

THE IMPORTANCE AND REALIZATION OF PERSONAL VALUES AND COGNITIVE AGE

VAŽNOST I OSTVARIVANJE OSOBNIH VRIJEDNOSTI I KOGNITIVNA DOB

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Abstract

Purpose – Population aging has emerged as a powerful megatrend affecting many countries, including Hungary. This demographic change will impact on many aspects of life, especially on consumption. The senior consumer market is becoming an increasingly important market for marketing professionals to understand and address. With this in mind, this paper is aimed at gaining a better understanding of older Hungarian consumers by exploring cognitive age and the importance and realization of personal values.

Design/Methodology/Approach – An online study carried out on a sample of 281 respondents among the Hungarian population aged 50–65 to collect data which was analyzed to answer the research questions. Measurement scales were adapted to measure the importance and realization of personal values and the cognitive age of the respondents.

Findings and Implications – A comparison of the importance and realization value scales revealed differences in the value rankings among the cognitive age groups. The correspondence between the realization and importance of values differed among the values, with the highest consistency found for modesty, generosity, sincerity, and honesty. An understanding of the values which are the most important to potential consumers (as life goals) and realized to the highest degree can provide useful information for decision-making on product positioning, branding, and communications.

Sažetak

Svrha – Starenje stanovništva postalo je snažan megatrend koji utječe na mnoge zemlje, uključujući Mađarsku. Ova će demografska promjena utjecati na mnoge aspekte života, a posebno na potrošnju. Tržište starijih potrošača postaje sve važnije za razumijevanje i obraćanje marketinških stručnjaka. Imajući to na umu, ovaj rad ima za cilj produbiti razumijevanje starijih mađarskih potrošača kroz kognitivnu dob te važnost i ostvarivanje osobnih vrijednosti.

Metodološki pristup – Provedeno je online istraživanje među mađarskom populacijom i analizirani su podaci ispitanika u dobi od 50 do 65 godina, a kako bi se odgovorilo na istraživačka pitanja. Veličina uzorka bila je 281. Mjerne skale prilagođene su mjerenju važnosti i ostvarivanja osobnih vrijednosti i kognitivne dobi ispitanika.

Rezultati i implikacije – Usporedba ljestvica kojima se mjere važnost osobnih vrijednosti i ostvarivanje pokazala je razlike u rangiranju osobnih vrijednosti među kognitivnim dobnim skupinama. Preklapanje između ostvarivanja i važnosti vrijednosti razlikovalo se između vrijednosti, a najveća konzistentnost pronađena je za skromnost, velikodušnost, iskrenost i poštenje. Razumijevanje koje su vrijednosti (kao životni ciljevi) najvažnije potencijalnim potrošačima i koje se najviše ostvaruju može pružiti korisne informacije za donošenje odluka o pozicioniranju proizvoda, upravljanju markom i komunikaciji.

Limitations – One of the limitations of our research online concerns data collection, which excluded persons who are not active online. Further research is needed to investigate the relationship between measures of values in terms of their importance and realization and other aspects of consumption behavior that are driven by personal value perspectives.

Originality – This paper contributes to the state of the field of research on older consumers in general and Hungarian older consumers in particular. To the best of the authors' knowledge, this is the first study in marketing to directly investigate the importance and realization of personal values and their relationship with cognitive age on a sample of older Hungarian consumers. Unlike most of the research in this field, the paper explores not only the importance of personal values but also their realization according to the identified cognitive age groups of older consumers.

Keywords – personal values, measurement, cognitive age, seniors, segmentation

Ograničenja – Jedno od ograničenja istraživanja jest online prikupljanje podataka čime su isključene one osobe koje nisu aktivne online. Potrebna su daljnja istraživanja kako bi se istražio odnos između važnosti i mjera ostvarivanja vrijednosti i drugih aspekata potrošačkog ponašanja koji su vođeni osobnim vrijednosnim perspektivama.

Doprinos – Rad upotpunjuje postojeća istraživanja o starijim potrošačima općenito, a posebice o starijem mađarskom potrošaču. Prema saznanjima autora, ovo je prvo marketinško istraživanje koje izravno ispituje važnost i ostvarivanje osobnih vrijednosti i njihovu povezanost s kognitivnom dobi na uzorku starijih mađarskih potrošača. Za razliku od većine istraživanja u području, ovaj rad ne istražuje samo važnost osobnih vrijednosti, već i njihovo ostvarivanje kod identificiranih kognitivnih dobnih skupina starijih potrošača.

