A Case Study on the Perception of Aging and Participation in Physical Activities of Older Chinese Immigrants in Australia

Fung Kuen Koo

This qualitative study explores how older Hong Kong Chinese Australians perceive aging and to what extent this perception affects their participation in physical activities. The main methods used were in-depth interviews with 22 participants ranging in age from 60 to 91 years. Interviews were translated from Chinese (Cantonese) and transcribed into English. Content analysis was used to find recurring themes from the interview data. The main findings indicate that the perception of aging is to some extent influenced by culture. Some participants defined aging as being measured in years, and others defined it by the state of one’s physical health, appearance, and capacity to continue fulfilling one’s social roles. These perceptions strongly influenced their preferences for and participation in physical activities. Acknowledging the fact that Chinese-speaking people are not culturally homogeneous, this article makes some recommendations to health service providers with regard to the development of appropriate physical activity programs.

Keywords: older Chinese Australians, health beliefs, cultural beliefs, barriers to physical activity

The aging population phenomenon prevails globally, including in Australia. However, much previous research on aging has tended to focus on ways to reduce morbidity and mortality (Grant, 2008). Other studies indicate that many older people are confused by the experience of being old and have had limited or no useful preparation for this stage of life (Kirkwood, 2008). Furthermore, aging, which is a natural process, has commonly been viewed as characterized by physical incapacity and loss of independence (Kite & Wagner, 2002; Sarkisian, Prohaska, Wong, Hirsch, & Mangione, 2005). Unfortunately, the process of aging has come to be viewed negatively by society, and older people are often described in such terms as withdrawn, isolated, living outside the mainstream, unattractive, frail, a burden, or unproductive (Kirkwood, 2008; Minichiello, Browne, & Hal, 2000; Nelson, 2005; Van Norman, 2004).

Older people tend to spend much of their leisure time watching television (Allison & Geiger, 1993; Chou, Chow, & Chi, 2004; Davis & Davis, 1985), but, unfortunately, television and other media tend to portray people over working age
as living in a state of frailty and poverty, creating “aging phobia” among both young people and older people in the community (Tsang, Liamputtong, & Pierson, 2004). For instance, a paper by the South Western Sydney Area Health Service (1990) stated that the younger generation of Australian-born people does not appreciate the positive and productive aspects of older people and their potential contribution to society. Only a minority of the elderly are represented as enjoying high levels of independence and achievement (New South Wales, 1998).

In fact, older people, regardless of different cultural beliefs, make great contributions to society in different ways such as support for their families, volunteer work, and participation in other productive activities (De Vaus, Gray, & Stanton, 2003; Lee & Brudney, 2008; Ranzijn, Harford, & Andrews, 2002; Tang & Morrow-Howell, 2008). Previous studies (Chodzko-Zajko, 2000; Chong, Ng, Woo, & Kwan, 2006; Grant, 2002; Lee & Brudney, 2008) have shown that older people can still experience healthy, independent, positive, and productive aging through these activities. In 2008, Yang studied life courses and temporal changes in the subjective quality of life of a group in the United States and found that overall levels of happiness of the studied group increased with age. Regarding the issues of social withdrawal or isolation, some studies (Carstensen, 1992; Carstensen, Isaacowitz, & Charles, 1999; Löckenhoff & Carstensen, 2004) explained such changes by socioemotional selectivity theory. In brief, this theory posits that older people who perceive that time is limited are more inclined to focus on meaningful, intimate, and emotionally satisfying ties and let go of weak, meaningless ties. This explanation is supported by previous empirical studies that found that emotionally close social relationships are common in later life, and other types of social contacts decline (Carstensen, 1992; Fung, Carstensen, & Lang, 2001; Lang, Staudinger & Carstensen, 1998).

Shepard (1999) and Van Norman (2004) commented that the motivation for older people to make changes could be significantly influenced by perceptions of self and perceptions of how they are viewed by others. Indeed, negative thinking about aging can strongly diminish older people’s self-esteem and self-efficacy and prevent them from believing in their ability to make changes (Dishman, 1994; Van Norman, 2004). Whaley and Ebbeck (2002) also argued that societal beliefs and stereotypes can influence older people’s behavior. Furthermore, studies revealed that negative perceptions of aging were associated with increased morbidity (Levy, 2003; Levy, Slade, Kunkel, & Kasl, 2002; Williamson & Fried, 1996) and mortality (Rakowski & Hickey, 1992). Successful aging emphasizes not only the length of life but also its quality (Rowe & Kahn, 1998; Strawbridge, Wallhagen, & Cohen, 2002). Palmore (1987) described successful aging as a combination of three elements: survival (longevity), good health (lack of disability), and life satisfaction (happiness). In recent studies, greater attention has been devoted to maintaining health and independence through lifestyle choices, quality of life, and exploring the perceptions of aging and retirement (Grant, 2008). Undoubtedly, prevention is the best cure for disease.

Public awareness of health in relation to physical activities has recently gained a great deal of attention, especially regarding older people. In fact, participation in regular physical activity, an accumulated 30 min or more of moderate intensity, has been promoted as one of the important ingredients for successful aging and maintaining a high quality of life in old age (Armstrong, Bauman, & Davies, 2000; Bauman, 2004; Bauman, Bellew, Vita, Brown, & Owen, 2002; Brown, Fuller,
Lee, Cockburn, & Adamson, 1999; Chodzko-Zajko, Schwingel, & Park, 2008; Cress et al., 2006; Nelson et al., 2007). Irrespective of the ethnic groups targeted, extensive research has demonstrated the benefits of regular physical, mental, and social activity and has reported that being physically active is linked to longevity (Arcury, Quandt, & Bell, 2001; Department of Health, 2004; Morabia & Costanza, 2004; Nied & Franklin, 2002).

However, a few studies have identified a number of important barriers to participation in physical activity, such as age, personal traits, lack of interest, laziness, health problems, fear of injury, lack of transportation and accessibility, no time, no companion or companions, high cost of facilities, poor environment, safety issues, poor weather, and poor quality programming and staff (Cardenas, Henderson, & Wilson, 2009; Cress et al., 2006; Grossman & Stewart, 2003; Henderson & Ainsworth, 2000, 2003; Horton, Baker, Côté, & Deakin, 2008; Nicholson, 2004). Furthermore, according to several studies (Booth, Bauman, & Owen, 2002; Booth, Bauman, Owen, & Gore, 1997; Sports Council and Health Education Authority, 1992), “I’m too old” was one of the factors given as a barrier to participation in physical activity by older people. Indeed, some older people described aging as a period of inevitable decline and deterioration of physical, cognitive, and social functioning (Goodwin, Black, & Satish, 1999; Henchoz, Cavalli, & Girardin, 2008; Kirkwood, 2008; Sarkisian et al., 2005; Williamson & Fried, 1996). Studies (Goodwin et al., 1999; Sarkisian et al., 2005) showed that older people with low expectations or fatalistic views about aging are less likely to practice preventive health behaviors. In contrast, Levy and Myers (2004) found that older people who had a more positive perception of aging were significantly more likely to practice preventive health behaviors such as physical activity over the next 2 decades of their life. Whaley and Ebbeck (2002) also argued that participating in an exercise class helped older people avoid the label of old, and it was a motivator to achieve the status of not old.

