



Culture Does Matter for Female Elders' Responses to Age Segmentation Cue (ASC) of Ads

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Abstract

This comparative study examines the influence of the elderly's perception of subject age and self-concept on their responsiveness to age segmentation cues. It also investigates a possible difference between American and Korean elders, based on labeling theory and social and cultural differences, by using a quasi-experimental design with two print advertisements, one with ASCs and the other without ASCs. The findings show the commonalities between the American and Korean female elderly: the perception of self-concept which is affected by educational level and religion; and self-concept which influences response to ASCs. The differences in their responses between two countries are identified in the selection of two advertisements concerning demographics: self-concept of the Korean female elderly less positive than that of the American; the responses to ASCs influenced by chronological age, education level, income, and religion. Overall, the senior members respond less positive to ASCs and their perception of subjective and self-concept influences responsiveness to ASCs.

Keywords: Age segment cue; Products for the elderly; Silver market; Elders' chronological age; Elders' subjective age; Cross-cultural study of the female elderly; Korean elders vs. American elders

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Introduction

The elderly consumers have been overlooked and advertisements targeting them are comparatively fewer in mainstream media than those for main target consumers. As the number of senior citizens has dramatically increased, marketers and advertisers have paid more attention to the potential of grey markets. In particular, older consumers' subjective perceptions of age have been attractive to practitioners of marketing and advertising. Many researchers have consistently indicated that the elderly tend to deny chronological age (physical age) and gauge subjective age with discrepancies between inner age and age of birth [1-4].

The term subjective perceived age implies that consumers eventually tend to seek congruity between a private self-image as a senior citizen and a more "youthful" social self-image, given the motivation to resolve discrepant selves [5]. Barak and Gould (1985) applied self-concept for the elderly's perception of age and indicated that "self-concept constructs tend to be concerned with subjectively perceived reality and not with objectively measured reality as in the instance of chronological age" (p. 53). Brubaker

and Powers [6] showed that the process of accepting membership in the category old indicated that there is considerable variation in the age at which individuals are willing to label themselves as old. These findings provide evidence that differences exist among the elderly in the relationship between their chronological age and their subjective interpretation of that age.

The main concern of the present study is whether the elderly's perception of subject age and self-concept influences their responsiveness to advertisements with age segmentation cues, the most common means through which marketers inform the elderly of product offerings that possess age-related benefits. Age segmentation cue (ASC) refers to the contextual elements of promotional materials that reference an older age, such as elderly models, "senior citizen" labels, or explicit age specifications, such as "over 50" [7].

Based on labeling theory, the study finds that the elders' perception of age influences on the elderly consumers' responses to age segmentation cues and that a significant difference(s) between American and Korean elders in subject age and self-concept influence rejection or acceptance of ASCs, by employing

a survey embedded in two print advertisements with ASC and without ASC. The comparative study between American and Korean elderly will contribute to a better understanding of social and cultural influences on the elderly's socio-psychological aspects.

Literature Review

A theoretical foundation of the study is labeling theory, which is based on the framework of the self-concept theory. Researchers' concerns with self-concept in the fields of advertising and marketing are primarily based on the assumption that a product is consumed not only by itself but also by its image. The consumption of images associated with the product reflects social, psychological, and cultural values as well as the socioeconomic status (SES) of consumers. In this vein, labeling theory has contributed to explicating the elderly consumers' tendency to resist the presentation or offering with clues of age segmentation in advertisements and promotion materials. The literature review of the present study includes overviews of labeling theory, previous studies which the labeling concept has been applied to, and possible cultural differences in the elderly of American and Korean societies.

Labeling theory

Labeling theory conceptions and applications premise social reaction as the force responsible for defining acts and actors as deviant by applying Goffman's [8] notion of stigma which originated in social psychological studies of deviance [9]. According to Goffman [8], stigma implies an attribute that deviates from expectations, is discrediting, and results in disgrace or shame. Labeling results from a variety of deviant statuses, including "physical stigma" or deviations from physical norms; "tribal stigmas" of race, nation, religion, and social status, and "blemishes of individual character" resulting from violations of cultural social norms. In other words, being labeled has implications of negative values in that, for example, patients as "mentally ill" would negatively influence the patient's social interaction by devaluing him/herself and discriminating from others [10].

Labeling enforces stereotypical perspectives that surround the label. These stereotypes are not positive, accurate, or inconsistent and place limitations both on the people in the group and the people with whom the group interact. In most societies across culture, negative stereotypes are far more prevalent. McKay [11] identifies both the positive and negative stereotypes applied to the Social. The Elderly's Subjective Age and Self-Concept 4 U.S. elderly. Positive stereotypes include "the Golden Age," "the John Wayne conservative," and "dependable" which projects an image of the elderly prospering happily, being wealthy, active and content [11,12]. Whereas, some stereotypical images people hold about the senior members such as being "recluse," "old-fashioned," "religious," and "despondent," are associated with negative implications. The author argues that the American elderly, despite their personal state of mind and abilities, tend to play into these negative stereotypes when interacting with younger people, because that is what is expected of them [11].