Ključne riječi – osobne vrijednosti, mjerenje, kognitivna dob, starije osobe, segmentacija

1. INTRODUCTION

The nature and structure of personal values is a topic of continuing interest in marketing. Contemporary marketers recognize that values serve as criteria for prioritizing buying options and for implementing one mode of behavior over others. Consumer values are the backdrop against which marketing programs are carried out. The need to understand the target market is increasingly pressing, making it important to grasp the complexity of its emotional and affective processes in order to establish lasting relationships between a brand and its audience. Therefore, the value system, rather than a single value, should provide a more complete understanding of the motivational forces driving an individual's attitudes, as well as behavior.

Population aging is one of the greatest social transformations of the 21st century, affecting almost all sectors of society, including the labor market, the pension system, health care, housing, migration, politics and, of course, consumption, as well as family structure and intergenerational relations (UN, 2019). In terms of the domestic situation, 38% of the Hungarian population are over 50 years old, with 20% aged between 50 and 64, while 14% are between 65 and 79, and 4% more than 80 years old (CSO, 2021).

In the last two decades, several papers have been published on the opportunities and challenges of addressing the senior market segment (Albuquerque, Amancio, Günther & Higuchi, 2018; Celer & Jánská, 2017; Guido, Pichierri, Pino & Conoci, 2018; Kohlbacher & Cheron, 2010; Prieler, Kohlbacher, Hagiwara & Arima, 2015; Sudbury & Simcock, 2009). However, several scholars have argued that despite the increase in the proportion and importance of consumers over 50, older consumers still do not receive enough attention in academic or practical marketing research (Guido et al., 2018; Hettich, Hattula & Bornemann, 2018; Hofmeister-Tóth & Neulinger 2021; Kohlbacher & Che-

ron, 2010; Zniva & Weitz, 2016). This is also true for Hungary (Hegedüs, 2020; Laukó & Mihálka, 2016; Lampek, Csóka, Hegedüs, Zrínyi & Töröcsik, 2021). To understand older consumers, researchers must first understand the relationship between their cognitive age and value system and how this might shape their consumption behavior. Living up to one's personal values is expected to promote well-being, providing an orientation for and satisfaction with life (Boer & Fischer, 2013; Ostermann et al., 2017). To date, only two studies in the field of psychology have investigated not only the importance of personal values but also their realization (Ostermann et al., 2017; Salikhova, 2013). Ostermann et al. (2017) found that the realization of values, beyond their importance, not only predicted mental health and satisfaction with life but was also the only significant predictor for both outcomes. Another study in psychology conducted by Salikhova (2013) investigated the tension that arises out of the conflict between value-saturated existential expectations and the perceived degree of realization of personal values in life among Russian and US students. However, there is no empirical research in the field of marketing that deals with the effects of the relative importance of values and their realization in the daily life of the elderly.

This paper aims to contribute to a better understanding of the importance and realization of personal values and their relationship with cognitive age in the case of older consumers. This is the first study that directly investigates the realization of personal values using a modified Rokeach value (MRVS) scale, named the Importance and Realization Value Scale (IRVS) here, and its relationship with cognitive age. To our knowledge, the relationship between value importance and realization, on the one hand, and cognitive age, on the other, has not been studied in marketing research to date. This study was conducted in a Central Eastern European context, among elderly Hungarian consumers.

2. THEORETICAL BACKGROUND

2.1. Personal values

Several academic disciplines, including sociology, psychology, anthropology, management, and marketing have tried to understand the role of personal values to better predict human behavior (Rankin & Grube, 1980; Rokeach, 1973; Schwarz, 1992, 1994). The works of Milton Rokeach (1973, 1976) are the major theoretical foundations of psychological research on value systems (Kahle, 1983). Rokeach (1973, p. 5) defines the concept of values first and foremost as “an enduring belief that a specific mode of conduct or end-state is personally or socially preferable to an opposite or converse mode of conduct or end-state.”