When it comes to investigating the physical activities of older people, it is important to emphasize that being old depends not only on the characteristics of the individual but also on the attitudes and needs of the culture in which they live (Minichiello et al., 2000). In other words, the attitudes toward old age and the role played by older people in the community vary considerably with time, place, and the individual. Aging needs to be understood as a long-term process of change by both the individuals themselves and the community in general.

Few empirical studies have been carried out that target the major immigrant groups of Australia in relation to their perceptions of aging and its effect on their physical activities. Although many older Australians are physically active, participation in physical activities among older Chinese Australians remains low (Abbott, Wong, Williams, Au, & Young, 2000; Bauman et al., 2002). Physical inactivity is a major risk factor for a range of pathological conditions including cardiovascular disease, diabetes, some cancers, obesity, and falls among older people (Department of Health, 2004; Public Health Association of Australia, 2004; U.S. Department of Health and Human Services, 2008; Weiler, Stamatakis, & Blair, 2010). It is essential to explore this phenomenon to help ensure that this older Chinese group can experience the health and social benefits of physical activities. Specifically, there is limited research on participation in physical activities among older Chinese Australians who might be consciously or unconsciously influenced by traditional Chinese beliefs (Koo & Rowling, 2006a, 2007).
In general, Chinese people’s daily lives, thinking, and behavior are tremendously influenced by Confucian philosophy, particularly filial piety (Lai, 2010). In Confucian ethics, an individual’s worth lies in fulfilling one’s duties: first to one’s family, then to neighbors, and, finally, to the community. Being an ideal person involves self-reflection, self-restraint, good-heartedness, responsibility, and respect for elders. Duty to one’s family involves not only the present family but past and future generations, as well (Chu & Caraw, 1990; Monroe, 1995; Wei & Li, 1996).

Barriers vary cross-culturally, and also between individuals and cultural groups (Lewis, Szabo, Weiner, McCall, & Piterman, 1997). It should be noted that Chinese-speaking people are not a culturally homogeneous group—they have different cultural backgrounds and needs (Koo & Rowling, 2007; Martin, 1999; Reid & Trompf, 1990). Because Chinese people have many different languages, come from many different areas, and have differences in culture between groups (even though these may be very subtle) these differences may give rise to a unique meaning of aging and a person’s understanding of the meaning of physical activity. The ethnic Chinese in Australia are typical of this diversity. Even though only about 3.2% (201,667 people) of the Australian population in New South Wales are Chinese speaking (Australian Bureau of Statistics, 2001), there is still a variety of cultures among them. Ethnic Chinese living in Australia may have been born in or emigrated from Hong Kong, China, Taiwan, Singapore, Indonesia, Vietnam, Cambodia, East Timor, or Thailand (Burnley, 2002; Martin, 1999; Reid & Trompf, 1990). Because Chinese people from Hong Kong have been described by various authorities as being socially, culturally, economically, and politically distinct from the Chinese from all the other mentioned countries (Abbas, 1997; Martin, 1999), I decided to study this group specifically. That distinctiveness is, of course, a result of Hong Kong’s history over the last 150 years, during most of which it was a British colony (Wong, 2005). Studies (Yau, 2003; Yeo & Meiser, 2003) also reveal that the preventive health behavior of older Hong Kong Chinese people is crisis and situation oriented.

While taking into account the literature, this article aims to explore the perception of aging of older Chinese Australians who have migrated from Hong Kong and to focus on understanding to what extent their perception of aging, health beliefs, and preventive health behavior influence their participation in physical activities. Knowledge about their perception of aging and the extent of their participation in physical activities should help determine how culturally appropriate preventive health programs can be designed for them. It can also be used as a reference for exploring ethnospecific strategies for the development of health-promotion programs for other ethnic groups in the future.

**Theoretical Framework**

The theory of planned behavior (TPB) is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). TPB postulates that behavioral intention is highly predictive of an individual’s behavior. Behavioral intention is held to be determined by three elements, namely, attitudes, subjective norms, and perceived behavioral control. Attitudes are determined by the person’s beliefs about outcome or about engaging in certain behavior (behavioral beliefs). Subjective norms have been defined broadly as perceived social pressure that is determined by the views on
whether the individual should or should not engage in certain behavior (normative beliefs). Perceived behavioral control focuses on perceived ability to achieve certain behavior (Ajzen, 2002; Ajzen & Driver, 1991; Kimiecik, 1992). As a general rule, the more favorable the attitude and subjective norms with regard to a behavior, and the greater the perceived behavioral control, the stronger should be an individual’s likelihood to undertake the behavior under consideration. Furthermore, Ajzen (1988) argued that perceived behavioral control will accurately predict behavior only when perceived control closely approximates actual control.

TPB was drawn on because it highlights the need to understand the beliefs that groups have about the issue, who they see as affecting these beliefs and their behavior, and what they see as the barriers to taking actions that might promote their health (Nutbeam & Harris, 1998). This theoretical framework has been used successfully to predict and explain a wide range of health and other behaviors including physical activities (Ajzen, 2002; Hagger, Chatzisarantis, & Biddle, 2002) and fall prevention (Aminzadeh & Edwards, 2000; Yardley, Donovan-Hall, Francis, & Todd, 2007).

Method

This study is descriptive and exploratory and uses a qualitative approach. To collect participants’ views on aging and their experience of participation in physical activities, in-depth interviews were employed as the main data-collection method.

Sample Recruitment

Participants were recruited from among older Cantonese-speaking Chinese people born in either mainland China or Hong Kong who had migrated to Australia from Hong Kong. Cantonese speakers were selected because Cantonese is the most commonly spoken Chinese dialect in Hong Kong (Lee, Lo, Ching, & Meng, 2002). A “snowball” sampling method was used in this study. It is a useful method to locate members of a population who are inaccessible or hard to find (DeJong & van Ommeren, 2002; Renzaho, Swinburn, & Burns, 2008), and it has proved effective in recruiting participants and maximized the exclusivity of various migrant groups (Jirojwong & Manderson, 2002; Rissel & Khavarpour, 1997). To ensure that participants were selected from a wide range of social groups and socioeconomic levels, contacts were made with church ministers, friends’ families, neighbors, and physiotherapists from various suburbs in the sample area to obtain an initial list of participants (see Public Health Department, 2009). Those participants were then asked to provide four names and telephone numbers of other older Chinese Australians (not immediate family members) who they believed would also meet the following criteria:

- Male or female Chinese age 60 years and over, physically active or not
- Physically independent (able to perform basic activities of daily living) and not institutionalized
- Resident in Australia for 2 years or more (I was interested in permanent rather than temporary residents)
• Resident of Sydney (where most Hong Kong Chinese Australians in New South Wales have settled (Burnley, 2002)

Data-Collection Strategy

Semistructured in-depth interviews were employed as the main data-collection method. Interviewing participants individually encouraged them to express their feelings and opinions in their own words (Koo, 2005; Ma, 1999), without any fear of “losing face” (Cheng, 1997; Koo & Rowling, 2006a). Interview questions regarding cultural beliefs about life and aging were structured based on the literature review. Data collection regarding participation in physical activities was structured using the constructs of TPB: attitudes, subjective norms, and perceived behavioral control (Ajzen & Fishbein, 1980). Many questions specified by Ajzen and Fishbein were used. Others were added to meet the requirements of this study. For example, to elicit behavioral beliefs, informants were asked to identify the advantages and disadvantages of physical activity. To assess normative beliefs, they were asked to list individuals or groups who would approve or disapprove of their being physically active. To examine perceived control beliefs, participants were asked to identify factors that made being physically active either easy or difficult. The interview questions then allowed me to establish a context in which the theory and its specific categories were being applied (see Figure 1).

