

THE IMPACT OF COGNITIVE AGE ON MATERIALISM, STATUS CONSUMPTION AND LOYALTY PRONENESS ON THE INDIAN ELDERLY

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This research found Indian seniors with a younger cognitive age to be more materialistic and more motivated to consume for status, but not significantly more loyalty prone. In terms of moderating variables, self-confidence as a moderator did impact the relationship between cognitive age and materialism as well as for loyalty proneness, but not for status consumption. In terms of social involvement, it had a moderating impact between cognitive age and materialism, status consumption, and loyalty proneness. This suggests the importance of social relationships for Indian elderly and the impact they have on consumption variables.

INTRODUCTION

India is of interest to marketers due to its transition from socialism to a market economy in the early 1990s (the liberalization period that included industrial deregulation, privatization of state-owned enterprises, and reduced regulation) (CIA, 2014; Khare, 2011; Lysonski and Durvasula, 2013). This liberalization period resulted in radical changes in the Indian economy that allowed for faster economic growth, greater choice in consumer products, and the entry of multinational firms (Lysonski and Durvasula, 2013) along with increased income levels, a higher priority toward education, and rapid industrialization (Khare, 2011). With the rapid emergence of the Indian economy, including growth of discretionary income and luxury consumption, little is known about how consumers behave in this market (Schultz and Jain, 2015; Knorringa and Guarin, 2014; Sanyal, Datta, and Banerjee, 2014).

Given India's population of more than one billion, 17 percent of the world's population (Krishnaswamy et al., 2008), it should be a country of interest to marketers. India is seen as a collectivist emerging economy with a high power distance culture (Sharma, 2011). However, the Indian market is complex and multi-hued (Krishnaswamy et al., 2008), as

Indians are influenced by both western and local cultures, and not all Indians are similar in how they consume (Eng and Bogaert, 2010; Knorringa and Guarin, 2014; Sanyal, Datta and Banerjee, 2014; Schultz and Jain, 2015). One segment of the Indian market that has not been adequately addressed by market researchers is the senior market (Verma and Gupta, 2014). As this market segment is expected to grow by 20 percent by 2050, representing almost 300 million consumers (Ray, 2009), it is an attractive segment for marketers to target (Verma and Gupta, 2014).

While age can be an important segmentation variable, research suggests that perceived (cognitive) age may be a better predictor of consumer attitudes and behavior than chronological age (Barak and Schiffman, 1981). Cognitive age, or variants of it, has been examined in terms of American seniors (Barak and Schiffman, 1981; Sherman, Schiffman and Mathur, 2001), Japanese seniors (Van Auken, Barry and Bagozzi, 2006), Italian seniors (Amatulli, Guido and Natarajan, 2015), Turkish seniors (Dogan, 2015), and cross culturally (Barak, 2009; Barak, Guiot, Mathur, Zhang, and Lee, 2011; Kohlbacher, Riley and Hofmeister, 2011); however, it has not been examined with the Indian senior market. This research examines this gap in the literature to determine if cognitive age is a meaningful variable for better understanding Indian seniors. It contributes to the literature by addressing the need "to better understand the consumption

experiences of older adults in developing countries” which has grown in importance given the increase in the proportion of older consumers globally (Dogan, 2015, p. 564) and answers the call to further study cognitive age and its measurement cross-culturally (Barak, 2009; Barak et al., 2011).

This paper explores the impact of cognitive age on the level of materialism, status consumption, and loyalty proneness for Indian seniors, and determines if these relationships are moderated by self-confidence and social involvement. By gaining a richer picture of this international market, we aim to aid marketers in better reaching and serving this segment. Additionally, this paper makes a contribution by demonstrating whether the construct of cognitive age is useful to consider for the Indian market and how it relates to other consumer behavior variables. For this research, the terms senior and elderly are utilized as both are seen to describe the same population in the literature. For our sample, we looked at seniors sixty-five years or older. We first present our literature review discussing the Indian senior market, cognitive age, self-confidence, social involvement, materialism, status consumption, and loyalty research, along with our hypotheses. Then we discuss our methodology and sample. Finally, we offer our results and discussion.

LITERATURE REVIEW

The Indian Senior Market

With an increase in life expectancy, demographic aging has become an issue in India (Krishnaswamy et al., 2008). Per the 2011 Census, there were 103.8 million people in the 60+ years category, which was about 8 percent of the total population (Government of India, 2011; Krishnaswamy et al., 2008). The elderly population in India has several features including the majority are located in rural areas, there is an increase in older-old people (over 80 years old), a significant number (30 percent) are below the poverty line, and a majority of Indian seniors are female (Ota, 2013; Krishnaswamy et al., 2008).

Indian seniors have been culturally conditioned to believe that their children will look after

them when they become old (Ota, 2013), but the rural-urban migration of younger Indians and decline of traditional extended family systems (Krishnaswamy et al., 2008) has increased the likelihood that India’s elderly may be living alone (Biswas, 2009). This issue is especially critical for Indian elderly women (Ota, 2013; Krishnaswamy et al., 2008). As the extended Indian family structure changes to a more nuclear family structure (Krishnaswamy et al., 2008), there are significant financial and emotional concerns for those Indian seniors who do not live with family (Ota, 2013). While the literature has examined Indian seniors in terms of their growth as a segment (Ray, 2009), technological behaviors (Amma and Panicker, 2013), and importance of family (Biswas, 2009), it has not examined the impact of cognitive age on consumer behavior constructs.

Cognitive Age

Cognitive age captures different aspects of age than chronological age (Barak and Schiffman, 1981). Research consistently shows that seniors are more likely to have a younger cognitive age than their chronological age (Barak and Schiffman, 1981; Sherman, Schiffman and Mathur, 2001; Barak, 2009) and that those who report a younger cognitive age have better social support, income, education, and health (Gwinner and Stephens, 2001; Eastman and Iyer, 2005). Amatulli, Guido and Natarajan (2015), in looking at Italian seniors, suggests that cognitive age may be related to seniors’ approach to luxury consumption, where elderly luxury consumers who consume for external reasons feel younger than those who consume for more internal reasons. Dogan (2015), in looking at Turkish seniors, suggests that those seniors who feel cognitively younger relative to their chronological age (RFY) are more materialistic. However, neither of these studies looked at Indian seniors. This study contributes to the literature by examining if these relationships hold for Indian seniors and what moderates these relationships.

