THE ASSOCIATION BETWEEN AGEISM AND SUBJECTIVE AGE OF OLDER PEOPLE IN EUROPE

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Abstract

Background: *Stigmata on older people in society remains a big problem in the whole of Europe. It can lead to a lower self-esteem and is even associated with higher suicide rates. This study questioned whether the identification with one's own age group is associated with an individual's perceived stigma on the group of 70+, which has been unexamined so far for European citizens.*

Method: *Data were derived from the European Social Survey (ESS). The sample consisted of 7878 persons aged 70+ stratified by three age groups. Group 1 = 70 – 75, Group 2= 76 – 80 and Group 3= >80. Independent T-test and Multiple regression analyses were used to examine influence of perceived stigmata in society on identification with one's own age group, controlled for the covariates gender, household's income, education, subjective general health, limitations in activities of daily life, marital status, having children living at home and having children not living at home.*

Results: *A significant association was found for Group 1 (70 – 75) and Group 2 (76 – 80). Participants of these age groups, who reported a higher perception of stigmata for older people (70+), identified themselves less with their age group. No significant effect was found for Group 3 (people 80+).*

Conclusion: *The results suggest that people older than 80 are less affected by stigmata of society on old age than younger groups (aged 70 - 80). Future research is necessary to examine the mechanisms which lead to a lower identification with their age of people aged 70 to 80.*

Keywords*: identification, stigma, subjective age, older people*

JEL Classification: J10

1. INTRODUCTION

"You're only as old as you feel." This expression illustrates that the understanding of age is much more than simply chronological. Subjective age reflects a person's own evaluation of age. It consists of factors such as recognition of chronological age, role involvement, health and physical limitations as well as awareness of the societal age norms (Hendricks, 1987). Research has shown that individuals tend to feel younger than their actual age (Barak and Stern, 1986; Kaufman and

Elder, 2002; Öberg and Tornstam, 2001; Uotinen, 1998; Westerhof et al. 2003). Barak and Stern (1986) found that the discrepancy between subjective age and chronological age increased in line with increasing age. However, in a longitudinal research design from Uotinen et al (2005) this increase in discrepancy was not found to be significant. Still, the higher this discrepancy between subjective and chronological age of an individual, the less the individual identifies with its chronological age group. In a pioneering study Neugarten, Moore, and Lowe (1965) found that old age begins around age 65. Still, there is evidence that the beginning of old age is perceived differently by individuals. So, people feel old at different ages, and this difference stems from the idea that individuals' perceptions of themselves is based not only on what age society defines as ''old'' but also on what happens in their life course (Sherman, 1994). Furstenberg (1989) suggests that people see themselves as old when they start to demonstrate the characteristics associated with old age like health decline and limitations in activities of daily life. Because subjective age provides a multidimensional view on the aging process it might explain some behavioral phenomena better than chronological age (Kastenbaum et al. 1972; Wilkes, 1992).

Explanations for people not identifying themselves with their chronological age group are often sought in social and cultural factors. Theories are developed mentioning societal stigmatization, changes in lifestyle, catalytic events and habit. For example, older people might perceive themselves younger because of the negative image associated with old age in society (Baum and Boxley, 1983), or by catalytic disruptions of one's life such as loss of health or mobility (Bultena and Powers, 1978). Another explanation is that people want to maximize wellbeing and are therefore inclined to identify themselves with younger age groups in society (Filipp and Ferring, 1989; Montepare and Lachman, 1989; Staats, 1996).

In addition, other variables found associated with subjective age, but evidence is still inconclusive. Some researchers have suggested that women perceive themselves as being younger than men (Bergtson et al 1977; Peters, 1971). However, other scientist did not find such a relation (Baum and Boxley, 1983; Bultena and Powers, 1978; Linn and Hunter, 1979). Similarly, in some studies important causal links have been found between subjective age and education (Bultena and Powers, 1978; Markides and Boldt, 1983), marital status (Markides and Boldt, 1983) and socioeconomic status (Bergtson, Kasschau and Ragan, 1977; Linn and Hunter, 1979). In other research these associations were not found between subjective age and education (Baum and Boxley, 1983;George, Mutran and Pennybacker, 1980), marital status (Baum and Boxley, 1983) and socioeconomic status (George, Mutran and Pennybacker, 1980). Also decrease in health status and increase in limitations in activities of daily life is found to be one of the strongest predictors of subjective age (Barrett, 2003; Braman, 2003; Furstenberg, 1989, 2002; Sherman, 1994), proving that as soon as an individual is experiencing worse health, it becomes more difficult for it to dissociate from old age. However, it can be expected that people who adapt to age changes maintain a youthful age identity although worsening health and limitations in daily activities occur (Baltes and Baltes, 1990; Brandtstädter, 2002). This expectation is supported by Freund and Smith (1999). They noted on the basis of findings in the Berlin Aging Study, that most of their old and very old participants continued to see themselves as active and present-oriented in spite of losses experienced in health and functioning. With the use of various cognitive strategies, people perceive themselves younger although disabilities occur and health declines (Heckhausen, 2002; Heckhausen and Krueger, 1993). Strategies such as making selective social comparisons allow an aging individual to overestimate other people's problems and to see its own situation in a more positive way. Because people use these strategies, the commonly held view of the aging process