The information that I hoped to elicit from the participants was

• The perception of aging of older Hong Kong Chinese people
• Their knowledge about and attitude toward physical activities
• Their patterns of participation in physical activities
• How their perceptions of aging influence their participation in physical activities

Because Chinese culture emphasizes social harmony and respect (Cheng, 1997; Lai, 2010; Wei & Li, 1996), the interview questions needed to be culturally appropriate and avoid cultural taboos or any confrontational aspects. To establish a rapport and minimize the discomfort that might be caused by some questions, questions requiring broader answers were asked first, and then gradually questions of a greater relevance to the study were asked, such as “What do you think ‘old’ is?” At the end of the interview, each participant was also asked basic demographic questions about age, birthplace, years lived in Australia, marital status, educational level, language spoken at home, and frequency of social activity. Health-related questions included self-reported frequency and intensity of physical activity, health status, and activities of daily living.

A consent form (translated into Chinese) was signed by each participant before the interview was conducted. All interviews were conducted in Sydney in Cantonese. A Hong Kong–born Chinese researcher who is proficient in both Cantonese and English conducted all the interviews. A migrant from Hong Kong who had a master’s degree in translation, as well as formal training and experience in interviewing, attended the pilot interviews and reviewed the taped interviews randomly. This method aimed to provide feedback on the researcher’s technique and ensure
Part I. Cultural Beliefs About Life and Aging
   1. What is your own viewpoint about life?  
      (Probe: Is there anything that influences your way of living?)  
   2. What do you think “old” is?  
      (Probe: What are the differences in your life as you get older?)  
   3. What do you do to cope with this particular life process?  
      (The term life process is influenced by a Chinese proverb that says that  
       birth, aging, illness, and death are the normal cycle of life processes.)  
      (Probe: In what ways does this thinking influence your beliefs and behavior  
       about health and illness?)  

Part II. Participation in Physical Activities
   1. What is your opinion about physical activities?  
      (Probe: What are the advantages of being involved in physical activities for  
       you personally?)  
      (Probe: What are the disadvantages of being involved in physical activities  
       for you personally?)  
   2. What physical activities do you currently participate in?  
      (Probe: In what ways do you participate? How often?)  
      (Probe: Do you think that you are physically active or inactive? Why?)  
   3. What kinds of physical activities do you prefer?  
      (Probe: Why do you have these preferences?)  
   4. What reasons are there for you to participate in physical activities?  
      (Probe: Of the people who are important to you, who approves of you  
       performing physical activities?)  
   5. What makes it difficult for you to participate in physical activities?  
      (Probe: Does anyone disapprove of you performing physical activity?  
       Who?)  
   6. What did you do to overcome these barriers?  
      (Probe: Did you experience any difficulties in overcoming these barriers?)  
   7. What is the ideal physical and emotional environment in which you prefer  
      to do physical activities?  

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Figure 1 — Excerpts from the main questions for the face-to-face in-depth interview.

that the questions that were asked were consistent for all the participants. Most  
interviews were 60–90 min in length. For the purpose of protecting the participants’  
identity, pseudonyms were used in all verbal and written reporting. In addition to  
speaking to the participants, I also used nonverbal communication and observed  
the surroundings and the participants’ responses.

Data-Analysis Strategy

I translated tape recordings of the interviews directly from Chinese into English  
and conducted preliminary analysis on all interviews to ascertain emerging themes,
with developing ideas being introduced into later interviews in an iterative manner. Once all the translated transcriptions were completed, they were reread carefully to establish where there was consensus and also where there were contrasting views. The translated transcripts were each read through at least four times by myself, and a series of terms and concepts were highlighted. To minimize bias and ensure accuracy, 10 translated transcripts were randomly audited and translated back to Chinese from English by a bilingual translator. Translated transcripts were also provided to an experienced health researcher for scrutiny. To ensure accuracy in transcription, the tapes were listened to repeatedly for clarification whenever necessary and checked for accuracy against the transcription text. To analyze the interview data, content analysis was used. Content analysis is an in-depth analysis using qualitative or quantitative techniques for making inferences about the antecedents, characteristics, and effects of communication data (Holsti, 1969; Neuendorf, 2002). Codes were generated from the data, and repeated coding was performed to review interpretations in the light of new data gathered. New codes were generated until no new insights were found (Chiovitti & Piran, 2003; Minichiello, Sullivan, Greenwood, & Axford, 1999).

To facilitate and guide the process of analysis, I consistently asked several theoretically framed questions during the coding of the transcribed interviews and data analysis. To enhance standards of rigor in the analysis yet conform with the TPB framework, questions were adapted from Chiovitti and Piran (2003). These questions were

- What is being revealed in the data?
- In what context is the code used?
- Is the code related to another code?
- Is the code encompassed by a broader code?
- Do these codes reflect similar or different patterns?

Established coded sections were compared with other similarly coded segments to ensure consistency of application, as well as adherence to the definition of the code. In addition, subcategories were linked logically to categories to determine the relationship between them. Table 1 provides a visualization of the linkage and track of each code.

