



# Attitudes and Perceptions of Older Chinese People in Hong Kong Towards Silver Gaming

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**Abstract.** This preliminary study aimed to explore the perceptions and attitudes of older Chinese people (over 60 years of age) in Hong Kong towards gaming by adopting a qualitative research method and to investigate the factors that motivate them to participate in gaming. A face-to-face interview was conducted with 20 older Chinese people in Hong Kong. The qualitative data were classified into six groups of factors, viz., personal factors, interpersonal relationships, product factors, environmental factors, desired outcomes, and economic factors, which are all interdependent. Findings suggest that personal factors are the core factor as they contribute the most to the perceptions and attitudes of the older people towards gaming. Interestingly, most participants were unable to clearly define gaming, and the older generation had no consensus. These findings have important implications in removing the barriers and difficulties that hinder the older Chinese people from gaming.

**Keywords:** Attitude · Barrier · Gaming · Older Chinese people  
Perception · Qualitative research

## 1 Introduction

The rapid growth of the aging population is a global issue, and Hong Kong is one of the many countries that are facing this problem. The population of Hong Kong has been experiencing an aging trend since the early 2000s. Their population profile reveals that the proportion of people aged 65 and above grew from an average of 12% in 2001 to 17% in 2016. This age group is forecast to comprise 32% of the Hong Kong population by 2041 [1].

The rapid increase of the aging population has captured the attention of the government and society, who have devoted plenty of resources to the welfare of the people aged 65 and over to improve their living quality. Numerous policies that focus on the older population in aspects such as healthcare, social security, housing, and IT adaptation were planned in the 2016 Policy Address of Hong Kong [2]. However, society has not placed much importance on the psychological health of older people. HelpAge

International launched the “Global AgeWatch Index” in 2013 in response to the main concerns of the aged population and of policy makers about the fundamental factors for the well-being of the older generation in over 90 countries, which represent 91% of people aged 60 and above worldwide [3]. In 2015, Hong Kong ranked 79 out of 97 countries in terms of psychological well-being among older people in the Global AgeWatch Index, with respondents scoring poorly in eudaemonic well-being [4].

Psychological and physical health are critical for achieving successful aging, thereby implying the importance of avoiding disease and maintaining physical and mental functioning from the biomedical perspective. Meanwhile, life satisfaction, social participation and functioning, and psychological resources, including personal growth, are considered the keys to successful aging from the psychological perspective [5].

A game refers to an activity that one engages in for amusement or fun [6]. Dempsey et al. defined games as sets of activities that involve one or more players. Games have goals, constraints, payoffs, and consequences and are rule-guided and artificial in some respects. Games also involve some aspect of competition, even when the competition is against oneself [7]. Many researchers claim that gaming is beneficial for the psychological and physical health of older adults [8]. Video games that combine entertainment and body movement (i.e., exergames) are commonly used to improve or maintain users’ fitness [9]. Apart from exergames, digital games that use computing machinery (e.g., personal computers, smartphones, electronic devices, and consoles) can be used to improve the health of older adults. Serious games, which are digital games that serve serious purposes, such as training and health, are also introduced to improve the health of older people by enhancing their physical fitness and coordinative abilities [10, 11]. Meanwhile, mobile gaming refers to games and gaming culture that are specifically related to the use of cell phone platforms (particularly smartphones) and exclude those related to other portable devices [12]. Silver gaming has been promoted in many western countries, especially in the Netherlands and the United States, because of the increasing evidence that shows that it can support the health of older adults.

Despite the potential and the benefits of silver gaming, its public recognition and popularity in Chinese society is relatively lower than in western countries. In 2013, approximately 14% of mobile gamers in the United Kingdom were aged over 55, whereas only 1.9% of mobile gamers in China were aged above 50 [13, 14]. Likewise, a rising trend in silver gaming has been observed in the United States since 1990. “Miscellaneous entertainment,” which includes electronic video games, is one of the fastest growing expenditure categories, showing a 9.8% annual growth since 1990. By contrast, the most popular activities for the older Chinese people are watching television, walking, reading, and exercising [15]. Watching television and reading keeps the older people informed, whereas walking and exercising allows them to stay fit and spend time alone. Games such as playing cards and mahjong receive the least participation among the older Chinese people in Hong Kong [16].