The Schwartz Theory of Basic Values is based on the Rokeach Values System, with a stronger psychological focus (Schwartz, 1992, 1994). It has recently been extensively used in psychological and sociological studies (Roccas, Sagiv & Navon, 2017; Sagiv, Roccas, Cieciuch & Schwartz, 2017; Schwartz & Sortheix, 2018; Schwartz & Cieciuch, 2021). According to Schwartz (1992), Maio (2010), and Fischer (2017), human values are often defined as abstract ideals guiding people’s behavior. Sagiv et al. (2017) define values that reflect what people find important, good, and worthy in life. While many other definitions of personal values can be found in the literature, the above definitions represent the most accepted definitions of such values. Over the past century, a number of models used for measuring personal values have been proposed and empirically supported, such as Rokeach’s (1973) instrumental and terminal values, Schwartz’s (Schwartz, 1992; Schwartz et al., 2012) quasi-circumplex model of human values, Inglehart’s (2000) materialism–post materialism, Van Lange, De Bruin, Otten, and Joireman (1997) social value orientations (SVO), and Le & Quay’s (2021) personal values in relation to luxury hospitality services, to mention just a few.

The two quantitative tools most widely used to measure personal values in marketing are the Rokeach Value Survey (RVS) developed by Rokeach (1973) and the List of Values (LOV) developed by Kahle (1983). Rokeach’s value scale (RVS) contains 18 terminal values and 18 instrumental values, which were selected and synthesized from hundreds of values in the research (Rokeach, 1973). The RVS instrument has been criticized because of the difficulty associated with ranking the 36 value items, the time required for ranking, and the information lost owing to rank ordering (Alwin & Krosnik, 1985; Rankin & Grube, 1980). Beatty, Kahle, Homer, and Mishra (1985) argued that not all the values included in the RVS are relevant in a consumer behavior context. Therefore, most of the research investigating consumer values applied RVS in a modified form (Eibel-Spanyi & Hofmeister-Tóth, 2013; Kamakura & Mazzon, 1991; Millar & Restall, 1992; Salikhova, 2013; Žabkar & Kolar, 2010).

The List of Values (LOV) scale was developed by Kahle (1983) as directly applicable to marketing and consumer behavior. The LOV consists of nine personal values that can be divided into intrinsically and extrinsically oriented personal value domains. The scale has been used extensively in consumer research as it offers the advantage of greater ease of administration and completion. The LOV is also considered more easily translatable and relates more closely to daily life and consumer behavior (Chrysohoidis & Krystallis, 2005; Novak & MacEvoy, 1990; Watkins & Gnoth, 2005). On the other hand, Kahle’s (1983) LOV only provides value labels and not definitions of the value items, while other measurement tools such as Rokeach’s (1973) Value Survey or Schwartz’s (1992) Global Values Survey provide respondents with clear definitions of the measured value items. Thomson (2009) questioned the validity of Kahle’s LOV since the meanings individuals attach to cultural values may differ across cultures. Hence, he suggested that researchers cannot assume analogous respondent definitions of broad cultural values. Without a descriptor to establish a common approach to each value,

each respondent to the LOV may not be rating the same set of values (Thomson, 2009). Instead, as pointed out by Kamakura and Novak (1992), they may be rating their own subjective interpretations of them. The LOV scale was later modified by grouping or extending the scale items (Herche, 1994; Huefner et al., 2002; Keng & Yang, 1993).

In empirical market research, personal values are often related to various consumer attitudes and behaviors (Burroghs & Rindfleisch, 2002; Hayley, Zinkiewicz & Hardiman, 2015; Homer & Kahle, 1988; Lee & Cho, 2019; Le & Quy, 2021; Schiffman, Sherman & Long, 2003). Personal values often serve as the basis of segmentation and product positioning in marketing research as well as being present in advertising messages (Lee & Cho, 2019; Sonoda, Oishi, Chomei & Hirooka, 2018; Thomé, Pinho & Hoppe, 2019; Weng & De Run, 2013).

A study conducted by Ostermann et al. (2017) in the field of clinical psychology investigated the relationship between the realization of personal values, mental health, and satisfaction in life using the German version of the Portrait Value Questionnaire (PVQ-RR) by Schwartz et al. (2012). Using 12 terminal values of the Rokeach Value Survey, the study by Salikhova (2013) found that differences in dynamic parameters bear witness to the fact that American students have already defined their life goals and are in the process of their fulfilment, whereas Russian students are still searching for meaningful life perspectives. Grunert and Muller (1996) investigated the value distribution of value priorities in Canada and Denmark in the case of respondents switching from “real” life orientation to an “ideal” life mental set; they found their measurement of values under “real” and “ideal” life conditions to show significant differences in value hierarchy.

