

Exploring Antecedents of Older Consumers' Self-perceived Age: Evidence from Japan

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Publication summary

Objectives: This study aims to contribute to the state-of-the-field of research on older consumers in general and the Japanese older (“silver”) consumer in particular. Following the previous relevant literature, this paper attempts to investigate the antecedents of self-perceived or cognitive age to better understand the consumer behaviour of older consumers in Japan. The analysis focuses on level of health, financial status and social communication that have been explored as key antecedents of cognitive age in previous studies outside Japan.

Method: A face to face survey of 316 elderly Japanese was conducted in the main commercial street of the Sugamo district in northeastern Tokyo, an area well known in Tokyo as a place of social interaction and gathering of older Japanese. Cognitive age, financial status, social communication, values and life style measures were collected in addition to descriptive variables.

Results: Descriptive results confirm that cognitive age is also lower from chronological age on average for Japanese older consumers. Metric multiple stepwise regression results indicated that level of health, financial status and social communication as well as some values and life style measures were significant antecedents of cognitive age for our Japanese sample.

Conclusions: The paper discusses the relative importance of the antecedents of the concept of cognitive age and emphasizes its importance for segmenting the silver market in Japan. Finally it addresses the usefulness of the concept to practical marketing issues.

Abstract

Older consumers remain under-researched, especially in Japan, the country most severely affected by demographic change. This paper aims to develop a better understanding of Japanese older consumers through self-perceived age, health condition, financial status, personal values and behavioral variables using a sample of 316 older Japanese consumers. An analysis of antecedents of self-perceived age in a multiple stepwise regression model indicates that the following variables are associated with lower self-perceived age: Fun and excitement, Health level, Time away from home, Sociability. Findings are discussed in relation to previous studies from different cultures and implications for marketing research and practice are given.

Keywords

Cognitive age, Japan, older consumers, self-perceived age, senior market, subjective age

Antecedents of Cognitive Age: Empirical Investigation of Older Consumers in Japan

Introduction and Objectives

Despite the growing importance of the 50+ age group in the population, older consumers are still under-researched and still often not included in a range of marketing practices (Sudbury and Simcock 2009). In addition, the vast majority of the research on older consumers published so far has been conducted in North America and Europe, while Japan – the most severely affected country by the demographic shift with both a rapidly aging and shrinking population – has been widely neglected. This is all the more surprising given that in Japan, older people hold a disproportionately large amount of personal financial assets, spending power and time to consume. Older consumers in Japan obviously form an attractive market segment and they have already overtaken younger age groups in terms of average household purchasing power and consumption, a trend that is forecast to increase even further over the next three years (The Nikkei Weekly 2010). This is also one of the reasons why experts have pointed to the fact that managers and marketers around the globe can learn from experimenting in the Japanese lead market (cf. e.g. Kohlbacher, Gudorf, and Herstatt 2010).

This paper aims to contribute to the state-of-the-field of research on older consumers in general and the Japanese older (“silver”) consumer in particular. It attempts to achieve a better understanding of the antecedents of the concept of self-perceived age (also called subjective age or cognitive age) (Barak and Schiffman 1981) of Japanese older consumers using independent variables such as health condition, financial status and personal values (Kahle 1983). Specifically, we examine: 1) the magnitude of the difference between actual age and self-perceived age in comparison with previous studies, and 2) the multivariate relative importance of several antecedents of self-perceived age to better understand the consumer buying behavior of older

consumers in Japan. While self-perceived age – as a form of self-concept – has proven important in gerontology and marketing, empirical studies outside the Western world are relatively scarce, at least in comparison to the large number of research conducted in the US (cf. e.g. Barak 2009; Sudbury and Simcock 2009). Health condition and financial status have been used in segmentation approaches to the silver market (e.g. Moschis 1996; Tempest, Barnatt, and Coupland 2008), but rarely in combination as antecedents of self-perceived age. As for values, Sudbury and Simcock (2009) have so far been the only ones to look into the relationship between personal values and perceived age for mature consumers in the UK. This empirical study is the first one to explore these variables together as antecedents of self-perceived age on a sample of 316 older Japanese consumers. We thus aim to enhance understanding of the older consumer and fill an important gap in the literature.

