http://hk.on.cc/hk/bkn/cnt/news/20160306/photo/bkn-20160306171934610-0306_00822_001_05b.jpg?20160306232114)



Help the Elderly Get to Know the MTR Network

Some interviewees reflected that the complicated route map and interchange stations are reasons stopping them from taking the MTR. Kwun Tong Line Extension and West Island Line Youth Ambassadors visited elderly homes and community centres to promote the new lines before opening. The scheme should also extend to the first few months after the new lines are opened. Ambassadors and station assistants should also play an important role in helping older people who cannot read the signage or find their way out.

Improve Bus Stop Waiting Experience (Monitor, Seating and Coverage)

Elderly citizens often travel during off-peak hours, during which the bus schedule is less frequent. They have to wait for a relatively longer time. Those with weaker legs could find difficulties in standing for 10-20 minutes waiting for buses. Seating and coverage at bus stops can provide a more comfortable waiting environment for passengers. The Real-time Bus Service Information Display Panel is another item that interviewees very much looked forward to being installed at all bus stations. Since a majority of the interviewees from this project do not use smartphone applications to check the estimated time of bus arrival, the display panels at bus stations are the most convenient way for them to know the real-time bus schedule. Especially at bus stations on busy pedestrian roads, passengers could choose to spend time on casual shopping and do not have to wait at the bus station. This can also reduce pedestrian congestion.

Bus Safety

Passengers taking buses often have to beware of their own safety before finding a seat. Although the four seats on the front row are already designated as priority seats, and are near to the exit door, passengers still have to walk a certain distance to the priority seats. Passengers might fall down when the bus drives off suddenly when they are still walking from the fare collection box to the seat. In order to reduce the risk of falling, many interviewees reflected that they would prefer to stand next to the fare collection box and hold the handrail, and only start walking to empty seats when the bus stops at the next red light. However, a bus accelerating or turning into traffic are moments when passengers might easily lose balance.

Minibus Safety

Older passengers taking minibuses also must be concerned about their safety as they might spend longer time finding a seat. It is very dangerous that minibuses accelerate when the passengers are still walking down the aisle or trying to sit down. Interviewees reflected that minibus drivers are usually willing to observe and wait until passengers are seated. Additionally, all minibuses registered on or after 1 August 2004 must be fitted with seat belts and high-back seats, and passengers must wear seat belts (Transport Department, 2018).

However, very few interviewees stated they fasten the seat belts, saying that they are not used to it or do not think the journey is that dangerous. More promotion on raising awareness of road safety, especially on safety tips for elderly passengers taking public transport should be done.

Tram Station Safety

Tram stations are often situated in the middle of multi-lane single/dual carriageways. Pedestrians have to be aware of the traffic between the pedestrian road and the tram station. Accidents at tram stations include pedestrians being hit by trams coming the other way, and being hit by cars while crossing the road to tram stations (**Figure 5.2.2**). Prevention of accidents can be improved by relocating the tram stations onto pedestrian roads. Widening pedestrian roads to connect current tram stations could be a solution (i.e. Fu Ming Street Tram Station) which, at the same time, could provide a better walking environment for pedestrians and passengers waiting at the tram station.

Figure 5.2. 2: People crossing the road from the tram station (Oriental Daily News, 2015)

(http://hk.on.cc/hk/bkn/cnt/news/20150724/photo/bkn-20150724191220721-0724_00822_001_01p.jpg?20150725054548)



Misuse of Tactile Units for Visually Impaired Persons at Road Crossings

Pedestrians waiting at crossings with relatively low pedestrian flow see electronic control boxes attached to traffic light poles. There are two types of control boxes, which comprise the Electronic Audible Traffic Signals (eATS) Pushbutton-cum-tactile Unit and eATS Tactile Unit (Transport Department, 2018d). The Pushbutton Unit can activate the pedestrian phase sooner at crossings. However, the eATS Tactile Unit looks very much the same as the Pushbutton-cum-tactile Unit. The eATS Tactile Unit is designed for visually- and hearing-impaired persons with a vibrating component located at the bottom of it. Interviewees in the focus group discussions mentioned their experiences using these facilities but they treat the two devices identically. Some of them choose the wrong unit, which does not have the function of activating the pedestrian phase, and end up waiting at the crossing for extra time. There should be more promotion on teaching pedestrians to distinguish the two types of units. A new design might also help people easily distinguish the difference between the two devices; changing the colour or size of the eATS Tactile Unit, together with labels stating it is not for activating the pedestrian phase, could help.

