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MASTERY BELIEFS AND PRODUCTIVE LEISURE ACTIVITIES IN THE THIRD AGE

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In the present study we examined the associations between beliefs of mastery and 2 important kinds of productive activities in the third age; participation in education, and volunteering. Within the broad concept of mastery beliefs, differential aspects of self-regulatory cognitions were studied, that is, self-esteem, control beliefs, effort to complete behavior, persistence in the face of adversity, and willingness to initiate behavior. Effects of these aspects on carrying out activities were investigated and controlled for the impact of some situational and demographic factors. Findings suggest that a general sense of mastery, as reflected in self-esteem and control beliefs, is not a precondition for study and volunteering work in the third age. However, special components of self-efficacy turned out to play a part. Willingness to initiate behavior emerged as a strong predictor for taking on educational activities, as was persistence in the face of adversity for being active as a volunteer. In the discussion, possibilities were looked at for how better to match productive activities in later life to personal dispositions.

Keywords: third age, mastery beliefs, productive activities.

In the present study we attempted to establish whether or not, and if so to what extent, there is an association between two phenomena which are of considerable importance in determining the life style and life plans of older people: beliefs of mastery and activities in the third age. It has become accepted practice among life-span psychologists to divide the life stages following youth and working life into the third and the fourth age. The third age covers the years between 55 and 75, designated by the World Health Organization as *young old age*. This is the period in a person's life when he/she gradually becomes free from the responsibilities hitherto imposed by work and family whilst at the same time, as a rule, still being healthy. However, if the person wishes to remain active in later life, he/she will have to make this his or her own responsibility. Activities in the third are do not

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"happen" to a person because of social roles or timetables, but are, each in their own right, the result of personal preferences and dispositions. Even though senior citizens make up a considerable proportion of the population, we know little regarding the determinants of their life style and self-actualizing activities.

We investigated whether several aspects of mastery beliefs play a part, because self-regulatory cognitions in this field are assumed to be important determinants for personal goals and actions. In the last few decades western society has emphasized the role of the sense of mastery (Bandura, 2000). The secularized and individualized zeitgeist goes hand-in-glove with high value being placed on personal confidence in one's capability to affect outcomes. According to Schulz and Heckhausen (1996) the kind of activity chosen will largely be determined by whether the person feels that he or she can exercise control. It is universally accepted that high performance tasks demand high mastery beliefs, but little is known about the role of mastery beliefs for voluntary activities in later life when the social environment no longer expects top-rate performance. Hence this issue was addressed in our paper.

ACTIVITIES IN THE THIRD AGE

In his lifespan developmental theory Havighurst, (1961) states that the finding of new activities to fill the increasing amount of free time is an essential developmental task for the young old, in preparation for older age. The third age can offer special opportunities for personal and interpersonal enrichment; sociology and adult education construct models of "productive age" (cf. Kohli & Künemund, 1996). These are based on the expectation that an active aging population might search for new roles and civic responsibilities, for example in volunteer work. Benefits can be expected both on an individual level and on a societal level: on the individual level, the person can still develop his/her potential for further personal growth, while on a societal level, the young old can provide valuable contributions, provided they search for- and find- appropriate activities. It is true that this age group makes contributions to society by supporting and helping children, grandchildren, and ailing parents (Kohli & Künemund, 2000), but in the public sphere they are almost invisible.

Time budget studies show that additional time gained when growing older is being used infrequently for seeking out new tasks and challenges (Breedveld & van den Broek, 2001). Free time gained is generally spent predominantly in two ways: firstly, people allow themselves more time to carry out their daily routines, secondly, they treat themselves more to life's little pleasures as evident particularly in the increasing desire to travel and go on outings (Timmer, Bode, & Dittmann-Kohli, 2003). In this study we wanted to center on enriching activities which are visible in the public sphere, so we selected participating in adult education

and volunteer work. Participation in educational activities on average has already decreased in midlife even though there is a rich palette of all manner of courses on offer for senior citizens (Breedveld & van den Broek). The same is true for voluntary work. Society urgently needs voluntary effort on a broad front. Here as well, however, statistics show that voluntary work is more often performed whilst people are still in paid employment rather than after retirement (Kohli & Künemund, 2000). Given the advantages these activities can provide for both the individual and for society, it is worthwhile investigating which factors determine being active in these fields. We presupposed that those individuals who are active in this way have, among other special attributes, higher mastery beliefs than those who are not.