Literature Review

Given the above-mentioned gaps in the literature and its suggestions for further research (e.g. Gwinner and Stephens 2001; Mathur and Moschis 2005; Wilkes 1992), our research partly replicates and extends previous studies (e.g. Moschis 1996; Sudbury and Simcock 2009; Van Auken and Barry 2009). It extends previous research by looking for relationships among self-perceived age, health condition, financial status and personal values and it extends previous research by using the four variables together (integrating them into a multivariate framework) and by doing so on a Japanese sample. Since, the theoretical background of our research uses the concept of self-perceived age and personal values, we now review the relevant literature.

Self-Perceived Age and Its Correlates

Scholars have frequently pointed to the fact that older people might not form one homogeneous market segment and empirical research has revealed a number of sub-segments (e.g. Gwinner and Stephens 2001; Moschis 1996; Powers and Trawick 1993). Despite its value and various uses in research, the limitations of chronological age as a meaningful predictor variable have long been acknowledged (Sudbury and Simcock 2009: 23). According to Barak and Schiffman (1981: 602), the use of chronological age is particularly problematic for age-related research examining the attitudinal or behavioral patterns of older consumers as it does not take into account the fact that people frequently perceive themselves to be at an age other than their birth age. This subjective age¹ is an individual's perception of how old he or she is (Gwinner and Stephens 2001). Since the operational measuring dimensions proposed by Barak and Schiffman (1981: 602), cover the appearing, feeling, thinking and doing aspects of the concept, we suggest that using the term "self-perceived age" is more appropriate than "cognitive age". It provides a multidimensional view of the aging process (Henderson, Goldsmith, and Flynn 1995) and is congruent with the framework of self-concept theory (Barak and Gould 1985; Sirgy 1982). Research on self-perceived age strongly suggests that non-chronological age measures may contribute more than chronological age to an understanding of how older consumers view themselves and how they make consumption-related decisions (Wilkes 1992: 292). Indeed, Moschis and Mathur (2006: 344) have found that "subjective age has a significant impact on old age-related consumer behaviors [...] suggesting that old-age consumer behaviors may be the manifestation of a person's old-age identity development".

¹ We will use the terms subjective age and self-perceived age interchangeably in this paper.

One frequently reported correlated variable of self-perceived age is health (e.g. Gwinner and Stephens 2001; Mathur and Moschis 2005; Ong, Lu, and Abessi 2009), with the relationship being stable both after controlling for chronological age and other factors, as well as over time (Markides and Boldt 1983). In a nutshell, research has found an older adult's health status to be a significantly correlated with subjective age with poorer health related to an older subjective age (e.g. Hubley and Russell 2009; Teuscher 2009) and that health variables usually explain the greatest proportion of variance in subjective age among all the variables contributing to subjective age identities (Hubley and Hultsch 1994). Socioeconomic status (Markides and Boldt 1983) and income (Wilkes 1992) also show a negative correlation with self-perceived age, even though this relationship can disappear when controlling for chronological age (Henderson et al. 1995). Finally, a study by Barrett (2003) found that the older age identities held by the less socioeconomically advantaged are explained by their worse health level. In addition, differences in age identity by higher education level and perceived financial well-being are greatest among older adults (Barrett 2003). Another important variable correlated with self-perceived age can be described as “(degree of) sociability” and was operationalized in different ways in various studies. Blau (1956) e.g. found that clique membership for people age 70 and older made a considerable difference for age identification. However, subsequent studies resulted in conflicting outcomes regarding the relationship between subjective age and group membership (Baum and Boxley 1983; George, Mutran, and Pennybacker 1980). Wilkes' (1992) study on older women indicated that subjectively younger respondents had a more active life-style orientation, including greater participation in certain activities. Chua et al. (1990) also found self-perceived age to be related to activity level, among other factors and so did Gwinner and Stephens (2001) for social support. Kleinspehn-Ammerlahn et al. (2008) reported a smaller discrepancy between felt and actual age as well as between physical age and actual age for those

respondents having a higher number of illnesses and showing less social loneliness. Finally, using a sample from Japan, Van Auken and Barry (2009) found that subjectively younger consumers have a better perception of health and engage in more activities, including social club membership and dining out.