### Results

**General Participant Profile**

In all, 22 participants (12 men and 10 women) ranging in age from 60 to 91 years (average 75.5 years) were recruited for the study. The minimum length of stay in Australia was 2 years, and the maximum was 21. Most were married (n = 18) and living with their spouses (n = 18). Three women were widowed and 1 man refused to give his marital status. Although most (77%) had secondary or tertiary education, over half (55%) had poor English skills. The participants were grouped into four general categories on the basis of their self-reported employment patterns, namely, paid employee (still working; n = 3), housewife (n = 3), retired (n = 14), or volunteer (n = 2). Twelve could not drive or had not driven after migration and relied on public transport or on family members to transport them, for instance, to general
<table>
<thead>
<tr>
<th>Theme</th>
<th>Main categories</th>
<th>Summary of the main subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes toward life</td>
<td>Birth, aging, illness, and death</td>
<td>Birth, aging, illness, and death are natural processes of life.</td>
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<td></td>
<td>Mechanical metaphors</td>
<td>Life is like a knife.</td>
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<td>Life is like a curtain.</td>
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<td>Perception of aging</td>
<td>Chronological definition</td>
<td>When you reach a certain age.</td>
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<td>When people call them older people or seniors.</td>
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<td>Acceptance of the role of being sick</td>
<td>Decline in physical fitness.</td>
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<td>Deterioration of digestive system.</td>
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<td>Deterioration of sensory function.</td>
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<td>Having a lot of health problems.</td>
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<td>Health problems are unavoidable.</td>
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<td>Health problems are the problems of old age.</td>
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<td>Discomfort and chronic pain are part of the aging process.</td>
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<td>Self-restriction</td>
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<td>Poor memory.</td>
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<td>Slow responses.</td>
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<td>Restriction in physical activities.</td>
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<td>Avoidance of learning anything new.</td>
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<td>Negative self-image</td>
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<td>Having a hunchback.</td>
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<td>Having a lot of facial wrinkles.</td>
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<td>Looking old and ugly.</td>
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<td>Positive self-image</td>
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<td>Having gray hair is normal.</td>
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<td>Self-enforced seclusion</td>
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<td>Not interested in anything.</td>
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<td></td>
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<td>Preferring to stay at home.</td>
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<td>Preferring to have minimal social life.</td>
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<td>Not socially active.</td>
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<td>Worried about being rejected by others.</td>
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<td>Capacity to continue fulfilling</td>
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<td>Having regular contact with friends.</td>
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<td>their social roles</td>
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<td>Intending to make new friends.</td>
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<tr>
<th>Theme</th>
<th>Main categories</th>
<th>Summary of the main subcategories</th>
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<tbody>
<tr>
<td>Loss of independence</td>
<td>Lost working ability.</td>
<td>Lost earning capacity.</td>
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<td></td>
<td>Spending children’s money.</td>
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<td>Maintaining independence</td>
<td></td>
<td>Spending money from government sources.</td>
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<td></td>
<td></td>
<td>Spending their own savings.</td>
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<td>Attitudes toward physical activity</td>
<td>A perception of susceptibility to illness</td>
<td>Doing exercise because of their age.</td>
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<td>Wanting to lose weight or keep fit.</td>
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<td>Capacity to care for themselves</td>
<td>Trying to avoid injury.</td>
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<td>Unwilling to be cared for by others.</td>
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<td></td>
<td>Unawareness of the necessity for and benefits of self-care</td>
<td>Don’t think too much</td>
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<td>Social support</td>
<td>Family</td>
<td>Children’s responsibility to take care of them.</td>
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<td>Wanting to exercise with family.</td>
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<td>Their families were too busy.</td>
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<td>It is boring to walk alone.</td>
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<td>Their family wanted them to do simple and safe exercise.</td>
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<td>Friends</td>
<td>Good friends who regularly do exercise would influence those who did not.</td>
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<td></td>
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<td>Afraid of saying something wrong or being rejected.</td>
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<td>Personality</td>
<td>Being introverted.</td>
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<td></td>
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<td>Like quiet.</td>
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<td>Like doing exercise alone.</td>
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<td>Having a sense of inferiority.</td>
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<td>Not wanting to have any time restriction.</td>
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Table 1 (continued)

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<thead>
<tr>
<th>Theme</th>
<th>Main categories</th>
<th>Summary of the main subcategories</th>
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<tbody>
<tr>
<td>Barriers to participation in</td>
<td>Deterioration of physical condition or</td>
<td>Felt painful when they did exercise.</td>
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<tr>
<td>physical activity</td>
<td>injury</td>
<td>Could not walk too far or too long because of their age.</td>
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<td></td>
<td>Deterioration of mental condition</td>
<td>Better to do physical activities leisurely and without pressure.</td>
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<td>Unwilling to memorize too many things because of their age.</td>
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<td>Preferring doing something simple and convenient.</td>
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<td></td>
<td>Cultural issues</td>
<td>It is not right to walk with opposite sex apart from their spouse.</td>
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<td>Preferring doing something they would not feel embarrassed about.</td>
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<td>Lack of transportation</td>
<td>It was too far away from their place.</td>
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<td>Family did not have time to drive them to join exercise class.</td>
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<td>Not feeling comfortable about using the provided transport services.</td>
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<td>Not wanting to bother anyone or owe favors.</td>
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<td>Feeling loss of freedom and autonomy because of fixed times in physical activity.</td>
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practitioner appointments or for shopping. Most reported they had current health problems such as arthritis, hypertension, diabetes mellitus, and high cholesterol. Among the 22 participants, 13 reported they engaged in physical activity for at least 30 min/day five or more times a week, and 5 reported themselves to have no or little physical activity. Three participants reported irregular physical activity. Twelve categorized themselves as physically active or just “so-so.” Nine categorized themselves as physically inactive, and 1 categorized himself as totally inactive. Nine of the 12 physically active or so-so were men. Seven of the 10 physically inactive were women. Twelve participants stated that they were socially active or so-so (7 men and 5 women), and 10 participants stated they were inactive (5 men and 5 women). Almost half \((n = 10)\) stated that they were socially inactive, attributing this to being “not sociable and talkative.” Indeed, this Chinese group had specific views on aging and physical activity. In reporting the following findings, I use verbatim quotes from participants.

Attitudes

The first category that TPB postulates will be highly predictive of an individual’s behavior is attitudes. Attitudes are determined by a person’s beliefs in regard to a behavior (Ajzen, 2002; Ajzen & Driver, 1991; Kimiecik, 1992). The commonly stated Chinese belief that birth, aging, illness, and death are the natural fate of all human beings may seem trite and obvious. However, some participants \((n = 14)\) held that it imbued them with a sense of fatalistic resignation about the course of their lives. These individuals viewed themselves as part of the natural and material world and thus subject to the same inexorable cycles of birth and death as all other living things. They saw no sense in trying to change the processes of aging by engaging in physical activities. In significant contrast, those who had higher levels of physical activity demonstrated very positive attitudes to this natural life cycle \((n = 6)\). Their responses were closely connected with their concept of health. Mr. Kwok, 80, explained this attitude:

> Birth, aging, illness, and death is a normal life cycle, but you don’t need to be pessimistic. Even when I get older, I will try my best to maintain my normal life. Of course, you shouldn’t compete with other people and show that you are number one. Just try your best to do everything you can. You can’t be too stubborn.

It is also clear that some participants \((n = 7)\) were pursuing not longevity but quality of life. Mrs. Lee, 91, expressed this view when she said,

> I don’t worry. If I only have 1 day, if I only live for 1 day. I don’t expect to have a long life. What for? Eating is the most important thing for me. I buy what I like to eat. I like to buy abalone and dried fish stomach. It’s also good if my arms and legs don’t hurt. Now, I just hope that I have a good death. It would be great to eat until I was full, go to bed, and eventually die when I was sleeping. If that came true, I would be very lucky.

Three participants stated that “A knife has to be sharpened from time to time to keep it sharp or it will rust,” and one stated, “Life is like a curtain, you need
to use it frequently to keep it smooth.” These beliefs motivated them to perform regular physical activity. However, 4 informants had integrated this belief with the modern perception that the human body was like a machine and that sooner or later it would wear out. Sixty-year-old Mr. Chin demonstrated this belief with this metaphor: “I try to keep myself healthy. If I have any health problems, it is irreversible. Just like a pot and a wok. You cannot use them forever. You will discard them in the rubbish bin one day.”

This response also demonstrates the very fatalistic aspect of some more traditional Chinese beliefs. Although not many participants saw the human body as a machine, they believed that nothing could prevent people from getting ill or delay their eventual death. Participants sharing such beliefs were usually those who had low levels of physical activity or had been suffering from multiple chronic health problems for a long period of time. This negative attitude toward life might also reflect their concept of age.