The research clearly demonstrates that for the U.S. market and abroad (Van Auken et al., 2006; Amatulli et al., 2015; Kohlbacher, Riley and Hofmeister, 2011), cognitive age is superior to chronological age for understanding and segmenting the elderly market, and

important in understanding seniors' consumer behavior (Barak and Schiffman, 1981; Wilkes, 1992; Mathur, Sherman and Schiffman, 1998; Sherman et al., 2001). While the cognitive age measure has been found to have universality (Barak, 2009; Barak et al., 2011), research suggests that how cognitive age impacts the elderly may vary by culture (Kohlbacher et al., 2011). Given the importance of the family and others in India (Krishnaswamy et al., 2008), cognitive age needs to be examined in terms of social involvement and self-confidence.

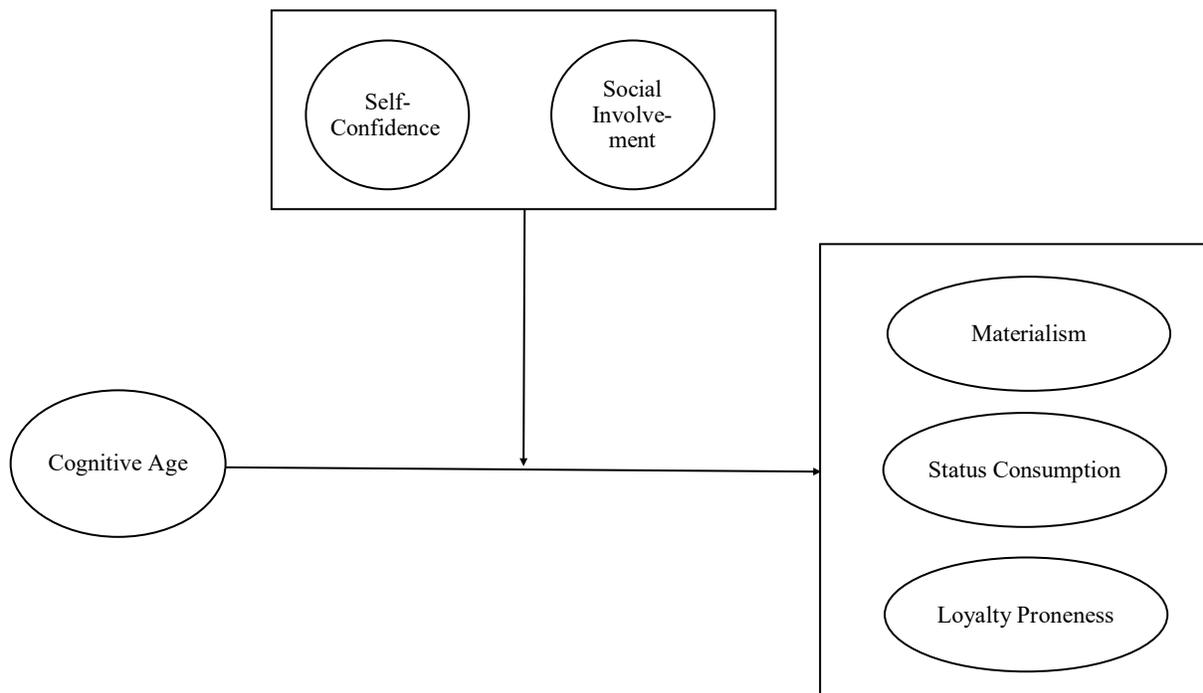
Self-Confidence and Social Involvement

The 'activity theory' of social aging suggests that seniors engage in compensatory activities to remain socially and psychologically fit (Smith and Moschis, 1984). Cognitively younger seniors have been found to exhibit higher self-confidence (Wilkes, 1992; Chowdhary, 2000) and greater social involvement (Wilkes, 1992; Chua, Cole and Leong, 1990), and to lead healthier and more active lives (Chua et al., 1990). Dogan (2015) finds that feeling younger is important for older consumers to feel more integrated with society.

What the literature has not examined is how the influence of cognitive age for Indian elderly is impacted by their level of self-confidence and social involvement.

Social identity theory (Tajfel and Turner, 1979) offers that group membership impacts a person's self-identity and is an important source of pride and self-esteem (McLeod, 2008). We suggest that social involvement and self-confidence are of particular importance to Indian elderly, given that India is a collectivist culture with high power distance (Sharma, 2011) and that the family is a vital group to Indian elderly (Ota, 2013; Krishnaswamy et al., 2008) as part of their social identity. What has not been examined in the literature is how self-confidence and social involvement impact the effect of cognitive age on other consumer behavior variables, such as materialism, status consumption, and loyalty, in the Indian culture for senior citizens. Given the importance of family and others in Indian culture and that group membership impacts how one feels about oneself, we feel it is important to examine the proposed relationships between these variables as conceptually illustrated in Figure 1.

**FIGURE 1:
Conceptual Model**



Materialism

Materialism has been examined as a personality trait (Belk, 1985) and as a value (Richins and Dawson, 1992; Richins, 1994). As a personality trait, materialism has been looked at in terms of possessiveness, lack of generosity, envy, and tangibility/preservation (Belk, 1985; Ger and Belk, 1990; Wong, 1997). As a set of values, materialism has been looked at in terms of acquisition centrality, happiness, and success (Richins and Dawson, 1992; Wong, 1997; Podoshen and Andrezjewski, 2012). Consumers who are more materialistic are seen as placing more importance on the external values of belonging and being well respected than those who are less materialistic (Clark and Micken 2002). However, Sirgy et al. (2012) proposed and developed a measure of materialism based on three dimensions (social recognition, happiness, and uniqueness) and suggest that using material possessions to make people feel unique promotes self-regard, an idea suggested by others in the literature (Belk, 1988; Tian, Bearden and Hunter, 2001; Shrum et al., 2013). Materialistic consumption may enhance well-being and self-identity (Ger and Belk, 1996; Ger and Belk, 1999; Kilbourne, Grunhagen and Foley, 2005; Karabati and Cemalcilar, 2010; Shrum et al., 2013) and increase certainty in one's life (Micken and Roberts, 1999).