In our research, we have chosen to apply the Importance and Realization Value Survey (IRVS), based on the modified Rokeach Value Scale (MRVS, Millar & Restall, 1992) and the Global Value Scale by Schürmann (1988). The IRVS scale,

developed by Hofmeister-Tóth and Simányi, was introduced for the first time in 2005 following a check of content validity and three rounds of qualitative research on the meanings of the value items (Hofmeister-Tóth & Simányi, 2006). The new value scale was tested in multiple studies among Hungarian and US students and on a representative sample in Hungary to investigate the influence of values on consumer behavior (Eibel-Spányi & Hofmeister-Tóth, 2013; Hofmeister-Tóth & Simányi, 2006; Hofmeister-Tóth & Neulinger, 2009).

2.2. Self-perceived age

An overwhelming majority of marketing experts use chronological age as one of the main criteria for market segmentation. Chronological age, the number of years passed since birth, is an objective measure and constant in daily life. Despite its numerous applications, the limitations of chronological age as a behavior-predicting variable were recognized many years ago (Sudbury & Simcock, 2009). Gerontology research has suggested multiple non-chronological age types, such as biological age, social age, other-perceived age, self-perceived age, identity (subjective) age, and personal age (Agogo, Milne & Schewe, 2014; Barak & Schiffman, 1981; Zniva & Weitz, 2016). The cognitive age scale (Barak & Schiffman, 1981) is one such multidimensional measure where respondents are asked how old they think they look, or their “look age” (biological dimension), how old they feel, or their “feel age” (psychological and biological dimension), and which age they would assign their behaviors, or their “do age”, and their interests, or their “interest age” (social dimension). Cognitive age is a specific number, namely the arithmetic average of the above four age dimensions: feel age, look age, do age, and interest age. In this paper, we use the term “self-perceived” age as a synonym of cognitive age, which is an arithmetic mean of the four age dimensions.

Multiple studies have proven that knowing someone’s self-perceived age provides a better insight into older consumers’ behavior than

their chronological age alone (Barak & Schiffman, 1981; Chaouli & Souiden, 2018; Chéron & Kohlbacher, 2018; Cleaver & Muller, 2002; Heidenreich, Kraemer & Handrich, 2016; Schiffman & Sherman, 1991). Although most marketing studies researching self-perceived age were undertaken in the United States, international research on the subject suggests that the cognitive age scale is reliable and can be used equally across cultures, and that people perceive cognitive age similarly around the world (Barak, Mathur, Le & Zhang, 2001). As a result, researchers have concluded that cognitive age is a culture-free concept (Kohlbacher, Sudbury-Riley & Hofmeister, 2011; Van Auken, Barry & Bagozzi, 2006; Van Auken & Barry, 2009).

Studies measuring the subjective age of older persons on a multidimensional scale (Barak & Rahtz, 1990; Goldsmith & Heines, 1992; Guido, Amatulli & Peluso, 2014; Sudbury & Simcock, 2009; Sudbury-Riley, Kohlbacher & Hofmeister, 2015) have consistently found that subjective age is typically considerably lower than chronological age. According to cognitive age research, people over 50 who feel younger than their actual age possess more self-confidence and self-respect; they are more innovative, novelty-seeking, open-minded, and creative; they accept changes, take risks more easily, use the internet more, and have more social contact (Chen & Chan, 2014; Chaouli & Souiden, 2018; Eastman & Lyer, 2005; Heidenreich et al., 2016; Schiffman & Sherman, 1991). Chéron and Kohlbacher (2018) found that cognitive age could be used as a key indicator to segment the market of senior Japanese consumers for high-tech innovations.

3. EMPIRICAL STUDY

3.1. Description of the applied measures

In accordance with the research objective of this paper, we utilized the measures of cognitive age and the IRVS scale. To measure cognitive age, we used the scale recommended by Barak and

Schiffman (1981), proven reliable in earlier international studies (Kohlbacher & Cheron, 2012; Sudbury-Riley, Kohlbacher & Hofmeister, 2011). Based on the four dimensions of the cognitive age scale (feel age, look age, do age, interest age), respondents had to select the decade-age group from 20s to 80s that corresponded to how they felt and what they looked like, as well as what group they believed they belonged to according to their activities and interests. The IRVS scale contains a set of 24 value items that the respondents evaluated separately in terms of importance and realization. The value items were measured using a five-point Likert scale. The respondents had to evaluate their income status on a ten-point scale and answered other sociodemographic questions.