**Perception of Aging**

This study demonstrates that the terms *aging* and *older person* are not easily definable. Some participants defined aging by years ($n = 5$); others assessed it by the state of physical health ($n = 15$) or appearance ($n = 8$), as well as capacity to continue fulfilling social roles ($n = 8$). These perceptions strongly influenced their health beliefs and preventive health behavior. In their response to the question “What do you think old is?” or “What do you think is the meaning of old?” some defined it by chronological age. Mr. Mak, 72, for example, stated, “In Australia, 65 years old is already a stage at which people call you older people or seniors.” However, 75 year-old Mr. Liu indicated the problem of chronological definitions:

Take me as an example. No matter how healthy I am, I have to be regarded as old. . . . As the Chinese say, “Very rarely can a person reach 70 years old.” But I think we need to consider all factors. Some people in their 50s or 60s look very old, whereas some people in their 80s do not feel themselves to be old.

Indeed, some participants considered themselves old not only in terms of a chronological definition but also because of the state of their physical, mental, and social functioning.

**Aging and Acceptance of the Role of Being Sick.** The participants’ classification of the severity of illnesses into 大病 (big problems) and 小病 (the problems of old age) reflected the influence of traditional concepts of aging and their passive acceptance of the role of being sick. (The Romanization of Cantonese terms is used for all Chinese terms. It will be seen that superscript numbers are attached to several Cantonese words used in the text. This is to show which tone indicates its meaning. Cantonese words have to be spelled exactly alike in Roman script, but in speech they are differentiated by tones that can make the meaning quite different.) Mrs. Chiu, 61, for example, stated, “Aging can cause a hundred health problems; your eyes are blurred, and your ears are deaf.” When asked to describe their current health status, these participants spontaneously made a direct link between these conditions and aging. Most participants rated their health as so-so (6 men and 8 women), and 4 men saw their health as good or very good.
Two male and 2 female participants reported their health as not good or poor. Apart from 3 male participants who saw their health as good, most reported that they had current health problems. The most common issues were arthritis, “bone pain,” or fung1 seb1 (3 men and 5 women), with hypertension the second most frequently reported (4 men and 3 women). They saw discomfort and chronic pain as part of and parallel to the aging process.

The first time I asked Mr. Mak about his health, he replied, “It is good.” Later, when asked whether he had any health problems, he replied, “I do not have any dai6 beng6 [big problems] yet.” In reply to a question about what being old means to him, he said, “Getting old is like this, having a lot of health problems. They are lou5 yen4 beng6 [problems of old age]. It’s unavoidable. I really believe it.” His belief that his health was bound to deteriorate with age and that declining physical fitness was also an indicator of aging was reflected in his statement, “I feel that my physical fitness is decreasing every 5 years.”

Sixty-seven-year-old Mr. Chan, despite having no reported health problems, said, “Getting old, getting worse. It is the rule.” Mrs. Ho, 60, who suffered from hypertension and thyroid problems, said, “Psychologically, I am not very old, but my body tells me that I am walking the road of aging.” That statement illustrates the sense that aging is a journey to be endured.

The first sign for many participants (n = 10) that they were becoming old was the deterioration of their digestive systems. Mrs. Shiu, 77, who suffered from hypertension and arthritis (bone pain—fung1 seb1), said, “When I was young, I could eat more because I could digest the food well. Since getting old, I can no longer digest food if I eat too much.”

**Aging, Self-Restriction, and Negative Self-Image.** Some participants predicted that as they became older, their memory was likely to deteriorate and their responses to slow. More than half tended to restrict their physical activities or avoid learning anything new because they felt they were old. Eighty-year-old Mr. Foo said, “I can’t learn English because I am too old and I don’t want to think so much.” Issues such as these had an important influence on people’s motivations for participating in social activities, which in turn has an impact on their participation in physical activities.

Apart from physical and mental deterioration, being old was defined by changes in appearance. Mrs. Su, 69, said, “You are old when you have a poor memory and a lot of wrinkles on your face.” Some participants (n = 8) viewed wrinkles as ugliness and marks of sadness. Mr. Kwok, 73, stated,

Since becoming old, I no longer have any energy and passion. I also have so many wrinkles on my face. They represent the sad experiences in my life. They are the marks of sadness. I am so old, I look very ugly.

This response reflects the generally negative self-image of some participants about what they saw as their “ugly old face.” Others accepted gray hair as a normal physical sign of old age. Most accepted that this normal change of appearance had a negative effect on their life and worried about being rejected by society.

**Aging and Self-Enforced Seclusion.** For the participants, it was normal to withdraw from active involvement in the community and lead a more secluded
lifestyle. Many participants \((n = 10)\) were not interested in anything but staying at home or preferred minimal social life. In the words of Mrs. Siu, 77, “I should hide myself and not meet anyone.” Only a few \((n = 4)\) claimed that they continued to have regular contact with their friends and intended to make new friends in Australia. Their resigned attitudes about avoiding an active life were captured in the words of 2 participants. Mr. Kwok, 73, said, “Dealing or coping with older people gives rise to complicated thoughts. At my age, I should hide myself. I need to live a secluded existence and not meet anyone.” Mrs. Ho, 60, also claimed, “I don’t like to have a very busy social life in church. I prefer a simple social life because I need a lot of energy to deal with human relationships. That is enough for me now.”

Fifteen participants reported that they engaged in social activity from at least once a month to every day. However, some had their own interpretation of social activity and what it meant to be socially active. In the words of Mr. Wan, 64,

If social life or social activity means casual chatting, having dinner and fun with friends, I can tell you, I seldom have social activity. Even when I go out three to four times a week, I am not “socially active” because visiting other church members is not only my job but my duty. I don’t have any close friends because I am a church minister, so I have a lot of restrictions.

Only a few participants \((n = 4)\) claimed that they continued to have regular contact with their friends and intended to make new friends in Australia. On this score, it is significant that those with higher levels of participation in physical activity were more willing to develop their social lives in Australia. Mr. Mak, 72, stated, “I can make friends anywhere. If people don’t know something, I will try to tell them. For example, I have to look after you when I go shopping if I know more English than you do.”

**Aging and Loss of Independence.** Another perception of what it means to be old related to work and retirement. Mrs. Yuen, 72, claimed, “If you can still work, you are not old.” Participants thought they were ready for retirement when they lost their working ability or earning capacity because that made them financially and socially dependent. As Mrs. Lee, a 91-year-old pensioner, stated,

How can I work now? Sometimes, when I go out, some people ask, “Do you want to take care of little kids [for money]?” Yes, I do. But I’m too old for that kind of work. I also need someone to take care of me. Now, I can’t bend down. Even when there is money on the floor, I can’t pick it up. I feel bored, very bored. I want to work but no one will employ me. If I was young, I could find a job as a housemaid, I could help people look after their houses. I am still capable of earning. But who will employ me now?

Although some participants had lost their ability to work, to show their independence they preferred spending money from government sources or their own savings rather than their children’s money, even when it was available. Mr. Mak, 72, claimed,

I seldom spend my children’s money. My character is very strange. If they give me money, I won’t accept it. My wife doesn’t agree with me. She thinks
that I should take the money. Her thinking is a bit traditional but I am more open-minded. I would feel obliged to them or become reliant on them if I took their money.

