



Health, quality of life and service needs among older Chinese immigrants in New Zealand

A report prepared for the CNSST Foundation



Health and Ageing Research Team
School of Social work
School of Psychology
Massey University

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INTRODUCTION

The population aged 65 and over is projected to increase for all four broad ethnic groups in New Zealand. Immigrants comprise 91% of the older Chinese population, with half having been in New Zealand for less than 10 years (compared to 12 per cent of other older New Zealand immigrants). Chinese dialects are the third most frequently spoken languages in New Zealand with Northern Chinese languages alone (Mandarin) representing the fifth most common. Between 2001 and 2013, the number of persons who could speak a Northern Chinese language grew from 26,517 to 52,263 and, for persons aged over 65, this value quadrupled from 996 to 4,266. While older Chinese immigrants likely to have both common and unique experiences of ageing in New Zealand compared to the wider older population, this emerging group remain unrepresented in studies of ageing in New Zealand.

The New Zealand HWR study is a study of health and ageing which began in 2006 and includes a biennial longitudinal survey of older New Zealand adults aged 55+. While over 10,000 older adults have responded to the study since it began, only 1.8% of respondents report an Asian ethnicity. Establishing protocols for the effective engagement of the older Chinese population in research is an important first step in ensuring that their experiences and needs are represented in New Zealand public health research.

Research representing the needs and views of this growing, and potentially marginalised, population has great potential to develop meaningful partnership with the Chinese community in New Zealand. This research is the first to capitalise on a MoU established in 2016 between Massey School of Social Work and the Chinese New Settlers Services Trust Foundation (CNSST). In preparing a report on the findings from this research, the School of Social Work can provide an evidence and a practice base which may inform New Zealand social service providers regarding the needs of this population and inform future practice and investment for services engaging this community. In scoping areas of importance to the health and wellbeing of this population and assessing effective methods of enabling their participation in public health research, this research builds Massey's capacity to engage the wider Chinese community.

Existing research on older Chinese adults in New Zealand emerged largely in the early 2000s, concentrating on issues such as mental health,

resettlement issues and family relationships (e.g., Abbott et al., 2003; Ho, Au, Bedford, & Cooper, 2003). Since then, this body of research has tended to focus demographics and mortality with limited emphasis on key ageing issues, such as caregiving, employment, health and wellbeing, service utilisation, and living and housing arrangements (e.g., Horner & Ameratunga, 2012; Parackal, Stewart, & Ho, 2017). This research will inform practice of public health research initiatives, including the New Zealand Health, Work and Retirement study, which has historically had poor engagement from the older Asian population. This project is anticipated to create an on-going relationship with and access to the Chinese immigrant community via key stakeholders and organisations, supporting other research opportunities to explore other immigrant issues in NZ.

The purpose of this research was to (1) identify factors important for health and quality of life in older Chinese immigrant population in New Zealand, and (2) identify effective and appropriate methods for engaging this population in large-scale public health research.



EXECUTIVE SUMMARY

- In addition to language barriers, technological challenges are emerging as a significant factor in maintaining social/community connection and accessing information to support health and wellbeing among older Chinese immigrants.
- There is a shift of filial expectations and desire to value independence and sense of control.
- Older Chinese immigrants are experiencing a renegotiation of their perspectives on filial piety and intergenerational support with the changing face of the intergenerational social compact.
- Their conceptions of happiness, joy, economic security, eating healthily and exercising held culturally specific connotations to ensure their self-reliance and not to be a burden to the family and the society.
- Immigrants responding to the survey generally indicated that their income was inadequate for their needs.
- More than half of the sample indicated that they could not converse in English and that is presented a barrier in their daily lives.
- Around a third of older immigrants expected a lot of care from their children as they aged, around a quarter indicated that they expected a lot of financial support from children.
- Participants valued feelings of safety in their neighborhood (80%), participation in recreational activities (69%) and volunteer work (49%).
- All elder care services were considered important by more than half of Chinese immigrants.
- “Routine telephone calls” and “visits by social workers” were most frequently viewed as important and endorsement did not differ with demographic factors.
- Those who reported being in poorer health were more likely to indicate that all elder care services would be important as they aged in New Zealand.
- A majority (84%) indicated that language barriers may prevent them from using care services, followed by difficulties in understanding the kiwi system (58%). Relatively few indicated “a lack of privacy” (9%), or that “family members don’t want them to use these services” (12%) as barriers to use.
- While reporting poorer health in general, there were few differences between the sample of older immigrants and other older adults in New Zealand in terms of quality of life.
- Only 45% of older Chinese immigrants indicated that they would consider participating in national research health research on ageing.
- Availability of Chinese language materials and support would provide the greatest boost to research participation among older Chinese immigrants.



METHODS

This research was conducted in three phases.

PHASE ONE – QUALITATIVE INTERVIEWS WITH PROFESSIONALS

This phase involved interviewing senior management team at CNSST to gain perspectives from professionals to explore the current issues and challenges of supporting older Chinese Immigrants, who came to NZ under the family re-unification criteria to age well in NZ. The interview schedule is presented in Appendix A. Low-risk notification was received.

PHASE TWO – QUALITATIVE INTERVIEWS WITH OLDER CHINESE IMMIGRANTS

This phase explored the experiences of aging, quality of life and life satisfaction among older Chinese immigrants via individual interviews. Its aims were to 1) identify their previous expectations of moving to NZ and current perceptions; 2) explore their family, social support and living arrangement; and 3) identify strengths, opportunities and challenges that have impacted on their wellbeing and quality as they continued living in NZ in later life. The interview was conducted in Mandarin by a native speaker. The interview schedule is presented in Appendix B.



PHASE THREE - QUANTITATIVE SURVEY

To examine experiences of health and wellbeing among the older Chinese immigrant community, a convenience sample of older Chinese immigrants who engaged with the CNSST Foundation, church or associated community networks in Auckland were invited to complete a short survey of their experiences of: health, social wellbeing and non-health related quality of life; need for and barriers to service use; attitudes and barriers to participation in health research participation, and; demographic characteristics and English language proficiency. Survey forms were translated by a native speaker, independently reviewed, and administered in simplified Chinese. Materials are presented in Appendix C.

To compare experiences of health and quality of life among the older Chinese immigrant sample with the general older adult population, a matched sample of participants responding to the 2018 New Zealand Health, Work and Retirement survey (Allen, Alpass, & Stephens, 2019) was identified. Participants in the HWR are randomly selected from the national electoral roll - those living in urban areas of the North Island were matched to current survey respondents on age, gender, marital status and perceived adequacy of income. Part two and three received approval from Massey University Human Ethics Committee Southern B (19/10).



PHASE ONE – PROFESSIONALS’ PERSPECTIVES

A total of four senior staff members from CNSST agreed to be interviewed individually. These participants were senior staff members who have extensive social care and welfare experiences currently working with older Chinese immigrants. Their experiences ranged from three to more than 25 years. Interviews were conducted in April 2019. Recruitment occurred through email invitations to CNSST. All interviews were conducted in English. Interview took approximately 60 minutes on average and were audio-recorded. All audio-recorded interviews were transcribed verbatim. Thematic analysis was conducted to analyse the data.

THEME ONE: CHALLENGES OF AGING IN AOTEAROA NZ

Language and technological barriers

While all of the participants identified language barriers as the biggest challenge, another kind of challenge has also been identified for this cohort of older people, technological challenges.

Because of age, they’re sort of behind in terms of technology. Working on their cell-phone or managing their network at home, it’s a challenge for them. They actually need that sort of access to watch TV or communicate with families.

I feel like their personal assistance. Pretty much everything: technology, translation and housekeeping. Like something’s wrong with their whiteware or they don’t know how to heat the oven. You just have to go up and show them... a few times because of their age they forget.

Technology can enhance their English learning ability and increase social connections.

We also give them a free tablet to learn when they come to our English classes. They can check what is actually English

and can type on a big screen and see very clearly. That’s one of the study tools for the students and they’re very happy.

We’ve got one particular session in the class where we teach them how to use WeChat. This is the most popular Chinese social media but if they’ve been here more than 10 years then they don’t know how to use it. And everyone who studies in our community classes all have a WeChat group so everyone can share what they’ve seen. And also it’s a good way for them to share their hobbies.

Insufficient social services to address cultural needs

While there are increasingly more culturally appropriate services to support the growing diverse population in Aotearoa NZ, ageing issues among culturally diverse groups remained understudied.

Ageing issues? Not really. We don’t have that focus at the moment. We don’t have such a strategy plan [for seniors] to have a community-focused senior policy or strategic plan. At this stage, the DHBs are not open home-based support to other providers. We’ve got a lot of complaints from our clients that they send someone to their home for home support and they can’t communicate with them. It’s not just about give them food or whatever, sometimes they (the seniors) need to communicate. They’re so isolated and mentally so depressed and there are no programmes for bilingual support for them.

Our work is in prevention and intervention. The government focus is intervention, but not prevention. That’s why I always keep on hammering that education is needed.

Even when initiatives, e.g., social housing, were developed, there are still stigma and discriminatory attitudes towards immigrants or older immigrants.

But they [seniors] do need support with cultural and language-appropriate services. They want to eat their own food. When you get old, you have particularly meals that you want like congee (the rice porridge), not sandwiches.

With the social housing project, some people say “why do we have to fund housing for Chinese people?” We’re trying to bridge [with the mainstream community].