Research suggests that materialistic values can occur in consumers across cultures and subcultures, but differences in the level of materialism can result from differences in economic and cultural influences across countries (Griffin, Babin and Christensen, 2004) and materialism may represent different things in different cultures (Handa and Khare, 2013). The literature suggests that there is not a consistent pattern in the levels of materialism between less- and more-affluent countries (Ger and Belk, 1996; Kilbourne et al., 2005). Cleveland, Laroche and Papadopoulos (2009, 2011) found that average materialism scores were equivalent in different countries, but their relationship with other variables and the objects selected to meet materialism needs varied by country.

Dogan (2015, p. 566) suggests that because older consumers are more interested in the

functional rather than the social benefits of products, "the materialism perception of older people can be thought to be different than the materialism perception of younger people" and that those seniors who feel younger consume more like younger consumers and are more materialistic. The literature also suggests that materialism may be related to social positioning and the drive to pursue a desirable image (Amatulli and Guido, 2012; Amatulli et al., 2015). As India is a more collectivist culture (Sanyal, Datta and Banerjee, 2014), being seen positively by others may serve a purpose in establishing social identity (Tajfel and Turner, 1979) for oneself and their group, particularly for seniors who see themselves as younger and thus may be more active consumers (Schiffman and Sherman, 1991). We suggest that cognitively younger seniors will be more materialistic than cognitively older seniors (Dogan, 2015). Additionally, the literature suggests that those driven for social purposes will be more materialistic as will those who see possessions as a source of identity (Amatulli and Guido, 2012; Amatulli et al., 2015). Given the importance of family and others in Indian culture, we offer that these relationships will hold for Indian seniors. Thus, we propose the following hypotheses:

- H₁: Indian elderly with an older cognitive age will have lower levels of materialism than those with a younger cognitive age.
- H_{1a}: The relationship between cognitive age and materialism is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{1b}: The relationship between cognitive age and materialism is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

Status Consumption

Status consumption is "the motivational process by which individuals strive to improve their social standing through the conspicuous consumption of consumer products that confer and symbolize status both for the individual and surrounding significant others" (Eastman, Goldsmith, and Flynn 1999, p. 41). Status comes from the evidence of wealth with

conspicuous consumption and the power that results from the associated consideration, respect, and envy of others (Veblen, 1899; Eastman et al., 1999) rather than from the value of the product itself (Mason, 2001; Husic and Cicic, 2009; Kuksov and Xie, 2012). Status consumers illustrate information about themselves to their reference groups (Husic and Cicic, 2009) by surrounding themselves with visible evidence of the higher rank they are claiming (Packard, 1959). Kastanakis and Balabanis (2014) suggest that status consumption can occur through either a bandwagon effect (for approval) or a snob effect (to stand out and be unique).

With respect to luxury consumption and culture, Souiden, M'Saad and Pons (2011) find evidence of conspicuous consumption in different cultural contexts (Canada and Tunisia). There has been some discussion of luxury marketing in India, though none of the research has focused on elderly marketing. In a study of non-senior Indians, Schultz and Jain (2015) suggest that luxury consumption can vary based on one's level of self, with the interdependent (outer) self being more motivated to consume externally (such as with conspicuous consumption) while the independent (inner) self is more motivated to consume internally (such as with individual luxury consumption for one's own enjoyment). This suggests that younger Indians may be motivated to consume for either external or internal reasons, similar to status versus style motivations (Amatuilli and Guido, 2012; Amatulli et al., 2015). Schultz and Jain (2013) suggest that Indian consumers specifically may be more motivated by the independent self, with an emphasis on pampering, indulging, and rewarding oneself. In a study of Indian households, Eng and Bogaert (2010) offer that both psychological and cultural factors impact Indians' luxury consumption and the need to signal wealth and status in their society. While Sanyal et al. (2014, p. 332) suggests that luxury consumption decisions are linked to one's self-concept and fulfill self-esteem needs and personal aspirations as well as social motivations, they specifically found that in the "Indian market environment, customers give more importance to subjective norms rather than their own attitudes while having intention to purchase luxury items."

In terms of seniors, Guiot (2001) suggests that those who feel younger than their chronological age spend more on luxury products. Thus, younger seniors are more motivated to consume for status (Amatulli et al., 2015) and this could be moderated by internal as well as external motivations (Schultz and Jain, 2015) in establishing one's social identity for either themselves and/or their group. This suggests that cognitively older seniors will be less motivated for status than cognitively younger seniors. Schultz and Jain (2013) suggest younger Indians focusing on the independent self will be focused on luxury, and we offer that this may hold for older seniors as well. Additionally, we think that those who are more socially involved will be more focused on what others think about luxury and status. Specifically, we propose the following hypotheses:

- H₂: Indian elderly with an older cognitive age will have lower levels of status consumption than those with a younger cognitive age.
- H_{2a}: The relationship between cognitive age and status consumption is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{2b}: The relationship between cognitive age and status consumption is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

Loyalty to the Brand/Product

Research has shown that seniors are more likely than younger consumers to remain brand loyal because it simplifies their buying decision (Stephens, 1991) and because of their early relationship with long-established brands (Lambert-Pandraud and Laurent, 2010). In India, seniors grew up with fewer brand choices, which also enhances brand loyalty.

With respect to cognitive age, research has shown that cognitively younger consumers are more open to trying new brands, switching brands, and seeking information, and are less cautious and more confident in their purchasing skills than consumers with older cognitive ages (Gwinner and Stephens, 2001; Szmigin and

Carrigan, 2001; Iyer, Reisenwitz and Eastman, 2008). In terms of luxury brands, Amatulli et al. (2015) suggests that senior consumers may be relatively more loyal to brand names. As Indian elderly have aged during India's liberalization period, with its increasing options of products and brands, their level of brand and product loyalty may have changed (Khare, 2011; Lysonski and Durvasula 2013). Thus, the literature offers that cognitively older seniors are more brand loyal, which we suggest will hold for Indian seniors. Furthermore, we suggest that for Indian seniors who are self-confident and socially involved, this link will be even stronger as they will not feel the need to look for new options for themselves. Thus, in looking at the relationship of cognitive age and brand loyalty for Indian seniors, we propose the following hypotheses:

- H₃: Indian elderly with an older cognitive age will have higher levels of loyalty to the product/brand than those with a younger cognitive age.
- H_{3a}: The relationship between cognitive age and loyalty to the product/brand is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{3b}: The relationship between cognitive age and loyalty to the product/brand is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