The \$2 Concessionary Fare Scheme

The \$2 Concessionary Fare Scheme, under the Public Transport Fare Concession Scheme, was initiated by the Hong Kong SAR Government to enable elderly people and eligible persons with disabilities to travel on designated public transport modes and services at a concessionary fare of \$2 per trip: ‘the Scheme aims to help build a caring and inclusive society by encouraging these groups to participate more in community activities’ (Labour and Welfare Bureau, Hong Kong SAR Government, 2018). It is recommended that the \$2 concessionary scheme should continue running, because the elderly participants interviewed expressed high levels of satisfaction with the scheme and the majority of respondents agreed that the scheme encouraged them to go out and travel more, and participate in the community to a greater extent. Because of the high effectiveness of the scheme, it is recommended that the scheme should continue running and be extended to citizens above the age of 55 or 60, in order to further encourage the younger elderly and older elderly to participate in the community more. The Labour and Welfare Bureau of the Hong Kong SAR Government, together with the MTR Corporation, should consider, plan and execute the continuation and

extension of the \$2 Concessionary Fare Scheme with the consultation of the public, professionals and the media.

Full Utilisation of Elderly Social Services

The majority of elderly participants in this study were frequent and regular service users of the elderly centres near their homes. The utilisation of elderly social services helps elderly individuals to achieve better physical health and psychological well-being by encouraging them to go out and engage with the community more. It is recommended that outreach services should be extended to public housing estates to reach out to elderly individuals, as well as introducing elderly persons to elders' social services and encouraging them to be active users of those services near their homes. In other words, it is recommended that the government, together with relevant organisations and parties, should encourage the full utilisation of elderly social services by older adults living in public housing estates and private apartments to facilitate community engagement and the associated enhancement in physical health and psychological well-being.

5.3 Well-being Perspective

Active ageing with enhanced well-being has become a policy priority in Hong Kong and is the main motivation of our research in **Chapter 4**. The provision of welfare to facilitate active ageing is a central theme in Hong Kong's ageing problems in the near future. To alleviate social problems, the government has introduced various welfare measures to promote living with quality. This includes the formulation of the Elderly Services Programme Plan (ESPP) under the Working Group on the Elderly Services Programme Plan of the Elderly Commission (EC) in 2014 (The Government of Hong Kong Special Administrative Region, 2014), with a reiteration in the 2016 Policy Address of its importance (The Government of Hong Kong Special Administrative Region, 2016).

Preventive measures are needed for working cohorts that will become older citizens in the future. The provision of subsidies, medical care and age-friendly facilities with an "outcome-based" orientation is to be carried out in order to address ageing problems in Hong Kong society. Early policy discussions have pivoted around possibilities to introduce retirement and pension schemes, a voucher system in medical care, and housing for the

elderly to address the needs of the elderly population (Chi & Chow, 1997; Chow & Chou, 2005; Chow et al., 2005; Phillips et al., 2005).

An immediate issue faced by stakeholders in active ageing issues is a higher poverty rate amongst people over 65 than that of other age cohorts in the territory (Hong Kong Legislative Council, 2015). Recently, policy discussions have given attention to effective measures to alleviate poverty problems faced by the elderly, and held debates on the implementation of means- or non-means-tested allowance schemes, and possibilities to introduce retirement schemes provided and regulated by the public sector.