Think about it, if you migrate to China, you won't understand the Chinese system and you'll need a bridge to understand it. That's why we run workshops for the Chinese immigrants in Chinese language. We're just trying to provide these services to help them to integrate in the long run. But people don't understand that. They'll say, "You're just staying together, doing your own things." But actually, it's not.

I keep on hammering that they [the government] should consider diversity, consider racism around it. It's also disability abuse, elder abuse, Asian minority abuse. We want to support our seniors, but we can't just take them out of their house because our organisation is not providing emergency housing. Sometimes we are trying out best but we're quite limited.

Since we provide services to be the bridge, people develop more of a sense of belonging to the country. They understand more about the kind of things we can do and not do so they will become settled earlier to the area and contribute.

THEME TWO: FAMILY RELATIONSHIPS AND SOCIAL CONNECTIONS

Being with their loved ones and assisting their children were usually listed among the major reasons for older people to come to Aotearoa NZ. Two of the participants identified older Chinese immigrants were aware of their changing positions in their families and in society. These older immigrants have got their vulnerabilities e.g., needed assistance in their daily living due to lack of language skills or knowledge about Aotearoa NZ culture and policy. These vulnerabilities put them at higher risk of being abused, such as financial and not knowing what to do.

In one case, the senior brought home money for the children to buy a house and a business. The business goes bankrupt and the house is a leaky house. They can't resell. They don't want to resell. The children are working hard and the seniors stay home feeling resentful and suicidal. So that's why we got involved. They [the seniors] want their money back but they know that the children struggle due to their own stupidity. They're trapped.

I feel ashamed about that [elder abuse] but it definitely happens. Some of the older people come to use in tears. "What happened?" "My son or daughter-in-law kicked me out. I have nowhere to live". We have seen so many such cases. I don't know what the reason is, but it's caused by social reasons, financial reasons, cultural values, all of that.

The other thing is because they haven't been here long enough, they're quite sceptical about what you say. They don't trust you enough. So, this makes it more difficult when you try to tell them what to do or give them the best advice. They don't always take it. People might assume that we're taking a cut but we're just trying to help them.

THEME THREE: RESILIENCE

Although there are challenges faced by older Chinese immigrants ageing in Aotearoa NZ, participants have also identified many resilience protective factors to assist them to age well.

Acceptance and appreciation

Even though older Chinese immigrants face many challenges and issues, participants said that when they interact with them, they are mostly pleased with what they have and feel comfortable with their environment.

They really appreciate NZ. The government actually is quite good. Those who are 65 plus can apply for a Gold Card to enjoy free bus services but they do complain about late buses or even no show. NZ has very good weather, the food safety and water safety and the air condition is very good. Lifestyle is different from China. It's more crowded and they would have more networks than here. Some of them do feel lonely. At this stage, the majority of them are still physically fit but I imagine in 10 years' time, the conditions get deteriorated.

They really enjoy living in NZ. They have choices. It's their choice to stay here. I suppose we integrate them into the mainstream but that can be quite difficult for the elderly. They'd rather just stay with their own group. I think they prefer this.

Independence and autonomy

Participants reported that many of the older Chinese immigrants want to rely on themselves

and put no extra burden on their children. The long-held tenets of filial behaviour were more relaxed and realistic than those found in other literature.

It's just the same as Kiwi kids, who all go overseas. We can't expect our children to look after us anymore. They're mobile kids now.

Even if they are living with their children in the same roof and if they're 50 or even 60, physically still strong enough, they'd rather go out and get a job. I still remember a senior said to me "I don't want to be looked down upon by the kids. So I need to learn English and how to improve that. And also I need to get some work and earn some more money."

I'm pretty sure they appreciate their own freedom. They don't have to listen to anyone, they don't have to live under someone else's house.

Although Chinese culture is imbedded or ingrained in their mind about [filial piety], they [seniors] want to be independent, that's what I've observed.

While older Chinese immigrants seem to prefer living independently, they still require support from their own family members, professionals and community.

I'm not sure about an independent life, but more of a comfortable life [living in NZ]. They need to learn how to use technology, they need to have someone who can

translate or them. That's very important because every time they receive something in English, they just have no clue. They'd rather just not do anything.

I think it's the right thing to do [look after your ageing parents]. I think this is still the general perception or general expectation within our community. You still keep working but once you stop, the children are supposed to take over.



PHASE TWO – OLDER CHINESE IMMIGRANTS

Ten older Chinese immigrants were recruited from CNSST while three others were recruited via personal network from the community. Seven of the participants were aged between 63 and 69 while the rest of them were above the age of 70. Their length of residency in Aotearoa NZ ranged from four to 24 years. Seven of them lived with their son/daughter when first arrived in Aotearoa NZ but were now living either alone or with their own spouse. A brief description of the older Chinese immigrant participants is presented in Appendix D. All interviews were audio-recorded, conducted in Mandarin and transcribed verbatim. Interview took approximately 60 minutes. Thematic analysis was conducted to analyse the data.

THEME ONE: PERCEPTIONS OF LIVING IN AOTEAROA NZ

Perceptions of living in NZ

Participants in general considered their lifestyles and living in NZ were quite positive. They felt “kiwi” were mostly really friendly and very helpful. They found the food, produce and products in NZ were in high quality and safe to buy and consume.

We went hiking in Mount Wellington and it suddenly rained. This kiwi guy signaled us to get into this car to avoid the rain. When we got in, there were other Chinese people whom he helped. Even though we couldn't speak English, I felt NZ culture is more friendly and approachable not like back home. (P02)

One time I tripped over while working on the pavement. A kiwi person came and helped me. Because I didn't know much English so all I could say was just “thank you; thank you”. Over the time I have been living here, I haven't experienced any discrimination or racism. (P10)

Bus drivers in NZ are really nice and they will wait for you to get in and sit down before moving. They really care about the

safety of the passengers regardless whether you are young or old. (P013)

Back home when you buy an apple, you have to peel the skin. But in NZ, you can eat the whole apple without worrying about chemicals. The food in NZ are more natural and nutrient without any preservatives. It is a lot safer for people like us who are older. (P013)

They were also very grateful of the support and assistance received by the NZ government in relation to housing, health and welfare.

NZ's welfare on older people are better than back home [China]. (P03)

The government introduced the Winter Energy payment in 2018. Even though we only get an extra \$20 per week over the five months during winter, it is still \$20 more for us to supplement our income. This is a caring gesture from the government to older people to get through wintertime. I am also thankful for the Gold Card to give us subsidies for public transportation. These are very important things for the government to recognise the need of older people and care for them. (P13)

I hurt my leg in 2016 and had to stay in hospital for more than 10 days. After being discharged, there were lots of support provided. They asked me if I would need any equipment at home and gave me a commode chair for the toilet. They asked me if I drive and who would take me to doctors or therapies. I said my daughter works during the day and they said they would give me some taxi vouchers and also organise a disability parking permit. I was very touched by their support. The government is really thoughtful. (P05)

Language was reported by all participants as the biggest challenge of navigating and living in NZ.

Even though I learnt a bit of English in the University back home, if you don't use it regularly, you forget them all. I can manage saying hello to people, but my husband does not even know the alphabets. Another challenge is different lifestyles. The children prefer western breakfast but for us we eat noodles and rice porridge. It can be hard to change the lifestyles you have been accustomed to for 50 or 60 years. We do try hard to adapt. For example, everyone in the public

transportation is very quiet but back home people speak loudly. When we go to café and restaurant, we are mindful of our noise level. We learn from our children and now we can google them online to understand the “kiwi” lifestyles. (P08)

Our English is no good but our daughter takes us everywhere. Because she is here and helps us with everything, we don't really communicate with NZ people in general. (P10)

One time there was an accident at home, I rang 111 and repeatedly said “I do not English, Chinese, Chinese” but they kept speaking English. After a while, finally a Mandarin speaking policeperson came to phone. You don't ring 111 if it is not an emergency and obviously you want to talk to someone urgently. I think not having adequate support to help those who can't speak English is a bit unhelpful when there are many Chinese people living here. (P05)

I found the healthcare system here is not as good as in China. Our family doctor is very nice, but you have to ring up and make an appointment all the time. If you want to see a specialist, you have to be referred to them. Not like back home you can go and get checked-up whenever you want. Communication is a barrier. (P09)

Many of the participants have identified using Chinese community services to assist the language barriers. One of the participants spoke of seeking help from her local Citizen Advice Bureau and the telephone interpreting services offered by the government (Ezispeak).

Citizen Advice Bureau is great and is located in every suburb. Another one is the language line... you can ring and choose Mandarin and wait for a while, someone will ring you back. When we receive letters from the hospital, even though we don't understand the whole letter, we also try to use our Smartphone for translation...we get by with these supports so that we don't trouble our grownup children. (P06)

THEME TWO: GROWING OLDER AND AGEING WELL

Many of the participants revealed a positive outlook, an engaged life, healthy eating habits, good health, supportive social networks and economic independence as the most important

component of “successfully aging” or “ageing well” in NZ.

