



MAX PLANCK INSTITUTE
FOR PSYCHOLOGICAL RESEARCH

**MOTIVES, PERSONAL GOALS,
AND LIFE SATISFACTION IN OLD AGE:
FIRST RESULTS FROM THE MUNICH TWIN STUDY (GOLD)¹**

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¹ GOLD = Genetic Oriented Lifespan Study on Differential Development

ABSTRACT

The present study is part of the Munich longitudinal twin study GOLD (Genetic Oriented Life Span Study on Differential Development) and is concerned with motivational determinants of life satisfaction and subjective well-being in old age. Participants were 280 males (n=94) and females (n=186) between 65 and 85 years of age. The main proposition is that life satisfaction in old age is a function of the degree to which a person's *motives*, *goals*, and *everyday activities* are matched.

Motives for Achievement, Affiliation and Power were assessed by a projective measure (TAT = "implicit motives") as well as by a questionnaire measure (Personality Research Form, PRF, = "self-attributed motives"). The participants indicated two personal goals most important to them and two activities they prefer to enact during a daily routine. Goals were rated by the participants according to commitment, attainability, and success probability. Additionally, goals and activities were evaluated according to their motive-specific contents by the participants themselves as well as by expert raters. The present report is confined to self-attributed motives and self-report measures. For the assessment of life satisfaction and emotional well-being three self-report inventories were employed.

Results can be summarized as follows: (1) There is a considerable coherency between self-attributed motives on the one hand and personal goals and everyday activities on the other hand. The moderate size of correlations, however, evidences that motives are not necessarily in thematic line with goals and activities; there is enough room for other determinants to come into play. (2) Goals are characterized by motivational contents (primarily affiliation) to a higher degree than everyday activities which, to a considerable amount, are leisure-oriented. (3) Life satisfaction and emotional well-being is generally rather positive in our sample and is significantly affected by the attainability and probability of personal goals; an attainability x commitment interaction shows that this holds especially for highly committed participants. (4) Males indicate higher grades of emotional well-being. This can be attributed to their goal setting strategies: males, compared with females, have personal goals that they judge themselves as more attainable and probable. (5) Life satisfaction is, to a considerable extent, also affected by motivation-related recent life events: Primarily events that are negatively related to affiliation and power, that is, the *absence* of affiliation-related events and - for males only - of power-related events, lowered the participants' mood. These results clearly evidence the contribution of motivational determinants in explaining life satisfaction and subjective well-being in old age.

INTRODUCTION

Becoming old and reaching retirement has been described as a life task (Havighurst, 1960, 1972; Neugarten & Hagestad, 1976) in which occupational involvement has to be replaced with other purposive activities. Retired people can no longer derive satisfaction from occupational pursuits or raising a family, they have to find new ways to lead rewarding lives (cf. Rapkin & Fischer, 1992).

Life satisfaction in elderly people, of course, is a multivariate phenomenon and is influenced -as is proven by many studies (e.g., Edwards & Klemmack, 1973; Hooker & Siegler, 1993; Spreitzer & Snyder, 1974)- by an array of various factors: There are external influences such as socioeconomic status, financial adequacy, etc., but also more personal or »psychological» factors like, for example, perceived health status, vitality, extraversion or, as shown in a recent study by Harlow and Cantor (1996), participation in culturally valued tasks, e.g., community services and social life participation (see also Diener & Suh, 1998).