Many studies have investigated the uptrend of silver gaming in western countries. Autonomy and competence were found to be the main drivers for playing games. Autonomy refers to one’s ability to perform a specific task. Competence refers to one’s need for challenges and the sense of being able to grasp the skills required in playing games. The participants felt a sense of competence in dealing with a game interface that

they did not expect to be able to control. This sense of self-determination drives older people to engage in gaming [8].

Interpersonal connection refers to the connections between aged people and their family members and has been identified as another factor that affects the perceptions and attitudes of older western people towards gaming. Osmanovi and Pecchioni showed that 39.4% of their participants in the U.S. cited entertainment, connectedness, spending time together, and sharing a joint activity as their major motivations for playing games; likewise, the majority of their participants (81.8%) enjoyed the closeness and connectedness acquired by playing video games with family members not only as a common activity but as a platform for maintaining connections [17].

The digital gaming activities of older western people have been extensively studied to understand how video games can improve the balance of life and aid in maintaining the mental and social health of older people [18]. However, the perceptions and attitudes of older Chinese people towards gaming, including playing traditional Chinese games and digital games, have not been investigated.

This study aimed to explore the perceptions and attitudes of older Chinese people (over 60 years of age) towards gaming and to investigate the factors that motivate them to participate in gaming. A qualitative research method was used to investigate the underlying factors that influence the adoption of or the resistance to gaming of the older Chinese people. NVivo software was used for qualitative data analysis to classify the data into different groups of factors [19]. Findings may have important and useful implications in and suggestions for removing the barriers and difficulties that hinder the older generation from gaming and encourage older Chinese people to further engage into gaming for their psychological and physical well-being.

## 2 Methodology

### 2.1 Research Method

A qualitative research approach was employed in this study. Qualitative methods have become popular in the social sciences as these methods help researchers obtain an in-depth understanding of social phenomena and the details of a particular issue [20]. Asking open-ended questions can bring out the attitudes, experiences, opinions, or behaviors of people [21, 22]. Many studies related to silver gaming, such as inter-generational gameplay, Nintendo Wii gaming, and serious gaming, use qualitative methods; the perceptions and attitudes of older Chinese people towards gaming have not been researched [17, 23].

### 2.2 Sample

A total of 20 Chinese adults aged over 60 (11 males and 9 females) in Hong Kong participated in this study. The sample size was justified as data saturation, in which new categories, themes, or explanations stop emerging from the data as a study progresses, had been reached [24].

### 2.3 Demographics

Most of the participants in the sample were aged 76–85 years (50%), male (55%), with primary (30%) and secondary education (20%), married (70%), born in mainland China (75%), and living with family member(s) (45%) or spouses (30%). Detailed characteristics of the sample are shown in Table 1.

**Table 1.** Summary of personal particulars of participants (n = 20)

Items	Number of participants	Percentage (%)
<i>Gender</i>		
Male	11	55.0
Female	9	45.0
<i>Age</i>		
60–75	7	35.0
76–85	10	50.0
Over 85	3	15.0
<i>Place of birth</i>		
Hong Kong	3	15.0
Mainland China	15	75.0
Others	2	10.0
<i>Education</i>		
No formal education	10	50.0
Less than 1 year	1	5.0
1 to 3 years	4	20.0
4–6 years	1	5.0
More than 6 years	4	20.0
<i>Marital Status</i>		
Divorced/Separated	1	5.0
Single	0	0.0
Married	14	70.0
Widowed	4	20.0
No data	1	5.0
<i>Number of children</i>		
0	2	10.0
1 to 2	3	15.0
3 to 4	4	20.0
More than 4	1	5.0
No data	10	50.0
<i>Living arrangement</i>		
With spouse	6	30.0
With family member	9	45.0
Living alone	5	25.0

## 2.4 Interview Questions

The interview questions were constructed on the basis of the concepts of silver gaming and the reasons of aged people in pursuing or resisting gaming that are revealed in some related publications, including the attitudes of the aged Chinese generation towards gaming, their traditional values and motivation for playing exergames and games, and the usability of mobile games, as well as the possible effects of exergames and games on the health of the older people. The interview questions were used to guide the interviewees to speak their mind [10, 25, 26].