MASTERY BELIEFS

We used *mastery beliefs* as an overarching term to describe *feeling able to affect outcomes,* but our aim was to examine different aspects of mastery and their association with productive activities in older age. Furthermore, we were interested in the person's attributes and dispositions, rather than in specialized skills, talents or expertise in a particular domain.

Differential aspects of mastery beliefs

On the most general level, the concept of *self-esteem* can be considered as *an indicator of beliefs of acting, or having acted, adequately and successfully.* Measurement instruments of self-esteem (Rosenberg, 1965; Tempelman, 1987) assess the degree of feeling sure, useful, and satisfied about oneself, and looking positively at oneself. Assessments of self-esteem include predominantly the evaluations of one's own general behavior, and refer to the agent and his capacities in general.

The concept of *control beliefs* is slightly more specific. It deals with *contingencies between agent and outcomes*. Rotter (1966) introduced the control concept in order to investigate whether a person considers outcomes controllable by him/herself, that is, whether the locus of control is internal or external. Skinner (1996) distinguishes between different kinds of agents, means, domains, time perspectives, subjective, and objective control. The concept of *control* examined in our research as one aspect of mastery beliefs reflects *the degree of perceived internal control over outcomes in general.* The kind of event and the kind of action are not taken into account.

An aspect of mastery beliefs which centers on behavioral characteristics concerns the efficacy of one's own acting. This concept of self-efficacy developed by Bandura has proved to be an important indicator of the person's beliefs of mastery (Bandura, 1997, 1999). It consists of three components reflecting special attributes of personality: willingness to initiate behavior, persistence in the

face of adversity, and effort to complete behavior. Willingness to initiate behavior concerns the willingness to embark on challenging activities; persistence in the face of adversity deals with a person's tenacity when being confronted with problems; and effort to complete behavior focuses on a person's being accustomed to

seeing things through to the end in spite of possible feelings of aversion. The subscales of self-efficacy refer to personal experiences concerning one's own behavior which are generalized by the person and will also affect his or her future actions. The three components of self-efficacy represent different personal means to master situations and to affect outcomes.

The five aspects of mastery beliefs described, that is, self-esteem, general beliefs of control, and the three components of self-efficacy, are genuine characteristics of personality; they do not refer to particular talents or competence in a special field of activity. These five aspects were investigated in our study.

AIM OF THE STUDY

We wanted to gain better insight into the special characteristics of those people in the third age who participate in the productive activities of study and volunteering. Since, in our individualized society, personal experiences and beliefs of mastery are essential factors characterizing one's personal lifestyle choices, it is important to know to what extent and in which ways activities in the third age depend on mastery beliefs. We expected that the young old who participate in educational and voluntary activities would score higher on self-esteem, general control beliefs, effort to complete behavior, persistence in the face of adversity, and willingness to initiate behavior, as compared to those who do not participate in these activities.

In addition to the psychological characteristics of mastery beliefs as possible incentives in the pursuit of special activities, there are further influencing factors. In this study we controlled for several basic situational and demographic factors, including health, the precise age within the third age, gender, the level of education, income, and the degree of urbanization- that is, the size of the community in which the participants in the study lived. Poorer health and older age were supposed to affect the energy necessary for productive activities. Gender may play a role in the choice of third age activities because of the different work history of men and women in the older cohorts. With respect to education and income, earlier research suggests that those who are more highly educated and those who are wealthier have more plans for the third age (Timmer, Bode, & Dittmann-Kohli, 2003). Since we made use of a sample stratified on degree of urbanization, we expected that populations which were either largely urban or largely rural might have different preferences for, and possibilities of, being active in later life.