I am able to find purpose in life here. My wife and I can continue supporting each other. If our health declines, I think the government here will help us. (P10)

It's quite and relax here...you can go out and enjoy the outdoor or go shopping with our daughter. I focus on my health. You have to have a family doctor in NZ and we have to have a Chinese speaking family doctor so we can ask questions. I feel I have enough to eat, to wear. (P02)

If I was still in China, my life would be quite busy and vibrant because I would still be working and have many friends and places to go. I am not needed here in terms of my skills. My children need me here but that's it. When I first came here, I felt a bit lost and down. But I have to adapt and change and find a purpose living here. This is really important. I found the technology in NZ is quite backward. However, people here are really nice and considered like they will stop immediately when people are crossing the road; they recycle. One time I was pushing my grandchild in the stroller in our neighbourhood and saw someone was mowing his lawn. His lawn mower was really noisy but he stopped when we got close and only resumed after we passed his house. Back home, people don't really care. I don't need the pension from NZ government as I was able to bring my pension here. As long as I am able to look after myself, that will be enough to grow old. (P08)

My wife likes growing vegetable here, so I help with the gardening. I like doing DIY. I also exercise regularly like swimming every morning. These are important for me living in NZ. (P03)

There is also some culturally specific aging well engagement reported by participants. All of the participants came to NZ because of their grownup children. Their views of aging well or successful aging revolved around familism, and filial piety, emphasising collectivism (e.g., grandparenting).

In terms of our life in NZ, the first responsibility is to help looking after my grandchildren. The grownups work every day, so we take the grandchildren to school and cook for them. (P03)

We are happy here to live with our son, daughter-in-law and the two grandchildren. It's important to have purpose in life, happy and enjoy being happy every day. We also participate community activities. Old people need to continue integrating in the community and don't just stay home all day. (P09)

I came here for my daughter. My husband died in 2017 and he was buried here in Auckland so I think I will stay here. (P07)

We lived with my son and his family when we first came here so that they can look after us. But after a while, they didn't like us "nagging" them. We as parents had to accommodate them all the time. Being Chinese parents, at times it is hard. (P01)

While there are still evidences of older Chinese immigrants' strong adherence to the heritage culture, in the forms of high prevalence of co-residences, close-knit relations, and frequent support exchanges, participants' narratives in this study also showed changes of their filial expectations to their grownup children in NZ. One participant talked about changing her expectations of respect and commitment and the other mentioned living together could lead to intergenerational conflict:

We thought we could have our grownup children and grandchildren with us as we grow old to go out, to play. But we can see we are drifting apart. She [my daughter] has her own way of thinking and doing things. Like the other day she said "ma, get ready and we will leave in 10 minutes". I said you need to give us some warning and time to prepare. We are not like them. We want to plan ahead. Perhaps this is how they do things here now. Sometimes they may think taking us out is a bit inconvenience. (P04)

Living together with my son can create friction but my biggest worry is we would become a burden to him. If needed, we will move away from him to avoid any friction and argument. (P08)

Some of the participants expressed that they were quite satisfied with their lives in NZ, particularly not living with their grownup children. While they still considered themselves fortunate to come to NZ and cared for by their grownup children, they have also come to understand their grownup children's difficulties and try not to be a burden.

We don't live with our son and daughter-in-law anymore. We have our own space, owned by Housing NZ. Living with them at times was inconvenience. She is not my own daughter so I can't speak freely to her. If you said something, it would put my son in a difficult position. We can now do whatever we want and can handle most of basic things. One time we broke the back window, so my husband rang Housing NZ and they have a Chinese interpreter. Within hours, someone came and fixed our window. If I asked my son to come, it would take him a long time. We think when we get older, we probably will need to go to a rest home. We can't rely on our grownup children...they are so busy. One of my grandsons is 12 and in ten years' time, he will be 22. The other grandson is still very young. So, my son will still be busy with them. I can't see him looking after us in ten years' time. Rest home is probably the only option although we haven't thought much about it at this stage. (P01)

Many of the participants discussed that they did not want to be a financial burden to their own family and society.

As we get older, the possibility of expecting our daughter to look after us is quite slim...not because she does not want to. My own mother back home is 84 and my four siblings take turn to look after her every three months. They can do that because they don't work anymore. When we get to that age, unless my daughter doesn't work, I don't think she will be able to look after us. We may end up going to rest home...we could probably afford the standard one, but this is also a problem. I don't trust those rest homes operated by Chinese people...I am doubtful about the quality. (P03)

Back home, I trained as a teacher. My belief was to use my knowledge to shine the light for the people around me. I wanted to bring happiness to others and not to add burden. If one day I became a burden to other people, I would want to have good quality of life and die with dignity. I told my grownup children that don't bother wasting money with any treatment to keep me alive. I want to have dignity and quality in my passing. (P08)

Most ideal is to be able to self-manage, self-reliant and have control of my life so

that I don't need to rely on people for everything. Maintaining financial independence and keeping myself healthy, not relying on my grownup children and able to eat what I want and do what I like... these are the best self-management to maintain self-confidence. (P03)

None of the participants were involved in any employment since retiring in NZ. However, some of them considered their contribution to the society and NZ economy via looking after the grandchildren, participating in community activities, keeping themselves healthy, happy and self-reliant.

Of course we don't have direct contribution to the community like a job, but we have lessened the burden for our daughter by looking after her and her children so that she can go to work. We cook, clean and take the grandchildren to kindy. So we can't say we don't contribute but our contribution is more indirect. Getting old is a reality and we can't expect our daughter and son-in-law not to work to look after us. This is unrealistic. So our only hope would be rest home. We hope the government can provide us with more support like in health as we get older. ...we just don't want to give too much burden to our daughter because she works and has her own family to look after. (P02)

I didn't have much education back home. So now I am in NZ, I want to learn. I like the atmosphere when attending community classes. To me, to age well means keep learning and don't stop. I think when you are alive, you need to contribute and serve people and the community. NZ government has been so good to people like us, so we need to have some heart to return the favour back. Looking after ourselves and our health are also important. If you have good health, you will be able to learn. I don't expect much. The benefit from the government is not a lot but it is more than enough for me to eat and live. Chinese people are very fugal, and we can't deny many Chinese people have experienced hardship in lives. (P01).

I don't have many requests...just get on with my life here and that's enough. Now I mainly hope to have good health and be happy. There are many community centres and activities to do...many Chinese people in this area to hang out. (P07)

Unlike the traditional expectations of filial piety, which obligates people to respect and support senior family members, four of the participants discussed the option of going into the rest homes as they did not want to become a burden to their family members. Language barrier was the major considering factor if they had to go to rest homes run by mainstream providers.

If we can't self-manage ourselves, then we will need to go into a rest home...run by kiwis. The issue is language difficulty and different eat habits. I don't know if there are any rest homes run by Chinese people. (P11 and P12)

I heard some of the rest home facilities run by Chinese people is not that good. I don't mind going to a rest home run by kiwis, but it is the language and communication barrier that worry me the most. I think everything provided in NZ is OK. I am not afraid to go to a rest home but even if you use Smartphone to communicate, it is still very inconvenience.

I would prefer to remain independent but if I couldn't, I believe the health and welfare system here. Because I have seen and heard about it like moving into a rest home. We have to consider these things as you never know what it will happen to you. (P10)

THEME THREE: ACCESS TO COMMUNITY, HEALTH AND WELFARE SERVICES

All of the participants have shared small to large extent of their involvement with Chinese and other community organisations. When asked about their views of receiving services such as home help, there were some mixed views. Nearly all of the participants said as long as they could look after themselves, they would not access the services unless it became a burden to the family and society. Quite a few of the participants said that they would be willing to accept the services, but they said most of the support workers were kiwis and they worried about language barriers. Some participants also mentioned that they were not comfortable for male support workers to conduct personal care to female clients or vice versa.

I was offered the home help service before, but I declined. I didn't feel comfortable to be showered by a stranger, even though that time the person was Chinese. But the

other support workers, regardless of male or female, who came to help my husband were not Chinese so we couldn't communicate. (P11 and P12)

Me and my husband can look after each other. We can make things work so we don't need to burden the society. We don't need outsiders to support us...we can manage. The other issue is one time I hurt my hand, they just sent anyone to come and help regardless of the gender of the client. I just was not accustomed to it. I rather put a chair in the bathroom and wash myself slowly. (P01)

I would consider the service because back home there are also home help services. But there should be some vetting process to check these support workers and ensure those receiving the services will not get hurt. (P02)

I like the home help services idea. My husband was quite sick last year and stayed in the hospital. Staff there were very kind and looked after him very well. Even if you had the money back home, the quality of services was very different. People here are much nicer and more caring. But if I can do it myself, I won't take the service. There may be a shortage of these support workers so if we can manage, we can help the government to save some money. I think the government has already been very good to us. (P04)

I am not worried about privacy if a support worker comes and help. But we have enough family members at home to help out. For example, when my husband was sick, our daughter was here, our in-laws were here and I was home too. This is our Chinese nature...not wanting to bother and burden others. May be when I get a bit older... we'll see. Having such service is good but it is best not to bother other people. I can do things in my own way...just don't want to bother people. (P07)

Ten out of the 13 participants have indicated that they were likely to live and age in NZ, mainly because of their families, grandchildren and the lifestyle.