Data was collected online by a professional market research company in November 2018 on a sample of 800 Hungarian nationals. The sample was representative of the Hungarian population aged 18–65 years in terms of gender, age, settlement type, and region. In this paper, we only analyzed the data of consumers aged between 50 and 65 as the study of cognitive age is more relevant among seniors. The sample size of the 50–65 year-old consumers was 281 people, 53% of whom were female, 48% retired, 45% employed, and 7% unemployed or jobseekers. With regard to their income, 58% belonged to the medium-income, 28% to the low-income, and 14% to the high-income category. The average age of the respondents was 58.94 years (min=50, max=65, SD=4.76).

3.2. Analyses and results

3.2.1. Difference between actual and cognitive age

The reliability of the four-dimension cognitive age scale proved to be acceptable (Cronbach's alpha: 0.78). Out of the four dimensions, look age had the strongest correlation with actual age ($r=0.411$; $p<0.001$), with a weaker correlation found for feel and do age ($r=0.264$ and $r=0.257$; $p<0.001$), while interest age only demonstrated a low-level significance relationship ($r=0.197$;

$p < 0.001$). Based on the results of this study, we may conclude that, as in other previous international studies, the average of the look age is the highest ($M = 55.82$) for all demographic groups, and thus also the closest to actual age ($M = 58.94$).

Table 1 shows the mean chronological and cognitive ages according to demographic variables, as well as the youth bias (defined as the difference between chronological and cognitive age), showing a clear bias toward a more youthful self-perceived age.

TABLE 1: Means of chronological and cognitive ages and youth bias

		N	Chronological age	Cognitive age	Youth bias
Gender	Male	132	58.78	51.80	6.98
	Female	149	59.09	52.20	6.89
	Total	281	58.94	52.01	6.93
Work status	Active	125	56.44	49.32	7.13
	Retired	136	61.64	54.78*	6.86
	Unemployed	20	56.20	50.00	6.20
	Total	281	58.94	52.01	6.93
Income	Low	77	58.26	53.25	5.01
	Medium	160	59.10	51.78	7.32
	High	39	59.59	50.45	9.14*
	Total	276	58.93	52.00	6.93

* Significant difference with a 95% reliability

As presented in Table 1, youth bias – the difference between the actual age and the cognitive age of the respondents amounted to 6.93 years. This means that, on average, the individual respondents believed themselves to be almost seven years younger than their actual age. It is also interesting that men showed a slightly more pronounced youth bias than women. Whether one is still active in the workforce may also influence cognitive age. As seen in Table 1, older persons still active in the workforce felt 7.13 years younger than their actual age. There is a considerable difference in the extent of youth bias in the income-based groups. For the low-income group, youth bias (5.01 years) is less pronounced than for the average-income group (6.93 years), while in the high-income category, the difference is more than nine years, which is statistically significantly higher than for the other groups.

3.2.2. Importance of personal values and their realization among the elderly

The IRVS scale measures the importance and the realization of personal values. The reliability of the scale was sufficient in both cases (Cronbach's $\alpha_{importance} = 0.93$; Cronbach's $\alpha_{realization} = 0.94$). Table 2 highlights the 10 most important values and the rate of their perceived realization in the lives of respondents over 50 years of age. As in earlier studies, the most important values for the 50+ generation were health ($M = 4.8$), honesty ($M = 4.78$), family ($M = 4.77$), and security ($M = 4.73$). However, in terms of their realization, health ($M = 3.38$), security ($M = 3.84$), and even happiness ($M = 3.70$) and harmony ($M = 3.79$) fell out of the top 10 values. The top 10 realized values include personal, inner values, such as generosity (rank=4; $M = 4.31$),

independence (rank=5; M=4.17), modesty (rank=7; M=4.09), and order (rank=9; M=3.93). When it comes to values in terms of their realization, the means of those values always represent

a lower rank than the means relating to value importance, with this discrepancy being the largest for the values of health, happiness, and security (1.43, 0.93, and 0.89, respectively).