The interview questions consisted of six parts (62 questions). Besides general information, questions about self-image or personalities, affection of peers and family members, and perceptions of mobile or electronic games versus traditional games were included. The fifth part asked the respondents to give their opinions to illustrate the status of their mental and physiological health in relation to gaming. The interview ended with questions about gaining support from other parties. Open-ended questions and a five-point Likert scale were used to allow the respondents to express their opinions and indicate the extent of their agreement or disagreement with a particular statement, respectively.

## 2.5 Procedure

Before the interview, all participants were informed about the aim of the study and the time that the interview would approximately take. They were allowed to discontinue the interview at any time and were assured of the confidentiality and anonymity of their data.

The face-to-face interviews were conducted in public areas, such as parks, fast-food shops, and jogging tracks. The older adults were asked about their general information, self-perceptions, experience in playing mobile or electronic games and traditional games, interpersonal relationships with peers and family members, desired outcomes from gaming, and recommendations on supporting older people through gaming. Each interview was conducted in Cantonese and lasted for approximately 30 to 40 min. The interviews were recorded in audio for transcription and further analysis.

## 2.6 Data Analysis

The transcripts of the audio recordings were analyzed with NVivo 11 software. The transcripts were coded line-by-line to extract concepts from the qualitative data [27]. Six main factors were identified in the coding analysis, and each factor contained sub-factors, which were divided into positive and negative responses. The positive ones support the sub-factors and are related to the acceptance of silver gaming, whereas the negative responses give the reasons of the aged people for resisting silver gaming.

### 3 Results and Discussion

The following sections summarize the background information of the interviewees, explain the perceptions of gaming among the participants, and finally identify the six factors that influence the perceptions and attitudes of the respondents towards gaming.

#### 3.1 Definition of Gaming by Participants

One of the major concerns of this study was how older adults define gaming. All the participants were asked about how they defined gaming to figure out their understanding or perception of gaming. Most of the respondents were unable to clearly define gaming but could give some examples. The majority of the respondents (80%) had little understanding about the different types of games and had only heard of traditional games, such as mahjong, Chinese chess, and poker. Some respondents said that gaming refers to activities they enjoy, such as playing musical instruments and listening to Chinese opera. One respondent explained that gaming is exercising. The collected statements include “Gaming? I’ve heard of it before, but I have never played it. I am too old for it,” “My gaming is playing guitar and singing at home. I also enjoy drawing,” and “I always play games. I always use the fitness equipment in the park to train my arms and legs.” Leisure activity is defined as all activities practiced at a person’s discretion once liberated from professional, social, and family constraints [28]. The respondents seemed to confuse leisure activities, such as singing, drawing, and doing physical exercises, with gaming. This finding reveals that older Chinese people do not have clear definitions or interpretations of gaming and did not have a consensus about it.

#### 3.2 Factor Analysis

The qualitative data were categorized into six groups of factors, viz., personal factors, interpersonal relationships, product factors, environmental factors, desired outcomes, and economic factors. These categories were called nodes in NVivo, and the nodes of all the factors are shown with the number of sources and frequencies in Table 2. Sources refer to the number of participants who mentioned ideas related to each factor, and frequencies are the number of times each factor is mentioned. “Positive” and “negative” describe the relationships between the corresponding factor and silver gaming. The data distribution for each factor and sub-factor is shown in Table 2 as well. The results are discussed in detail in the succeeding paragraphs.

##### **Factor 1: Personal Factors**

Table 2 shows that personal factors are the core among all the factors and contribute the most to the perceptions and attitudes of the older people towards gaming.