Thus far, the government in Hong Kong has launched a series of policies aiming to promote positive ageing. Few policy schemes (except for the '2\$ Public Transport Fare Concession Scheme') have explicitly paid attention to the elderly's travel and activity patterns, despite the close link to well-being and quality of life. This weakness is further compounded by a lack of coordination between different policies that is mainly reflected in their varied target groups (e.g., aged 65 versus 70). In addition, those aged 60 to 64 are generally omitted from these schemes, although many of this age group may face similar challenges (e.g., retirement, declining health and economic conditions) as those who are older (i.e., those aged 65 or above). The age gaps in the above schemes are likely to create (or aggravate) discrepancies in socio-economic status among the elders. This, in turn, may result in certain sub-groups of elderly citizens experiencing more constraints on their activity engagement and, ultimately, deterioration in their well-being and quality of life. Given this, there remains substantial room to improve the existing policy agenda to be better coordinated and more behaviour-focused to ensure sufficient social welfare and care across different sub-groups of older adults in Hong Kong.

The findings of **Chapter 4** open up a new equaliser to well-being for older citizens in Hong Kong. With travel allowances and information on travelling, older people experiencing greater satisfaction in using transportation systems will report a better state of health and psychological wellness. To a certain extent, differences in demographic, social and economic backgrounds among older people would offset inequalities that are based on individuals' life experiences and economic assets.

The findings inform us that the effect of transport has been neglected in prevalent topics of public discussion focusing on retirement protection policy and long-term elderly care only. As a result, policy discussion should not be limited to reforms in social security systems,

mandatory provident funds, and protection measures for retired persons. Improvement in the transport systems and better facilities for older people should be included in the public policy discussion on enhancing active ageing. Physical mobility reinforces older people as active participants in their daily needs as well as engaging members in local affairs.

Therefore, travelling behaviour entails social effects that include all older people who would like to travel regardless of their age, standard of living, gender and type of housing. For instance, older people's recreational centres can organise volunteers to disseminate the latest travel information, transit concessions and new routes in the districts. Another policy implication from the findings would be for government or non-governmental organisations to advocate credit systems to convert older people's travel mileages into allowances for visits to general or specialist clinics in public sectors. To foster a smooth transition of older people approaching retirement, those who are 60-64 should be entitled for the travel allowance scheme that is currently only available to those aged 65 and above.

Chapter 6 Limitations of Study

In this final chapter, a critical reflection on the shortcomings of the study is provided, mainly by commenting on the data collection method, data sources, analytical scheme and policy implication sections.

In our interviews in the 18 districts, a prominent challenge to the implementation of the research methodology is posed by the social inactivity nature of the elderly population. Viable means of contacting eligible respondents are relatively confined, compared to other social groups with higher physical mobility and accessibility to survey entry, as well as intellectual ability to comprehend the interview materials. Given the interviewee recruitment obstacle, elderly respondents in this study were contacted by social workers in elderly centres across districts. Such a sampling methodology yielded two fundamental limitations to the research, namely insufficient sample size and biased feedback.

To ensure comprehensive spatial registration of the collected samples, elderly people were recruited from elderly centres in every district in Hong Kong. However, due to the high time cost in arranging and conducting the interviews, only one centre from each district was visited, which greatly restrained the number of interviewees participating in the survey. In addition, deriving from this setup, only the elderly involving in elderly centre activities could be accessed in this study, which caused reservations on the biased feedback from respondents of a specific social background, thus affecting the representativeness of the study results. Senior citizens who are not socially active or have leisure activities other than visiting elderly centres would be omitted from the interview.

In the activity time-use analysis, the elderly's time allocation on daily activities was obtained from the two THS, 2002 and 2013, for further interpretation. Given the fact that numerous elderly welfare policies had been initiated after the release of the latest THS, including the \$2 Fare Concession Scheme in 2013 and the Health Care Voucher Scheme in 2015, the data source might not be able to reflect the contemporary elderly activity situation as the impacts of the above-mentioned schemes are yet to be revealed. Such a time lag in data availability would lower the significant of the research as a policy reference.

Although much of the focus of the project lies on out-of-home activity and transport usage, the physical and psychological well-being of the elderly remain the complementary indicators for the assessment model in Chapter 4. The commonly used well-being evaluation

method is simple to implement but, on the other hand, is often accused of generalised outcomes. In this report, only two self-stated well-being scores were elicited, which might be insufficient for an extensive understanding of the physical and psychological well-being perspectives of the elderly.