The social and psychological tendency of the elderly has been applied to consumers' motivations which are combined with self-concept and thereby lead to accept or resist the purchase of labeled products associated with senior users' images in the sense that undesirable images denote a threat to self-concept [7,13-15]. The studies assumed that consumers have consistent motives to reject unfavorable labels that are considered incongruent with their self-image. Furthermore, personal acceptance of negative labels might occur through a private and public self-labeling process [7].

The private self-labeling process focuses on individuals labeling themselves as deviants or violators against actual or imagined social or cultural norms, even though others do not consider the violation when the emphasis of public self-labeling process is on its impact on interactions of labelees. In this course of self-labeling, labeling occurs in the violations expectations and cultural agreement, which are shared within a society. In other words, when viewed as denotation of the rule-breaking behaviors, attachment of stigmatized labels can be refused by motivations to conform to social and cultural norms and pressure to conflict with self-esteem. Thus, being aged tends to be thought of as a labeling stigma, which implies physical and financial inability in society. Thus, senior members' subjective age need to be understood in the context of social and cultural traits. For example, the elderly tend to reinforce unfavorable or favorable images of themselves depending on different cultural values as well as perspectives of individual welfare.

The reasons of the elderly's resistance to labeling are found in self-esteem motivation and consistency motivation [16]. The higher self-esteem motivation might lead to stronger resistance to negative labeling, which threatens self-concept of a labelee, while the consistency motivation is in common as noted in Festinger's cognitive balance, assuming that the existence of dissonance generates psychological tension and the discomfort resulting from cognitive dissonance results in internal pressure to eliminate or reduce the psychological inconsistency [17]. As a result, an individual tends to actively avoid situations and information which would likely cause inconsonance in their mind. The stereotypes about old age are reflected in advertisements images of older adults are inadequately represented and younger models are preferred even for products targeting seniors [18].

Elder's subjective age

Another theoretical base of the study is the elderly's self-concept depending on a discrepancy The Elderly's Subjective Age and Self-Concept 6 between chronological age perception (CAP) and perceived age perception (PAP) of aging people. As Barnes-Farrell and [19] noted, perceived age perception (PAP) which refers to the extent to which people think of themselves only as old as they feel is different regardless of their chronological age perception (CAP). In other words, the self-concept of elderly people varies depending on health condition, financial abilities, past experiences, and so forth. The self-concept has an effect on elderly consumers' attitudes of advertisements, in particular, for aging products. Chronological age is no longer a sufficient factor to understand senior consumers' attitudes and behaviors although biological age provides an understanding of metabolic

changes such as decreasing visual and aural acuity or diminished mobility in that the health declines occur at different rates in different people. Thus, psychological age related to a self-concept sheds light on aging related positive characteristics of themselves and stereotypical traits about other senior members.

One of approaches to the measurement of personal age concepts which is considered useful for identifying discrepancies between subjective age and chronological age is a direct numerical expression of how old an individual "feels." Studies comparing felt age and other measures of age self-concepts with chronological age generally report that individuals tend to perceive themselves to be younger than their chronological ages [1]. Furthermore, the process of accepting membership into the category "old" indicates that there is considerable variation in the age at which individuals are willing to label themselves as old [6]. These findings note that differences exist among the elderly in the relationship between their chronological age and their subjective interpretation of that age. In other words, advertisement images or messages suggestive of being aged could lead the senior who show a larger discrepancy between their physical and perceived age to unfavorable attitudes toward the advertisement.

Age segmentation cue (ASC)

Age segmentation still is a widespread practice to offer promotions, services, or products to the mature market as a whole. Age segmentation cue (ASC) has attracted researchers to explore how the elders' perception of age impacts acceptance and resistance to clues presented in advertisements and promotion materials, thereby contributing to the consumption of the product. ASC indicates the contextual elements that refer to the product and service for an older age, for example, by employing elderly models, labeling "for seniors" or "over 50." The cues are utilized as a common means through which marketers inform the elderly product offerings that possess age-related benefits.

On the other hand, some studies argued the clue could be suggestive of stereotypical images, especially unfavorable traits, about the senior. It predisposes elderly consumers to resistance to being identified as a separate market on the basis of age [20,21], by responding less favorably to products with implications of the potential users' older age in ads [22]. The ASC indicates, for example, that the use of senior discounts infers being aged, which is associated with being physically less attractive, financially limited, and second-class citizens who should not be entitled to the same service. In particular, in terms of the senior citizen discount, the most commonplace offering based on age segmentations, studies show ambivalent attitudes of elderly consumers; elderly consumers tend to prefer retailers that offer the discount [23,24] whereas their low participation in senior citizen discount promotions is considered one of reliable indicators that older consumers are inclined to resist accepting references about themselves on the basis of age. Some studies suggest that ASC does not threaten the self-image of the elderly consumers, inhibit their responsiveness to a discount offer, and ultimately won't influence their purchase decisions [25].