METHODOLOGY

Sample

Data were gathered from a sample of elderly consumers from the capital city of India. Following established field research data gathering procedures (e.g., Arnold and Reynolds, 2003; Bitner, Booms and Tetreault, 1990; Jones and Reynolds, 2006; Iyer and Muncy, 2016), the researchers recruited graduate students and trained them to administer a printed survey. The students were trained in proper data collection procedures and instructed to contact elderly consumers and to explain the nature of the research study, and to ask that s/he participate by completing a questionnaire form. These consumers were

promised complete confidentiality and those who agreed to participate in the study completed the questionnaire at that time and immediately returned it to the student helper. The elderly consumers were required to provide their name and contact information for verification of their participation in the study. Later that day, student helpers gave the completed questionnaires to the researchers. The entire data collection process lasted four weeks and a total of 705 questionnaires were completed. After all questionnaires had been gathered, the elderly consumers received a follow-up phone call from the researchers' secretary to thank them for participating in the study and to verify that they had actually completed the questionnaire themselves. Next, the researchers reviewed each questionnaire form to identify and delete those from any elderly consumer who did not meet the age parameter for inclusion in the study (e.g., less than 65 years of age were excluded). This procedure led to a final sample of 676 usable responses. The average respondent was a male (69%), aged 65 years, with an undergraduate degree or higher, and 47 percent of the respondents were still employed.

Construct Operationalization

All items were adapted from established scales (shown in Table 1). Cognitive age utilized the four indicants of feel, look, act and interests as developed by Barak and Schiffman (1981). The scale measured seven points of ten-year intervals ranging from 30's to 90's. All other items were measured on a seven point Likert scale from "1 = strongly disagree" to "7 = strongly agree," with a 4 being neutral.]

Measures and Purification

Following Anderson and Gerbing's (1988) process, we evaluated the measurement quality of the indicators. Every factor was submitted to a confirmatory factor analysis. All factor loadings were significant at the 0.01 level with all individual reliabilities above the required value of 0.4 (Bagozzi and Baumgartner, 1994), and the composite reliability exceeded the required value of 0.7 (Bagozzi and Yi, 1988; Bagozzi and Baumgartner, 1994). After examining the individual factors, a reduced set of items was subjected to a confirmatory factor

TABLE 1:
Measurement Items

Scale/Items *	Standardized Loading (t-values)	Source/adapted from
Cognitive Age		Barak and Schiffman (1981)
Most of the time...		
I feel like I'm in my...	0.85 (26.83)	
I look like I'm in my...	0.86 (27.09)	
My interests are those of a person in his/her...	0.86 (27.27)	
I do the things a person does in his/her...	0.76 (22.65)	
Materialism		Sirgy et. al. (2012)
I enjoy owning expensive things that make people think of me as unique and different.	0.85 (27.06)	
I usually buy expensive products and brands to make me feel unique and different.	0.95 (32.59)	
I usually buy expensive things that me look distinctive.	0.89 (29.45)	
Status Consumption		Eastman et al. (1999)
I would buy a product just because it has status.	0.85 (26.44)	
I am interested in new products with status.	0.88 (27.30)	
I would pay more for a product if it had status.	0.77 (22.66)	
Loyalty to the Product/Brand		Lichtenstein, Netemeyer and Burton (1990); Raju (1980)
I generally buy the same brands that I have always bought.	0.73 (21.30)	
Once I get used to a brand I hate to switch.	0.83 (25.71)	
If I like a brand, I rarely switch from it just to try something different.	0.89 (28.23)	
Even though certain products/services are available in a different number of brands,		
I always tend to buy the same brand.	0.80 (24.19)	

analysis using maximum likelihood estimation via LISREL 8.5 (shown in Table 2 with construct inter-correlations and information on the reliability and validity). While the chi-square value for the measurement model was significant (440.70 with 71 d.f, $p < 0.001$), other goodness-of-fit measures demonstrated a good overall fit of the model to the data (Baumgartner and Homburg, 1996): RMSEA = 0.08 (NNFI = 0.94, IFI = 0.95 and CFI = 0.95).

Construct Validity Assessment

We then examined the validity of the model. Each item illustrated acceptable loadings (path estimate > 0.50) that were significant (t-value > 2.0), indicating acceptable convergent validity. For discriminant validity, none of the confidence intervals of the phi matrix included 1.00 (Anderson and Gerbing, 1988). The amount of variance extracted for each construct was compared with the squared phi estimates (Fornell and Larcker, 1981) and the estimates for all constructs were greater than the squared phi estimate, demonstrating sufficient

discrimination between the variables. All factor loadings were significantly different from zero, shown by their consistently large t-values. The scale reliability was determined via the calculation of composite reliability scores. These ranged from 0.73 to 0.93, all above the cutoff of 0.6 (Bagozzi, Yi and Phillips, 1991). Thus, the measures had sufficient validity and reliability for testing the hypothesized model.

Structural Model Estimation

The hypotheses were tested (shown in Table 3) using structural equation modeling through LISREL 8.5 (Jöreskog and Sörbom, 1993). We tested for common method variance using the marker variable approach (e.g., Fang, Palmatier and Evans, 2008) and found no evidence that it was biasing the overall results.

Data Analysis

Moderating effects were tested with subgroup analysis per Kohli (1989). The respondents were classified into three groups based on their

TABLE 2:
Construct Correlations, Means, Standard Deviations and Variance Extracted
(Construct Reliabilities on the Diagonal)

Construct	1	2	3	4
1. Cognitive Age	0.90			
2. Loyalty to Product Brand	0.058	0.89		
3. Materialism	-0.093*	-0.053	0.93	
4. Status Consumption	-0.057	-0.021	0.541**	0.87
Mean	3.41	4.79	2.63	2.76
Standard Deviation	1.00	1.60	1.51	1.49
Variance Extracted	0.69	0.66	0.80	0.69

** correlation significant at $p < 0.01$

* correlation significant at $p < 0.05$

TABLE 3:
LISREL Results for the Hypothesized Model

Hypothesis Path	Completely Standardized Estimate	t-value	Result
H ₁ Cognitive Age → Materialism	-0.12	-2.80	Supported
H ₂ Cognitive Age → Status Consumption	-0.09	-2.18	Supported
H ₃ Cognitive Age → Loyalty to Product/Brand	0.05	1.20	Not Supported

Structural Model: ($\chi^2_{(74)} = 661.58, p < 0.01; RMSEA = 0.09; IFI = 0.92; CFI = 0.92; NNFI = 0.90$) and the significance of the proposed paths/relationships is provided in Table 3.

moderator score, with the lowest 35 percent of respondents considered low on that dimension and the highest 35 percent considered high. The middle 30 percent were eliminated to maximize contrast between the low and high groups and enhance the power of further statistical tests.