##### ***Resistance to Challenges or New Attempts***

Nineteen respondents (95%) mentioned the factor of resistance to challenges or new attempts. Twelve of them (63%) indicated that they were not willing to attempt new things and accept new challenges, whereas the rest (37%) were adventurous and could not resist trying new things. Responses such as “All the older people like us are

**Table 2.** Sources and frequencies of each factor (n = 20)

Factors	Sources	Frequencies
<b>1. Personal factors</b>	20 (100%)	137
<b>Resistance to challenges or new attempts</b>	<b>19</b>	<b>24</b>
Positive	12	15
Negative	4	5
Neutral	4	4
<b>Age</b>	<b>16</b>	<b>28</b>
Positive	1	1
Negative	15	26
Neutral	1	1
<b>Educational or intelligence level</b>	<b>14</b>	<b>20</b>
Positive	1	1
Negative	13	18
Neutral	1	1
<b>Physical factors</b>	<b>16</b>	<b>34</b>
Positive	1	1
Negative	15	33
<b>Concepts of winning and losing</b>	<b>12</b>	<b>12</b>
<b>Memory</b>	<b>10</b>	<b>11</b>
Positive	0	0
Negative	10	11
<b>Time</b>	<b>6</b>	<b>8</b>
Positive	3	3
Negative	5	5
<b>2. Interpersonal relationships</b>	19 (95%)	34
Positive	4	4
Negative	18	29
Neutral	1	1
<b>Intergenerational relationships</b>	<b>4</b>	<b>4</b>
<b>Gender differences</b>	<b>2</b>	<b>2</b>
<b>3. Product factors</b>	15 (75%)	29
<b>Durability</b>	<b>1</b>	<b>1</b>
Positive	0	0
Negative	1	1
<b>Security</b>	<b>1</b>	<b>1</b>
Positive	0	0
Negative	1	1
<b>Ease of use</b>	<b>14</b>	<b>24</b>
Practical	8	9
Simple	11	15

*(continued)*

**Table 2.** (continued)

Factors	Sources	Frequencies
<b>Performance</b>	<b>3</b>	<b>3</b>
Positive	2	2
Negative	1	1
<b>4. Environmental factors</b>	14 (70%)	31
<b>Ease of access</b>	<b>4</b>	<b>4</b>
Positive	0	0
Negative	4	4
<b>Availability</b>	<b>12</b>	<b>21</b>
Facilities	12	18
Positive	4	4
Negative	9	14
Software	3	3
Positive	0	0
Negative	3	3
<b>Comfort</b>	<b>6</b>	<b>6</b>
Positive	0	0
Negative	6	6
<b>5. Desired outcomes</b>	14 (70%)	24
<b>Quality of life</b>	<b>8</b>	<b>8</b>
<b>Happiness</b>	<b>4</b>	<b>4</b>
<b>Relationships with family members and friends</b>	<b>0</b>	<b>0</b>
<b>Health (physical and psychological)</b>	<b>7</b>	<b>8</b>
<b>Satisfaction</b>	<b>4</b>	<b>4</b>
<b>6. Economic factors</b>	10 (50%)	15
<b>Cost</b>	<b>10</b>	<b>15</b>
Positive	2	2
Negative	9	13

conservative and traditional. We are all insensitive to those new things or new technology” were collected. The older adults conceptualized the relationship between their generation and the conservative behavior that makes them averse to change due to age. However, three respondents (16%) were willing to try unexplored fields. Meanwhile, others (21%) were neutral about self-challenge or attempting to acquire new knowledge.

**Age**

Fifteen participants (75%) mentioned age as a barrier that discourages them from playing games or trying new things. However, one participant expressed a positive attitude and said that gaming should not be hindered by age. “We should not think that the aged need no upgrade. Even though the aged are no longer part of the working force, they must keep improving themselves together with the society.” He insisted that older people should not stop improving themselves merely because of their age.



### ***Educational or Intelligence Level***

Thirteen respondents claimed that their low educational or intelligence level is an obstacle to gaming on mobile phones, with one of them saying, “I don’t know how to use a smartphone. I didn’t receive any education. I am just using an old model of a cell phone, and it is the simplest one.” Most of the respondents might not be able to understand the instructions in games as 80% of them received education for less than six years. Understanding instructions is the most serious problem for the aged Chinese people when playing games. Some interviewees felt helpless as they could not understand complex instructions with low intelligence levels; thus, they decided to use cell phones of old models with simple functions. A participant stated that “If you don’t know English, you can’t use a smartphone. Only those who know English well can use it.” This implies that products and game applications in the Chinese language are scarce for older Chinese people.