These responses of senior consumers to age segment oriented discounts are strongly influenced by their perception of age

related labels. Tepper [7] applies labeling theory in order to better understand the underlying processes, stating "elderly consumers may reject senior-citizen-type discounts to avoid self-devaluation that might occur with personal acceptance of the status (resisting private self-labeling) and/or to avoid stigmatization from others who become aware of the status (resisting social labeling)" (p. 504). The study examined the effect of an age segmentation cue using the label 'senior citizens' on the assumption that labels referring to a relatively higher age are negative in nature and therefore restrain responses to age oriented approaches. According to Tepper's study [7], in the youngest category, aged 50-54, lower discount usage intention was reported as a consequence of greater self-devaluation and greater perceived stigma. For the middle categories, aged 55-59 and 60-64, presence of age segmentation cues resulted in higher self-devaluation and greater perceived stigma, but not in lower discount usage intention. For the group aged 65 and over, no such effects were found. In general, self-devaluation increases with higher social visibility, especially for the cognitively younger group. The study suggested that the disagreement between discount usage behavior and self-perceptions is reduced by the elderly consumers' acceptance of the senior citizen status as a new and proud identity.

Kang [26] applied the labeling theory to the Korean elderly's perception of subjective age to explore correlation in discrepancies between chronological age (CA) and self-perceived age (SPA) and their response to advertisements with ASC. The findings of the study showed the greater the discrepancy between CA and SPA increases, the more negative the response of subjects to advertisement with ASC as well as the more negative the stereotype of the elderly and the more the degree of aging fear. The study implies that the elderly subjects did not accept the advertisement with ASC because it evoked negative connotation related to being aging. Whereas, Dunne and Turley's research [27] applied the labeling theory to the responsiveness towards banking schemes explicitly aimed at senior citizens, and one of their conclusions is that "mature adults did not appear to be concerned about the negative social consequences of their consumption behavior" (p. 33). These controversial findings have led the researchers to study further the effect of ASCs on consumers' attitudes and behaviors focusing on possible differences in cultural and social values associated the status of senior members.

Subjective age and self-concept in western and Asian elders

Whether the elderly might perceive aging as stigmatized status or not needs social and cultural considerations as well as individuals' characteristics and demographics, which influence different self-concept depending on age, gender, levels of education and economic status, religion, and so forth. Furthermore, potential differences in elderly's perception of being aged could be more significant so-called in the comparative study of "Western versus Eastern perspectives," in that their elderly's perception of aging are based on the two differing traditional cultural values and characteristics of the current social changes.

As discussed in the Labeling theory, the term aging may possess value-charged connotations in the both societies and lead to greater efforts to remain ageless as reflected by heavy use of cosmetics and cosmetic surgery [2,28]. Most Western countries being sensitive to age and youth-oriented are considered to hold more unfavorable views of aging and elderly adults. Subjective age research consistently reports patterns of age denial among adult Americans. This denial, gauged as discrepancies between inner ages and age of birth, increases with the process of chronological aging. The findings of Barak and others [2] noted that the desire to be young and youthful seems common in both Western and Asian societies, identifying similar patterns of age identification in three Asian countries, India, China, and Korea. Both cognitive and desired age, shown in the participants of the three countries, was younger than chronological age. Also, Asian women's perceptions of their own ages did not differ from the way men viewed themselves in the same societies.

On the other hand, most studies point out to the Eastern culture rooted in Confucianism and collectivism, the term aging implicates a traditional respect for ancestor and senior members a cardinal virtue for family solidarity and filial piety [29,30]. The traditional values of Eastern societies are considered to promote positive perceptions of aging and high esteem for senior members [30].

However, some studies put an emphasis on other values such as socioeconomic values and psychological characteristics of older adults within a society, arguing that dichotomous cultural classification, western vs. eastern, is not sufficient to explain different perspectives of aging and elderly adults [28]. Elderly people are viewed as a lower priority in most Asian countries (Martin, 1988), and policymakers in Asia countries overlooked the importance of programs for the senior members [2]. Compared with the Western society, which has been industrialized and modernized for a long time, the Korean society has undergone rapid economic growth and social change only since 1960s. The radical shift of social values in the society has rendered loss in traditional value and family structure leading to devaluation of the elderly's social status and their role in family and society [31]. The recent medical technology has contributed to extending the life expectancy of the Korean elders and thereby to increasing the senior population from 3% in 1971 to 38% of the total population in 2008 [32]. Nevertheless, the Korean policy makers of public welfare have not recognized the necessity of social insurance and retire programs. Emphasis on traditional values has contributed to an undeveloped social insurance system and social security retirement program for the Korean elderly because Confucianism underscores children's duty to respect and support their old parents. Thus, public welfare for the elderly has depended on individual rather than national supports. A recent report of OECD revealed that Korea is ranked first in relative poverty of elders out of OECD countries [33]. The alarming rate of suicide among S. Korean people 65 or older also indicates that Korean younger generations do no longer support their parents, and the senior members have been not taken care of and lived out their final years deprived [31]. Kang's [26] study pointed out that for the Korean elders, aging denotes negative labeling such as useless labors, physical weakness, dependence on children, and so on. Jang, Poon, Kim, and Shin [34] found that SES and health problems

are determinants of self-perception of aging and health. The Korean elderly, with lower levels of education and economic status and more serious health problems, showed more negative self-perception of aging. Also, a recent survey showed that 89% of senior respondents refused to be called "the senior members" and their desire to look younger has led to an increasing number of plastic surgeries for seniors [32].