This process (shown in Table 4) was used to examine the moderators (social involvement and self confidence) and the three dependent measures (loyalty to the product/brand, materialism, and status consumption). For each, a regression analysis with either loyalty to the product/brand or materialism or status consumption as the dependent variable and cognitive age as the independent variable was run with all respondents in the high and low moderator subgroups. A second regression was run allowing different regression coefficients for the two subgroups. A Chow test (Chow, 1960) was done on the difference in the sums of squared residuals from the two regressions to determine the statistical significance of the difference in the coefficients of cognitive age between the high and low groups. This process

was repeated for each moderator. This is an accepted process to test moderation per Posakoff, MacKenzie, Ahearne, and Bommer (1995).

RESULTS

Per Table 3, we found empirical support for two of the three direct relationships between the constructs (H₁ and H₂ were supported). Our results indicate that cognitive age has a negative relationship with materialism ($t = -2.80$) and status consumption ($t = -2.18$). As Indian elderly consumers feel cognitively old, their level of materialism and motivation for status diminishes. In terms of loyalty to the product/brand, our hypothesis was not supported ($t = 1.20$) though it was the hypothesized direction of cognitively older Indian seniors being more product/brand loyal. This lack of significance could be attributed to the proliferation of products and brands in the India market (since liberalization). Per Table 4, we find empirical support for five of the six research hypotheses on moderating effects. The results indicate that social involvement and self-confidence serve as a moderator of the

TABLE 4:
Regression Coefficients Across Low and High Levels of Moderator Variables (Unrestricted Run)

Hypotheses	Moderator Variable	Dependent Variable	R ²	Moderator Level	<u>Independent Variables</u>	
					Cognitive Age	Chow Test
H _{1a}	Self Confidence	Materialism	0.016	Low	-0.185*	F = 6.11**
				High	-0.221	
H _{2a}	Self Confidence	Status Consumption	0.015 0.000	Low	-0.153*	F = 0.94 (NS)
				High	-0.034	
H _{3a}	Self Confidence	Loyalty to	0.002	Low	0.072	F = 10.33***
		Product/Brand	0.031	High	0.284	
H _{1b}	Social Involvement	Materialism	0.033 0.001	Low	-0.294	F = 10.35***
				High	-0.036*	
H _{2b}	Social Involvement	Status Consumption	0.021 0.003	Low	-0.207*	F = 6.44**
				High	0.087*	
H _{3b}	Social Involvement	Loyalty to	0.000	Low	0.151	F = 14.15***
		Product/Brand	0.000	High	-0.014*	

*** p < 0.01
** p < 0.05
* p < 0.10

effects of cognitive age on loyalty, materialism and status consumption for elderly consumers.

Moderating Effects of Self Confidence

For H_{1a} and H_{3a}, the moderating effect of self-confidence for elderly consumers is significant as demonstrated by the test of differences between the regression coefficients of high and low levels of self-confidence when exhibiting materialistic tendencies (F = 6.11, p < 0.05; Table 4) and when being loyal to a product/brand (F = 10.33, p < 0.01; Table 4). However for H_{2a}, self-confidence is not a moderator when these elderly consumers engage in status consumption (F = 0.94, Table 4).

One possible explanation of the significance of the moderating effect of self-confidence for materialism and loyalty is that these elderly consumers have seen India go through a transformation from being a closed economy to a more liberalized economy. As these consumers grew older, the cognitively young

consumers felt that this was the time to satisfy their materialistic cravings. These same consumers also exercise loyalty towards the products introduced into India after liberalization. However, self-confidence may not be a moderating factor when it comes to consuming for status because of the importance of others in Indian culture and the fact that many Indians derive their social identity from group membership (Tajfel and Turner, 1979).

Moderating Effects of Social Involvement

For H_{1b}, H_{2b} and H_{3b}, the moderating effect of social involvement for elderly consumers is significant as demonstrated by the test of differences between the regression coefficients of low and high levels of social involvement when exhibiting materialistic tendencies (F = 10.35, p < 0.01; Table 4) and motivated by status consumption (F = 6.44, p < 0.05; Table 4) and when being loyal to a product/brand (F = 14.15, p < 0.01; Table 4). As their level of social involvement increases, Indian seniors

enjoy their materialistic pleasures, consume for status and are loyal to the products/brands.

DISCUSSION

This study examined the Indian senior market, looking at the cognitive age of seniors to determine if there was a relationship between those Indian seniors' cognitive age and their level of materialism, status consumption, and loyalty proneness. Indian seniors with a younger cognitive age were more materialistic and motivated to consume for status. This suggests that for marketers of luxury products, those seniors who perceive themselves to be younger may be more interested in consumption of luxury products to meet status needs. This relates to Amatulli et al.'s (2015) finding that cognitively younger seniors are more motivated for status than style. Given the increasing economic power of the Indian market, particularly among those who are older and may have more wealth (Knorringa and Guarin, 2014), this suggests that cognitively younger seniors may be an important market for luxury brand name products.

We then examined two moderators, self-confidence and social involvement, impacting the relationship between cognitive age and materialism, status consumption, and loyalty proneness. We found that the moderator of self-confidence did impact the relationship between cognitive age and materialism as well as loyalty proneness. However, self-confidence did not impact the relationship between cognitive age and status consumption. This suggests that it is a more interpersonal external motivation, such as conspicuousness, or a social bandwagon motivation (Eastman and Eastman, 2015; Kastanakis and Balabanis, 2014) in demonstrating one's social identity (Tajfel and Turner, 1979), rather than a more personal internal motivation, such as experiential, reward, or quality (Eastman and Eastman, 2015) that may be impacting Indian seniors' motivations for status.