### ***Physical Factors***

Flexibility of the body is one of the sub-factors under personal factors. Sixteen interviewees (80%) thought that physical agility, especially mobility and health, is one of the concerns of the aged population when considering whether to play games or not. Both negative and positive attitudes towards physical agility were observed. The main reasons for unfavorable attitudes (75%) were poor vision and hearing and inability to stand and walk for a long time. Responses such as “The pain in my legs stops me from going anywhere I want” and “I am not in a mood to play games as I always need to stay in the hospital” show that the lack of physical agility negatively affects the attitudes of the older Chinese people towards gaming. Yet, a participant shared that he could read things on a smartphone even with poor eyesight because of the bright display screen. Furthermore, a respondent replied that “I felt extremely sleepy after taking those medicines for skin allergies and stabilizing blood pressure.” This statement indicates that medication also makes aged Chinese people tired throughout the day, thereby decreasing their mood and intention to play games.

### ***Concepts of Winning and Losing***

Interestingly, no participant cared about winning or losing in games. “I don’t want to win. People aged over 70 like us should not care about winning,” one of them said. This finding shows that the fear of losing has no effect on the participants’ perceptions of gaming.

### ***Memory***

Half of the respondents indicated that they no longer have the memorization ability that they had when they were young. Replies such as “It’s useless for you to teach me how to play if I can’t remember what you said at all” and “You won’t know how to play digital games or use smartphone unless you got the memory” were collected. These results suggest that older Chinese people avoid playing games due to diminishing memory because they feel that they cannot memorize game instructions.

### ***Time***

Six respondents (30%) demonstrated different attitudes towards spending their time on gaming. Some respondents reported that they refuse to waste their time on gaming as time is never enough for them, with one of them saying, “I have to take care of my

husband all day long. I barely have time for myself.” Likewise, two female respondents spend almost all of their time taking care of their families. These findings imply that aged Chinese people view playing games to be time consuming. Yet, three respondents would choose to play games if they had the time. “Now, I have time to learn mahjong,” said an 85-year-old female.

### **Factor 2: Interpersonal Relationships**

Nearly all the participants (95%) were influenced by interpersonal relationships in deciding whether to play games or not. They believed that interpersonal relationships are one of the reasons that older generations resist gaming. Eighteen respondents thought that their gaming intentions would be negatively influenced by poor relationships with peers. A female aged 80 explained that “I don’t pay attention to the games in the center for old people. I don’t know anybody there. How can I play with someone I don’t know?” This statement shows that older Chinese adults tend to play games with people they know. Meanwhile, an 85-year-old female said, “Some of the mahjong players have a bad personal character. I don’t like playing with them.” These statements show that personal characteristics can negatively affect interpersonal relationships. Thus, unfavorable relationships among peers influence the intention of older Chinese people to play games. However, interpersonal relationships can also bring positive perceptions of gaming to older people. “I always play rummikub with my wife and grandchildren on Saturdays and Sundays,” said an 81-year-old man. Hence, letting older Chinese people play games with familiar people will motivate them to enjoy gaming.

### ***Intergenerational Relationships***

Intergenerational relationships also affect the attitudes of the participants towards gaming. For example, “The young generation dislikes talking to old ones like us. The kids like to play with those of the same ages,” said a 75-year-old man. Some participants pointed out that the generation gap between them and their children or grandchildren acts as a barrier to playing games together. These statements reveal that aged Chinese people do not mind playing with young people but believe that the younger generations prefer to spend time with their peers.

### ***Gender Differences***

Apart from intergenerational relationships, gender differences are a concern under interpersonal relationships. One male participant responded that the old women in the center for old people are annoying as they keep gossiping about others. “Most of them are gossiping. They do nothing but gossip,” he said. He prefers staying in a quiet place, such as a park, rather than visiting the center for old people. Another male participant prefers not to play with women as he perceives females as poor game players. “There are more women than men in the center for old people. I can’t play with them as they don’t know how to play chess,” he said. Consequently, gender perceptions can affect the attitudes of aged Chinese people towards playing games. Interestingly, the female participants did not give similar negative comments about males.