Research Questions

Based on literature review, research concerns were narrowed down to the American and Korean elderly's self-perception of age, its impact on their responses to advertisements embedded in ASC, and possible differences in the two countries' elders according to their educational levels, income, and religion.

In particular, the study considered religion as one of the key factors to self-concept of the elderly in the sense that religious beliefs and practices moderate the stress and concerns resulting from aging [35]. For example, Buddhists believe that a living being goes through the stages of birth, youth, adulthood, and old age before death, which leads to embracing aging as a process of nature. Thus, religious beliefs contribute to reducing stress of aging and fear of death, and religious activities help the elderly to alleviate their sense of isolation and enhance self-esteem [36].

RQ1: Do the American female elderly's subjective age and self-concept differ according to their age, the level of education and income, and religion? Is there a significant relationship between the American female elderly's response to ASC age and their subjective age and self-concept?

H1.1: The American female subjects with a higher level of education will perceive themselves younger and their aging more positive.

H1.2: The American female subjects with a higher level of economic status will perceive themselves younger and their aging more positive.

H1.3: There is a significant difference in the extent of subject age and self concept between the American female subjects with religion and those without religion.

H1.4: The American female subjects who select an advertisement without ASCs will feel themselves significantly younger than those who select an advertisement with ASCs.

H1.5: The American female elderly who select an advertisement with ASCs will feel their aging as significantly positive in comparison to those who select an advertisement without ASCs.

RQ2: Do the Korean female elderly's subjective age and self-concept differ according to their age, the level of education and income, and religion? Is there a significant relationship between the Korean female elderly's response to ASC age and their subjective age and self-concept?

H2.1: The Korean female subjects with a higher level of education will perceive themselves younger and their aging more positive.

H2.2: The Korean female subjects with a higher level of economic status will perceive themselves younger and their aging more positive.

H2.3: There is a significant difference in the extent of subject age and self concept between the Korean female subjects with religion and those without religion.

H2.4: The Korean female subjects who select an advertisement without ASCs will feel themselves significantly younger than those who select an advertisement with ASCs.

H2.5: The Korean female elderly who select an advertisement with ASCs will feel their aging significantly positive in comparison to those who select an advertisement without ASCs.

RQ 3: Are there significant differences in the extent of subjective age and self-concept and the response to ASCs between the American and Korean female elderly?

RQ 4: Will the extent of subject age and self-concept predict the female elderly's response to ASCs?

H3: Perceived positive response to ASCs is positively predicted by the greater level of subject age and self-concept.

Research Methods

To explore how the American and Korean elderly people respond to advertisements embedded with ASCs, the study produced two printed advertisements of "Noble," a product for preventing irritation of urine. Two advertisements have the same head copy, 'Noble helps your sound sleep.' One advertisement (AD1) has three ASCs—an elderly female model and two references, "over 50" and "discount coupon for senior citizen inside," to imply a product for the female senior—and the other advertisement (AD2) employs a young female model and does not include any ASCs.

At first, the female elderly was asked to select one of two print advertisements after information of the product was offered and to complete the questionnaire which takes 20-25 minutes. The subjects who take the trouble of independently completing the survey were offered the researchers' help.

The study employed a quasi-experimental research method with convenient sampling. The researchers contacted coordinators or moderators of elderly institutes such as Sunday schools and senior social groups. The researchers in America collected data from three places including Sunday schools and senior sporting groups located in Louisiana, and those in South Korea collected data from six places, including Sunday schools and civic senior schools located in Seoul. This was done during October and November, 2008. The data were interpreted using t-test, ANOVA, and linear regression.

Questionnaire

The questionnaire consisted of three parts: (1) response to ASCs; (2) subject age and self-concept; and (3) demographics (age, income, level of education, and religion). The questionnaire was translated in Korean for the Korean elderly. It was double-checked by another Korean researcher.

Conceptual and operational definitions of each variable are provided in Table 1.

Response to ASCs

To examine a reliability of two experimental advertisements, three items were asked of the subjects' general attitudes toward ASCs, consisting of interest in senior products, willingness of using a discount coupon, preference to younger models in advertisements, and references to ASCs in advertisements. The first item was reverse coded to make the high score mean a positive attitude.