We studied a representative sample of the Dutch population which had been gathered for the Longitudinal Aging Study of Amsterdam (LASA; Deeg, Knipscheer, & van Tilburg, 1993). LASA is an interdisciplinary project initiated to investigate predictors and consequences of physical, cognitive, emotional, and social functioning in the Dutch population of those aged 55 years and older. The data used in this study were collected in face-to-face interviews.

The most recent interviews and examinations at our disposal took place in 1998/99, when the youngest participants were 61 years old. For this study on behavior in the third age, participants up to the age of 75 were included. In order to ensure a sample capable of valid self-assessments, we included only people without cognitive impairment. Cognitive impairment was indicated by a score higher than 23 on the Mini Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975). The selected sample consisted of 1094 persons aged 61-75 years (M = 64.5, SD = 5.58), of whom 505 were male and 589 were female. Among the sample 64.7% were living with a partner and 35.3% were living alone. The majority (99.1%) were Dutch nationals.

MEASURES

Activities

The respondents stated whether or not they took part in educational and voluntary activities; thus participation was logged as a yes/no response. Educational activities were taken to include education leading to qualifications, courses concerning general knowledge, emancipation, creativity courses, language courses, and an “other” category. Since the various courses had relatively small numbers of participants, all educational activities were subsumed under the single variable "study". With respect to volunteering, two variables could be constructed, because the respondents indicated two kinds of engagement: administrative work (e.g, management tasks or serving on steering boards) and practical volunteering (work in the field).

Aspects of mastery beliefs

All aspects of mastery beliefs were examined by instruments which proved to be adequate for use in an elderly population (Smits, Deeg & Bosscher, 1995). In all instruments the beliefs were assessed on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*. For analysis purposes negative answering categories were reversed, so that high scores reflected high beliefs in the respective aspect of mastery.

Self-esteem was assessed with the aid of four items (Tempelman, 1987), based

on the concept of self-esteem developed by Rosenberg (1965):

I am satisfied with myself.
I am quite sure of myself.
Sometimes I feel useless.
I look positively at myself.

The internal consistency of the scale measured by Cronbach's alpha reached .67.

In the LASA survey control-beliefs were assessed via a 5-item version of the mastery scale constructed by Pearlin and Schooler (1978). For this scale Cronbach's alpha reached .69. The items are:

I have little control about things that happen to me.
Some of my problems I can't seem to solve at all.
There is not much that I can do to change important things in my life.
I often feel helpless dealing with the problems of life.
Sometimes I feel like a plaything of life.

Sherer et al. (1982) constructed a scale for the measurement of self-efficacy beliefs, including subscales for the measurement of the three components. On the basis of a pilot study the instrument was abbreviated by Bosscher, Laurijssen, and De Boer (1992). Effort to complete behavior, persistence in the face of adversity, and willingness to initiate behavior are subscales of self-efficacy tested and used in the LASA survey (Bosscher & Smit, 1998).

Willingness to initiate behavior (Cronbach's alpha = .64) is assessed by reaction to the following statements:

If something looks too complicated I will not even bother to try it.
I avoid trying to learn new things when they look too difficult.
When trying to learn something new I soon give up if I am not initially successful.

Assessing persistence in the face of adversity (Cronbach's alpha = .64) is stimulated by the statements

When I set important goals for myself, I rarely achieve them.
I do not seem capable of dealing with most problems that come up in my life.
When unexpected problems occur, I don't handle them very well.
I feel insecure about my ability to do things.

Assessments of effort to complete behavior(Cronbach's alpha = .63) are measured by the following items:

When I make plans, I am certain I can make them work.
If I can't do a job the first time, I keep trying until I can.
When I have something unpleasant to do, I stick to it until I finish it.
Failure makes me try harder.

Situational and demographic characteristics

We controlled for age, gender, health, education, income, and degree of urbanization of the place of residence. The respondents subjectively assessed health on a five-point scale, ranging from *excellent* to *poor*. Level of education ranged from 1 (*elementary school, not completed)* to 9 (*university education*). The variable "income" takes into account the proportional household income of the person per month and was measured in 12 categories, ranging from 455 to more than 2270 Euro. Degree of urbanization was indicated by the number of addresses per square kilometer within a one-kilometer radius of the respondent's address.