**Factor 3: Product Factors**

The first factor analysis in this study focused on the usage experience and perceived value of the different gaming products, such as board, mobile, and digital games (Table 2).

***Durability***

Only one participant was concerned about the durability of the gaming products. "Once you drop the phone, it will be broken. It is not waterproof," he mentioned. The respondent sounded quite concerned about the quality and the life expectancy of the said products.

***Security***

One male interviewee commented on security in the digital world. "It will charge you a few thousands of dollars simply by pressing a wrong key," he said. Older Chinese people may fear technology traps in the digital world and may also believe that those traps could not be simply prevented or cured. The fear of being trapped is one of the factors that stop the aged Chinese population from digital gaming.

***Ease of Use***

This study found that the ease of use of gaming products is the main concern under product factors (70% of participants). Smartphones have become too complicated and difficult for aged people to use. "I don't know what is said on the screen when I'm using a smartphone. It causes too much trouble to me. So, I decided to use the old model of cell phone instead," one respondent said. A similar statement was made by an 83-year-old man. He stated that a phone should be simple and that the call-in and call-out functions should be easy to manage, especially for those who cannot read. Some respondents refuse to switch to using smartphones because they are too complicated to use. These statements reveal that ease of use is one of the obstacles that prevent aged Chinese people from using smartphones. Older people with cell phones may lose the chance to play mobile games as these games are normally played on smartphones.

***Performance***

Among the three respondents who were concerned about the performance of gaming products, two were attracted by the sophisticated functions. One participant said, "I am attracted to the music and the fabulous pictures of those digital games." This finding shows the positive effect of product performance on the perceptions of the older Chinese generation towards gaming.

**Factor 4: Environmental Factors*****Ease of Access***

The environment is one of the factors that affect the attitudes and perceptions of older Chinese adults towards gaming. Only four participants were concerned about the ease of access to the center or facilities for old people. A 90-year-old male respondent reported that his home is far from the center for old people. "I need to take the bus to get there. That causes me inconvenience." Clearly, ease of access to centers for old people or other gaming facilities affect the involvement of older Chinese people in gaming.

***Availability***

Twelve interviewees (60%) were concerned about the availability of gaming facilities, and nine of them found that the availability of gaming facilities in the centers for old people is insufficient. Statements such as “I don’t know the purpose of going to the center for old people. There is nothing to play” and “I can seldom find games to play there. You can only listen to Chinese opera there” were collected. By contrast, four interviewees were satisfied with the availability of gaming facilities in the centers for old people and their own communities. “There are many facilities around here (participant’s district), as well as in other districts in Hong Kong,” said one respondent. Generally, these results suggest that the availability of games and facilities for older adults do not satisfy the needs of older people. Therefore, the suitability of the available games and facilities for older Chinese adults should be ensured.

***Comfort***

A total of 30% of the participants expressed their dissatisfaction with the comfort of the environment for gaming. They reported that centers for old people are too cramped and had poor ventilation. Some of them dislike the noise inside the gaming centers. Statements such as “The games in the game center are interesting, but I can’t stand the extremely high noise level there” were collected. These replies indicate that the environmental comfort of the amenities is one of the considerations of older Chinese people when gaming.

**Factor 5: Desired Outcomes**

According to Maddux et al., increments in outcome expectancy increase intentions to perform a behavior [29]. Their finding is consistent with those of the current study, which indicate that the intentions of older Chinese people to perform a task are affected by their desired outcomes.

***Quality of Life***

Gaming can enhance the quality of life of older Chinese adults, thereby motivating them to play games. A total of 40% of the participants admitted that games can make their lives meaningful and improve their quality of life.

***Happiness***

A total of 20% of the respondents stated that gaming can deliver happiness to the older population, with two of them saying, “Yes, I think gaming can cheer one up” and “Whatever brings happiness to older people, it’s the game that belongs to older population.” These statements indicate that older Chinese people view gaming as a source of happiness.