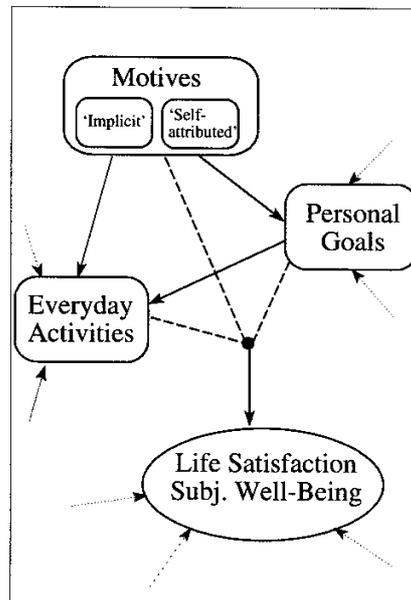


Figure 1. Network of the variables of the study

Figure 1 depicts the network of variables we were investigating in the present study. The main dependent variable was life satisfaction and subjective well-being in old age, and our main assumptions were motivational. Is there an independent contribution of motivational determinants in explaining life satisfaction - above all the aforementioned influences? Do motivational explanations also hold true for older, retired adults, in whom motive dispositions, especially for achievement or power, possibly do not play that role anymore (McClelland, Scioli, & Weaver, 1998; Veroff, Depner, Kulka, & Douvan, 1980), and personal goals are to be changed from occupational toward social or leisure pursuits (Harlow & Cantor, 1996)?

In a recent study, for example, Jacob and Guarnaccia (1997) correlated need for achievement and need for affiliation with life satisfaction in elderly individuals. Based on only moderate correlations they concluded that possibly motivational determinants become less important to well-being in elderly people. For us, this conclusion is not very convincing. Of course, an age-related decline in motive dispositions could take place, and, before going deeper, analyses often start with simple correlations. However, why should motive dispositions have an influence on life satisfaction per se? For a motivational analysis other variables, like opportunity structures, situational incentives, etc. have additionally to be taken into account.

The core variables we propose to have an effect on life satisfaction and emotional well-being are (1) *motives*, (2) *personal goals* and (3) *experiences in daily life*. In a very global way it is stated that life satisfaction and well-being in old age is -in part- a function of the degree to which the persons' motives, personal goals and everyday activities are matched. In other words, the more the persons' activities are suited to fulfill their motives and their goals, the higher life satisfaction should be. This general congruency assumption is indicated in Figure 1 by the dotted connecting lines. However, the issue is complicated by the fact that the separate pieces in the network are not independent from each other, and -in addition- are influenced by various external variables outside the described network, as is indicated by the arrow-lines.

The *Motive* box is split into two small boxes, one for "implicit" and one for "self-attributed" motives. This differentiation dates back to the very beginnings of motivation research by

the McClelland-group (McClelland, Atkinson, Clark, & Lowell, 1953) although the terminology of “implicit” vs. “self-attributed” motives is quite a recent labeling. It points to the fact that different methods of motive measurement usually yield non-coinciding results (see Spangler, 1992): Motive dispositions measured via TAT are better in predicting spontaneous behavioral trends over time, whereas motives measured by self-report inventories can better explain specific responses to specific situations and choice behavior (McClelland, 1980). This “dichotomic validity theorem” (Heckhausen & Halisch, 1986) led McClelland (McClelland, Koestner, & Weinberger, 1989) to propose two different motive systems: an “implicit” one, representing “a more primitive motivational system derived from affective experiences” and a “self-attributed” one, representing “more cognitively elaborated constructs” (p. 690). How the combination of both types of motives can improve predictions of behavior was shown by McClelland (1985a). We also assessed both types since we expect them to contribute differently in explaining our dependent variables.

Personal Goals are a second set of motivational variables that we propose to have an effect on life satisfaction. Personal goals are defined as »consciously accessible and personally meaningful objectives people pursue in their daily life” (Brunstein, Dangelmayer, & Schultheiß, 1996, p. 1006). Located at a middle level of abstraction personal goals are narrower than motives; according to Emmons and McAdams (1991) personal goals - or personal strivings, as Emmons (1986, 1989, 1996) called them - could be seen as an idiographic instantiation of motive dispositions. However, this does not mean that goals are a direct manifestation of motives. Instead, a modern conception envisions motives and goals as dual motivation systems that can coincide to a different degree. The extent of congruence between goals and motives can be conceived as an individual difference variable: Brunstein, Lautenschlager, Nawroth, Pöhlmann, and Schultheiß (1995), e.g., showed that emotional well-being is strongly influenced by the extent to which motives and goals go together or not.