Perception of Susceptibility to Illness, Capacity to Care for One’s Self, and Unawareness of the Necessity for and Benefits of Self-Care. The participants’ attitudes toward their ability to care for themselves resulted from their attitudes toward age and life. Some, especially those who had higher levels of participation in physical activity (n = 12), were more aware of the importance of having physical independence when they were old and took action to maintain their capacity to care for themselves as much as possible. They tried to avoid injury because they believed that no one would be able to help them and they did not want to be cared for by others. Physical activity was one of the most common preventive health measures they employed. This awareness strongly influenced participants’ intentions or motivations to undertake preventive health behavior. This feeling is reflected in the following comments made by Mrs. Lee, 91:

No one can help me if my leg aches. I am old. If I want to carry a bag, I can ask you to do it for me. But if I feel pain in my legs, who can bear the pain for me? It’s very difficult to move when my legs ache, but if I don’t move them, they will be really stiff. When I have time, I move my legs even when I’m sitting. If it’s raining heavily, I won’t go out because who will help me and sympathize with me if I fall? I have to take care of myself.

The findings revealed that some participants (n = 5) felt that now that they were “old enough,” they would start thinking about doing physical activities. This thinking was evident in the words of 64-year-old Mrs. Kwan, a housewife at home:

I do exercise not only because of health problems but because of my age. If I don’t do exercise when I can still manage, it will be very difficult to start when one day I can’t manage. Now is the right time to be doing exercise.

However, those who reported a lower level of physical activity (n = 3) did not exhibit this same strong awareness of the necessity for and benefits of self-care. Typical of these was Mrs. Leung, 72, who said, “I don’t know, I don’t think too much. It’s my children’s responsibility to take care of me in the future.”

Although age was regarded as an indicator of the need for regular physical activities, the findings showed that a perception of susceptibility to illness was another main motivating factor. Indeed, most (n = 15) were motivated to or intended to undertake regular physical activities to promote their health only when and if they saw themselves as being susceptible to health problems and they felt it had an immediate relevance to their lives. Although some (n = 3) undertook physical activities because they wanted to lose weight or keep fit, the underlying motivation for this group was to prevent the emergence of health problems and the physical inconvenience that might be caused by obesity. Mrs. To, 60, stated,

We need to do physical activities at our age, or else we will become very fat. I don’t like looking fat. Fat people look clumsy and they are unhealthy.
People criticize you behind your back. When I find that my tummy is very big, I will do physical activities. When I put on weight or I am too full, I will deliberately do housework. I feel that that burns off the energy and I won’t be so fat.

**Subjective Norms**

The second area highlighted by TPB as predictive of behavior concerns subjective norms. Subjective norms arise from perceived social pressure—whether an individual should or should not engage in certain behavior (Ajzen, 2002; Ajzen & Driver, 1991; Kimiecik, 1992).

Participants (n = 8) relied on family as their main source of support for engaging in physical activities. Yet although exercising with family provided their best motivation, this was mostly not possible because their families were too busy. Mrs. Leung, 72, said, “My daughter has suggested that I have a morning walk, but I do not want to walk alone because it is very boring.” The family of Mr. Kwok, 73, discouraged him from jogging every morning. His family wanted him to do something simpler and safer because they believed jogging to be too strenuous for older people. He stated, “My sister always calls me from the United States and says, ‘You still jog at this age? Don’t jog anymore, you should walk. You are too old to jog!’” This response showed that younger people also had a concept of aging that influenced the way they either supported or did not support physical activities among older people. Some believed that older people should only engage in low-intensity activities. Such attitudes can discourage older people from engaging in physical activities.

As far as social circles beyond the family were concerned, only a few participants (n = 4) believed that a group of good friends who regularly engaged in physical activities would influence those who did not. Furthermore, some participants (n = 8) described themselves as being introverted and having a sense of inferiority. Therefore they tried not to bother anyone unnecessarily. This thinking was especially common for those reporting a lower level of participation in physical activities, such as Mrs. Shiu, 77:

I am very introverted. I don’t know English. I don’t know how to communicate with other people. I’m afraid of saying something wrong. I enjoy staying at home and doing indoor activities. It is all right for me because I don’t go out. I like peace and quiet. I don’t like being active. I do housework at home, I can spend a whole day on it.

A strong sense of independence among participants and their desire for autonomy and for a secluded life decreased their participation in physical activities. Most were not interested in joining exercise classes or other activities conducted by community centers. Among the stated reasons were, “I don’t want to have any time restrictions,” “I don’t want to socialize with the others in the exercise class,” or “I am too old; those people also do not want me there.”
Perceived Behavioral Control

The third category that TPB postulates as predictive of behavior is perceived behavioral control—whether individuals believe they can achieve practicing that behavior (Ajzen, 2002; Ajzen & Driver, 1991; Kimiecik, 1992). Even though some participants who had lower levels of physical activity realized that physical activity was good for their health, their participation was hindered by their acceptance of the role of being sick.

Seven participants, mostly women, claimed that they could not participate because of their poor physical condition or physical injury. For example, Mrs. Shiu, 77, asked, “When I feel pain in my legs, how can I move? I look disabled,” and Mrs. Mo, 60, asserted, “I hurt my knees when I was young. So now I am old, I can’t walk too far or walk for a long time.” The findings demonstrate a clear connection between participants’ health problems and their preferences for physical activities.

Nine participants in this study performed more than one kind of physical activity; walking, Tai Chi, and housework were the most common examples. Most (8 men and 8 women), including those with lower participation levels, said that walking was their main physical activity because it was simple, suitable, and convenient. These were also the key factors influencing their choice of physical activities. Some participants (n = 15) preferred to walk alone, the main reasons being that it was awkward arranging mutually suitable times with friends, that members of their family did not have the time to walk, or simply that they disliked socializing with others. Mr. Chiu, 74, raised an interesting cultural issue: “I won’t walk with anyone from the opposite sex apart from my wife. It’s related to our Confucian ethical code. It’s not right for me to walk with a woman who is not my wife.”

Tai Chi was a popular choice (4 men and 1 woman) for men. Some participants believed that it was suitable for older people because “it is slow and it mainly trains the qi [energy], and Western people also recognize that it is beneficial to health.” However, the women tended to not like Tai Chi. Women were more likely than men to choose housework (1 man and 5 women) or calisthenics (3 women) as their main physical activity. Mrs. Chu, age 69, said,

I am old. It is better to do physical activities leisurely and without pressure. I don’t like Tai Chi because I am too impatient to learn it, even if someone is willing to teach me. I don’t want to memorize too many things, it’s too complicated and it’s not good if I miss one step.

An important finding was that participants seldom selected swimming as the preferred activity not only because they could not swim but also because a few were very conservative and felt embarrassed about wearing a swimsuit. Mrs. Siu, age 77, stated, “When I was your age, we were not so open-minded. The people were very conservative. If I wore a swimsuit, my father-in-law would scold me and say, ‘you are so bad.’”