I will stay in NZ...haven't thought about moving back to China to retire. I don't want to leave my children even though they are not small children anymore like they are in

their 30s. If anything happened to them, I would be too far to be with them. I rather stay closer to them. (P02)

I am used to the lifestyle here. If my wife wants to go back to China, she can go but I will stay. My daughter has been living here for 19 years. I have been back to China, but I am not used to the old lifestyle. I just don't feel comfortable there anymore. (P10)

I don't think about going back to China anymore. I came here to be reunited with my children. If they moved, I would move with them but at the moment everything is fine. I have thought about where I would be when I get older like 80s but I am not there yet so for now everything is going quite well and I will leave it as it is. (P09)

A majority were aged 65+

PHASE THREE – QUANTITATIVE SURVEY

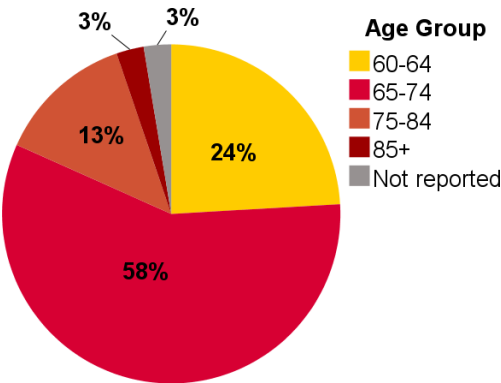
The quantitative survey of older Chinese immigrants provides an opportunity to examine the themes raised in the interviews with older immigrants and supporting professionals.

Descriptive comparisons and conclusions are presented in text and inferential statistics presented in Appendix E.

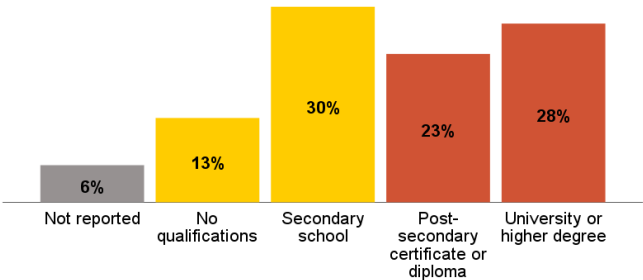
PARTICIPANTS

As respondents were adults who were both engaged with CNSST or broader Chinese community networks, and were interested in participating in the research, respondents are unlikely to be representative of all older Chinese immigrants. Here we take the opportunity to provide a description of those who responded to the survey in terms of their demographic characteristics, living arrangements and ability with English language.

One hundred and ninety-one community members returned a survey: 144 from CNSST networks and 47 from Chinese churches and social networks in the Auckland region. Of those who returned a survey, 57.1% were female, 41.4% were male and 1.6% did not indicate their gender.

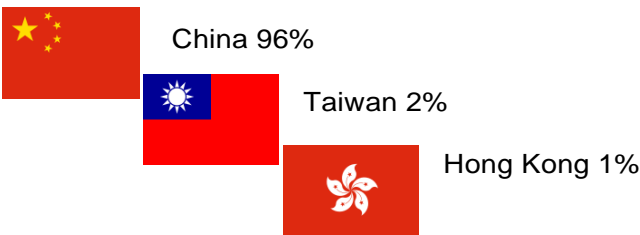


Around 51% had a post-secondary or higher qualification.



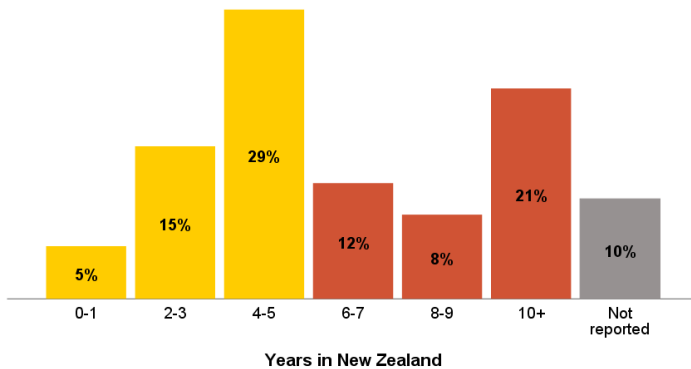
86% were married, 11% did not have a partner (6% widowed; 3% single; 2% divorced) and 3% did not indicate their marital status.

Almost all respondents were **born in China**.



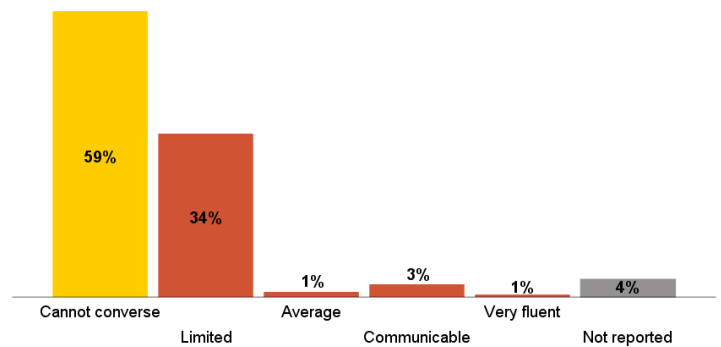
Time in New Zealand

Around half reported having lived in New Zealand for **5 years or less**.

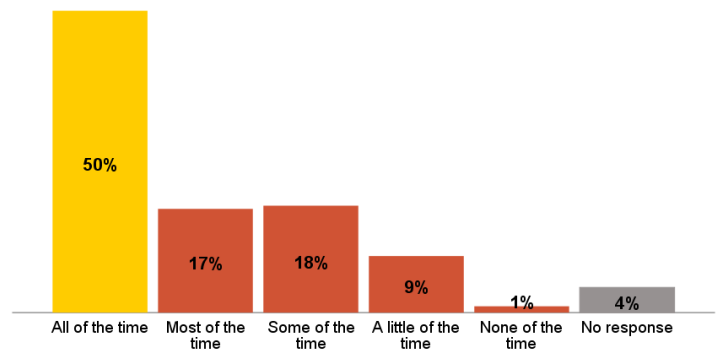


English language ability

Language emerged as a key challenge for older Chinese immigrants in the interview phase. Among survey respondents, 59% reported that they could not speak English, while 34% reported having a limited level of spoken English.

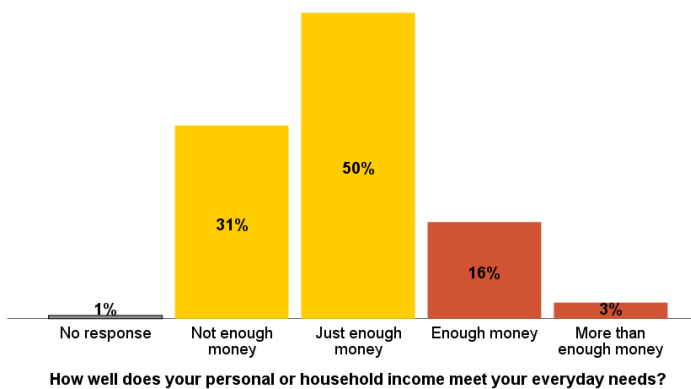


50.3% indicated that their lack of English ability **interfered with their daily activities** all of the time.



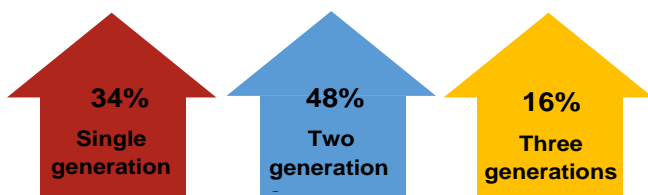
Income

Just **18%** of respondents reported that they had **enough or more than enough** income to meet their everyday needs.



Intergenerational living

In terms of those living in the respondent household, **64%** reporting living in a **multigenerational household**, while one third lived in a single generation household, either alone (2%) or with a spouse (32%).

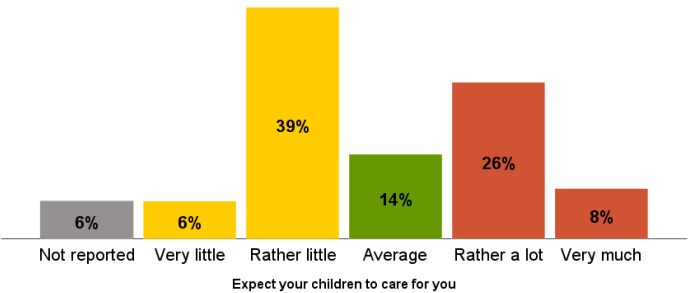


PERSONAL EXPECTATIONS AND VALUES

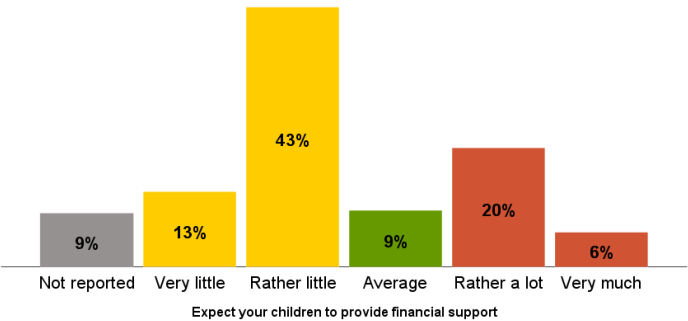
Family relationships and social connections were consistently raised as important factors for wellbeing by professionals and older immigrant community members in qualitative interviews. To understand the importance of expectations and values, participants were asked to rate the personal importance of expectations related to care by family members and the importance of participation in recreational and volunteer activities and of safety in their neighborhoods.