We introduced *Activities* people exert in daily life as a third set of variables. Following McClelland’s main proposition on the effect of motive dispositions, one can expect motives to manifest themselves to some extent in activities people like to do in their daily routines. Moreover, one can propose a differential hypothesis concerning motive types on the one hand and activities vs. goals on the other hand, as is indicated in Figure 1. Whereas implicit motives should in a greater extent be related to behavioral trends and daily activities, self-attributed motives should have a greater influence on personal goals.

In sum, the aim of the study was to prove the contribution of motivational determinants in explaining life satisfaction and subjective well-being in old age. Especially, the main proposition was that satisfaction is a function of the degree to which motives, goals, and everyday activities are matched.

METHOD

Sample

This study is part of the extensive Munich longitudinal twin study (Genetic Oriented Life Span Study on Differential Development - GOLD; Weinert & Geppert, 1996; Weinert & Geppert, 1998; Weinert, Geppert, Dörfert, & Vieck, 1994). It was begun by Kurt Gottschaldt in 1937, and continued in the 1950s and the 1960s, with pairs of identical and fraternal twins. Due to the natural drop-out, today the sample is narrowed down to about one third of its original size. Therefore, the data base is broadened currently by recruiting new pairs of twins. The present report is based on a sample of 280 participants (94 males, 186 females).

Several restrictions pertain to the substudy reported here: First, although the GOLD-study is an extensive longitudinal one, the origins of which go back to the thirties, our study was not lon-

itudinal in nature since the main variables were introduced only in the last measurement wave. Second, although the sample consists of dizygotic and monozygotic twins, the main propositions were not related to twin research or heredity analyses. The sample was treated as a sample of independent subjects and there were no genetically hypotheses to be tested. This, of course, is not a basic restriction: The data are principally open for genetic analyses (see also Geppert & Halisch, this volume). Third, cross-sectional analyses on age differences - the sample comprises an age-range from about 65 to 85 years - will only be done in the future. Fourth, since the study is still in progress not all data are available at this time. This applies especially to the motive measurement using the TAT. Therefore, the following report will be confined to motive measurement by self-report inventory.

Instrumentation

Table 1 gives an overview over all the measurement tools we have employed, grouped according to the core variables of (1) Motives, (2) Goals, (3) Activities, and (4) subjective well-being.

Table 1. Measurement tools

Motives
(1) Implicit motives Achievement, Affiliation, Power (10 TAT pictures; Coding system by Winter, 1991)
(2) Self-attributed motives Achievement, Affiliation, Dominance (Power), Endurance, Play, Understanding (Personality Research Form, Jackson, 1984; confined to 12 items for each scale)
Personal Goals
(1) Two goals most important for the next 6 to 12 month
(2) Goal Dimensions ; Subjects' ratings (according to Brunstein, 1993) on
(a) Subjective Probability
(b) Goal Commitment (Determination, Willingness, Urgency)
(c) Goal Attainability (Opportunity, Control, Support)
(3) Goal Contents ; Goals-to-motives assignment
(a) by expert raters
(b) by subjects (18-Items-Questionnaire; "I adhere to this goal because I want to ...")
Everyday Activities
(1) Routine of a "typical day"
(2) Two activities liked best
(3) Activity Contents ; Activities-to-motives assignment
(a) by expert raters
(b) by subjects (same procedure as for goals)
Satisfaction / Subjective Well-Being
(1) Affect-to-Motive-Related-Events Scale (24-items-questionnaire relating positive and negative affect (12 items each) to recent life events; »It happened to me that I was satisfied because«)
(2) Satisfaction-with-life Scale (Diener et al, 1985, five items)
(3) Affect-Balance (two 4-item scales for positive and negative mood, adopted from Bradburn, 1969)

Note. The variables in bold are the ones included in the present report.