We also found that social involvement had a moderating impact between cognitive age and materialism, status consumption, and loyalty proneness. This relates to the idea of interdependent self as suggested by Schultz and Jain (2015), which is consistent with the

importance of family for India's elderly (Ota, 2013; Krishnaswamy et al., 2008). It also relates to the importance of the influence of subjective norms on luxury brand intention as suggested by Sanyal et al. (2014). This may aid in explaining why Indians gave extra importance to subjective norms, how Indians think important others will perceive their luxury behaviors rather than their personal perceptions of luxury brands in Sanyal et al.'s (2014) study, as well as the moderating impact of social involvement found in our study. Eng and Bogaert (2010, p. 55) offer that luxury consumption for Indians "reflects conspicuous consumption and status, and signals wealth for individuals, and conveys social identity and status in Indian society." In terms of the materialism, it relates to Clark and Micken's (2002) finding that those who are more materialistic place more importance on belonging and being respected by others. Thus, our results suggest that Indian seniors may be motivated for luxury more by traditional conspicuous consumption and bandwagon status motivations than by personal, style motivations. This illustrates the importance of social relationships for Indian elderly and their impact on marketing variables. Cognitively younger consumers may derive their social identity (Tajfel and Turner, 1979) in part from consumption.

Our study examined social involvement in terms of the Indian elderly respondents enjoying and liking being around others. Our results indicating the important moderating impact of social involvement suggest that marketers targeting the Indian senior market need to consider social relationships in trying to reach and communicate with this market. This is particularly true for status brands as they may serve an important role in developing social identity for cognitively younger Indian seniors. Marketing efforts aimed at Indian seniors need to recognize their collective cultural traits and the importance of groups, such as the family, as well as their psychological motivations for luxury products and brands (Eng and Bogaert, 2010). Luxury marketers need to stress the social aspects of their status products and how they aid not just the individual senior, but their collective family and group, in enhancing status and social identity among others.

Research is needed to see if the moderating

impact of social involvement on status consumption and materialism found in this study holds in other emerging markets with collectivist cultures. If so, there are tremendous managerial implications for luxury marketers in such markets, particularly because conspicuous consumption (Souiden et al., 2011) and hedonic elements of products (Sharma, 2011) have been found more with individualistic cultures. Our findings suggest that by focusing on the social involvement aspect, luxury marketers may be effective in reaching the cognitively younger elder interested in status consumption in a more collectivist culture, such as India, as a means for social identity and enhanced social comparison (Tajfel and Turner, 1979).

Future Research and Limitations

This research contributes to the literature by being one of the first to examine the senior Indian market. We demonstrate that similar to American seniors, the construct of cognitive age does have an impact, and we highlight several variables that are impacted. Specific to the Indian market, we illustrate the importance of social involvement in considering the influence of cognitive age on status consumption, materialism, and brand loyalty. However, we recognize that there are a number of variables that future research can examine that may be impacted by cognitive age or moderate the impact of cognitive age for Indian seniors, and we acknowledge that significantly more research is needed to better understand the role of cognitive age for Indian seniors. Thus, while this research establishes the relationship between cognitive age and status consumption, materialism, and brand loyalty, along with the importance of social involvement, future research is needed to see what other variables may also be influenced by cognitive age for Indian seniors. For example, while this study examines the importance of social involvement, social positioning may be a useful variable for future consideration with India seniors given its examination with materialism and image in the literature (Amatulli and Guido, 2012; Amatulli et al., 2015).

In terms of status consumption, research is needed to better determine what specific external motivation is influencing this interest

and how it relates to purchase behavior. Research is also needed to examine cultural variables more specifically associated with Indian culture, such as collectivism and power distance. Future research could also examine contextual factors in India that impact older consumers to feel cognitively younger, similar to that done in other countries (Amatulli et al., 2015). Research is also needed to determine how Indian seniors meet their needs for social involvement, given the changing Indian family structure.

Finally, the data for our study was collected from the capital city (New Delhi) in India and, as a result, our study cannot be generalized over other populations of India. Our sample is from an urban center and needs to be replicated to capture the rural centers. As a significant number of Indian elderly are females who live in rural areas (Ota, 2013; Krishnaswamy et al., 2008), more research is needed to enhance the representation of the country. From a methodological perspective, the fit indices of the study just met the acceptable criteria of a good fit. There is a need to develop measures aimed primarily at emerging markets that can capture the nuances of market composition.

This research illustrates that cognitive age is an important segmentation variable for the Indian elderly market, as it was in the United States. Additionally, this research demonstrates the link between cognitive age and other consumer behavior constructs, such as status consumption and materialism. Finally, this paper illustrates that for the Indian elderly, social involvement has a significant moderating impact on these relationships. Given the size and importance of the Indian market (Krishnaswamy et al., 2008; Verma and Gupta, 2014), this paper hopes to contribute to the needed research in the ever-growing Indian market.

REFERENCES

- Amatulli, C. and G. Guido (2012). Externalised vs. internalised consumption of luxury goods: Propositions and implications for luxury retail marketing. *The International Review of Retail, Distribution and Consumer Research*, 22(2), 189-207.