Subject age

Chronological Age (CA) is a general concept referring to the objective age according to the calendar year. Self-Perceived Age (SPA) is a relative subjective age which an individual perceives regardless of actual age. The study used six items to measure the subject age with a five-point scale ranging from "much younger (1)" to "much older (5)" as seen in Table 1.

Montepare and Lachaman, 1989

Scores of each degree were recoded to indicate that the lower score means the subjects feel younger than their chronological age. The low score implies a subject's negative perception of aging [37].

Self-concept of aging

Self-concept of aging is measured with the five items adapted from the attitude toward own aging in the Philadelphia Geriatric Center Morale Scale [38]. The study used five items with a five-point scale ranging from "strongly agree (1)" to "strongly disagree (5)" as seen in Table 1. Scores of each degree were recoded to associate high scores with more positive self-concept.

Findings

A total of 72 seniors participated in the survey, consisting of 32 American female and 40 Korean female elders. Fifty nine percent of American elders are over 61 year old and 56% of Korean elders are 51-60 years old in Table 2. Fifty-six percent of the American subjects have less than high school or high school graduate level of education while 78% of the Korean subjects do. In terms of monthly income, 31% of the American subjects and 28% of the Korean subjects spend monthly over \$ 400, and 44% of the Korean subjects spend less than \$100. Eighty-seven percent of the American subjects have a religion and 72% of the Korean subjects have a religion (Table 2).

Twenty three American female subjects (72%) selected AD1 with ASCs while 16 Korean female subjects (40%) selected AD2 without ASCs. At first, to examine a reliability of two experimental advertisements, the subjects were asked questions about general attitudes related to ASCs and senior products. Three items used to examine the elderly's attitudes toward ASCs ($\alpha=0.671$).

As a result, there is a significant difference ($F=109.897$, $p<0.001$) in the extent of the American female subjects' attitudes toward ASCs between the subjects who select AD1 ($M=4.10$, $SD=0.98$) and those who select AD2 ($M=2.24$, $SD=1.01$). The Korean female elders also show a significant difference ($F=23.518$, $p<0.001$) in their attitudes of ASCs between AD1 ($M=3.38$, $SD=0.78$) and AD1

Table 1 Conceptual and operational definitions of variables.

Variable	Conceptual Definitions	Operational Definitions
Response to ASCs	Degree to which a subject responds to ASCs	Following three statements on a 5-point scale (1: strongly agree; 2: agree; 3: neutral; 4: disagree; and 5: strongly disagree) I am willing to use discount coupons of the product. (-) I prefer younger models to elderly models in the advertisements of senior products. In usual, I tend to feel annoyed by any reference used in advertisements indicating the product for senior citizens.
Subject age	Degree to which a subject perceives herself younger or older compared with chronological age	Following five statements on a 5-point scale (1: much younger; 2: younger; 3: no younger or older; 4: older; 5: much older) I feel myself _____ than my age. I think my appearance looks _____ than my age. I think my interests are similar as _____ people's interests. If I had an opportunity to choose my age, I will choose _____ age. My friends think that I'm _____ than my age. When seeing me for the first time, people think that I'm _____ than my age.
Self-concept	Degree to which a subject perceives being aged	Following three statements on a 5-point scale (1: strongly agree; 2: agree; 3: neutral; 4: disagree; 5: strongly disagree) Things keep getting worse as I get older. (-) I have as much pep as I had last year. I feel that as I get older I am less useful. (-) As I get older, things are better than I thought. I am as happy now as I was when I was younger

Table 2 Descriptive Statistics on the American and Korean female subjects.

Monthly Income	American Subjects	Korean Subjects
Less than \$ 100	10 (31%)	18 (44%)
\$ 100-400	12 (38%)	11 (28%)
\$ 401-700	9 (28%)	11 (28%)
\$ 701-1,000	1 (3%)	0 (0%)
	32 (100%)	40 (100%)
Religion		
Yes	27 (87%)	29 (72%)
No	5 (16%)	11 (28%)
	32 (100%)	40 (100%)
Ad with ASCs	23 (72%)	16 (40%)
Ad without ASCs	9 (28%)	24 (60%)
	32 (100%)	40 (100%)
Response to ASCs	M=3.52 (SD=1.01)	M=2.82 (SD=0.71)
Subject Age	M=3.18 (SD=0.54)	M=2.13 (SD=0.65)
Self-Concept	M=3.36 (SD=0.84)	M=2.67 (SD=0.90)

(M=2.45, SD=0.91). This finding means that the subjects with positive attitudes of ASCs select the experimental advertisement with ASCs.

RQ1. Differences in the American female elderly's subjective age and self-concept, according to age, the level of education and income, and religion.