TABLE 2: The 10 most important values and their realization in the 50+ generation

	Importance			Realization		
	Mean	Standard deviation	Rank	Mean	Standard deviation	Rank
Health	4.80	0.53	1	3.38	1.02	20
Honesty	4.78	0.53	2	4.59	0.65	1
Family	4.77	0.61	3	4.32	0.95	3
Security	4.73	0.57	4	3.84	0.98	11
Sincerity	4.68	0.61	5	4.42	0.75	2
Lust for life	4.64	0.66	6	3.85	1.00	10
Happiness	4.64	0.64	7	3.70	1.10	16
Freedom	4.58	0.65	8	4.05	0.93	8
Wisdom	4.58	0.67	9	4.14	0.73	6
Harmony	4.51	0.70	10	3.79	0.94	12

3.2.3. Cognitive age and value differences

Table 3 presents the importance and realization of the IRVS values among groups based on the difference of actual age and cognitive age (youth bias). According to the respondents' self-perception of feeling older, the same age, or younger than their actual age, we created three age groups: 1) older group, with cognitive age higher than chronological age, 2) same-age group, with nearly the same cognitive and chronological age, and 3) younger group, with cognitive age lower than chronological age. Respondents who believed themselves to be older than their actual age in all four dimensions of the cognitive age scales were named the "old-identifying" group, which accounted for 11.4% of the sample. Their average chronological age was 55.28 years and their average cognitive age 61.88 years. This means that, on average, they felt 6.59 years older than their actual age. The "real-age" group with a minimal difference between chronological and cognitive age made up 16.4% of the sample. The average chronological age of the respondents

in this group was 59.43 years, with their average cognitive age at 59.18 years. The largest group, named "young at heart", representing 72.2% of the sample, felt much younger than their actual age. Their average chronological age was 59.41 years and their average cognitive age 48.83 years. The youth bias in this case was 10.58 years, which means that they felt more than ten years younger than their actual age.

A considerable difference was found among the three cognitive age groups in their evaluation of the importance of health and lust for life value. Health was significantly less important for the "old-identifying" group. Although they assigned a relatively high score (4.59) to this value, it was still lower than in the other two groups (4.76 in the "real-age" group; 4.85 in the "young-at-heart" group). Out of the top ten values, health took only seventh place, but all ten of the most important values scored above 4.5 in this group. They also assigned the lowest score (2.42) to health on the scale relating to value realization, which may mean that they did not manage to remain healthy and accept this to some extent. Another considerable differ-

ence between the groups was the significantly higher importance assigned to lust for life by the “young-at-heart” group (4.70). Significant differences were also found with regard to the

value of family, which was less important to the “real-age” group (but was still the fourth most important value), and to wisdom, which the group found least important.

TABLE 3: The 10 most important values of older consumers by youth bias group

Values	Old identity (11.4%) Youth bias= +6.59			Real age (16.4%) Youth bias= -0.25			Young at heart (72.2%) Youth bias= -10.58		
	(N=32)			(N=46)			(N=203)		
	Mean	Standard deviation	Rank	Mean	Standard deviation	Rank	Mean	Standard deviation	Rank
Health	4.59*	0.76	7	4.76	0.67	1	4.85	0.44	1
Honesty	4.81	0.54	1	4.63	0.77	3	4.81	0.45	3
Family	4.72	0.81	3	4.57*	0.89	4	4.82	0.47	2
Security	4.78	0.55	2	4.63	0.83	2	4.74	0.50	4
Sincerity	4.63	0.61	6	4.54	0.86	5	4.71	0.54	5
Lust for life	4.59	0.95	8	4.43	0.81	7	4.70*	0.55	6
Happiness	4.69	0.69	4	4.52	0.89	6	4.66	0.56	8
Freedom	4.56	0.62	11	4.26	0.88	10	4.66	0.57	9
Wisdom	4.66	0.70	5	4.15*	0.97	13	4.66	0.54	7
Harmony	4.28	1.05	14	4.37	0.85	8	4.58	0.58	10

* Significant difference with 95% a reliability. The top three values of each group are in bold.

These differences may be caused by the income differences of the three cognitive age groups, as half of the “old-identity group” belonged to the low-income category, while the majority of individuals with a high income belonged to the “young-at-heart” group.

Table 4 presents the rankings for the realization of values by youth bias groups. As shown in the table, two out of the three most important values – honesty and sincerity – can be found in all cognitive age groups.