***Relationships with Family Members and Friends***

None of the participants mentioned relationships with family members and friends as an outcome of gaming. This result disagrees with the findings of Osmanovic and Pecchioni in the U.S, in which 81.8% of the participants enjoy the closeness and connectedness that playing video games bring when played with their families [17]. The difference between the two studies may be due to the lack of gaming experience of older Chinese people with family members and friends.

***Health (physical and psychological)***

A total of 35% of the participants believed that gaming can enhance the physical and psychological health of older people. Feedback such as “It can train our brain. That’s good” were received, thereby showing that aged people are willing to sharpen their mind by playing brain training games. However, this small percentage of respondents who recognize physical and mental wellness as a desired outcome of gaming mean that some older Chinese adults may still be unaware of the relationship between health and games.

***Satisfaction***

Satisfaction is also a desired outcome. Responses such as “Of course! If someone teaches what you don’t know, you will be happy once you can manage it!” were collected from 20% of the interviewees. This result is consistent with that of Loos and Zonneveld, which showed that autonomy and competence attract older adults towards playing games and that sense of self-determination drives the aged population to engage in gaming [8]. The respondents in the current study expressed positive attitudes towards gaming in terms of satisfaction as learning how to play games can make them feel that they can succeed.

**Factor 6: Economic Factors*****Cost***

The cost of gaming is an important factor that affects perceptions of gaming. Half of the participants were concerned about money when mentioning gaming, especially mahjong and chess. The income of older Chinese adults decrease as they retire. Thus, they cannot afford to spend money on games such as mahjong. Nine out of ten respondents (90%) responded negatively, with two of them saying, “We are afraid of consumption. We consume much less than we used to be” and “Now that I am retired, as an old man, my income has decreased. I have to be frugal. I only play mahjong when I can afford it.” Frequently, old people no longer have a monthly income after retirement, thereby creating an imbalance between income and expenditure. Consequently, older Chinese adults avoid money-consuming games. However, two respondents expressed a neutral attitude towards economic factors. One of them said, “It doesn’t matter whether the game is money-consuming or not.” These results suggest that the cost of gaming is a major factor that negatively influences the attitudes of older Chinese people towards gaming.

**4 Conclusion**

Using a qualitative research approach, this preliminary study investigated the perceptions and attitudes of older Chinese people in Hong Kong towards silver gaming. The authors do not intend to produce any quantitative or conclusive findings from this study and only aim to call the attention of policy makers and the society to this important issue. However, the small sample size of this study means that the stated views and findings may not be representative of the large group of older people in Hong Kong. Results indicate the necessity of pursuing further systematic research to deeply understand silver gaming and its effects on the health and general well-being of this age group in local society.

Regarding the preliminary findings, six categories of factors were identified from the qualitative data, namely, personal factors, interpersonal relationships, product factors, environmental factors, desired outcomes, and economic factors. Among all the factors identified, personal factors were mentioned by all participants. This finding suggests that personal factors have the biggest influence on the perceptions and attitudes of older people towards gaming. This category is followed by interpersonal relationships, product factors, environmental factors, desired outcomes, and economic factors.

The educational or intelligence level of the participants and the ease of use of gaming products are related. Aged people with low educational or intelligence level cannot read written instructions and thus prefer to use products that are simple to use. Physical factor can be linked to ease of access under environmental factors. Some participants explained that their poor mobility limits the areas they can access. Thus, they cannot easily meet their friends to have fun or travel. Age, which is under personal factors, is also related to interpersonal relationships, specifically intergenerational relationships. Participants who showed concern about intergenerational relationships mentioned the large age difference between them and the young generation. This generation gap prevents these two age groups from playing or even communicating with each other. Personal factors are related to the intrinsic value of oneself. The government, together with different stakeholders, such as families and centers for old people, will need long-term planning to improve the educational level, physical agility, and psychological health of the older Chinese people.

A future generation of older people who are digital natives (individuals who were born after the widespread adoption of digital technology) will likely replace the existing silver generation, who are digital immigrants (individuals who were born before the widespread adoption of digital technology) [30]. The uptrend of silver gaming for both digital and non-digital games is foreseeable. Until then, the effect of age on gaming should be eliminated by bridging the gap between the youth and the older Chinese adults so that the latter will not be detached from society.

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