The results show that there is a significant difference in subject age (F=5.501, p<0.01), according to age, indicating that the younger subjects at the age of 51-55 years old perceive themselves younger than the older elders while no significant difference is not found in their self- concept. Six items were used to examine the elderly's subjective age (α=0. 884) and five items were used to examine the elderly's self-concept of aging (α=0. 838). Significant differences in self-concept are found in education level (F=3.315, p<0.05) and religion (F=2.427, p<0.01) as seen in Table 3. In other words, the American subjects with the higher level of education and with religion present more positive self-concept. However, significant differences in subject age are not found. Thus, the first hypothesis, subjects with the higher level of education perceive their aging more positive, is in part supported because there is no significant difference in their perception of subject age. Also, the

Table 3 Differences in the American female subjects' subject age and self concept.

	American Subjects			
	Subject Age		Self Concept	
	M (SD)	F	M (SD)	F
Age		5.501**		2.44
51-55 years old	2.51 (0.54)		3.21 (1.63)	
56-60 years old	3.15 (0.42)		2.70 (0.62)	
61-65 years old	3.45 (0.43)		3.77 (0.39)	
66 or older	3.53 (0.39)		3.68 (0.82)	
Education Levels		2.015		3.315*
Less than high school	2.85 (0.43)		2.70 (0.95)	
High school graduate	2.88 (0.67)		3.10 (0.89)	
Associate/ Bachelor degree	3.28 (0.44)		3.40 (0.49)	
Master's degree	3.93 (0.00)		4.24 (0.00)	
Monthly Income		2.125		2.857
Less than \$ 100	2.96 (0.46)		2.88 (0.89)	
\$ 100-400	3.34 (0.41)		3.08 (0.85)	
\$ 401-700	3.11 (0.67)		3.73 (0.45)	
\$ 701-1,000	3.23 (0.00)		3.75 (0.00)	
Religion		1.581		2.427**
Yes	3.24 (0.49)		3.94 (0.82)	
No	3.12 (0.69)		2.78 (0.52)	

Note. Entries are mean scores; Standard deviation is in parentheses. *p<0.05; **p<0.01; *p<0.001.

second hypothesis about possible difference in monthly income is not supported.

In terms of religion (H1.3), a significant difference in self concept is found but is not found in subject age. The American subjects who have religious belief perceive their aging positive than those who have no religion.

The study examined possible differences in responses to two experimental advertisements according to age, education, monthly income and religion as seen in Table 4. The result shows significant differences in four variables, age (χ²=21.007, p<0.001), educational levels (χ²=12.213, p<0.01), monthly income (χ²=9.101, p<0.05), and religion (χ²=4.394, p<0.05). In other words, subjects

who are relatively older, have a greater level of education and monthly income, and religious belief select the advertisement with ASCs. The findings implies that age, levels of education and income, religion of the American subjects influence their acceptance of ASCs.

For response to experimental advertisements (H1.4 and H1.5), the subjects who select the second advertisement without ASC perceive their aging significantly more negative than those who select the first advertisement with ASC (F=5.616, p<0.05) in Table 5. The result implies that the subjects' self-concept influence their acceptance of products embedded with ASCs, but their perception of subject age does not influence.

RQ2. Differences in the Korean female elderly's subjective age and self concept according to age, the level of education and income, and religion.

Table 4 Difference in the American female subjects' response to experimental ads.

	Responses to Experimental Ads			Chi-square c ²
		AD1 ¹	AD2 ²	
Age				21.007***
50-55		4(44%)	5 (56%)	
56-60		2.(50%)	2 (50%)	
61-65		8 (88%)	1 (12%)	
66 or Older		9(90%)	1 (10%)	
Education				12.213**
less than high school	3	3(33%)	6 (67%)	
high school	6	6(66%)	3 (37%)	
associate/bachelor	13	13(100%)	0 (0%)	
master's degree		1 (100%)	0 (0%)	
Income				9.101*
less than\$100	3	3(30%)	7 (10%)	
\$100-400		11 (92%)	1 (8%)	
\$401-700	8	8(89%)	1 (11%)	
\$701-1,000		1 (100%)	0 (0%)	
Religion				4.394*
Yes		22 (81%)	5 (19%)	
No	1	-20%	4 (80%)	
Total		23 (72%)	9 (28%)	

Note: Entries are the number of subjects for each item battery; Percent is in parentheses. AD¹ has ASCs and AD² does not have ASCs *p<0.05; **p<0.01; ***p<0.001.

Table 5 Differences in the American subjects' responses to print experimental advertisements.

		American Subjects			
		Subject Age		Self Concept	
		M (SD)	F	M (SD)	F
			2.829		
AD 1	(With ASCs)	3.12 (0.37)		3.63 (0.63)	5.616*
AD 2	(Without ASCs)	3.24 (0.39)		2.71 (0.39)	

*p<0.05; **p<0.01; ***p<0.001.

The Korean subjects' perceptions of subject age and self-concept significantly differ in relation to their age, level of education and income, and religion. The results show, in terms of age, that there are significant differences in subject age (F=4.992, p<0.01) and self concept (F=8.270, p<0.001) as seen in Table 6. This means that the younger elders perceive themselves younger as well as their aging more negative than the older elders.