Research typically reports self-perceived age to be 8-12 years lower than chronological age (e.g. Barak and Rahtz 1999; Sherman, Schiffman, and Mathur 2001; Van Auken and Barry 1995). Self-perceived age has been studied in various different countries, but the bulk of the research comes from the United States (see e.g. Barak 2009 for a review on self-perceived age studies around the globe). As far as Japan is concerned, there seems to be only one empirical study on subjective age of which the results have been published in English; both papers reporting results from this study confirm the validity of the self-perceived age concept in the Japanese context and thus suggest that subjective age is culture free (cf. also Barak 2009; Van Auken and Barry 2009; Van Auken, Barry, and Bagozzi 2006).

Personal Values

“Values are both a powerful explanation of and influence on human behavior” (Homer and Kahle 1988: 638) as they are the guiding principles that determine what is important to people (Kahle 1983; Rokeach 1973). They are thought to be relatively stable in adults and to motivate people’s behavior (e.g. Kahle, Rose, and Shoham 1999; Rokeach 1973; Schwartz 1992). Indeed, values are more stable and occupy a more central position than attitudes within a person’s self-perceived system and thus are determinants of attitudes and behavior providing a more stable and inner-oriented understanding of consumers (Kamakura and Novak 1992: 119). This is why values are widely used in trying to understand and predict the behavior of people in their roles as consumers, employees or other ones relevant to business and marketing. In

particular, empirical research links personal values to various consumption attitudes and behavior (e.g. Burroughs and Rindfleisch 2002; Homer and Kahle 1988; Kahle, Beatty, and Homer 1986). Moreover, personal values are also used in marketing studies as a basis for market segmentation and product positioning (Kahle and Kennedy 1988; Schiffman, Sherman, and Long 2003). A variety of approaches to measure personal values have been developed, employed and compared to each other, with Kahle's (1983) List of Values (LOV) having emerged as one of the most widely employed approaches to measure personal values in consumer research. Its theoretical underpinnings come mainly from Rokeach's (1973) and Maslow's (1954) reasoning on human nature, motivation, and personality. LOV has been used in a wide variety of consumer research settings in a variety of countries and cross-cultural contexts (Kahle et al. 1999).

Self-perceived Age and Personal Values

According to Kahle et al. (1986: 407), "identified age differences [in personal values] could be due to the obvious factor of age, but could also be due to development, history, biological influences, situational influences, cohort effects, or interactions of these factors". In a similar vein, Sudbury and Simcock (2009: 27) note that "[t]he literature devoted to older consumers clearly suggests that older people have different values than younger people" and LOV studies have identified differences in values between generations or cohorts (e.g. Kahle et al. 1986; Kahle, Poulos, and Sukhdial 1988; Muller, Kahle, and Chéron 1992). However, as Sudbury and Simcock (2009: 28) note, "[d]espite the obvious importance of values in consumer behavior, and the fact that age differences have been identified in values research, only one study, from Australia, has investigated values in relation to a form of self-perceived age, where respondents were asked how old they felt". In this study, Cleaver and Muller (2002) found that the importance placed on the value "fun and enjoyment in life" was predictive of a younger

perceived age, and those who felt closer to their actual age placed more importance on “security”. Szmigin and Carrigan (2001: 1111) in their interpretive study of subjectively young older adults concluded that identifying personality traits that may correspond with differences in self-perceived age could be a potentially interesting avenue for further research. Writing ten years earlier, Schiffman and Sherman (1991) proclaimed the coming of an ageless market and the emergence of a “new-age elderly” with a youthful value orientation and more active consumption patterns. However, despite these assertions, empirical research addressing these issues and analyzing them further has remained almost non-existent.

Based on the fact that self-perceived age is now a commonly used variable among marketers, Sudbury and Simcock (2009: 28) were the first to have tackled this research gap with their study of values and self-perceived age among older consumers in the UK. Using quota sampling and a self-administered questionnaire, they obtained 650 usable responses from people aged 50 and older in the UK. Measuring self-perceived age using Barak and Schiffman’s (1981) scale and personal values using Kahle’s (1983) LOV scale, they found that their respondents perceived themselves to be almost 10 years younger than their actual age and that there were differences between subjective age groupings in the relative rankings of values. Indeed, for their sample, significant differences appeared between self-perceived age groups for all values except for “self-respect” (Sudbury and Simcock 2009: 30).