Expectations

Overall, 45% of participants indicated little expectation that their children would take care of them, while 34% indicate that they expected a lot of care.

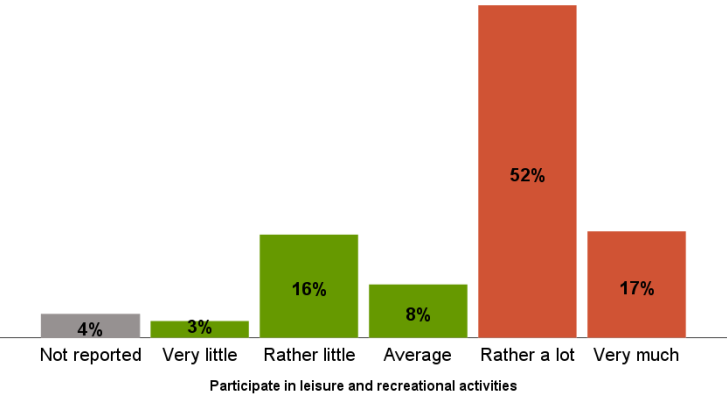


In terms of financial support from children, a majority (56%) indicated that they expected little financial support, while 26% indicated that they expected a lot.

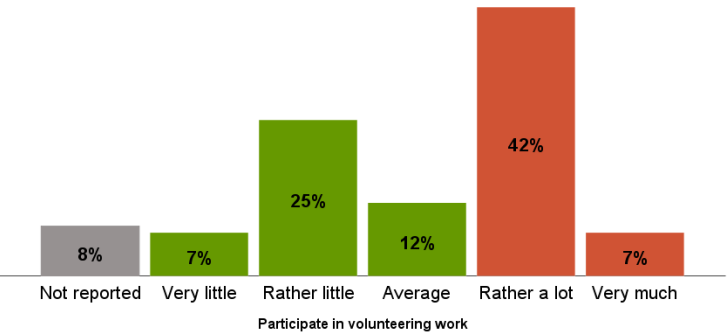


Values

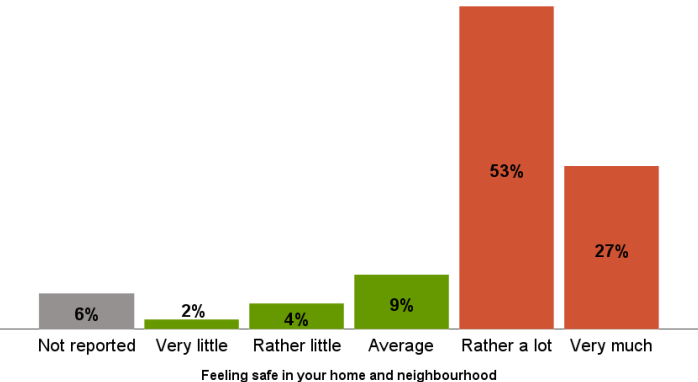
Overall participants rated participation in recreational (69%) as having a lot of importance to them personally.



Around half (49%) also indicated that volunteer work had a lot of personal importance.



However, a great majority (80%) indicated that feelings of safety in their neighbourhood held a lot of importance to them.



HEALTH AND NON-HEALTH RELATED QUALITY OF LIFE

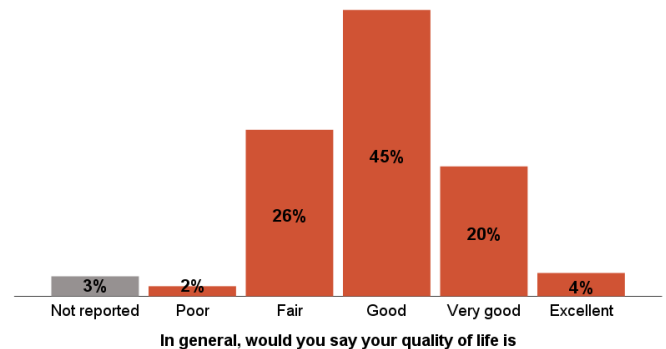
Interviews with professional and older immigrants highlighted that, both health and non-health related aspects of wellbeing, such as a sense of independence and autonomy, are highly valued among the older Chinese immigrant population.

However, issues of health and quality of life among older immigrants are complex. Both health and an individual's sense of non-health related wellbeing, such as their sense of individual autonomy, self-efficacy and enjoyment in life, are shaped by experiences throughout lives as well as by immediate situations and resources.

Immigrant populations are often healthier and more highly educated than their adopted nations, which in part reflects the resources associated with the capacity to immigrate. However, given the range of stressors faced by older immigrants, we investigated whether Chinese immigrants differed in their experiences of health and non-health related quality of life compared to non-immigrants in New Zealand.

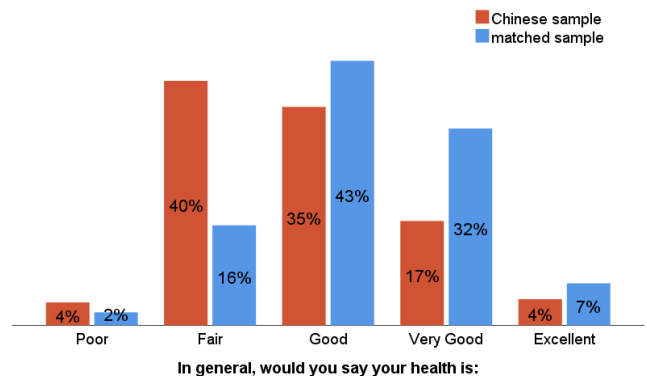
In the quantitative survey, we aimed to describe overall health and quality of life among older immigrant population and to compare these with a matched sample of older Kiwis living in urban areas of NZ participating in the New Zealand Health, Work and Retirement study who were matched in terms of age, gender, marital status and perceived adequacy of income.

Overall quality of life



Overall, the current sample of older Chinese adults displayed a normal distribution in regard to perceptions of their general quality of life, with 28% rating their general quality of life as 'fair' or 'poor' and 24% rating as 'very good' or 'excellent'.

General health

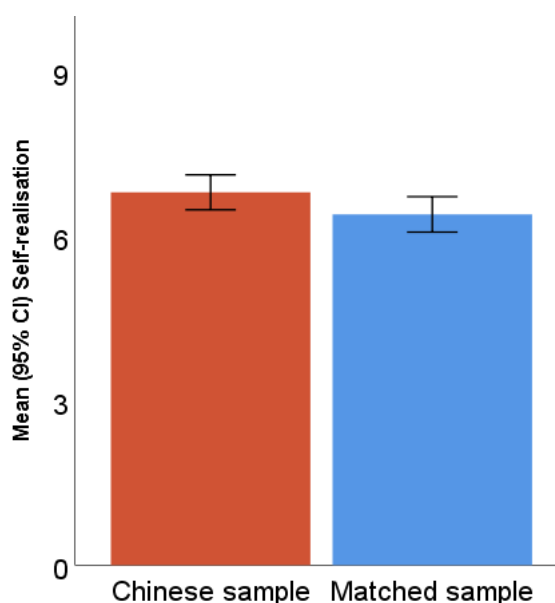


Compared to other older NZ adults, the Chinese immigrant sample were more likely to report low levels of health, with 44% indicating their health was 'fair' or 'poor', compared to 18% of adults in the matched sample. Health was not reported for 1% of the immigrant sample.

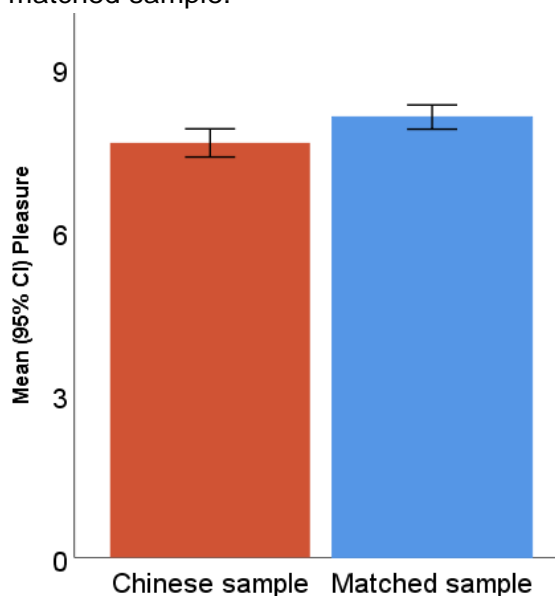
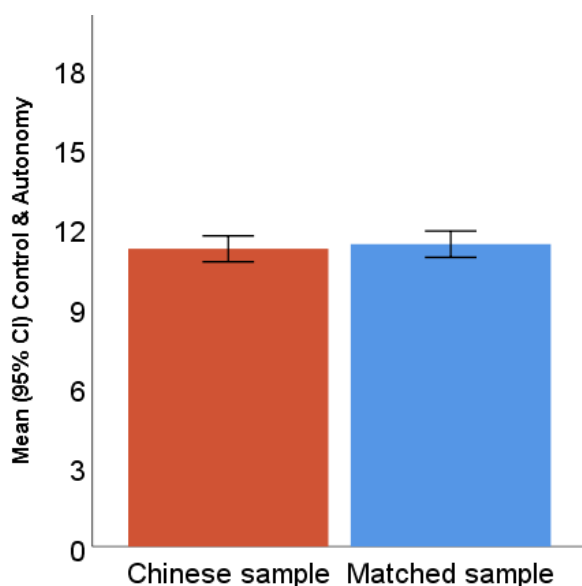


Non-health related quality of life

Comparisons indicate that the Chinese sample were highly comparable to other older adults in New Zealand in terms of their non-health related quality of life. These groups did not differ in terms of their sense of personal control and autonomy in their lives, nor their sense of self-realisation.