In addition, changes in participants’ new environment such as lack of transport hindered the performance of physical activities. However, another important finding was that some (n = 7) did not feel comfortable about using the transport services
provided by either friends or organizations because of the Confucian moral code. They did not like to ask for help even if it was available because they did not want to bother anyone, owe favors to anyone, or lose their freedom and autonomy because of fixed times for physical activities. Mrs. Yiu, age 61, raised this cultural issue:

My friends have offered to drive me to the beach to do physical activities. But if they took me there, I would feel embarrassed and think that I owed them a favor. This is Chinese culture. You need to return any favors you have received. There’s no point in going so far. No, thank you. I prefer walking around my house.

**Discussion**

Parallel to previous studies (Cardenas et al., 2009; Cress et al., 2006; Grossman & Stewart, 2003; Henderson & Ainsworth, 2000; Horton et al., 2008; Nicholson, 2004), this study found that for older Chinese participants who categorized themselves as physically inactive, their barriers of age, language, lack of transport, personal traits, no companions, and fear of injury are common to their low levels of participation in physical activity. Health promoters need to realize that physical activity is a behavior influenced by a multitude of factors (Grant, 2002, 2008). TPB was used to frame the following discussion through the three elements considered predictors of behavior by TPB, namely, attitudes, subjective norms, and perceived behavioral control.

**Attitudes**

This group’s emphasis on quality of life and life satisfaction is consistent with previous literature (Palmore, 1987, Rowe & Kahn, 1998; Strawbridge et al., 2002), but a sense of inevitability about aging and the body’s deterioration exercised a strong influence on their self-esteem and their decisions on the extent to which they participate in physical activities. Yang (2008) found that participants’ overall levels of happiness increased with age. However, some participants in the current study did not have the same experience. Grant (2002) pointed out that aging needs to be recognized as being influenced by the attitudes, expectations, and prejudices of the societies in which people live and grow old. Furthermore, negative thinking about aging can strongly diminish older people’s self-esteem and self-efficacy and prevent them from believing in their ability to make changes (Dishman, 1994; Van Norman, 2004). The participants in the current study not only accepted societal stereotypes of older people—they accepted that this experience is a natural phase of life as it has been chronologically, functionally, and socially classified by Chinese society. This finding agreed with some authors’ comments (Shepard, 1999; Van Norman, 2004) that older people’s motivation to make changes could be significantly influenced by perceptions of self and perceptions of how they are viewed by others.

As previously mentioned, watching television is a common leisure activity of older people (Allison & Geiger, 1993; Chou, Chow, & Chi, 2004; Davis & Davis, 1985), so portraying a more positive image of older people on television (Hausdorff, Levy, & Wei, 1999; Kessler, Rakoczy, & Staudinger, 2004; Levy, Hausdorff, Hencke, & Wei, 2000; Levy, 1996) might help improve this Chinese group’s atti-
tude toward life and aging. An example can be taken from a participant’s quote: “Gray hair is a normal physical sign of old age.” In addition, older Chinese people should be reminded that performing volunteer work or domestic obligations such as looking after grandchildren and doing housework for their families can be a great contribution to society and a form of self-achievement (De Vaus et al., 2003; Lee & Brudney, 2008; Ranzijn et al., 2002; Tang & Morrow-Howell, 2008), even though they have lost the capability to work to earn money.

These older Chinese people had a fatalistic attitude toward not only life and aging but also health problems such as arthritis, hypertension, or diabetes. This finding is consistent with previous research (Goodwin et al., 1999; Henchoz et al., 2008; Kirkwood, 2008; Kite & Wagner, 2002; Williamson & Fried, 1996). Their stereotypical thinking about the irreversibility of physical decline can be regarded as a contributing factor to their frequent unwillingness to participate in physical activities (Koo & Rowling, 2007; Kwok & Sullivan, 2006; National Aging Research Institute, 2003). This finding has reinforced the conclusion that low age expectations may act as a barrier to physical activity among older people (Goodwin et al., 1999; Sarkisian et al., 2005).

One significant finding was that some participants believed that increasing age meant that they should take increasing care of their health. Hong Kong Chinese are crisis and situation oriented (Yau, 2003; Yeo & Meiser, 2003). This belief was one of the key points influencing their attitudes toward, and motivation for participation in, physical activities and is something that should be reemphasized by health educators, pointing out that once someone becomes sick, physical activities will be far less beneficial to health and less effective in maintaining physical independence. In other words, prevention is better than cure. Whaley and Ebbecks (2002) suggested a very effective strategy, which, if applied, may motivate this Chinese group to participate in physical activities. They found it was beneficial to use positive and appropriate descriptors. For example, health promoters might encourage older Chinese people to be physically active as a method of “staying not old.” In addition, there is a need to use culturally appropriate strategies to increase older Chinese people’s awareness of the necessity for and benefits of self-care. For instance, because emphasis on mutual dependence and family responsibility for individual members is crucial for Chinese culture, it is important to emphasize individuals’ responsibility for their own health rather than leaving it to their children to take care of them.

**Subjective Norms**

Another issue health promoters need to take into account is a belief system that encourages self-enforced seclusion and introversion among this older Chinese group. Most participants regarded self-enforced seclusion as being common among the elderly. Participants’ preference for a secluded lifestyle or minimal social activities reflects the cultural belief that withdrawal from the structures and judgment of society leads to a simpler life (Yeo & Meiser, 2003). Their isolated lifestyle and their perception of social activity fits in with Carstensen’s (1992) socioemotional selectivity theory, which explains how older people prefer to spend less energy dealing with human relationships that they do not value. This preference implies that family support is an important strategy for motivating and supporting older Chinese people’s participation in physical activity (Grossman & Stewart, 2003; Henderson & Ainsworth, 2003; Yau, 2003).
However, Mar (1998) argued that conflicts between older Chinese parents and adult children are increasing as the children become more Westernized and take on the values of Australian society. Furthermore, lack of English proficiency and lack of transport limit older Chinese people’s autonomous mobility and make them highly dependent on their adult children (Ip, Lui, & Chui, 2007). This phenomenon might lead to a decline in parental authority and filial piety, creating a stressful situation for older Hong Kong Chinese (Mar, 1998). It may be worthwhile to further study the impact of transgenerational relationships on older Chinese people’s perception of aging and their participation in physical activity. It will provide insight into the design of culturally appropriate strategies to promote physical activity.

The case of the older man cited earlier who was discouraged by his family from jogging because of his age indicates that attention should be paid not only to ways of addressing the beliefs of older Chinese but also to changing the misconceptions of their families. Positive portrayal of old age through the mass media can also have positive effects on changing negative aging stereotypes among younger generations (Kessler et al., 2004), resulting in reducing fears of getting old and providing more support to older Chinese people. More important, appropriate training should be provided to health-promotion professionals to help them recognize the impact of negative stereotypes on perceived health status and choices and understand how personal belief systems color perceptions of physical activity programs (Van Norman, 2004).

Although difficulties in language and transportation, negative self-image, and introverted nature may discourage this group from maintaining active social lives, they may also constitute a hindrance to their seeking social support from non-family members in relation to participating in physical activities. To ensure that this group is motivated to take action toward appropriate physical activities, it is crucial to develop an understanding that maintaining active social lives and networks not only provides older people with opportunities to make new friends (Chodzko-Zajko et al., 2008) but also increases their self-esteem (Lee & Brudney, 2008) and integration into Australian society.