might be inaccurate because it no longer corresponds to the individual's experience of growing older. This often reflects in a youthful subjective age (Barnes-Farrell and Piotrowski, 1989).

Older people are often the victims of ageism, stereotyping and discrimination based on age (Butler, 1987; Nelson, 2002). We question whether the impression people have of the amount of stigmata in society influences the sense of identification with their own chronological age group. Therefore our hypothesis is that the stronger the people's impression of ageism on their age group in society is, the less they identify themselves with their own age group. Which possibly explains the discrepancy between subjective and chronological age.

2. METHOD

2.1 Sample and data

Data were derived from the European Social Survey (ESS, 2008b), which is an ongoing survey designed to collect data on the attitudes, beliefs and behavior patterns of Europe's diverse populations. The fourth wave collected in 2008 includes data from 31 European countries. In terms of sampling, random (probability) samples with comparable estimates based on full coverage of the eligible residential populations aged 15+ were used. The minimum required sample size is 1500 or 800 in countries with populations less than 2 million. The response rate varies between countries but the target response rate is 70% (ESS, 2008a). For the present study only people aged 70+ were selected, which resulted in a total study sample of 7878 people. The sample was stratified by age into three groups: Group 1= 70 -75 (N=3767), Group 2= 75 -80 (N=2183), Group 3= >80 (N=1928).

2.2 Variables

Identification with own age group was measured with one question: 'To what extent do you identify yourself with your age group'. Answers were coded on a 11-point Likert scale (Likert, 1932) ranged from 0 (very weak sense of belonging) to 10 (very strong sense of belonging). A higher identification with own age group indicates a lower discrepancy between subjective and chronological age. As an independent variable, opinion about the stigmata of society on older people, an index of eight questions was used (Cronbach's alpha = 0.6). The sum of the questions was divided by eight for later interpretation of the results. These questions covered the participants opinion about the stigmata of society on people 70+ viewing them as friendly, competent, having high moral standards, with respect, envy, pity, admiration or with contempt. Answers were coded on a 5-point Likert scale range from 0 (not at all likely to be viewed that way) to 4 (very likely to be viewed that way). Because in the questions about pity and contempt higher scores indicated a more negative view on older people, we recoded such that 0 means very likely to be viewed that way and 4 means not at all likely to be viewed that way.

Control variables included gender, education and income. Years of fulltime education was measured by years spent in an educational system. Income was measured by a scale from 1 to 10 representing the deciles of the population´s income. Labels were adjusted to the different incomes of the countries. Marital status was included and dichotomized by having a partner or not having a partner. Parenthood was divided into three groups: having children living at home, ever had children living at home and never had children as the reference group. Also subjective general health was included, coded on a 5-point Likert scale range from 1 (very good) to 5 (very bad). Limitations of daily activities was coded on a 3-point Likert scale range from 1 (no limitations) to 3 (a lot of limitations).

2.3 Analyses

Independent T-test's were used to measure mean group differences concerning the identification people had with their age group. Multiple regressions analyses were used to examine to what extent identification with one's own age group can be explained by differences in perceived stigmata. While controlling for age, gender, household's income, education, subjective general health, limitations in activities of daily living, marital status and parenthood.

3. RESULTS

Household's netto income and years of fulltime education is higher in the younger age group compared with age Group 2 (76 -80) and age Group 3 (>80). Also subjective general health and limitations in activities of daily living is slightly better in Group 1. As expected, the highest percentage of having a partner is in Group 1 (53.8%). Group 2 is 44.4% and Group 3 is 29.3%. More than 10% of the people in all age groups still have children living at home. In Group 1, 65% of the people have children not living at home, compared with 63.5% in Group 2 and 59.0% in Group 3.