TABLE 4: The 10 most realized values of the 50+ consumers by youth bias groups

Values	Old identity (11.4%) Youth bias= +6.59			Real age (16.4%) Youth bias= -0.25			Young at heart (72.2%) Youth bias= -10.58		
	(N=32)			(N=46)			(N=203)		
	Mean	Standard deviation	Rank	Mean	Standard deviation	Rank	Mean	Standard deviation	Rank
Honesty	4.41	0.98	1	4.57	0.65	1	4.62	0.59	1
Sincerity	4.34	1.00	2	4.26	0.80	3	4.46	0.69	2
Family	4.31	1.18	3	4.43	0.81	2	4.30	0.95	5
Generosity	4.19	1.15	4	4.20	0.78	4	4.35	0.76	3
Independence	3.63*	1.18	7	3.91	1.07	7	4.32*	0.76	4
Wisdom	3.88	0.94	5	4.09	0.89	5	4.19	0.64	6
Modesty	3.84	1.17	6	3.89	0.80	8	4.17	0.79	7
Freedom	3.53*	1.14	9	4.02	0.93	6	4.14*	0.87	8
Order	3.59*	1.19	8	3.78	0.84	9	4.01*	0.83	10
Lust for life	3.00*	1.32	17	3.61*	0.95	15	4.04*	0.87	9

* Significant difference with a 95% reliability. The top three values of each group are in bold.

While the values of honesty and sincerity can be used almost interchangeably in English, have a slightly different meaning in the Hungarian context (Hofmeister-Tóth & Simányi, 2006). Both values are interpersonal, moral values. At the same time, honesty, representing a desire for predictable social relations, remains one of the most important values and the most realized value for older Hungarians, which indicates the importance of the common value system shared by all members of society.

The family value is ranked third in the “old-identity” and the “real-age” group, while generosity takes third place in the “young-at-heart” group.

It is worth noting that several values were realized to a significantly different extent by the youth bias age groups. People with the “old identity” realized values such as independence, freedom, order, and lust for life to a lesser extent than the “young-at-heart” group. Furthermore, the following values – outside the top 10 realized values – were significantly different for the “old-identity” and the “young-at-heart” groups: health, happiness, harmony, security, education, performance, pleasure, achievement, wealth, authority, originality, success, contentedness. Members of the “young-at-heart” group realized these values to a far greater extent.

TABLE 5: Values with the largest gap between importance and their realization by cognitive age groups

Values	Old-identity group			Real-age group			Young-at-heart group		
	Importance	Realization	Difference	Importance	Realization	Difference	Importance	Realization	Difference
Health	4.59	2.42	-2.17	4.76	3.27	-1.59	4.85	3.55	-1.30
Wealth / well off	4.57	2.42	-2.15	4.04	3.19	-1.15	4.12	3.22	-0.90
Harmony	4.28	3.38	-0.90	4.37	3.59	-0.78	4.58	3.88	-0.70
Pleasure	3.86	2.63	-1.23	3.38	3.25	-0.13	3.90	3.49	-0.41
Contentedness	4.48	2.94	-1.54	4.16	3.35	-0.81	4.47	3.65	-0.82
Happiness	4.69	3.13	-1.56	4.52	3.66	-0.86	4.66	3.81	-0.85
Lust for life	4.59	3.02	-1.57	4.43	3.58	-0.85	4.70	4.04	-0.66

Table 5 shows a substantial difference between the importance and realization of values for each cognitive age segment. The largest discrepancy between importance and realization was found for the following values: health, wealth / being well off, happiness and contentedness. This discrepancy is most pronounced in the case of the old-identifying group (health -2.17, wealth -2.15, happiness 1.56 and contentedness 1.54) and relatively the smallest for the young-at-heart group (health -1.3, wealth 0.90, happiness -0.85, contentedness -0.82). It is not surprising that health-related values are among the most important values for all three cognitive age groups, but unfortunately the realiza-

tion of these values lags considerably behind their importance.

4. DISCUSSION AND IMPLICATIONS

The objective of this research has been to gain a deeper understanding of the concept and relationship of self-perceived age and the importance and realization of personal values and their use as a variable in segmenting the older consumer market. Our study is the first to directly investigate the importance and realization of personal values and their relationship with cognitive age on a sample of older consumers

in Hungary. The correspondence between the realization and importance of values differed among the cognitive age groups between the values, with the highest consistency found for modesty, generosity, sincerity, and honesty.