Concerning the Korean subjects' educational levels (H2.1), significant differences are found both in subject age (F=4.568, p<0.05) and self-concept (F=8.043, p<0.01) in Table 6. This implies that the Korean elderly subjects with the higher level of education feel themselves younger and their aging more positive. Also, the Korean subjects' subject age (F=10.745, p<0.01) and self-concept (F=18.534, p<0.001) significantly differ in the level of monthly income (H2.2), and in terms of religion (H2.3), a significant difference in self-concept (F=8.060, p<0.01) is found. Thus, the Korean elders who have religious belief also perceive their aging positive than those who have no religion.

The study examined possible differences in the Korean subjects' responses to two experimental advertisements according to age, the level of education and monthly income and religion. The result shows significant differences in four variables, age ($\chi^2=14.158$, p<0.01), educational levels ($\chi^2=10.531$, p<0.01), monthly income ($\chi^2=7.891$, p<0.05), and religion ($\chi^2=3.562$, p<0.05). In other words, the Korea subjects who are relatively older, have a greater level of education and monthly income, and religious belief select the advertisement with ASCs. The findings implies that the Korean subjects' age, level of education and income, and religion influence their acceptance of ASCs (Table 7).

For response to experimental advertisements (H2.4 and H2.5), the subjects who select the second advertisement without ASCs

Table 6 Differences in the Korean female subjects' subject age and self concept.

	Korean Subjects			
	Subject Age		Self Concept	
	M (SD)	F	M (SD)	F
Age		4.992**		8.270***
51-55 years old	1.69 (0.64)		2.07 (0.61)	
56-60 years old	2.25 (0.77)		2.13 (0.63)	
61-65 years old	1.97 (0.35)		3.00 (1.16)	
66 or older	2.61 (0.36)		3.48 (0.61)	
Education Levels		4.568*		8.043**
Less than high school	1.46 (0.56)		2.00 (0.70)	
High school graduate	2.09 (0.71)		2.93 (0.77)	
Associate/ Bachelor degree	2.84 (0.44)		3.08 (0.83)	
Monthly Income		10.745**		18.534***
Less than \$ 100	1.74 (0.52)		1.81 (0.40)	
\$ 100-400	2.22 (0.61)		2.80 (0.92)	
\$ 401-700	2.43 (0.38)		3.40 (0.55)	
Religion		2.581		8.060**
Yes	2.16 (0.49)		3.11 (0.77)	
No	2.10 (0.69)		2.23 (0.86)	

Note. Entries are mean scores; Standard deviation is in parentheses. *p<0.05; **p<0.01; ***p<0.001.

feel themselves significantly younger ($F=25.648$, $p<0.01$) as well as perceive their aging significantly negative ($F=134.878$, $p<0.01$) than those who select the first advertisement with ASCs in Table 8. The result implies that the level of subject age and self concept of the Korean subjects influence their acceptance of ASCs.

RQ3. Differences in the extent of subjective age and self-concept and the response to ASCs between the American and Korean female subjects.

The study assumes that subject age and self-concept of the American and Korean elderly differ and their responses to ASCs also differ, on the basis of cultural and social characteristics as noted in the literature review. Table 9 shows that three variables, subject age ($t=-8.007$, $p<0.001$), self-concept ($t=-3.672$, $p<0.001$), and responses to ASCs ($t=3.427$, $p<0.01$) are significantly different between two country elders. This implies that the Korean female subjects perceive themselves younger and their aging more negative than the American subjects.

RQ4. Predictors of Responses to ASCs. The ultimate research focus of this study is whether the elderly consumers' responses to ASCs will be predicted by subject age and self-concept. Based on labeling theory, the study assumes that there are the effect of subject age and self-concept on response to ASCs as a dependent variable. The index of response to ASCs, subject age and self-concept, which is calculated by the mean of two country female elders' responses to ASCs, subject age and self-concept, are used. The subjects' demographics (age, educational levels, and monthly income) are not considered in linear regression.

The findings in the linear regression show that subject age ($\beta=0.583$, $p<0.001$) and self-concept ($\beta=0.364$, $p<0.01$) are positively associated with the level of responses to ASCs as seen in Table 10. This implies that the whether subjects reject or accept ASCs is influenced by their subject age and self-concept.

Table 7 Difference in the Korean female subjects' responses to two experimental ads.

	AD1 ¹	Chi-square χ^2	
Age			14.158**
50-55	4 (14%)	14 (84%)	
56-60	2 (40%)	3(60%)	
61-65	3 (43%)	4 (57%)	
66 or Older	7 (70%)	3 (30%)	
Education			10.531**
Less than high school	3 (15%)	17 (85%)	
High school	8 (73%)	3 (27%)	
Associate/bachelor	5 (55%)	4 (45%)	
Income			7.891*
less than\$100	6 (33%)	12 (67%)	
\$100-400	5 (45%)	6 (54%)	
\$401-700	5 (45%)	6 (54%)	
Religion			3.562*
Yes	11 (38%)	18 (62%)	
No	5(45%)	6 (54%)	
Total	16 (40%)	24 (60%)	

Note: Entries are the number of subjects for each item battery; Percent is in parentheses. AD¹ has ASCs and AD² does not have ASCs.
* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table 8 Differences in the Korean subjects' responses to print experimental advertisements.