In Table 2 the differences between the three age groups are shown. Between Group 1 and 2 no significant differences in the gender ratio were observed (ΔM = -0.00, SE 0.01, Sig=.790). Between Group 1 and 3 (ΔM=-0.04, SE=0.01, Sig=.002) and Group 2 and 3 (ΔM=-0.04, SE=0.02, Sig=.013) significant differences in the gender ratio were observed. Observations were that household's netto income was significantly different between Group 1 and 2 (ΔM=0.27, SE=0.07, Sig=.000) and Group 1 and 3 (ΔM=0.42, SE=0.07, Sig=.000), this significant difference was not observed between Group 2 and 3 (ΔM=0.15, SE=0.08, Sig=.073). For years of fulltime education the same differences between groups were observed. Group 1 and 2 and Group 1 and 3 were significantly different (Sig=.000), but no significant differences were found between Group 2 and 3 (ΔM=0.08, SE=0.14, Sig=.567). Differences in subjective general health were observed between Group 1 and 2 (ΔM=-0.14, SE=0.03, Sig=.000) and Group 1 and 3 (ΔM=-0.18, SE=0.03, Sig=.000). Between Group 2 and 3 these differences were not significant any more (ΔM=-0.04, SE=0.03, Sig=.195). Differences in limitations in activities of daily living and marital status were highly significant between all groups (Group 1 - 2, Sig=.000, Group 1 – 3, Sig=.000, Group 2 – 3, Sig=.000). Being a parent and having children living at home was significantly different between Groups 1 – 2 (ΔM=-0.02, SE=0.01, Sig=.033) and Groups 2 – 3 (ΔM=-0.03, SE=0.01, Sig=.016). Between Group 1 and 3 this difference was not significant anymore (ΔM=-0.01, SE=0,01 Sig=.505). Being a parent but not having children living at home was not significantly different between Groups 1 and 2 (ΔM=0.01, SE=0,01 Sig=.262), but was significantly different between Groups 1 – 3 (ΔM=0.06, SE=0,01 Sig=.000) and Groups 2 - 3 (ΔM=0.05, SE=0,02 Sig=.003).

In Table 3 the association between the impression people have of the stigma on people aged 70+ in society and the identification with their own age group is shown by age. In Model 1 no significant effect of perceived stigma of society on people aged 70+ on people's own group identification was observed for all age groups. In model 2 gender, household's netto income and years of education completed were added in the model. Observations were that the effect of perceived stigma in society became significant for the age group 70 – 75 (Sig≤ .05). Households netto income and years of education completed significantly influenced this association for both Group 1 and Group 2. In model 3 is gender, household's netto income, years of education completed, subjective general health, limitations in activities of daily life, marital status and parenthood with or without

children living at home were added. People between 70 and 75 had significant lower identification with their age group if their impression of societies stigmata on people 70+ was higher (B=0.30, SE= 0.48, β=.066, Sig≤ .05) when adding the covariates. Years of education completed was significantly influencing the association (Sig≤ .01) and limitations in activities of daily life also influences the association significantly (Sig≤ .05). People between 76 and 80 also had significant lower identification with their age group when their impression of societies stigmata on 70+ was higher (B=0.36, SE= 0.15, β=.077, Sig≤ .05). Years of education completed and limitations in activities of daily life significantly influencing the association (Sig≤ .05). Also household's total netto income was found to influence the association significantly (Sig≤ .05). Within Group 3 no significant association between identification with the own age group and the impression of societies stigmata on 70+ was observed. Subjective general health and parenthood with children living at home influenced the association highly significantly (sig≤ .01).

4. DISCUSSION

This study questioned whether an individual's perceived stigma on the group of 70+ has an influence on the group identification of those 70 and older. A significant association between perceived stigma of society on the group 70+ and people identification with one's age group was found for Group 1 (70 – 75) and Group 2 (76 – 80). Participants of these age groups, who reported a higher perception of stigmata for older people (70+), identified themselves less with their age group. No significant effect was found for Group 3 (people 80+). Because in the European Societies becoming old is often related with a negative brand (Butler, 1987; Nelson, 2002), many older people avoid being associated with this group (Baum and Boxley, 1983). One possible coping strategy for doing this is identifying themselves with younger age groups resulting in higher discrepancy between subjective and chronological age. Results from this study support this idea by showing that the higher an individual´s perception is of this negative brand in society, the less it identifies itself with its age group.