Method

Following the above review of previous research studies this paper examines: 1) the magnitude of the difference between actual age and self-perceived age in comparison with previous studies, and 2) the multivariate relative importance of several antecedents of self-perceived age to better understand the consumer buying behavior of older consumers in Japan.

This multiple regression analysis focuses on level of health, financial status and values. It will also explore the relative importance of additional antecedent variables such as: degree of sociability and time spend away from home and on hobbies.

Data

The data sample was collected in February 2009 face to face by a team of Japanese speaking trained research assistants in the main commercial street of the Sugamo district in northeastern Tokyo. This area is well known in Tokyo as a place of social interaction and gathering of older Japanese and frequently serves as a retail and research lab for Japanese companies doing marketing research on older consumers. Extensive pretesting of the questionnaire was conducted and lead to shortening its length and moving the most sensitive questions on objective health and wealth at the end of the survey when trust was established. The information on health and wealth was also cross-checked using both self-perceived and objective questions. In addition, to avoid stress and reduce social desirability, interviews with elderly respondents were organized while they were sitting and relaxing on benches near a temple. A total of 316 completed surveys were obtained for a response rate of 45.6%. Refusals in terms of gender and estimated age groups were not found to be different from the proportions in the final sample. As the objective of this research was to replicate and extend previous research with the use of a different sample in a different country and to test for relationships between theory-driven concepts, we deemed such a convenience sample appropriate, even though it neither enables us to make any population-related estimates nor to generalize the findings to other populations (cf. also the study by Mathur and Moschis 2005: 979). Indeed, consumers frequenting the Sugamo shopping street are of great interest to marketers in Japan and thus form a meaningful population to study in a marketing context.

Measures

The survey instrument was prepared in a series of steps following a systematic review of the literature. An original English shortened version of the survey was prepared including 18 questions fitted on to three pages. These questions included a measure of self-perceived age following the four-statement scale proposed by Barak and Schiffman (1981), which is a measure of actual age-role self-concept (Barak and Gould 1985). Respondents were asked to select a decade from 20s to 90s for: 1) “feel age”, 2) “look age”, 3) “do age” 4) “interest age”. Two questions asking for degrees of agreement on a scale of 1 to 5 to series of statements were used to measure health level. The first one included statements on ability to perform daily activities such as grocery shopping, cooking meals and cleaning. The second one measured perceived constraints to travel, to leave the home and for daily life. This second series of statements was reverse coded and combined with the first to measure the construct of self-perceived health level. For financial situation, respondents were invited to describe their present financial situation as: “Financially well off”, “Relatively financially well off”, “Having a bit more than needed for their daily life”, “Enough to afford their daily life”, “Only enough to be able to live their daily life” and “Not enough to afford their daily life”. The question on values used the LOV scale developed by Kahle (1983) and requested respondents to read all nine statements shown in Table 2 carefully before giving their answer on a scale of importance from 1 to 5.

In another part of the questionnaire a series of statements were asked in connection to the extent that respondents liked to be with people or preferred to do things alone. With proper recoding, and reliability check, these questions were used to measure a degree of sociability of elderly Japanese respondents. A subsequent section of the survey included questions on hours spend away from home per day and hours invested per week on hobbies. In the last part of the

survey questionnaire, chronological age and gender were asked in a series of other descriptive questions. A first draft of the original English version of the questionnaire was translated into Japanese by four bilingual students. In relation to several face-to-face pretests, sensitive questions were reordered to appear at the end of the Japanese version of the survey. The fine-tuning and back translation for verification purposes of the Japanese version of the survey questionnaire was completed by a Japanese professional expert affiliated with Senior Life Design, a company specializing in the study of the lifestyle of senior people in Japan.

Findings

The final sample of 316 completed surveys consisted of a larger proportion of female respondents (66%), in line with the higher average number of female older consumers found in the shopping area of Sugamo where the data were collected, in addition to the fact that women outnumber men in the Japanese population of those aged 50 and older (although to a lesser extent). Average age of the sample was 71 years old (min = 51, max = 93, SD = 9). Concerning age groups, the number of respondents in their 60s and those in their 70s were about equal and represented 73.7% of the total sample.