		Korean Subjects			
		Subject Age		Self Concept	
		M (SD)	F	M (SD)	F
			25.648*		134.878**
AD 1	(With ASCs)	2.43 (0.41)		3.24 (0.36)	
AD 2	(Without ASCs)	1.83 (0.53)		2.10 (0.41)	

* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table 9 Paired Differences in the American and Korean female subjects.

	American Subjects	Korean Subjects	t
	M (SD)	M (SD)	
Attitudes of ASCs	3.52 (1.01)	2.82 (0.71)	3.427**
Subject Age	3.18 (0.54)	2.13 (0.65)	-8.007***
Self-Concept	3.36 (0.84)	2.67(0.90)	-3.672***

* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table 10 Linear regression analysis of the American and Korean subjects' responses to ASCs.

	ASCs response		
	Beta	R ²	F
Dependent variable		0.748	42.967
Subject Age	0.364**		
Self-concept	0.583***		

Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Discussion

The study concerns whether the American and Korean elderly perceive subjective age and self-concept differently and whether their perception of subject age and self-concept predicts the responses to ASCs embedded in senior products. It was assumed that a greater perceived response to ASCs will be predicted by subjective age and self-concept. The study focuses on female elders in the sense that they tend to be more responsive to ASCs [7]. The main findings support earlier studies of ASC effect, indicating that subjective age and self concept have over all effects on the perceived responses to ASCs [6,7,39].

The results reveal commonalities and differences in the female elders of the two countries with regard to subjective age and self-concept. In terms of demographics, the elderly's educational level and religion influence the self-concept of the Korean and American female elders. In other words, the female elders with a higher level of education and religious belief present a more positive perception of aging while subjective age is not influenced by religion. The findings imply that religious belief might contribute to lessen stress and concerns which might arise from change in surroundings that the elderly face, such as lack of finances, illness, loneliness and depression (Mehta, 1997), and thereby support a positive self-concept of aging.

Whereas, the Korean female elders' perception of subjective age and self-concept is affected by other demographic variables, chronological age, and the levels of income. Their chronological age affects the perception of subject age and self-concept in the sense that the subjects in the youngest age group from 51 to 55 are more likely to see themselves younger than their actual age and view their aging less positively than the older age group. Compared with the American female elders, the findings reveal that labeling theory is more applicable to understanding the Korean elders than the American elders in that the Korean female elders on the whole present less positive perceptions of aging. This reflects their socio-psychological traits rather than individual tendency as discussed in the literature review part. To understand the Korean elders, the notion needs different social and cultural considerations from the American society. The results indicate that the Korean senior members have been faced with overwhelmingly rapid social change and have undergone the collapse of the traditional value rooted in Confucianism, while the Korean society has put its priority instead on economic growth [40,41]. Furthermore, the Korean female elders' negative perception of aging may be ascribed to a lack of public welfare policies for senior members.

Concerning the elders' response to ASCs, the results of the study are intriguing in that they show impact of subjective age and self-concept on rejection or acceptance of ASCs, although the product used in the experimental advertisements is associated with female seniors. There are differences in the female elders who selected one of two advertisements, in relation to their age, levels of education and income, and religion. In particular, the younger elders are less likely to select the advertisement with embedded senior labels, such as ASCs, while chronologically older subjects are not affected by the presence of senior labels

as noted in Tepper's study [7]. The education levels and religion, which influence the self-concept of the elderly, also affect their acceptance or rejection of senior labels.

The findings also show significant differences in the female elders between the two countries with regard to the responses to senior labels, subjective age, and self-concept. The Korean female elders presented a less positive response to ASCs than the American female elders, and those who are not affected by the presence of senior labels show a more positive perception of their subjective age and self-concept, whereas the American elders show a difference only in perception of self-concept [42,43].

The study reveals a few limitations that point to further study. First of all, a follow-up study of the elderly needs to consider their ability to read and complete questionnaires in research designs, which in this study resulted in a limited number of subjects. Thus, the researcher would benefit from combining a questionnaire and a personal interview with the elderly. The use of a visual medium in an experimental design might be more effective for the elderly rather than the print medium which the study used in an attempt to minimize technical incapacity in America and Korea. Finally, the study of male elders, which the study did not include, may be of use to study the elderly market.

The results may be useful to marketers seeking to appeal to multinational elderly consumers in that they need to consider potential differences in the international elders' socio-psychological traits. In order to attract international senior consumers' attention, such as responsiveness of the Korean female elderly's to ASCs. Also, another finding of linear regression notes the importance of the elders' psychological factors, such as subjective age and self-concept of aging in the elderly market.

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