Motives were measured in two ways. For implicit measurement we used 10 TAT-Pictures. The TAT-protocols will be coded according to the coding system by Winter (Winter, 1991; see also Smith, Atkinson, McClelland, & Veroff, 1992) for the motives for achievement, affiliation, and power, respectively. As mentioned above, these data are not available at present.

For the assessment of self-attributed motives we used the German version of the Personality Research Form (PRF) by Jackson (1984; Stumpf, Angleitner, Wieck, Jackson, & Beloch-Till, 1985). The PRF is a multidimensional personality inventory, designed along the personology of Murray (1938), which comprises 22 scales in its original version. We selected six of these, namely Achievement, Affiliation, Power (called Dominance in the PRF), Endurance, Understanding, and Play. A few items had to be modified for the special sample of old adults. The report below will concentrate on the core motives for *Achievement*, *Affiliation* and *Power*.

For the assessment of *personal goals* we adopted a technique developed by Brunstein (1993). The participants were asked to generate a list of their personal goals for the next 6 to 12 months. From that list they then indicated two goals most important to them. These two goals were estimated according to several goal dimensions and goal contents.

Goal dimensions are, first, *subjective probability*, measured by a scale ranging from 0 to 100 percent, second *goal commitment*, built by the subscales Determination, Willingness, and Urgency, and third, *goal attainability*, assembled by the subscales Opportunity, Control, and Support. Each subscale had two items that were to rate on a 7-point scale.

In a second step, goals were evaluated according to the degree in which they are related to the motives for achievement, affiliation and power. These evaluations were done by expert raters as well as by the participants themselves. On an 18-item questionnaire the participants indicated their agreement to statements like "I adhere to this goal because I want to prove how good my abilities (still) are", or, e.g., "... because I like to live in harmony with others". Only the self-report data of this motive-goal coherence are available at present.

Data on *everyday activities* and their relation to motive dispositions were obtained in a similar manner. The participants first wrote down their routine of a "typical day" and then chose from that list two preferred activities. The motivational contents of these activities were estimated in the same manner as was done for personal goals. Again, we have only the self-report data available.

Finally, for the assessment of *satisfaction* and *well-being*, three inventories were used: On a 24-item questionnaire the participants indicated whether events that are related to Achievement, Affiliation, or Power happened to them recently and put them into an elated or depressed mood. Overall *satisfaction with life* was assessed by a short questionnaire developed by Diener and co-workers (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993) and *affect balance* scores were obtained by two 4-item scales for elated and depressed mood adopted from Bradburn (1969).

RESULTS

Motives

Table 2 shows the intercorrelations of the PRF-motive scores. There were substantial correlations between the Achievement, Endurance, Power, and Understanding variables on the one hand and Affiliation and Play on the other. Incidentally, this pattern is nearly identical with the results reported by Stumpf et al. (1985) for the German version of the PRF. For us, however, the correlation between Achievement and Power variable is of special importance. This result is in line with many other studies that did not prove these two motives to be completely independent,

and it points to the general problem of the theoretical and methodological separation of the two. There is no room to speculate about reasons for this because it goes beyond the scope of this report.

Table 2. Correlations between PRF-Motive scores

	Affiliation	Power	Endurance	Play	Understanding
Achievement	.14	.37 ***	.50 ***	.08	.27 ***
Affiliation		.15 *	.14	.42 ***	.11
Power			.37 ***	.17 *	.17 *
Endurance				.10	.19 **
Play					.09

Note. * $p < .01$; ** $p < .001$; *** $p < .0001$

We found gender differences in motive dispositions as well. Figure 2 shows that achievement- and power-motivation was higher in males than in females; females, in turn, were affiliation-motivated to a somewhat higher degree. This result, replicating a well-known finding from many other studies in motivation research, at least underpins the validity and suitability of the PRF for (self-attributed) motive measurement in old age.