Difference between chronological and self-perceived age

In line with the scale developed by Barak and Schiffman (1981) a self-perceived age score was computed for each respondent using the four statements corrected for the midpoint of the decade given as an answer. The four statements were found highly correlated and a principal components analysis extracted a dominant Eigenvalue accounting for 74.34% of variance. Internal reliability using Cronbach alpha was found to be satisfactory with a coefficient of .87, and no improvement resulted from deletion of any of the four statements underlying the scale.

As reported by the authors (Authors, 2010) in previous research, the mean chronological age of the sample was 71 years old and the mean self-perceived age was 63 years old. Thus, the mean age difference between chronological age and self-perceived age for elderly Japanese respondents was of eight years on average. T-tests for the equality of the mean values for men and women of the sample on actual age, self-perceived age and the difference between chronological age and self-perceived age did not reveal any significant statistical differences.

LOV Scale by Score and Rank

Mean scores and standard deviations given by our sample of respondents appear in Table 1. The bivariate correlations of the values with self-perceived age are also included in the last column. As can be seen in the second column of table 1, Japanese older respondents gave a top mean score of 4.73 to “warm relationships with others”, followed by 4.71 for “security”.

Table 1: List of Values Average Scores, Standard Deviations and Correlations with Self-perceived Age of Older Japanese (N = 314)

Values	Mean score*	Standard deviation	Bivariate Correlation With Self-perceived Age**
Warm relationships with others	4.73	0.63	-.085
Security	4.71	0.63	-.069
Fun and enjoyment in life	4.69	0.77	-.179
A sense of accomplishment	4.24	1.10	-.238
Self-respect	4.22	1.09	-.070
Being well respected	4.02	1.20	-.075
Self-fulfilment	4.01	1.17	-.093
Sense of belonging	3.72	1.43	-.063
Excitement	3.71	1.35	-.269

* On a scale of 1 to 5 where 1 is “Not important at all” and 5 is “Extremely important”.

** Correlations in bold are significant at level .05, correlations in Italics are not significant at level .05.

The least important values were respectively: “sense of belonging” with 3.72 and “excitement” with 3.71. It can be noted that a higher consensus prevails among Japanese respondents for values scoring at the top. Larger standard deviations tend to be observed for values perceived as less important such as for example: “sense of belonging” with a standard deviation of 1.43.

The bivariate correlations with self-perceived age are all negative showing that higher degree of agreement with the importance of a value tends to be inversely related to self-perceived age. However, only three values are statistically significant: “Excitement” (-.269), “A sense of accomplishment” (-.238) and “Fun and enjoyment in life” (-.179).

Multiple stepwise regression analysis of antecedents to self-perceived age

Previous research on older people has shown that wealth and health were key variables underlying the lifestyle and well-being of older consumers in general as well as in Japan (Cutler 2001; Hakuodo Institute of Life and Living and Hakuodo Inc. Elder Business Development Division 2003; Moschis 1996; Van Auken and Barry 2009). Beyond the variables included in previous research studies, variables showing significant bivariate correlation with self-perceived age were examined as additional potential antecedents. These variables were related to values, degree of sociability, time away from home and time spent on hobbies. In summary, the following series of variables were included in a multiple regression model to explore their potential degree of relative influence on self-perceived age: 1) Financial situation, 2) Health level, 3) Degree of sociability, 4) List of value and lifestyle variables showing significant degree of correlation with self-perceived age such as “sense of accomplishment”, “fun and enjoyment in life”, “excitement”, “time spent away from home per day” and “time spent per week on hobbies”.

Preparation of variables to test as antecedents to self-perceived age

Before turning to the results of the multivariate analysis of antecedents of self-perceived age, steps involved in the data preparation were as follows. The dependent variable of self-perceived age was formed as a linear combination of the four mid-point decade answers given to the four statements used and validated in previous research studies ($\rho = .92$). The dependent variables that were not coded in increasing order (such as financial situation) were reversed coded to facilitate interpretation. Other dependent variables (such as health level) were structured as a linear combination of statements allowing us to reach an acceptable level of measurement reliability. The health level variable was formed using a linear combination of nine statements related to ability to move and constraints to conduct activities related to travel, going out of home and performing daily activities (ρ value = .89). Degree of sociability was adapted from Reynolds and Beatty (1999) and structured using four statements related to preference to be with people or to do things alone ($\rho = .75$). Values of “Excitement” and “Fun and enjoyment in life” being conceptually similar were combined to form a construct of “Fun and excitement” ($\rho = .75$). Finally, lifestyle measures found significantly correlated with self-perceived age, such as hours spent away from home per day and hours spent per week on hobbies, were included in the exploratory regression model as measured and coded in the survey.