According to our results, the cognitive age of the over-50 Hungarian population segment (52 years) was considerably lower than their actual age (58.93 years). Compared to the survey carried out almost 10 years ago (Hofmeister-Tóth, Kelemen & Piskóti, 2011), we may conclude that the current results for Hungary correspond more closely to previous results from other international studies. Thus, while older Hungarian respondents felt only 3.67 years younger than their actual age in 2010, they felt nearly seven years younger in 2018, which is similar to previous results obtained in the United States, Western Europe, China, and Japan (Cleaver & Muller, 2002; Sudbury & Simcock, 2009; Sudbury-Riley et al., 2011, 2015; Van Auken et al., 2006; Ying & Yao, 2010). This is likely due to the perception of belonging to the old-age category changing as people age (Ying & Yao, 2010). Nowadays, many Hungarian people aged 60 years or older are not willing to admit that they have joined the old-age club because they feel much younger. Among the 50+ generations, with the current trend of the Internet becoming the primary channel for obtaining information, more and more people also shop online albeit with many being helped by younger family members (Eastman & Lyer, 2005; eNet, 2018). Looking at the four dimensions of cognitive age, it can be concluded that our results are in line with previous international research on look age being the closest to the actual age (Mathur, Sherman & Schiffman, 1998; Sudbury & Simcock, 2009; Sudbury-Riley et al., 2011).

Overall, personal values of the older consumers have shown similarities to previous domestic studies, with health being the most important value for the 50+ respondents (Dernóczy-Polyák & Keller, 2017). Based on the examination of the relationship between cognitive age segments and personal values, the cognitive age groups of the 50+ respondents can be said to

differ significantly when it comes to rankings of the importance and realization of personal values. Regarding the realization of values, it is worth noting that values such as *independence*, freedom, order, and lust for life figure less prominently in the lives of people with “old identity” compared to the “young at heart”. It is also interesting to note that lust for life is significantly more important for the “young-at-heart” group.

4.1. Managerial implications

The finding that 72.2% of the respondents belonged to the “young-at-heart” group, which means they feel 10 years younger than their actual age, is believed to be a significant result. This fact, in addition to the similarity to Western European trends, also means that companies need to rethink their communication in addressing the silver market. For example, according to Jászberényi (2008) and Cszimadia, Győri Szabó, and Kovács (2015), people over 50 are primarily featured in advertisements for medicine and food. Hungarian advertisements often depict the elderly as sick or sad, or sometimes as the targets of bad jokes (Jászberényi, 2008). In our opinion, the “young-at-heart” group could not be successfully addressed with such advertising today. Consumers’ own perception of their age and personal values may interact with the product/brand “form” or “not-for-me” perception and perceived affinity between the self and the brand (Chang, 2008). The results of our research on the importance and realization of personal values and their relationship with cognitive age presented here have several implications for marketing and advertising practitioners. An understanding of which values are the most important to potential customers can provide useful information for decision-making on product positioning, branding, and communications. There appears to be a small cluster of values, such as happiness, health, and family, which may well be universal and can be used by marketers in product positioning and communications. Marketers may also benefit by gaining a better understanding of the large gaps between the importance and realization of key values and consider marketing actions which

would appeal to these consumers in closing such gaps by buying or consuming products and services related to them. This may apply to messages around values such as health, harmony, wealth, and contentedness and could be applied successfully through marketing promoting healthier life styles.

Hopefully, marketing and advertising experts will gradually come to realize the limitations of chronological age and the benefits of cognitive age, which enables a much better understanding of the senior market. From a marketing standpoint, the importance of our research is that it supports the possibility and necessity of investigating not only the importance of personal values but also their realization along with cognitive age (self-perceived age). Since most of the Hungarian older consumers perceive themselves to be younger than they are, businesses should not treat them substantially differently than middle-aged consumers in their marketing and communication strategies. When designing marketing and communication strategies for the older consumer market, businesses should understand their values, the gaps between the importance and realization of those values, and try to meet the special consumption needs of these new older consumers by developing new products and services that satisfy their need to feel younger and healthier.

4.2. Limitations and further research

One of the limitations of our research concerns online data collection, which excluded persons who are not active online. Eastman and Lyer (2005) found that seniors with a younger cognitive age use the Internet more than those with an older cognitive age. In the future, it would be worthwhile to ensure a wider presence of the Hungarian population in the survey by means of hybrid data collection. Additionally, the fact that this study was conducted in Hungary may also limit the applicability of the research results to other countries. Further limitations may relate to the size of youth bias groups, particularly the small sizes of our two youth bias groups. In future studies, larger group sizes can enhance the robustness of analysis and the generalizability of the findings.

Another limitation to be addressed by potential future research can relate to the method of measuring cognitive age and personal values. The application of different value scales in future studies may also add to knowledge in this field. Finally, further research is needed to investigate the relationship between measures of values in terms of importance and realization and other aspects of consumption behavior that are driven by personal value perspectives.

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