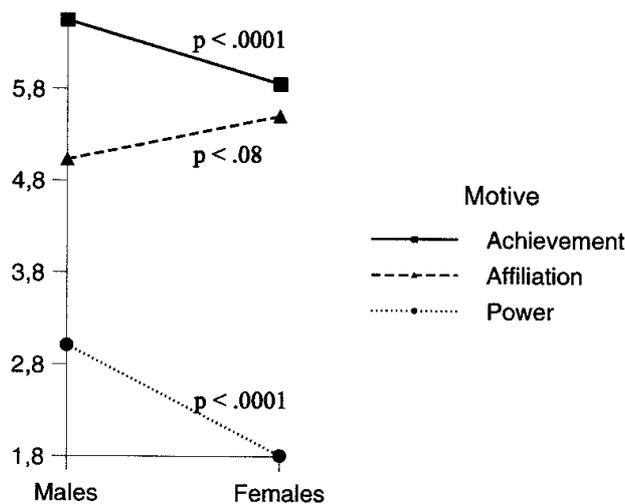
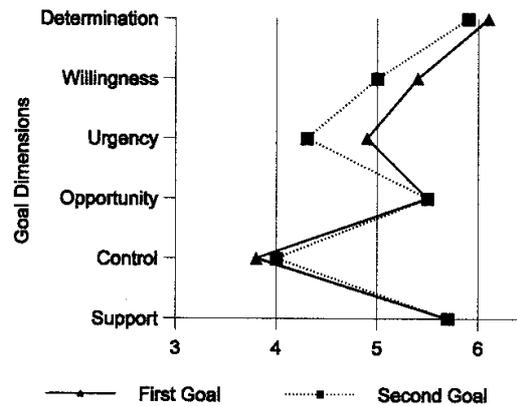


Figure 2. Self-attributed achievement, affiliation, and power motives in males and females

Hence, for our further analyses we have to deal with the facts that (1) two parts of the ‘‘Motive Triad’’, namely the achievement and power motives, are not independent and (2) that the motive-strengths of achievement, affiliation, and power are different in males and females.

Personal goals

The goals our participants pursue were of a great variety; they are concerned with family, affiliates, learning, traveling, health, living conditions, etc. Following our data there is no reason to speculate about a general disengagement and a decline of the quantity and richness of personal goals in elderly people.



	First Goal	Second Goal	
Goal Commitment	5.5	5.1	$p < .0001$
Goal Attainability	5.0	5.1	
Success Probability	76.9	76.1	

Figure 3. Goal dimensions of personal goals

Figure 3 reveals the all-over-results for the goal dimensions, separated for the two most important goals. There were no differences between the two goals on success probability as well as on the dimensions of opportunity, control, and support which are summed up for goal attainability. But goal commitment, which is built upon the dimensions of determination, willingness, and urgency was much greater for the first goal than for the second. The participants attributed the same degree of attainability and probability to their second goal as to their first goal, but they were much more committed to their first goal than to their second. In some sense, this could be viewed as a kind of manipulation check, since the participants were to select the goals according to their personal importance which can be seen as a common equivalent for 'commitment'.

Are there gender or motive differences in goal dimensions? Table 3 shows that males were more willing to pursue their goals than females, and that they saw more opportunity and personal control for achieving their goals. Summed up, males estimated their goals more attainable, and they also judged the subjective probability of their goals somewhat higher ($p < .08$).

Motive differences were found to some degree in correspondence with the gender differences: Achievement and power motives correlated significantly with the willingness to pursue the goals and with the evaluation of goal attainability and success probability, the latter result being in line with a core tenet of achievement motivation theory.