However, on average, the Chinese immigrant sample reported a slightly lower sense of pleasure and enjoyment in life compared to the matched sample.



Overall, results indicate that while older Chinese immigrants who responded to the survey reported poorer health compared to other older adults in New Zealand, their experiences of non-health related quality of life were similar. While validated in both English and Mandarin speaking older populations, the small differences observed in respondent's sense of pleasure in life may reflect differences in interpretation of survey items. However, future work investigating influences of experiences on pleasure among older adults may point to ways to support non-health related quality of life among the older Chinese immigrant population.



SERVICE NEEDS AND BARRIERS TO USE

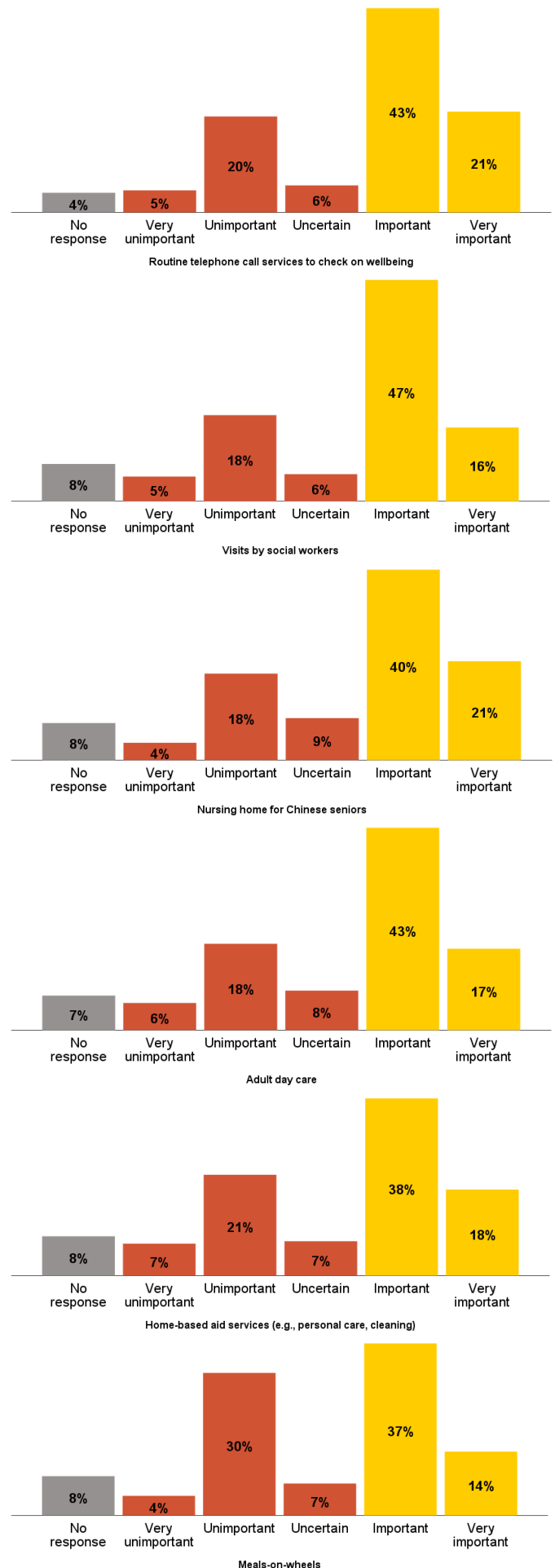
Access to community health and welfare services emerged as key theme in the qualitative interviews with older immigrants. In the quantitative survey we sought further insight into the importance of elder care services, who found them most important, and some of the barriers to accessing these services.

How important are elder care services?

When asked to rate the importance of six key elder care services as respondents aged in New Zealand, all services were considered 'important' or 'very important' by a majority of respondents, suggesting social services were highly valued in the older Chinese immigrant community.

% respondents rating service as *important* or *very important*:

- 64% routine telephone call
- 63% visits by social workers
- 61% nursing home for Chinese seniors
- 60% adult day care
- 56% home-based aid services
- 51% meals on wheels



Who views elder care services as important as they grow old?

We compared characteristics of those who rated each service as:

Important/very important vs uncertain/unimportant/very unimportant.

- Age
- Gender
- Marital status
- Intergenerational living
- Perceived income
- Perceived health

The importance of elder care services was not associated with age, gender, marital status or intergenerational living situation. Those who perceived that they had adequate income to meet their needs were less likely to indicate that adult day care or nursing homes for Chinese seniors would be important to them. However, those who had poorer self-related health were more likely to judge that all elder care services would be important as they grew old in New Zealand.

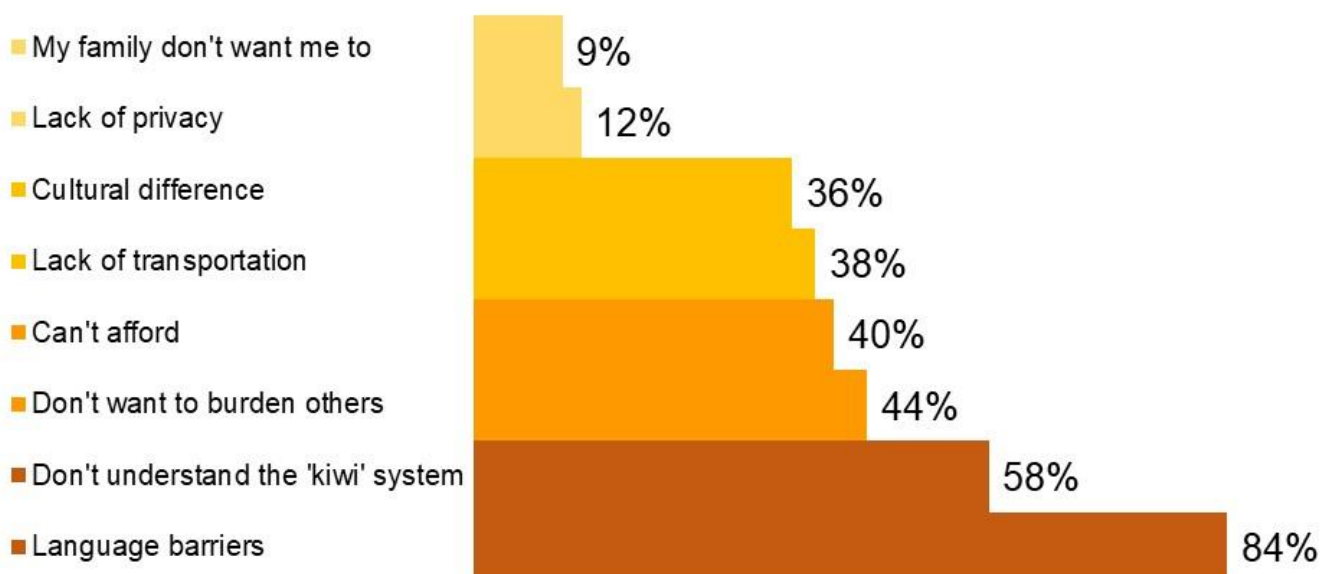
What barriers prevent older Chinese immigrants from using these services?

When asked what barriers may prevent them from using these elder care services, participants most frequently indicated language barriers (i.e., no Chinese speaking helpers), while more than half indicated that difficulties in understanding the New Zealand system presented barriers.

Similar proportions (40% and 44%) cited not wanting to burden others (e.g., adult children), and not being able to afford these services as barriers to use.

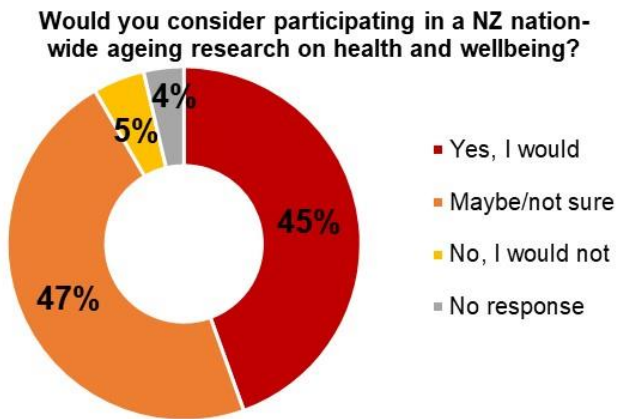
Roughly equal proportions (36% and 38%) cited cultural differences in style of treatment and services, and lack of transportation to get to services as barriers.

Relatively few respondents (9% and 12%) indicated that a lack of privacy, or that family members don't want them to use these services as barriers to service use.



ENGAGEMENT WITH HEALTH RESEARCH

Respondents were open to the idea of participating in health research in New Zealand, although 47% indicated that they were unsure whether they would participate.



As respondents to the current survey had demonstrated willingness to participate in research by completing and returning this short quantitative questionnaire, this general, if tentative, willingness to participate may be expected

Who would consider participating in health research?