- Amatulli, C., G. Guido, and R. Natarajan (2015). Luxury purchasing among older consumers: Exploring inferences about cognitive age, status, and style motivations. *Journal of Business Research*, 68 (September), 1945-1952.
- Amma, K.P.S. and S.M. Panicker (2013). Senior citizens' acceptance of information communication technology: A study of e-banking in India. *Journal of Information Technology & Economic Development*, 4(1), 1-8.
- Anderson, J.C. and D.W. Gerbing (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Arnold, M.J. and K.E. Reynolds (2003). Hedonic shopping motivations. *Journal of Retailing*, 79(2), 77-95.
- Bagozzi, R.P. and Y. Yi (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-95.
- Bagozzi, R.P. and H. Baumgartner (1994). The evaluation of structural equation models and hypothesis testing. In *Principles of Marketing Research*, Richard P. Bagozzi, ed, Cambridge: Blackwell Publishers, 386-422.
- Bagozzi, R.P., Y. Yi, and L.W. Phillips (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly*, 36, 421-458.
- Barak, B. (2009). Age identity: A cross-cultural global approach. *International Journal of Behavioral Development*, 35(1), 2-11.
- Barak, B. and L.G. Schiffman (1981). Cognitive age: A nonchronological age variable. *Advances in Consumer Research*, 8, 602-606.
- Barak, B., D. Guiot, A. Mathur, Y. Zhang, and K. Lee (2011). An empirical assessment of cross-cultural age self-construal measurement: Evidence from three countries. *Psychology & Marketing*, 28(May), 479-495.
- Baumgartner, H. and C. Homburg (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, 13(April), 139-161.
- Belk, R.W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research*, 12(December), 265-279.
- Belk, R.W. (1988). Possessions and the extended self. *Journal of Consumer Research*, 15(September), 139-168.
- Biswas, L.D. (2009). Silver surfers: Senior citizens in India embrace the internet to cope with a lonely future. Available at http://www.thewip.net/contributors/2009/04/silver_surfers_senior_citizens.html.
- Bitner, M.J., B.H. Booms, and M.S. Tetreault (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing*, 54(1), 71-84.
- Chow, G.C. (1960). Test of equality between sets of coefficients in two linear regressions. *Econometrika*, 28(July), 591-605.
- Chowdhary, U. (2000). Correlates of apparel significance among older men and women. *Journal of Consumer Studies and Home Economics*, 24(September), 150-159.
- Chua, C., J.A. Cote, and S.M. Leong (1990). The antecedents of cognitive age. *Advances in Consumer Research*, 17, 880-885.
- CIA (2014). The world factbook. Retrieved March 5, 2014 from <https://www.cia.gov/library/publications/the-world-factbook/geos/tu.html>.
- Clark III, I. and K.S. Micken (2002). An exploratory cross-cultural analysis of the values of materialism. *Journal of International Consumer Marketing*, 14(4), 65-89.
- Cleveland, M., M. Laroche, and N. Papadopoulos (2009). Cosmopolitanism, consumer ethnocentrism, and materialism: An eight-country study of antecedents and outcomes. *Journal of International Marketing*, 17(March), 116-146.
- Cleveland, M., M. Laroche, and N. Papadopoulos (2011). Ethnic identity's relationship to materialism and consumer ethnocentrism: Contrasting consumers in developed and emerging economies. *Journal of Global Academy of Marketing Science*, 21 (2), 55-71.
- Dogan, V. (2015). The effect of materialism and proximity of clothing to self on the ratio of feeling younger: Implications for the consumption experiences of older people in Turkey. *International Journal of Consumer Studies*, 39(September), 564-573.
- Eastman, J.K. and R. Iyer (2005). The impact of cognitive age on internet use of the elderly: An introduction to the public policy implications. *International Journal of Consumer Studies*, 29(March), 125-136.

- Eastman, J.K. and K.L. Eastman (2015). Conceptualizing a model of status consumption theory: An exploration of the antecedents and consequences of the motivation to consume for status. *Marketing Management Journal*, 25(1), 1-16.
- Eastman, J.K., R.E. Goldsmith, and L.R. Flynn (1999). Status consumption in consumer behavior: Scale development and validation. *Journal of Marketing Theory and Practice*, 7 (Summer), 41-52.
- Eng, T.-Y. and J. Bogaert (2010). Psychological and cultural insights into consumption of luxury western brands in India. *Journal of Customer Behaviour*, 9(1), 55-75.
- Fang, E., R.W. Palmatier, and K.R. Evans (2008). Influence of customer participation on creating and sharing of new product value. *Journal of the Academy of Marketing Science*, 36(September), 322-336.
- Fornell, C. and D.F. Larcker (1981). Structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(August), 382-388.
- Ger, G. and R.W. Belk (1990). Measuring and comparing materialism cross-culturally. *Advances in Consumer Research*, 17, 186-192.
- Ger, G. and R.W. Belk (1996). Cross-cultural differences in materialism. *Journal of Economic Psychology*, 17(February), 55-77.
- Ger, G. and R.W. Belk (1999). Accounting for materialism in four cultures. *Journal of Material Culture*, 4(July), 183-204.
- Government of India (2011). 2011 Census data. Available at www.censusindia.gov.in.
- Griffin, M., B.J. Babin, and F. Christensen (2004). A cross-cultural investigation of the materialism construct: Assessing the Richins and Dawson's materialism scale in Denmark, France, and Russia. *Journal of Business Research*, 57(August), 893-900.
- Guiot, D. (2001). Antecedents of subjective age biases among senior women. *Psychology & Marketing*, 18(October), 1049-1071.
- Gwinner, K.P. and N. Stephens (2001). Testing the implied mediational role of cognitive age. *Psychology & Marketing*, 18(October), 1031-1048.
- Handa, M. and A. Khare (2013). Gender as a moderator of the relationship between materialism and fashion clothing involvement among Indian youth. *International Journal of Consumer Studies*, 37(January), 112-120.
- Husic, M. and M. Cicic (2009). Luxury consumption factors. *Journal of Fashion Marketing and Management*, 13(2), 231-245.
- Iyer, R. and J.A. Muncy (2016). Attitude toward consumption and subjective well-being. *Journal of Consumer Affairs*, 50 (Spring), 48-67.
- Iyer, R., T.H. Reisenwitz, and J.K. Eastman (2008). The impact of cognitive age on seniors' lifestyles. *Marketing Management Journal*, 18(2), 106-118.
- Jones, M.A. and K.E. Reynolds (2006). The role of retailer interest on shopping behavior. *Journal of Retailing*, 82(2), 115-126.
- Joreskog, K.G. and D. Sorbom (1993). LISREL 8: A guide to the program and applications. *Scientific Software International*, Chicago, IL.
- Karabati, S. and Z. Cemalcilar (2010). Values, materialism, and well-being: A study with Turkish university students. *Journal of Economic Psychology*, 31(August), 624-633.
- Kastanakis, M.N. and G. Balabanis (2014). Explaining variation in conspicuous luxury consumption: An individual differences' perspective. *Journal of Business Research*, 67 (October), 2147-2154.
- Khare, A. (2011). Impact of Indian cultural values and lifestyles on meaning of branded products: Study on university students in India. *Journal of International Consumer Marketing* 23(5), 365-379.
- Kilbourne, W., M. Grunhagen, and J. Foley (2005). A cross-cultural examination of the relationship between materialism and individual values. *Journal of Economic Psychology*, 26(October), 624-641.
- Knorrinda, P. and A. Guarin (2014). Standards and consumer behaviour of the rising middle class in India. In *Globalization and Standards*, Keshab Das (Ed.), Springer India, 23-40.
- Kohlbacher, F., L.S. Riley, and A. Hofmeister (2011). Challenging the culture-free hypothesis of cognitive age among older consumers: Evidence from a cross-national survey. *Advances in Consumer Research*, 39, 325-332.