For the youngest two age groups, Group 1 and Group 2, observations were that this decrease of identification with their age group because of perceived stigmata was influenced by education and limitations of daily activities. Showing that the longer people had been educated, the less they identified with their age group. Limitations in daily activities indicated that the more people experience limitations in daily activities, the more they identify with their age group. For Group 2 also the household's netto income proved to be important. Showing that the higher a household's netto income is, the less people identify with their age group.

This study proved that people in Group 3 were not influenced by stigmata in society when asked whether they identified with their own age group. They perceived more limitation in daily activities but these limitations were not increasing nor decreasing their identification with own age group as in the lower age groups (70 – 80). An explanation is that when people have a curtain age, they accept having limitations "because of their age". The worse people above 80 perceive their general health, the higher they identify themselves with their age group. When people in Group 3 had children living at home, their identification with their age group decreased.

Barak and Stern (1986) found that with increasing age the discrepancy between subjective and chronological age increases in line with chronological age. This study found that after a certain age (80+) this discrepancy was not found to be influenced by stigmata of society, which is the case for younger age group. Because of this reason, and supported by longitudinal study results of Uotinen

(2005), it can be questioned whether discrepancy between subjective and chronological age increases in line with chronological age.

The possible reason why people above 80 are not influenced by the perceived stigmata whereas people below 80 are is still uncertain and needs further research. Results from Barret (2003), Braman (2003), Furstenberg (1989, 2002) and Sherman (1994), which stated that lower general subjective health and more limitations in daily activities influence a person's identification with their own age, resulting in a lower discrepancy between their subjective and chronological age are also supported by our results. However, this study showed that this influence of subjective general health and limitations of daily activities on identification with own age group is different per age group. Subjective general health was only significantly associated with identification with one's own age group in the group 80+. They seem to accept health decline coming with age. Possibly the same mechanism explains why people 80+ are not influenced by perceived stigmata from society. People 80+ might agree with the stigmata of society and therefore identify more with their age group. Another explanation is that people 80+ just do not care about the stigmata in society. They accept that there is a stigmata, and accept that they are 80+ and therefore identify themselves with their age group. A third possible explanations is that one part of the stigmata is that of being useless, therefore people aged 70 - 80 still identify themselves with a working role, where people 80+ have become used to their role of a retiree.

Some comments on the design of the present study have to be made. Firstly, the study sample is derived from 31 different countries, but does not distinguish between nationalities of the participants. As a result of this, cultural factors were not taken into account. For example differences in the social politics and between welfare states could have an impact on the stigmatization of older people and therefore might influence the perceived stigmata older people experience. This problem could have been solved by stratification by country. However this would have reduced the sample size to such a degree that calculations were not reliable anymore. Therefore making implications by country should not be done. Secondly, perception of stigmata in society was derived from 8 different variables and only people giving valid answers were included in the study. Still, 7878 participants were included, equally distributed by countries. Therefore the study sample remained large enough. Contrary to measurements in other studies, measurements were done about identification with own age group instead of subjective age. However, the less older people identify with their age group, the higher the discrepancy between subjective and chronological age is.

To conclude, results from this study point out the need for future research concerning the mechanisms which lead to a lower identification with the age group. With the use of future research more predicting variables can be found concerning the influence of perceived stigmata of older people.

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Table 1. Characteristics of study sample by age group (observed data)

	Group 1 *(N= 3767)*		Group 2 *(N= 2183)*		Group 3 *(N= 1928)*	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Age (years)	72.3	1.7	77.9	1.4	84.6	3.3
Gender (Women %)	58.8		59.1		62.9	
Household's total netto income (0- 10)	3.8	2.3	3.6	2.2	3.4	2.2
Missing	*1031*		*565*		*546*	
Education (years fulltime education completed)	9.6	4.5	8.7	4.5	8.6	4.6
Missing	*67*		*45*		*55*	
Subjective general health (1 – 5)	2.9	0.9	3.1	1.0	3.1	1.0
Limitations in activities of daily living (1 – 3)	1.6	0.7	1.8	0.7	1.9	0.8
Marital status (% having partner)	53.8		44.4		29.3	
Parenthood (% Children living at home)	13.6		11.7		14.3	
Parenthood (% Children not living at home)	65.0		63.5		59.0	