Comparisons between those who indicated that they would consider research participation and those who would not or were unsure indicate that these groups did not differ in terms of age, gender, marital status, intergenerational living

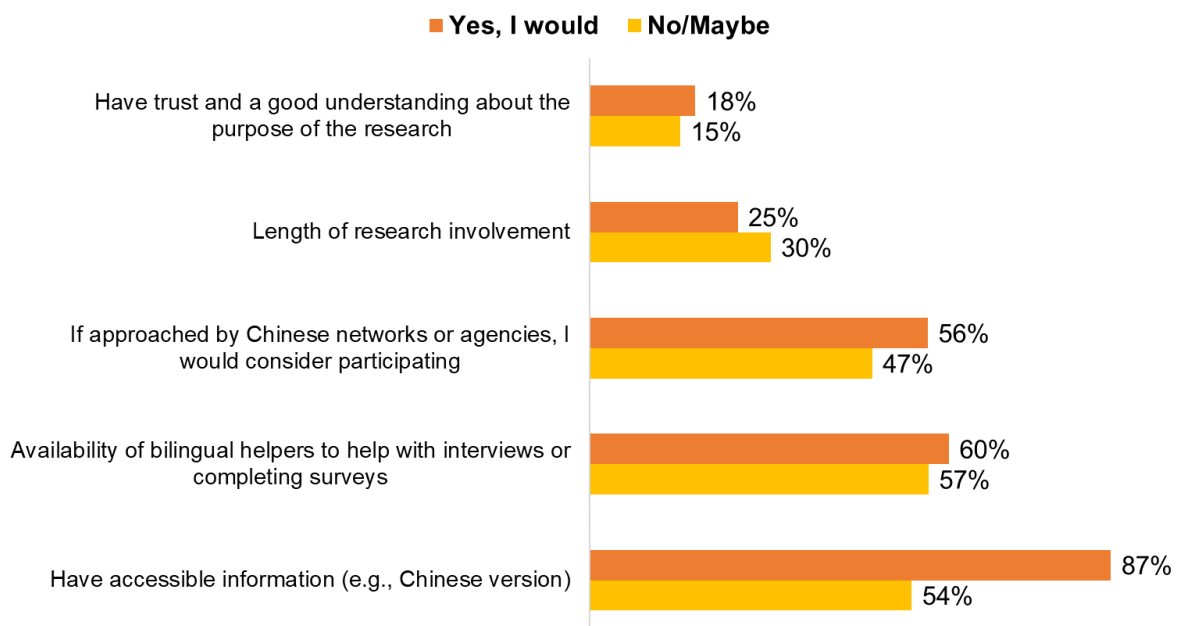
situation, perceived adequacy of income, English language proficiency or self-rated health.

What factors may influence participation?

We asked respondents to indicate what administrative and research protocols may influence their decision to participate in health research projects, comparing responses by those who would consider research participation and those who would not or were unsure.

Overall, language and cultural networks were key factors influencing decisions to participate in research both for those who indicated that they would and would not or were unsure if they would consider participating in research. 84% of those who would consider participating in research and 54% of those who were 'on the fence' would be influenced by accessibility of information (i.e., Chinese language forms).

More than half in both groups would be influenced by the availability of bilingual helpers supporting participation and around half in both groups indicated that approach through Chinese networks or agencies would influence participation. Burden of research (i.e., length of participation) and the role of trust/purpose of the research were relatively infrequent considerations for both groups.



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APPENDIX A QUALITATIVE SURVEY SCHEDULE FOR KEY INFORMANTS

Phase One: The objective of this phase is to gain perspectives from professionals (i.e., senior management at CNSST) to explore the current issues and challenges of supporting older Chinese immigrants, who came to NZ under the family re-unification criteria, to age well in New Zealand.

Semi-structured Interview Questions for key informants

- Please tell me a little bit about yourself and your professional background
- What are some of the key issues you have seen or experienced when working with older Chinese immigrants?
 - Why do you think (these issues) arise for older Chinese immigrants?
 - How do (these issues) affect the quality of life and wellbeing of older Chinese immigrants?
- What are the hopes and dreams of older Chinese immigrants in NZ?
- What helps older Chinese immigrants to cope and lead happy and meaningful lives in NZ?
- What resources/services are currently available to support older Chinese immigrants in NZ?
- What gaps are there in services for older Chinese immigrants?
- What would you recommend the current government do to increase quality of life and wellbeing for older Chinese immigrants?
- Looking at the Chinese immigrant community in NZ, particularly in Auckland, tell me if you have you seen any changes over the past decade or so in in terms of the followings:
 - How principles of filial piety are upheld by children of older Chinese immigrants?
 - How do living arrangements affect the intergenerational relationships of older Chinese immigrants?
 - What sorts of living arrangements are most important to these older Chinese immigrants?
 - Have you seen any other major changes in relationships between older immigrants and their children?
 - How do older Chinese immigrants view their ways of living to meet “kiwi” expectations of living in New Zealand? Any major issues from these adaptations?
 - Any other areas that you have seen changes over the time older Chinese immigrants have been living in NZ that may affect their social support, quality of life, health and wellbeing?
- Are there any other comments that you would like to make in relation to supporting older Chinese immigrants living in NZ?
- Finally, there is not much research on the health and wellbeing of older Chinese people in New Zealand. What barriers, if any, do you think there are for older Chinese immigrants to participate in health research in New Zealand?
 - How do you think these could be overcome?

APPENDIX B QUALITATIVE SURVEY SCHEDULE FOR OLDER CHINESE IMMIGRANTS (ENGLISH VERSION)

Semi-structured Interview Questions for Older Chinese Immigrants

1. I would like to know a little bit about yourself.
 - Can you tell me your age?
 - When did you migrate to New Zealand?
 - Which part of China do you come from? (rapport building question)
 - Did you come with the other family members?
 - Who are you living with at present?
 - Have you always lived with ____ since you have come to NZ? If not, who did you live with before?
2. Tell me why did you come to New Zealand?
3. Before coming to NZ, what did you expect living in New Zealand would be like?

Prompts:

 - Were there any surprises or things happened that you didn't anticipate before migrating to NZ?
 - What were some of your struggles you had experienced when you first settled in NZ?
 - How did you manage those struggles and difficulties? Who helped you?
 - What things did you like about when first settling in NZ? Why did you like them?
4. Can you tell me about your life as an older Chinese immigrant living in NZ?

Prompts:

 - What is it like to grow old in NZ?
 - What makes you feel positive about ageing in NZ?
 - What makes it difficult for you ageing in NZ?
 - What is the most important thing you think/-feel in your old age?
 - What is most important to you about your family life?
 - Who do you usually turn to for assistance when you encounter difficulties in NZ (e.g., family members, friends, Chinese support organisations, etc.)?
 - Who do you share special or positive times with?
5. Do you still have family members and/or friends living in China?
6. Do you want to stay in NZ, return to China or migrate to other countries? Why?
7. Final question: Are you satisfied with your overall quality of life in NZ compared with that in China?

Next, I want to ask you a question about health care services. CNSST Foundation has identified that some of the older Chinese immigrants do not feel comfortable receiving home-based services (Explain: support services provide helpers in your home to help with things like personal care and cleaning) due to several reasons such as: language barriers and not wanting stranger into their homes.

8. Tell me how would you feel about using home-based services if you became unwell and required some support to live at home?

Finally, there is not much research on the health and wellbeing of older Chinese people in New Zealand. We want to know your views on participating in health research.

9. What would motivate or stop you from participating in a NZ national health and wellbeing research on older adults?

APPENDIX C QUANTITATIVE SURVEY (ENGLISH VERSION)



COLLEGE
OF HEALTH
TE KURA HAUORA TANGATA

Determinants of Quality of Life for Older Chinese Immigrants in New Zealand

Survey of Older Chinese Immigrants 2019

Instructions

This survey is designed to provide information to help us learn about older Chinese immigrants' experiences of health, retirement, social life, quality of life, and their expectations for the future.

- It should take no longer than 20 minutes to fill in. It consists of ... sections. To answer the questions, you are asked to tick (✓) one or more answer(s).
- There are no right or wrong answers; we want the response that is best for you.
- Do not linger too long over each question; usually your first response is best.
- You are under no obligation to answer any question.
- All the information you give us is in confidence and will be used only for the purposes of the research study.
- Once you finish completing the survey, please place it in the envelope provided and return it according to the instructions.
- **Do not put your name on the survey.**

Thank you for taking the time to complete this questionnaire.