Work/retirement status was not included in our study since, firstly, in the Netherlands most of the older women of the age range under examination had never been in the workforce, and secondly, in the Dutch population around the year 2000 few people older than 60 were still working. Furthermore, there is such a variety of preretirement facilities that classification would result in fragmentation of the sample into insignificantly small groups.

Statistical analyses

First mean scores of self-esteem, general mastery beliefs, willingness to initiate behavior, persistence in the face of adversity, and effort to complete behavior were compared for nonparticipants and participants in the activities under study. In a second step logistic regression analyses were carried out in order to find independent predictors for the three kinds of activities. In the regression model, we also included the demographic and situational variables age, gender, subjective health, level of education, income and degree of urbanization.

RESULTS

MEANS

Study

As is shown in Table 1, the participants in adult education (N = 149) indicated higher self-esteem (t[1092] = 2.87**), willingness to initiate behavior (t[1092] = 6.87***), and persistence in the face of adversity (t[1092] = 3.75)***, than did those who do not participate. Participants and nonparticipants, however, did not differ significantly with respect to control beliefs and effort to complete behavior.

TABLE 1
PARTICIPATION VERSUS NONPARTICIPATION: COMPARISON OF MEANS IN MASTERY ASPECTS

Study						Volunteering: Administrative work					Volunteering: Practical work				
	Participants *N*=149		Non-participants *N*=945		T-value *(df)*	Participants *N*=204		Non-participants *N*=890		T-value *(df)*	Participants *N*=360		Non-participants *N*=734		T-value *(df)*
	M	*SD*	*M*	*SD*		*M*	*SD*	*M*	*SD*		*M*	*SD*	*M*	*SD*	
Self-esteem (range 6-20)	15.44	2.21	14.41	4.28	2.87** (1092)	15.66	1.98	14.30	4.38	4.36*** (1092)	15.47	2.04	14.10	4.70	5.30*** (1092)
Control beliefs (range 5-25)	18.03	3.23	17.75	3.41	0.93 (1092)	18.33	3.27	17.65	3.40	2.58* (1092)	17.87	3.14	17.74	3.51	0.61 (1092)
Willingness to initiate behavior (range 3-15)	9.96	2.47	7.97	3.39	6.87*** (1092)	9.07	2.69	8.05	3.46	3.95*** (1092)	8.89	2.59	7.92	3.63	4.53*** (1092)
Persistence in the face of adversitiy (range 5-20)	15.05	2.19	13.66	4.47	3.75*** (1092)	15.50	2.30	13.47	4.51	6.26*** (1092)	14.90	2.45	13.32	4.83	5.83*** (1092)
Effort to complete behavior (range 3-15)	19.25	2.26	18.45	5.13	1.89 (1092)	19.48	2.24	18.34	5.25	3.02** (1092)	19.35	2.32	18.16	5.66	3.82*** (1092)