Regarding the contribution on the policy implications of the research, the difficulty of attaining some of the policy suggestions has been recognised. The project was able to identify constructive areas of improvement for public transport stakeholders (viz the rehabilitation of impaired arrival display and acceleration of supporting asset construction), and to encourage continuous resource allocation on effective policy schemes. However, several suggestions on future policy formulation might require further consideration on their actual feasibility in terms of their administrative cost. For instance, disaggregating the cut-off age of elderly transport welfare certainly safeguards the well-being of the worse-off younger elderly and promotes social justice, yet its pragmatic implementation could be a tough issue to resolve from the view of policymakers.

On the whole, although our collected data and the extracted outcome might not capture the whole elderly group, the findings were able to pinpoint the most pressing problems related to elderly out-of-home activities and transport usage, as well as providing timely feedback to recent developments in transport policy (e.g., the Green Light Extension Scheme).

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Appendix I Questionnaire in Chinese

第一部分：流動性

1. 請排列你主要的出行目的 (1= 最主要, 2= 第二重要, 3= 第三重要.....)

- ☐ 上班 ☐ 教育及培訓 ☐ 接送子女／孫子女 ☐ 無薪酬活動 (購物、義工活動)
☐ 閒暇活動 ☐ 探訪親朋好友 ☐ 其他：_____

2. 你每天平均需花多少時間在交通上/ 步行到目的地?

- ☐ 0-15 分鐘 ☐ 16-30 分鐘 ☐ 31-45 分鐘 ☐ 46 分鐘至 1 小時 ☐ 多於 1 小時

3. 你每天平均需花費多少在交通上?

- ☐ 免費 ☐ \$0.1-4 ☐ \$4.1-8 ☐ \$8.1-12 ☐ \$12.1 以上

4. 通常是誰和你一起出行?

- ☐ 自己 ☐ 伴侶 ☐ 子女 ☐ 孫子女 ☐ 朋友 ☐ 傭工 ☐ 其他：_____

5. 請為你獨自出行的頻繁程度評分 (1= 不頻繁, 10= 很頻繁)

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

6. 長者出行津貼可否有效地鼓勵你出行更多? (1= 沒有效, 10=很有效)

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

7. 你通常會用甚麼出行方式? (可多選一個)

- ☐ 步行 ☐ 地鐵 ☐ 巴士 ☐ 小巴 ☐ 渡輪 ☐ 電車 ☐ 單車
☐ 的士 ☐ 駕車/ 乘客

請為上述常用出行方式的滿意程度評分 (✓最適合的答案)

步行

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
街道直達性 (不用兜路)					
街道連續性 (整路? 過很多馬路? 要過天橋?)					
路面質素 (凹凸不平?)					
過路設施 (班馬綫, 行人過路信號)					
過馬路的時間					
行人天橋/隧道的方便程度					
路牌指示					
	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
遮陰					
路邊空氣和噪音					
安全性					
照明					
街道的整潔性					
街道的綠化					
洗手間					
座位和休息區					

地鐵

	非常				非常
--	----	--	--	--	----

	不滿意	不滿意	沒有意見	滿意	滿意
收費					
服務可靠性（準時？正常運作？）					
從家步行到地鐵站的距離					
進出地鐵站的困難程度					
站內的到站資訊					
站內提供的指示					
轉車時的情況					
站內的擠逼程度					
洗手間					
候車時間					
車箱內的擠逼程度					
車箱內的整潔程度					
坐位數目					
在站內和車箱內的安全性					

巴士

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
收費					
路線（直接？足夠？）					
服務可靠性（準時？正常運作？）					
到站資訊					
從家步行到巴士站的距離					
候車時間					
司機的態度和行為					
上落車的困難程度					
巴士內的擠逼程度					
巴士內的整潔程度					
坐位數目					
在巴士內的安全性					

小巴

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
收費					
路線（直接？足夠？）					
服務可靠性（準時？正常運作？）					
從家步行到小巴站的距離					
候車時間					
司機的態度和行為					
上落車的困難程度					
車速（太快？太慢？）					
小巴內的整潔程度					
在小巴內的安全性					

渡輪

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
收費					
服務可靠性（準時？正常運					

作？)					
從家步行到碼頭的距離					
等候渡輪時間					
上落渡輪的困難程度					
渡輪內的整潔程度					
在渡輪內的安全性					
洗手間					