Mean values, standard deviations and the correlation matrix of the variables of the proposed model are shown in Table 2. Correlation values appearing in bold are all significant at level .05 and those shown in italics are not statistically significant. It can be seen, in column 1, that with the exception of financial situation, all correlations between seven independent of the eight variables are statistically significant and inversely related to self-perceived age. In other words, this means they are potentially contributing to a decrease in self-perceived age of elderly Japanese respondents. Further examination of the columns numbered 2 to 7 indicates that some

correlations among the dependent variables are significant. For example, the correlation between “fun and excitement” and “sense of accomplishment” is .47 and “sense of accomplishment” and “financial situation” is .248. Thus a multiple stepwise regression procedure is needed to deal with multicollinearity among dependent variables.

Table 2 Mean values, standard deviations and correlations of antecedents of self-perceived age (N = 290)

Variables	Mean	SD	1	2	3	4	5	6	7
1. Self-perceived age (1)	63.10	11.27	1.00						
2. Financial situation (2)	3.82	.89	-.008	1.00					
3. Health level (3)	4.56	.69	-.255	.006	1.00				
4. Sociability (3)	3.66	.96	-.211	.169	.134	1.00			
5. Sense of accomplishment (4)	4.23	1.09	-.245	.046	.248	.202	1.00		
6. Fun and excitement (4)	4.18	.85	-.296	.108	.107	.179	.470	1.00	
7. Time away from home (5)	3.31	1.04	-.199	-.079	.048	.154	.042	.107	1.00
8. Time for hobbies (6)	3.67	1.70	-.163	.093	.096	.044	.173	.179	.230

(1) Average of self-perceived age mid-point decades.

(2) On a scale from 1 “I cannot afford daily life” to 6 “I consider myself financially well off”.

(3) On a scale of 1 “totally disagree” to 5 “totally agree”.

(4) On a scale of 1 “not important at all” to 5 “extremely important”.

(5) On a scale of 1 to 6 in hours per day.

(6) On a scale of 1 to 6 in hours per week.

Multiple stepwise regression results

Before discussing the multiple linear regression results, assumptions about linearity, homoscedasticity, normality and independence of the variables were tested and found not to be

violated. A test of stability of retained variables in the stepwise approach was conducted with forward and backward procedures. The same variables were retained with the same order of importance by the two approaches than with the stepwise method. Almost no multicollinearity was left after the stepwise procedure since tolerances and variance inflation factors of the four retained variables were very close to 1 (in addition all condition indices were also lower than 22).

Table 3 Independent variables retained in a stepwise multiple regression on self-perceived age
($N = 289$)

Independent Variables	Standardized Coefficients	T values
Fun and excitement	-.221	3.93**
Health level	-.195	3.53**
Time away from home	-.149	2.72**
Sociability	-.112	-1.99*
Adjusted $R^2 = .157$		F value = 14.43, $p = .000$
Durbin Watson = 2.00		

** Significant at level .00; * Significant at level .05

Both time spent away from home and sociability were retained in the final model in spite of some degree of bivariate correlation (.154). Multicollinearity checks indicated no severe variance inflation factors with values close to 1 (1.03 and 1.08 respectively for time spend away from home and sociability). As shown in Table 3, four statistically significant antecedent variables of self-perceived age are retained in the multiple regression procedure after controlling for multicollinearity. In order of decreasing relative importance they are: “Fun and excitement”, “Health level”, “Time out of home” and “Sociability”. Although the overall model is statistically significant ($F = 14.43$, $p = .000$), “Sociability” is significant only at level .05. The overall model is accounting for 15.7% (Adjusted $R^2 = .157$) of the variance in self-perceived age. Such an R^2

value is not unusual compared to previous results (cf. e.g. Hubley and Hultsch 1994). "... it must be noted that in the literature, the proportion of variance explained in subjective age measures by any combination of variables is notoriously low (usually less than 15%)" (Hubley and Hultsch 1994: 435).