TABLE 2
INDEPENDENT EFFECTS OF MASTERY ASPECTS ON ACTIVITIES LOGISTIC REGRESSIONS

	Study				Volunteering Administrative work				Volunteering Practical work			
Model 2	B	S.E.	Exp(B)	Sig.	B	S.E.	Exp(B)	Sig.	B	S.E.	Exp(B)	Sig.
Self-esteem	0,08	0,06	1,08	0,19	0,01	0,05	1,01	0,81	0,05	0,04	1,05	0,22
Control beliefs	-0,04	0,04	0,96	0,30	-0,04	0,03	0,97	0,31	-0,05	0,03	0,93	0,06
Willingness to initiate behavior	0,19	0,04	1,21	0,00	-0,05	0,04	0,95	0,15	0,01	0,03	1,01	0,86
Persistence in the face of adversity	0,00	0,05	1,00	0,96	0,19	0,05	1,21	0,00	0,08	0,04	1,09	0,03
Effort to complete behavior	-0,09	0,04	0,92	0,06	-0,04	0,04	0,96	0,26	-0,06	0,03	0,94	0,04
Subjective health	-0,04	0,13	0,97	0,78	-0,01	0,11	0,99	0,90	-0,16	0,09	0,85	0,07
Age	-0,03	0,02	0,97	0,21	-0,05	0,02	0,96	0,02	-0,05	0,02	0,95	0,00
Gender	0,54	0,20	1,71	0,01	-0,60	0,18	0,55	0,00	-0,15	0,14	0,86	0,30
Level of education	0,20	0,05	1,23	0,00	0,22	0,05	1,24	0,00	0,09	0,04	1,09	0,03
Income	0,01	0,03	1,01	0,67	0,00	0,03	1,00	0,89	-0,02	0,02	0,98	0,38
Level of urbanisation community	0,03	0,03	1,03	0,40	-0,06	0,03	0,94	0,03	-0,06	0,02	0,94	0,01
Constant	-2,42	1,87	0,09	0,20	0,81	1,66	2,24	0,63	3,64	1,35	38,08	0,01
-2 log likelihood	767.78				934.03				1290.24			

Administrative work

Those participating in administrative work (N = 203) showed, in comparison with those who do not, differences with respect to all aspects of mastery: the scores were significantly higher on self-esteem (t[1092] = 4.36***), control beliefs (t[1092] = 2.58*), willingness to initiate behavior (t[1092] = 3.95***), persistence (t[1092] = 6.26***), and effort to complete behavior (t[1092] = 2.58**).

Practical volunteering work

The volunteers in practical work (N = 360) indicated higher self-esteem (t[1092] = 5.30***), willingness to initiate behavior (t[1092] = 4.53***), persistence (t[1092] = 5.83***), and effort (t[1092] = 3.82***) than did those who are not active in this field; however significant differences in control beliefs were not found.

LOGISTIC REGRESSIONS

Independent effects of the respective aspects of mastery on participation or nonparticipation in fields of activities were examined by means of logistic regression analyses. Additionally, we controlled for possible effects of demographic and situational factors. The results are shown in Table 2.

Study

When controlling for the other aspects of mastery and for demographic and situational factors, willingness to initiate behavior showed a positive effect and thus emerged as an important precondition for study in young old age. Effort to complete behavior also seemed to be important. Self-esteem, general mastery beliefs, and persistence in the face of adversity did not appear to be associated with educational activities. However, gender and level of education had an effect: it was mainly women and those with a higher level of education who signed up for courses. The precise age within the age range, subjective health, income or degree of urbanization were not found to be influential factors in the uptake of education courses.

Volunteering: Administrative work

Among the aspects of mastery only persistence in the face of adversity emerged as a significant predictor of doing administrative work after controlling for the other variables. However, gender, education, age, and urbanization also showed effects. It was predominantly men and those with a higher educational level who took on such work. Furthermore, it was more likely that people in smaller communities would do this type of work. Within the age group under study these activities decreased with increasing age. Subjective health and income, however, did not show a significant effect.

Volunteering: Practical work

Persistence in the face of adversity emerged as a predictor of practical voluntary work among the aspects of mastery beliefs, too. However, effort to complete behavior also showed a positive effect. As with administrative work, the readiness to commit to practical volunteer work depended on the level of education, decreased with increasing age, and was higher in smaller communities. There was no significant gender effect.

DISCUSSION

In the present study we examined associations between two important kinds of productive activities in the third age; participation in education and volunteering, and different aspects of mastery beliefs. Our findings suggest that a general sense of mastery - as reflected in self-esteem and control beliefs - is not a precondition for study and volunteering work in the third age. However, special components of self-efficacy beliefs turned out to play a part. Willingness to initiate behavior emerged as a strong predictor for taking on educational activities, while persistence in the face of adversity was a strong predictor for taking on volunteering, both in the administrative and in the practical domain.