S.D.= Standard Deviation

Table 2. Mean differences between the different age groups

	Groups 1 - 2				Group 1 - 3				Group 2 - 3			
	Δ Mean *(SE)*	t	df	Sig.	Δ Mean *(SE)*	t	df	Sig.	Δ Mean *(SE)*	t	df	Sig.
Age	*-5.56 (0.04)*	-135.4	5269	0.00	*-12.26 (0.08)*	-153.8	2481	0.00	*-6.68 (0.08)*	-82.9	2553	0.00
Gender	*-0.00 (0.01)*	-0.3	5943	0.79	*-0.04 (0.01)*	-3.0	3949	0.00	*-0.04 (0.02)*	-2.5	4061	0.01
Household's total netto income	*0.27 (0.07)*	3.8	3465	0.00	*0.42 (0.07)*	5.7	2875	0.00	*0.15 (0.08)*	1.8	2998	0.07
Education (years fulltime education completed)	*0.92 (0.12)*	7.5	5836	0.00	*1.00 (0.13)*	7.8	5571	0.00	*0.08 (0.14)*	0.8	4009	0.57
Subjective general health	*-0.14 (0.03)*	-5.3	5939	0.00	*-0.18 (0.03)*	-6.4	3709	0.00	*-0.04 (0.03)*	-1.3	4103	0.19
Limitations in activities of daily living	*-0.14 (0.02)*	-7.3	5921	0.00	*-0.28 (0.02)*	-13.6	5667	0.00	*-0.14 (0.02)*	-5.8	4090	0.00
Marital status	*-0.08 (0.01)*	6.3	4574	0.00	*0.24 (0.01)*	17.9	4215	0.00	*0.15 (0.01)*	10.2	4104	0.00
Parenthood (% Children living at home)	*-0.02 (0.01)*	2.1	4797	0.03	*-0.01 (0.01)*	-0.7	5693	0.51	*-0.03 (0.01)*	-2.4	3940	0.01
Parenthood (% Children not living at home)	*0.01 (0.01)*	1.1	4523	0.26	*0.06 (0.01)*	4.4	3781	0.000	*0.05 (0.02)*	3.0	4023	0.00

df = degrees of freedom, SE = standard error, Δ Mean = mean difference, Sig = significance

Table 3. Multiple regression analysis, the association between impression of stigmata in society and one's own group identification by age group

	Group 1		Group 2		Group 3	
	B *(SE)*	*β*	B *(SE)*	*β*	B *(SE)*	*β*
Model 1						
Impression of stigma in society	0.17 *(0.10)*	0.038	0.23 *(0.13)*	0.052	-0.06 *(0.15)*	-0.003
Model 2						
Impression of stigma in society	0.28 *(0.12)*	0.019*	0.26 *(0.15)*	0.056	0.01 *(0.18)*	0.003
Gender	-0.03 *(0.12)*	-0.006	0.12 *(0.15)*	0.024	-0.21 *(0.17)*	-0.049
Household's total netto income	-0.06 *(0.03)*	-0.060*	-0.09 *(0.04)*	-0.089**	-0.03 *(0.04)*	-0.026
Education (years fulltime education completed)	-0.04 *(0.01)*	-0.079**	-0.05(0.02)	*-0.094***	-0.01 *(0.02)*	-0.013
Model 3						
Impression of stigma in society	0.30 *(0.12)*	0.066*	0.36 *(0.15)*	0.077*	0.21 *(0.18)*	0.046
Gender	-0.04 *(0.12)*	-0.009	0.07 *(0.16)*	0.017	-0.26 *(0.19)*	-0.060
Household's total netto income	-0.05 *(0.03)*	-0.047	-0.08 *(0.04)*	-0.077*	0.04 *(0.05)*	0.038
Education (years fulltime education completed)	-0.04 *(0.01)*	-0.076**	-0.04 *(0.02)*	-0.084*	0.00 *(0.02)*	0.008
Subjective general health	0.05 *(0.08)*	0.020	0.11 *(0.10)*	0.050	0.42 *(0.11)*	0.190**
Limitations in activities of daily life	0.20 *(0.10)*	0.064*	0.30 *(0.12)*	0.103*	0.03 *(0.13)*	0.012
Marital status	0.04 *(0.13)*	0.009	0.01 *(0.16)*	0.003	-0.18 *(0.21)*	-0.038
Parenthood (children living at home)	0.16 *(0.21)*	0.022	0.14 *(0.27)*	0.018	-0.82 *(0.31)*	-0.113**
Parenthood (children not living at home)	0.10 *(0.14)*	0.022	-0.11 *(0.17)*	-0.023	-0.19 *(0.18)*	-0.043

SE = standard error of the beta, *β = beta , ,* * p≤ .05, ** p≤ .01
Model 2 was adjusted for gender, household's total netto income and education (years of fulltime