+++Thank you for your time and participation++++

Section 1: Health, Wellbeing and Quality of Life

Q.1 These are questions about your general health. (Please put a “√” in the appropriate boxes)

	Excellent	Very good	Good	Fair	Poor
In general, would you say your health is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, would you say your quality of life is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q.2 How important do you consider for the following items in your life? (Please put a “√” in the appropriate boxes)

	Very little	Rather little	Average	Rather a lot	Very much
Expect your children to care for you	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expect your children to provide financial support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in leisure and recreational activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participate in volunteering work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling safe in your home and neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q. 3 Below is a list of statements that people have used to describe their lives or how they feel. We would like to know how often, if at all, you think the following applies to you. (Please put a “√” in the appropriate boxes)

	Often	Sometimes	Not often	Never
I can do the things that I want to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I can please myself what I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I look forward to each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that my life has meaning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy the things that I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel full of energy these days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that life is full of opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that the future looks good for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My age prevents me from doing the things I would like to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shortage of money stops me from doing things I want to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that what happens to me is out of my control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel left out of things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 2: Service Needs

Q. 4 How important are the following elder care services for you as you grow old in New Zealand? (Please put a “√” in the appropriate boxes)

	Very unimportant	Unimportant	Uncertain	Important	Very important
Home-based aid services (e.g., personal care, cleaning)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult day care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nursing home for Chinese seniors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meals-on-wheels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visits by social workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Routine telephone call services to check on wellbeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q. 5 What are the barriers that may prevent you from using the elder care services? (Please put a “√” in as many boxes as appropriate)

<input type="checkbox"/> Language barriers (no Chinese speaking helpers)	<input type="checkbox"/> Lack of privacy	<input type="checkbox"/> Can't afford the services
<input type="checkbox"/> Lack of transportation to get there	<input type="checkbox"/> Cultural difference in style of treatment and services	<input type="checkbox"/> Don't understand the 'kiwi' system
<input type="checkbox"/> My family members don't want me to use these services	<input type="checkbox"/> Don't want to burden others (e.g., adult children)	<input type="checkbox"/> Other (please specify) _____

Section 3: Health Research for Older Immigrants

Q. 6 Would you consider participating in a New Zealand nation-wide ageing research on health and wellbeing? (Please put a “√” in an appropriate box)

<input type="checkbox"/> Yes, I would	<input type="checkbox"/> No, I would not	<input type="checkbox"/> Maybe	<input type="checkbox"/> Not sure
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Q. 7 What factors or conditions would influence you to participate in New Zealand nation-wide ageing research? (Please put a “√” in as many boxes as appropriate)

<input type="checkbox"/> Have accessible information (e.g., Chinese version)	<input type="checkbox"/> Availability of bilingual helpers to help with interviews or completing surveys	<input type="checkbox"/> Have trust and a good understanding about the purpose of the research
<input type="checkbox"/> If approached by Chinese networks or agencies, I would consider participate	<input type="checkbox"/> Length of research involvement	<input type="checkbox"/> Others (please specify) _____

Section 4: Personal Information

- Q. 8 Are you: ☐ Male ☐ Female
- Q. 9 How old are you?
- ☐ 60-64 years ☐ 65-74 years
- ☐ 75-84 years ☐ 85 years or over
- Q. 10 Which country were you born in?
- ☐ China ☐ Hong Kong
- ☐ Taiwan ☐ Other
- Q. 11 What is your highest education achieved?
- ☐ No qualifications ☐ Primary school
- ☐ Secondary school ☐ Post-secondary certificate or diploma
- ☐ University degree
- Q. 12 What year did you migrate to New Zealand? _____
- Q. 13 What level of spoken English skills do you have?
- ☐ Can't speak ☐ Limited ☐ Average
- ☐ Communicable ☐ Very fluent
- Q. 14 How much of the time has your lack of English language ability interfere with your daily activities?
- ☐ All of the time ☐ Most of the time ☐ Some of the time
- ☐ A little of the time ☐ None of the time
- Q. 15 What is your current marital status?
- ☐ Married ☐ Widow
- ☐ Single ☐ Separated/divorced
- Q. 16 Who live in the same household as you? (Please put a "√" in as many boxes as appropriate)
- ☐ Alone ☐ Spouse ☐ Children
- ☐ Grandchildren ☐ Others (please specify) _____
- Q. 17 How well does your personal or household total income meet your everyday needs?
- ☐ Not enough money ☐ Just enough money
- ☐ Enough money ☐ More than enough money

++++Thank you for your time and participation++++

APPENDIX D DESCRIPTION OF OLDER CHINESE IMMIGRANTS PARTICIPATING IN QUALITATIVE SURVEY

ID	Age	Gender	Arrival Year	Immigration– Family Reunion	Current Living Situation
P01	72	Female	2010	Through my son	Lived with my son for a while when first came to NZ and now living with my husband only
P02	65	Female	2016	Through my daughter	Husband passed away before coming to NZ. Have always been living with daughter
P03	63	Male	2015	Through my daughter	Lived with my wife until 2016 and separated and living alone now
P04	69	Female	2010	Through my daughter	Have always been living with my husband and daughter's family
P05	68	Female	2005	Through my daughter and came alone	Separated from husband back home. Lived with my daughter for a while when first came to NZ and now living alone
P06	72	Female	1998	Through my daughter	Lived with my daughter for a while when first came to NZ and now living with my husband only
P07	78	Female	2002	Through my daughter	Have always been living with my husband and daughter but husband passed away in 2017
P08	65	Female	2014	Through my son	Have always been living with my husband and son
P09	67	Female	2013	Through my son	Have always been living with my husband and son
P010	68	Male	2014	Through my daughter	Lived with my daughter for a while when first came to NZ and now living by myself as my wife has gone back to China temporarily
P011*	83	Male	1996	Through my daughter	Lived with my daughter for a while when first came to NZ and now living with my wife only
P012*	80	Female	1996	Through my daughter	Lived with my daughter for a while when first came to NZ and now living with my husband only
P013	80	Female	2005	Through my daughter	Husband passed away in 1995. Have always been living with daughter and her family

*husband and wife

APPENDIX E QUANTITATIVE ANALYSIS NOTES

DATA

To reduce biases associated with small proportions of missing data, item-level data were imputed in a procedure including participant age, overall health, overall quality of life, adequacy of income and CASP-12 items using SPSS in-built expectation-maximization algorithm where cases were missing no more than 3 observations. Overall 19/2912 observations included in the procedure were imputed (0.007% missing). Raw, scored and analysis data are available on the Open Science Framework:

https://osf.io/mvksq/?view_only=2772604037e141e9aed2800b78629a53

HEALTH AND NON-HEALTH RELATED QUALITY OF LIFE

Reported health and non-health related quality of life (CASP-12) in the immigrant sample was compared with that of an age, gender, marital status and income matched sample of older urban-dwelling adults from the 2018 New Zealand Health, Work and Retirement survey using paired samples t-tests. The immigrant sample reported lower general health and lower sense of Pleasure compared to the general New Zealand adult sample.

Table 1. Descriptive statistics related to paired comparisons of health and non-health related quality of life indicators.

	Chinese immigrant sample			Matched general sample			t-test
	N	Mean	95% CI	N	Mean	95% CI	
General health	189	2.8	(2.7-2.9)	191	3.3	(3.1-3.4)	$t(188) = -5.1, p < 0.001$
Control and autonomy	181	11.2	(10.8-11.7)	189	11.4	(10.9-11.9)	$t(178) = -0.5, p = 0.599$
Self-realisation	181	6.8	(6.5-7.1)	189	6.4	(6.1-6.7)	$t(178) = 1.8, p = 0.076$
Pleasure	181	7.6	(7.4-7.9)	190	8.1	(7.9-8.3)	$t(179) = -2.9, p = 0.004$

SERVICE NEEDS AND BARRIERS TO USE

Personal factors associated with perceptions of importance of elder care services as the respondent grew older in New Zealand were assessed using logistic regression. Associations of age, gender, marital status, multigenerational living, perceived adequacy of income and general health with endorsing elder care services as 'important or 'very important' (1) vs 'very unimportant', 'unimportant' or of 'uncertain' importance (0) were assessed. Age, gender, marital status and intergenerational living situations were not associated with perceived importance of elder care services. However, better self-rated health decreased the odds that services were considered important. Greater perceptions of adequate income decreased the odds that adult day care and nursing homes for Chinese seniors were considered important.

Table 2. Odds ratios for modelled association personal factors with perceptions care services as important or very important.

	Home-based aid services		Adult day care		Nursing home for seniors		Meals-on-Wheels		Home visits by social workers		Routine phone call services	
	OR	p	OR	p	OR	p	OR	p	OR	p	OR	p
Age (1-4)	1.12	0.674	1.00	0.999	1.01	0.983	0.97	0.889	0.70	0.087	0.88	0.567
Gender (Female = 1)	1.39	0.452	0.83	0.541	0.82	0.518	1.83	0.160	1.66	0.258	0.96	0.905
Marital status (Partnered = 1)	1.65	0.453	0.79	0.604	1.82	0.406	0.66	0.318	0.99	0.987	1.14	0.819
Intergenerational living (Multigenerational = 1)	0.85	0.612	0.86	0.650	0.75	0.369	0.86	0.625	0.96	0.918	0.07	0.854
Income (Enough/More than enough = 1)	0.56	0.051	0.43	0.001	0.42	0.001	0.74	0.410	0.69	0.260	1.16	0.741
General health (1-5)	0.60	<0.001	0.64	0.002	0.68	0.011	0.73	0.033	0.63	0.001	0.59	<0.001
n	170		172		172		170		171		177	
R ²	0.11		0.10		0.10		0.07		0.10		0.06	



REPORT CONTRIBUTORS

Dr Polly Yeung

Dr Joanne Allen

CONTACT DETAILS

For more information, please contact Dr Polly Yeung

Email: p.yeung@massey.ac.nz

DATA AVAILABILITY

Anonymized data from quantitative interviews and Chinese language information sheets and survey forms may be available by contacting Dr Polly Yeung.

Quantitative are available on the Open Science Framework.