電車

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
收費					
路線（直接？足夠？）					
服務可靠性（準時？正常運作？）					
從家步行到電車站的距離					
候車時間					
司機的態度和行為					
上落車的困難程度					
電車內的擠逼程度					
電車內的整潔程度					
坐位數目					
在電車內的安全性					

單車

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
單車徑路線（直接？足夠？）					
單車徑地面質素					
路牌指示					
路邊空氣和噪音					
單車徑旁的車流量					
單車徑上的安全性					
單車停泊設施					
照明					
單車徑上的整潔程度					
單車徑旁的綠化					
座位和休息區					

的士

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
收費					
在街上招的士的困難程度					
透過電話／互聯網招的士的困難程度					
司機的態度和行為					
的士內的整潔程度					

駕車/ 乘客

	非常 不滿意	不滿意	沒有意見	滿意	非常 滿意
開支（如油費、泊車費）					
找泊車位的困難程度					
找油站的困難程度					

道路的車流量					
路牌指示					

第二部分：經濟活動身份

1. 你現時的經濟活動身份是甚麼？

- ☐ 全職工作（請回答第二題） ☐ 兼職工作（請回答第二題）
☐ 已退休（請回答第三至五題） ☐ 其他（如料理家務者）（請跳到第三部分）

2. 你計畫何時退休？

- ☐ 54 或以前 ☐ 55- 59 ☐ 60- 65 ☐ 66- 70 ☐ 71- 75 ☐ 76- 80 ☐ 80 以上

3. 你的退休年齡是多少？

- ☐ 54 或以前 ☐ 55- 59 ☐ 60- 65 ☐ 66- 70 ☐ 71- 75 ☐ 76- 80 ☐ 80 以上

4. 你同意退休生活對你以及你的家庭帶來經濟壓力嗎？

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

5. 你退休生活對你以及你的家庭帶來社交上的壓力

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

第三部分：身體健康

1. 你可以行 360 米嗎？（一個運動場的距離）

- ☐ 沒有難度 ☐ 有點難度 ☐ 可以但需要幫手 ☐ 不能

2. 你有沒有任何長期病痛？

- ☐ 有 ☐ 沒有

3. 你有沒有任何病痛限制參與社交活動？

- ☐ 有 ☐ 沒有

4. 你有沒有任何病痛至不能自理？

- ☐ 有 ☐ 沒有

第四部分：心理健康

1. 最近兩星期內，我覺得好開心，神清氣爽

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

2. 最近兩星期內，我覺得平靜放鬆

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

3. 最近兩星期內，我覺得有活力有精力

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

4. 最近兩星期內，我覺得起身後休息得很好，精神飽滿

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

5. 最近兩星期內，我覺得每日生活日常都很有趣

- ☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

第五部分：社區活動

你正在／ 近三個月內參加過甚麼社區活動？

	活動人數	活動地點	使用甚麼交通 到達活動場地	參與活動頻率 1= 每天 2= 一星期 4-6 次 3= 一星期 1-3 次 4= 兩星期 1 次 5= 一個月 1 次 6= 少於一個月 1 次	活動時間多 長？	參與活動的主要原因（可選多於一個） 1= 興趣 2= 消磨時間 3= 認識朋友 4= 自我增值 5= 提升身心健康 6= 增加對社區歸屬感 7= 服務社區及幫助別人 8= 其他(請註明)
一、文娛活動						
書法						
粵劇班/ 看粵劇						
下棋（如中國棋）						
戲劇班/ 看戲劇						
跳舞（如芭蕾舞、查查舞、中國舞、爵士舞、排排舞、社交舞、廣場舞、探戈、西方土風舞）						
古箏						
結他						
麻將						
畫畫						
鋼琴						
唱歌/ 聲樂						
二、運動						
水中健體						
箭藝						
羽毛球						
籃球						
單車						

健體						
門球						
高爾夫球						
遠足						
長跑						
晨運						
氣功						
欖球						
壁球						
游泳						
乒乓球						
太極班						
網球						
瑜伽						
三、興趣班						
電腦班						
烹飪班						
英語班						
園藝班						
手工藝班						
投資班						
魔術班						
攝影班						
普通話班						
四、其他						
節日聚會（如聖誕派對、新年派對）						
教會活動						
聚餐						
義工團						
工作坊						
其他:_____						
其他:_____						