In contrast, some participants in this study did not really want to join an exercise class because of time restrictions, loss of freedom, or a sense of inferiority, a finding different from the study of Whaley and Ebbeck (2002) in which the group of older people they studied enjoyed participating in exercise class. In the current study the participants expressed a strong sense of independence and a desire for autonomy through doing their favorite physical activities around their homes. Home-based physical activity could be an appropriate choice for them because they do not need to worry about transport, special facilities, or restricted time frames (Hinrichs et al., 2009). For example, through regular home visits or telephone consultation, physiotherapists or home support workers can provide this group with appropriate instruction for performing simple physical activities at home (see McMurdo & Johnstone, 1995; Tudor-Locke et al., 2000). A previous study (Ashworth, Chad, Harrison, Reeder, & Marshall, 2005) also found that home-based physical activity programs, particularly in the long run, showed better adherence than center-based programs.
Perception of Aging and Participation in Physical Activities

Perceived Behavioral Control

The results of this study were similar to previous research findings in Australia (Armstrong et al., 2000; Brown et al., 1999) in that walking, Tai Chi, and housework were the most common examples of physical activities in which the participants engaged. However, perceived poor mental functioning caused by aging influenced their choice of participation in certain physical activities. Some, especially women, tended not to practice Tai Chi, despite knowing its benefits, because they thought it was hard to memorize. Health promoters should realize that there are some simple forms of Tai Chi that are easy to learn. Thus, strategies for promoting a simplified version of Tai Chi could be devised when encouraging older Hong Kong Chinese people to participate in this form of physical activity.

Most participants with lower levels of physical activity did not enjoy physical activity. This response confirms that culturally appropriate strategies are needed to change their negative perceptions of aging and make physical activity more relevant to them. Examples are reframing physical activity as a simple and easy action for every older Chinese person and educating them about how much control they have over participation in physical activities. More important, health-promotion efforts among this group should be tailored to their specific beliefs, stressing that it is possible to remain healthy in the later stages of their life cycle if they are willing to make an effort to engage in regular physical activities. An example can be taken from one participant’s metaphor: “Life is like a curtain, you need to use it frequently to keep it smooth.”

Furthermore, health promoters should give this group a clear message that, to a large extent, physical activity can be easily managed. They should be told that substantial health benefits may be gained if they are willing to regularly perform 30 min of any type of physical activity (Armstrong et al., 2000; Bauman, 2004; Bauman et al., 2002; Cress et al., 2006; Nelson et al., 2007). In addition, they can start with a short duration and low intensity level of physical activity and then gradually increase the intensity, frequency, and duration (Blair, Kohl, Gordon, & Paffenbarger, 1992; Hootman et al., 2001; Kushi et al., 2006; Pescatello, Murphy, & Costanzo, 2000).

This group of participants all originally lived in Hong Kong when it was a British colony and therefore would have been influenced to a greater or lesser degree by Western thinking. In addition, they have lived in Australia for 2–21 years and as such have been influenced by Australian thinking. However, it must be noted that this group’s concept of aging and their moral and ethical codes have a strong impact on their preferences for different types of physical activities, and this concept limits their choices. Participants’ behavior is still rooted in and bound by Confucian ethical and moral codes. They tried to avoid any behavior that might dishonor their families (Chu & Caraw, 1990; Monroe, 1995; Wei & Li, 1996). Some participants worried about “saying something wrong” when they engaged in physical activities with their friends. Their concern contrasts with the study of Henderson and Ainsworth (2000), in which some older African American and
American Indian women explained that they could open up to people when they were walking and talking with friends.

In addition, several participants with spouses were very careful not to exercise with members of the opposite sex because it was considered immoral behavior. Swimming was also not favored by a few female participants because it was considered immoral behavior. Consequently, the cultural background and moral codes of this group should be carefully considered before promoting activities such as walking groups and aqua-aerobics to avoid cultural taboos or family shame (Koo & Rowling, 2002). Another specific aspect worth further investigation is how traditional gender roles influence this Chinese group’s participation in physical activity, because a gender difference in physical activity levels was found in this study.

A participant belief that also needs to be taken into account is that aspect of Chinese culture that demands that favors be reciprocated. This belief can inhibit utilization by older Chinese people of services such as free transport. In Chinese culture, reciprocation of greetings, favors, and gifts is perceived as a very important relational value (Gao & Ting-Toomey, 1998; Koo, 2005). The reluctance of the participants to put themselves in that position, together with a lack of their own or public transport, makes it difficult or impossible for them to travel even short distances to venues where they can participate in physical activities. An in-depth understanding of such beliefs will assist in the design of appropriate health-promotion messages.

To sum up, TPB helped this study focus on how participants gained or lost their motivation to participate in physical activities through three main predictors: attitudes, subjective norms, and perceived behavioral control.

**Limitations**

This study has several limitations. The first relates to the theoretical issue. The findings in this study revealed that the three predictors of TPB interacted with each other, influencing participants’ intentions with regard to participation in physical activities and also their actual behavioral change. More important, it is clear that not only does this group’s perception of aging strongly influence their participation in physical activity, but also their traditional Chinese belief system such as attitude toward life and ethical and moral codes could be a major factor influencing their attitudes toward participating in physical activity, the way they perceive their social support systems, and the way they perceive their control over barriers to physical activity. TPB does not fully account for these important ethical and moral codes (Koo, 2010; Koo & Rowling, 2004). In other words, these specific belief systems need to be incorporated into the TPB framework for future studies of older Hong Kong Chinese people.

Second, the 22 informants were recruited by snowball sampling. This resulted in the sample size being small, and the participants were not randomly selected to be representative of the Hong Kong Chinese population in a statistical sense. Despite
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this drawback, strict criteria were used in their recruitment process. This group of older Chinese people was deliberately selected and interviews were structured to facilitate diversity and contrast in opinions and behavior.

Third, it should be noted that these are the results from one small subgroup of older Chinese immigrants, and any conclusion drawn may not be applicable to all older Chinese immigrants. Their length of stay in Australia varied from 2 years to 21 years, so different acculturation levels may have influenced their experience of aging and participation in physical activity. Future research could expand the sample size with participants who all have a similar number of years living in Australia.

Fourth, the term physical activity has been interpreted differently by researchers and does not have one precise meaning (Koo & Rowling 2002, 2006b, 2007). Possibly the group in this study had their own specific interpretation of physical activity.

Conclusion

This article explored the relationships between perceptions of aging and their effect on the participation in physical activities by older Chinese immigrants in Australia, using TPB as a framework. Although this group of older Chinese lives in Australia and to a greater or lesser extent is immersed in Australian culture, it has been demonstrated in this article that their daily lives and cultural values are still deeply rooted in traditional Chinese beliefs. The same is true for their perception of aging and their participation in physical activities. This Chinese group was very limited in their choice of the type of physical activities they felt able to participate in. This limitation in turn stemmed from an interaction of factors such as their perception of aging and health, as well as their cultural beliefs and their physical environment, all of which raised barriers to their participation in physical activities. There is a need for health policy makers to understand these Chinese cultural and health beliefs and design culturally appropriate elements in national health strategies or healthy aging policies to tackle the problems of older Hong Kong Chinese people in Australia, because they, as much as any other Australians, would benefit from it. Similar findings could probably result from a study of other ethnic groups in Australia.

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