In spite of R^2 values that are relatively low, this does not reduce the value of these findings. As noted by Novak and MacEvoy (1990), even low R^2 could reflect significant differences across consumer groups. In this context Duncan (1975: 65) noted 'it is a mistake to focus too much attention on the magnitude of R^2 '. Since the primary focus here is on exploring potential antecedents of self-perceived age among elderly Japanese consumers, the authors decided to proceed with further analysis and interpretation of results. (Mathur, Moschis, and Lee 2003: 135-136).

Discussion

List of Values and Self-perceived Age

In terms of value ranking, Japanese respondents gave top ranking to "warm relationships with others". This is in line with the traditional importance of harmony and group relationships in the Japanese and Asian culture. Keng and Yang (1993a, b), in two studies using the LOV in Singapore and Taiwan, offered similar explanations to their findings that the majority of their respondents had opted for "harmony" after collapsing "security", "sense of belonging" and "warm relationships with others" into this unique category.

“Security” was second in order of importance. Although this high ranking is expected for elderly people in general as compared to younger consumers, in the case of Japan this may simply reflect a culturally higher level of uncertainty avoidance. However, a less well known and interesting aspect of our findings is that elderly Japanese of our sample were found to value “Fun and enjoyment in life” reaching the third position in importance. As shown in Table 1, the relatively small standard deviation of .77 compared to values ranked lower than third, indicates that older Japanese respondents seems to be more in agreement than for other values ranked lower. The much lower importance ranking of “self-respect” for Japanese older consumers, ranked fifth in our sample, may be related to the lower individualistic culture in Japan. This is not too dissimilar from previous research employing LOV in Japan, even though comparisons between studies might be problematic due to differences in the samples employed (especially as related to age; to our knowledge, our study is the first to use LOV in a research deliberately studying an older sample in Japan) as well as changes over time and/or cohort effects. Beatty et al. (1993) found that the most important value for their Japanese sample was “self-fulfilment” followed by “warm relationships with others” and “security”. In Soutar et al.’s (1999) research, the most important value to Japanese people surveyed was “security”, followed by “warm relationships with others” and “a sense of belonging”. In contrast to that, Rose and Shoham (1999) found that “fun and enjoyment in life” had the highest mean value in their sample, followed by “security” and “a sense of accomplishment” (very closely followed by “warm relationships with others” and “self-fulfilment”). Last but not least, Watkins and Gnoth (2005) reported the highest mean for “fun and enjoyment in life”, followed by “warm relationships with others” and “a sense of accomplishment”.

Correlates of Self-perceived Age

Four out of seven possible correlates of self-perceived age were retained as significant. This may not be surprising as some bivariate correlations between some of them were found significant. This is the case for “Sense of accomplishment” and health level (.248), time out of home and time for hobbies (.23). Among the retained variables after controlling for multicollinearity, “Fun and excitement” has the largest inverse relationship with self-perceived age. Next come health level, time out of home and sociability. The finding about health level is consistent with previous research on self-perceived age, which tends to reveal negative correlations between health and self-perceived age (e.g. Barrett 2003; Gwinner and Stephens 2001; Markides and Boldt 1983; Mathur and Moschis 2005; Wilkes 1992). Spending time away from home was found significantly related to a lower self-perceived age. More time spent away from home is consistent with higher sociability in Japan where social meetings tend to be mostly organized outside of the home. Finally, Van Auken and Barry (2009) obtained similar results with respect to sociability on a sample from Japan. They found that self-perceived younger consumers tended to engage in activities where they can meet other people including social club membership and dining out.

Limitations and Further Research

A number of limitations apply to our study. First of all, even though the concepts of self-perceived age and personal values have widely been used in a variety of contexts and settings, they are of course not without limitations and critique. Besides, there are a number of different measures of available and we have chosen the most common ones in the marketing literature. Moreover, it has been pointed out that the usefulness and applicability of the self-perceived age

concept could change along with changing social attitudes such as the one towards aging for example (cf. e.g. Catterall and Maclaran 2001), which would call for making research on alternative variables. One limitation to LOV studies is that cross-country comparisons may be misleading when within-country cultural differences are overlooked. Such differences have been found e.g. in LOV studies in the US (Kahle, Liu, and Watkins 1992) and Canada (Chéron and Muller 1993). Future research in Japan could also explore within country cultural differences.