第六部分：社交關係

1. 你有多少個可信任的朋友？

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 多於 5

2. 請為以下關係評分：(1= 差, 10= 好)

家庭成員	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	☐ 10
朋友	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	☐ 10
鄰居	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	☐ 10

3. 我覺得我是社區的一份子

☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

4. 我對我居住的社區很滿意

☐ 非常不同意 ☐ 不同意 ☐ 一般 ☐ 同意 ☐ 非常同意

第七部分：個人資料

性別：☐ 男 ☐ 女

年齡：☐ 60 以下 ☐ 60-64 ☐ 65-69 ☐ 70-74 ☐ 75-79 ☐ 80 或以上

教育程度：☐ 小學及以下 ☐ 中學 ☐ 副學士 ☐ 大學 ☐ 大學以上

婚姻狀況：☐ 從未結婚 ☐ 已婚 ☐ 離婚／分居／喪偶

居住地區：☐ 中西區 ☐ 灣仔區 ☐ 東區 ☐ 南區 ☐ 九龍城區 ☐ 黃大仙區

☐ 觀塘區 ☐ 油尖旺區 ☐ 深水埗區 ☐ 荃灣區 ☐ 葵青區

☐ 西貢區 ☐ 沙田區 ☐ 大埔區 ☐ 北區 ☐ 屯門區 ☐ 元朗區 ☐ 離島

你住在哪個屋苑？_____

你家裡有多少人？

☐ 1 人 (自己) ☐ 2 人 ☐ 3 人 ☐ 4 人 ☐ 5 人 或以上

你與誰同住？(可選多於一項)

☐ 自己 ☐ 伴侶 ☐ 子女 ☐ 孫子女 ☐ 朋友 ☐ 傭工 ☐ 其他：_____

你的家庭每月平均收入是多少？

☐ <\$4,000 ☐ \$4,000 - \$7,999 ☐ \$8,000 - \$19,999 ☐ \$20,000 - \$39,999

☐ \$40,000 以上

你有沒有駕駛執照？☐ 有 ☐ 沒有

你家裡有沒有私家車？☐ 有 ☐ 沒有

Appendix II Focus group interview questions

第一部分：流動性

1. 從你家去車站的路上，你遇到甚麼困難或不便？
2. 你覺得對老友記便利的交通應該是怎樣的？為什麼？
3. 對於改善你社區的交通設施上，你有什麼建議？

第二部分：經濟活動身份

(在職人士：請回答第一至二題；退休人士：請回答第三至六題)

1. 你理想的退休生活是怎樣？
2. 你會怎樣準備迎接退休生活？
3. 你如何形容退休前的工作生活？
4. 你認為現時退休生活理想嗎？
5. 請分享一件你覺得退休後最不滿意的事情。
6. 請分享一件你覺得退休後最滿意的事情。

第三部分：身心健康與社區活動參與

1. 你認為參與社區活動可以提升身心健康嗎？
2. 你認為現時社區提供的活動足夠嗎？你認為有甚麼改進的地方？

第四部分：社交關係

1. 請簡單描述一下你與鄰居之間的關係。
2. 良好的鄰舍關係對你生活帶來哪方面的幫助？
3. 你對現時職責/角色有甚麼看法（家庭／朋友／鄰里／社區上）

Appendix III Public Dissemination

Public Workshop

A public workshop was arranged in October 2018 to present the results of this study and provide feedback to the public. The main target audience included social workers from the 18 elderly centres that we visited, transport professionals, government employees, and NGO workers. Small pamphlets were distributed during the workshop, with key policy implications highlighted.

Conference Presentation

A paper based on Chapter 2, titled “A time-use perspective on the out-of-home activities of older people in Hong Kong” was presented at the international conference mobil.TUM 2018, June 13-14, 2018 (Munich, Germany). Funding sources were acknowledged. Another paper, based on Chapter 4, was presented at the annual conference of the Hong Kong Society for Transportation Studies (HKSTS), December 8-10, 2018 (Hong Kong).