What can we conclude from our findings? Apparently participation in education does not require strong beliefs of mastery in general, but rather just the impetus to start, and the readiness to encounter new challenges and experiences. Courses taken up by older adults might provide immediate rewards through the pleasure of learning. Obviously this constitutes a goal in itself, described by Klinger (1999) as a "consummatory goal". But it is a pleasure largely for the initiated, for those who have already attained a higher level of education (cf. Clenell, 1990). How can the threshold for those “not in the know” be lowered? Can the concept of “learning for pleasure” still be a realistic notion for those whose earlier experiences in educational settings have not been positive? Further research in this area may prove worthwhile since the value of lifelong learning is beyond doubt. Such research would, however, also need to investigate the extent to which older people may be pursuing individual, nonorganized learning projects. This point has not been taken into account in this study.

Our findings with regard to volunteering, in both the administrative and practical arenas, draw our attention to another problem. If persistence in the face of adversity is an important precondition, obviously volunteering activities are not carried out primarily for immediate gratification but rather with more distant aims in mind, for example the pursuit of political or humanitarian ideas. Though volunteering, by definition, is for the benefit of others, the value of personal pleasure and reward ought not to be underestimated; in general, people are not inclined to voluntarily choose activities which confront them with situations that

they find unpleasant. The importance of stamina uncovered in this study also shows that these activities demand long-term engagement and real commitment. In contrast, what the majority of retirees enjoy most is the "late freedom", the fact that they are no longer confined by long-term obligations. The outcomes indicate that short-term projects in volunteer work might better meet the interests of the elderly and might encourage more of them to contribute to society by volunteering. In the face of a growing third-age population it is worthwhile to consider possible restructuring in different fields of volunteer work, that is, the development of more personally rewarding and more short-term projects.

Our investigation of situational and demographic factors suggests that both involvement in education and public commitment to volunteer work are highly dependent on the level of education. Therefore we can expect that interest in these activities may increase, as more highly educated cohorts grow older.

Furthermore, participants in education are predominantly female. This is also shown in all statistical studies of participation in educational activities in older adult age (cf. Breedveld, & van den Broek, 2001; Clenell, 1990). Why men are less inclined to enroll in courses has as yet not been discovered. There is no indication that men would benefit less; they, too, can still expect a lifespan of many years in which to further their personal development. With respect to volunteering, men are more involved in administrative work than are women. This mirrors the tendency for management tasks to be predominantly taken on by men (Kohli & Künemund, 1996). It may prove fruitful to conduct further research into whether men and women use personal development opportunities in different ways.

The investigation of situational and demographic factors indicates another interesting point with respect to volunteering. The inclination to become involved is apparently furthered by a neighborhood culture which is sufficiently welcoming, often still found in smaller communities; this may explain the effect of urbanization. In an increasingly individualized society this result is also of importance. If one thinks that active membership of social and political associations is beneficial to both the individual and his/her community, and if one wishes to further promote such involvement, then it is necessary to respond to the need for more intimate communities, in which “people know each other”.

Surprisingly, health did not show any association with involvement in the activities under study. Among those who participate in productive activities, health does not seem to play a predominant role influencing their lifestyle. The same is true for the role of age with respect to further education; in the 61-75 age range, enrolment in courses does not depend on age. Commitment to tasks often helps divert attention away from ailments and releases new energy. This may be one of the reasons why state of health and age are not significant factors in this context.

LIMITATIONS OF THE STUDY

Besides the instruments used in the LASA survey, there are other instruments to measure self-esteem and control beliefs which might produce more differentiated out-comes. Additionally, the fact that no effects were found for control beliefs may indicate that the instrument employed by in this study is not appropriate in the nonpathological area of "normal" motivations and assessments. Research with other, different, instruments designed to measure general control beliefs may bring further insights. The most interesting findings result from the subscales of the self-efficacy scale. The internal consistencies of these scales were sufficient, but moderate; this may be due to the small number of items. It could be useful to develop more elaborated instruments which give deeper insight into different facets of self-efficacy.

The factors researched and controlled by us can explain only a small part of the variance. Thus it would be advisable for further studies to construct interpretation models for the performance of productive activities. However, it was not the aim of our study to develop interpretation models. Rather, we aimed to investigate the role of some different aspects of mastery beliefs for selected fields of productive activities in the third age, and, in the process, to show possible effects of some important demographic and situational factors.

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