- Kohli, A.K. (1989). Effects of supervisory behavior: The role of individual differences among salespeople. *Journal of Marketing*, 53 (October), 40-50.
- Krishnaswamy, B., U.T. Sein, D. Munofawafa, C. Varghese, K. Venkataraman, and L. Anand (2008). Ageing in India. *Ageing International*, 32(December), 258-268.
- Kuksov, D. and Y. Xie (2012). Competition in a status goods market. *Journal of Marketing Research*, 49(October), 609-623.
- Lambert-Pandraud, R. and G. Laurent (2010). Why do older consumers buy older brands? The role of attachment and declining innovativeness. *Journal of Marketing*, 74 (July), 104-121.
- Lichtenstein, D.R., R.G. Netemeyer and S. Burton (1990). Distinguishing coupon proneness from value consciousness: An acquisition-transaction utility theory perspective. *Journal of Marketing*, 54(3), 54-67.
- Lyonski, S. and S. Durvasula (2013). Consumer decision making styles in retailing: Evolution of mindsets and psychological impacts. *Journal of Consumer Marketing*, 30 (1), 75-87.
- Mason, R. (2001). Conspicuous consumption: A literature review. *European Journal of Marketing*, 18(3), 26-39.
- Mathur, A., E. Sherman, and L.G. Schiffman (1998). Opportunities for marketing travel services to new-age elderly. *Journal of Services Marketing*, 12(4), 265-277.
- McLeod, S.A. (2008). Social identity theory. Available at www.simplypsychology.org/social-identity-theory.html.
- Micken, K.S. and S.D. Roberts (1999). Desperately seeking certainty: Narrowing the materialism construct. *Advances in Consumer Research*, 26, 513-518.
- Ota, H. (2013). India's senior citizens' policy and an examination of the life of senior citizens in North Delhi. *Institute of Developing Economies Discussion Paper No. 402*, 1-33.
- Packard, V. (1959). *The Status Seekers*. McGraw Hill, New York.
- Podoshen, J.S. and S.A. Andrzejewski (2012). An examination of the relationships between materialism, conspicuous consumption, impulse buying, and brand loyalty. *Journal of Marketing Theory and Practice*, 20(3), 319-333.
- Posakoff, P.M., S.B. MacKenzie, M. Ahearne, and W.H. Bommer (1995). Searching for a needle in a haystack: Trying to identify the illusive moderators of leadership behaviors. *Journal of Management*, 21(June), 422-470.
- Raju, P. S. (1980). Optimum stimulation level: Its relationship to personality, demographics, and exploratory behavior. *Journal of Consumer Research*, 7(December), 272-282.
- Ray, A. (2009). India: ICT for senior citizens - where are we today? Available at <http://globalvoicesonline.org/2009/10/04/india-ict-for-senior-citizens-where-are-we-today/>
- Richins, M.L. (1994). Special possessions and the expression of material values. *Journal of Consumer Research*, 21(December), 522-533.
- Richins, M.L. and S. Dawson (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19 (December), 303-316.
- Sanyal, S.N., S.K. Datta, and A.K. Banerjee (2014). Attitude of Indian consumers towards luxury brand purchase: An application of 'attitude scale to luxury items'. *International Journal of Indian Culture and Business Management*, 9(3), 316-339.
- Schiffman, L.G. and E. Sherman (1991). Value orientations of new-age elderly: The coming of an ageless market. *Journal of Business Research*, 22, 187-194.
- Schultz, D.E. and V. Jain (2013). The same, but different: Luxury brands fill disparate roles in China and India. *Marketing Insights*, Fall, 16-17.
- Schultz, D.E. and V. Jain (2015). Discovering India's three levels of luxury consumption: An exploratory research to find a conceptual network. *Journal of Marketing Communications*, February, 1-20.
- Sharma, P. (2011). Demystifying cultural differences in country-of-origin effects: Exploring the moderating roles of product type, consumption context, and involvement. *Journal of International Consumer Marketing*, 23(5), 344-364.
- Sherman, E., L.G. Schiffman, and A. Mathur (2001). The influence of gender on the new-age elderly's consumption orientation. *Psychology and Marketing*, 18(October), 1073-1089.

- Shrum, L.J., N. Wong, F. Arif, S.K. Chugani, A. Gunz, T.M. Lowrey, A. Nairn, M. Pandelaere, S.M. Ross, A. Ruvio, K. Scott, and J. Sundie (2013). Reconceptualizing materialism as identity goal pursuits: Functions, processes, and consequences. *Journal of Business Research*, 66(August), 1179-1185.
- Sirgy, M.J., E. Gurel-Atay, D. Webb, M. Cicic, M. Husic, A. Ekici, A. Hermann, I. Hegazy, D.-J. Lee, and J.S. Johar (2012). Linking advertising, materialism, and life satisfaction. *Social Indicators Research*, 107(May), 79-101.
- Smith, R.B. and G.P. Moschis (1984). Consumer socialization of the elderly: An exploratory study. *Advances in Consumer Research*, 11, 548-552.
- Souiden, N., B. M'Saad, and F. Pons (2011). A cross-cultural analysis of consumers' conspicuous consumption of branded fashion accessories. *Journal of International Consumer Marketing*, 23(5), 329-343.
- Stephens, N. (1991). Cognitive age: A useful concept for advertising? *Journal of Advertising*, 20(December), 37-49.
- Szmigin, I. and M. Carrigan (2001). Time, consumption, and the older consumer: An interpretive study of the cognitively young. *Psychology and Marketing*, 18(10), 1091-1105.
- Tajfel, H. and J. Turner (1979). An integrative theory of intergroup conflict. In *The Social Psychology of Intergroup Relations*, William G. Austin and Stephen Worchel, eds, Brooks/Cole Publishing Co., 33-47.
- Tian, K.T., W.O. Bearden, and G.L. Hunter (2001). Consumers' need for uniqueness: Scale development and validation. *Journal of Consumer Research*, 28(June), 50-66.
- Van Auken, S., T.E. Barry, and R.P. Bagozzi (2006). A cross-country construct validation of cognitive age. *Journal of the Academy of Marketing Science*, 34(June), 439-455.
- Veblen, T. (1899). *The theory of the leisure class*. Penguin, New York.
- Verma, V.C. and D. Das Gupta (2014). Senior citizens: As food shoppers. *SCMS Journal of Indian Management*, 11(April-June), 21-28.
- Wilkes, R.E. (1992). A structural modeling approach to the measurement and meaning of cognitive age. *Journal of Consumer Research*, 19(September), 292-230.
- Wong, N.Y.C (1997). Suppose you own the world and no one knows? Conspicuous consumption, materialism, and self. *Advances in Consumer Research*, 24, 197-203.