Our measures of health level and financial status are subjective measures (even though we double checked the financial status through the income variable) since objective measures are not easily accessible, especially in the case of health (for privacy reasons), even though previous research has confirmed the utility of self-rating of health as a measure of health in survey research on older adults when objective measures are not available (Maddox and Douglass 1973).

Another obvious limitation concerns our sample and the fact that we collected our data only in Japan (and only in one area of Tokyo). Even though we, like Mathur and Moschis (2005: 979), deemed a convenience sample appropriate, following a research objective of replication of and extension on a previous research with the use of a different sample in a different country to test for relationships between theory-driven concepts, it neither enables us to make any population-related estimates nor to generalize the findings to other populations. Further research using national, representative samples in various countries as well as a longitudinal research will be necessary to fully validate our approach. In a similar vein, in order to fully disentangle age, period and cohort effects, cohort analysis based on a longitudinal research design would have

been necessary (Rentz, Reynolds, and Stout 1983). With our cross-sectional study, we cannot really tell these effects apart from each other. The same holds true for any assumptions regarding causality. Both longitudinal and experimental research will be necessary to shed more light on this important issue.

Finally, as Tempest et al (2008: 251) correctly argue, “companies need to develop an understanding of the broader social contexts of older people in terms of both their varying immediate household compositions, and their intergenerational relationships” in order to really grasp the silver market of today and the future. Further research clearly has to take these changing social contexts into consideration as well, especially in countries with rapidly changing demographics like Japan. Including more variables measuring the social, cultural and individual context will also help to verify up to which extent self-perceived age is really universal or if some of these variables are confounding our results.

Further analyses include testing for stability of regression results and getting a better understanding of antecedents but also of consequences of self-perceived age. Further data analysis using structural equation modeling and partial least square are suggested to shed more light on alternative structural relationships with additional variables and measurement options available in the survey data.

Managerial Implications

Our main results indicate that for elderly consumers in Japan, self-perceived age was strongly and inversely influenced by the need for fun and excitement as well as health level, time spent away from home and sociability. As such, older people, feeling a strong need for fun and excitement and feeling healthy, will tend to perceive themselves much younger than their chronological age. These consumers will tend to avoid products associated with old-fashioned design or features that might make them appear old or reveal health problems (e.g. hearing aids). In Japan, the highly successful easy-to-use “Raku-Raku Phone” is a case in point as the mobile phone company focuses on usability, while at the same time making sure to deliver also in terms of stylishness and functionality. Given its many features and functions, as well as a variety of colors to choose from, it also appeals to the need for fun and excitement (Japanese mobile phones are widely used as entertainment gadgets as well). In relation to lower self-perceived age, the need for sociability and time away from home suggest opportunities for products and services offering elderly consumers in Japan a combination of fun, excitement and sociable meetings. The Nintendo’s brain training and remote motion sensor sports games (that can be practiced in group of friends or family) are appealing to consumers who want to either appear younger than their biological age or maintain their level of physically healthy self-perceived age.

Given that Van Auken and Barry (2009) found ideal age to match self-perceived age, both coping strategies may amount to the same thing. In advertising, the use of “self-perceived-age congruent” models or spokespersons should prove fertile as a consumer’s self-perceived age interacts with the perceived age of the model or spokesperson seen in an ad, and can subsequently influence the response to the advertising message (Chang 2008; Van Auken and Barry 2009). This may also explain why older people are often underrepresented in advertising, a

fact that also holds true for TV commercials in Japan (Prieler et al. 2009). Nintendo's products may also appeal to those who value fun and enjoyment in life and thus advertising should not only take self-perceived age into account when selecting models for ads but also heed to values important to older consumers when planning ads and copies. Companies following our segmentation approach should become able to better cater to the individual needs of older consumers with innovative products and services, thus increasing business opportunities while at the same time contributing to the well-being of the fastest growing age group in the world.

Areas like Sugamo in Tokyo, where our data were collected, can be used as a retail laboratory to learn how to better serve elderly consumers elsewhere. In addition, foreign companies can also benefit from the opportunity to test new products and services targeting older Japanese in advance of leveraging these ideas in other graying markets worldwide.

Finally, our findings can also be helpful in trying to change the traditional way of viewing the silver market as a monolith and to open the path for breaking it into different segments. Providing such a clearer picture of the different target groups and their life situation yields important insights for new product development, marketing and promotion.

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