The second topic concerning personal goals relates to goal contents. We gave our participants a list of statements ("I adhere to that goal because ...") on which they could indicate how much their goals are characterized by motive-specific contents. Factor analyses let us group these statements into seven clusters. The "motivational triad" (achievement, affiliation, power) could be replicated to a sufficient degree, but it seemed appropriate to divide the power dimension into two separate clusters, one representing a social support factor (e.g., "prevent others from making mistakes" or "support a valuable worthwhile cause"), the other representing a dominance factor (e.g., "get others to agree to one's own ideas" or "impress other persons"). Further clusters relate to understanding, relaxation and flow.

Table 3. Goal dimensions as a function of sex

	Males	Females
Goal Commitment		
Determination	5.9	5.9
Willingness	5.4	5.2*
Urgency	4.5	4.6
Commitment (D/W/U)	5.3	5.3
Goal attainability		
Opportunity	5.7	5.4*
Control	4.1	3.8*
Support	5.9	5.7
Attainability (O/C/S)	5.2	4.9**
Success Probability	79.48	74.93

Note. Contents for first and second goals combined

Difference between males and females: * $p < .05$; ** $p < .001$

Figure 4 depicts how the personal goals were characterized by these factors: Goals were affiliation-oriented to a very high degree. Need for understanding and relaxation followed. Support and achievement were placed in the “center field”, whereas flow and dominance were at the end. This means that goals were structured according to the “classical motives” to a moderate degree. The fact that dominance was at the end could be due to a social desirability effect as was suspected by McClelland (1985b) and confirmed by Emmons and McAdams (1991): People are inclined to deny power-related goals. That power, nevertheless, plays a role in explaining satisfaction will be shown below.

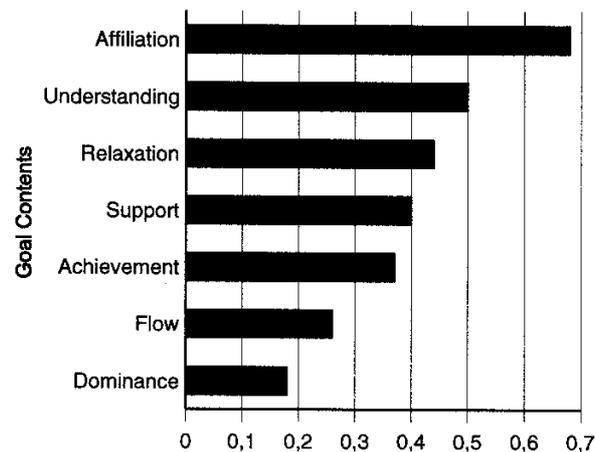


Figure 4. Contents of personal goals (first and second goal combined)

Gender differences in goal contents were not very pronounced: Goals of females were significantly more relaxation-oriented and a bit more affiliation-oriented than goals of males. However, of greater theoretical interest than gender differences is the question whether there was some coherence between motive dispositions and goals. Table 4 clearly supports the proposition that goals are influenced by motives: Achievement-motivated persons had achievement-oriented goals, affiliation-motivated persons had affiliation-oriented goals and power-motivated persons

had power- (primarily support-)oriented goals. In addition, Table 4 shows that achievement-motivated persons pursued support-oriented goals to some degree as well. This pattern of correlations is a clear evidence for a motive-goal coherence on the one hand, as proposed by Emmons and McAdams (1991), but the moderate size of the coefficients, on the other hand, makes clear that there is enough independence of both concepts: Goals are not necessarily in thematic line with motives and can be determined, in addition, by other factors than motives.

Table 4. Motive-related goal contents as a function of motives (measured via PRF)

Motive (PRF)	Motive-related goal contents				
	Achievement	Affiliation	Support	Power Dominance	Support + Dominance
Achievement	.15		.23 **		.16
Affiliation		.25 **	.19		.16
Power			.21 *		.17

Note. Contents for first and second goals combined

Coefficients shown are $p < .01$; * $p < .001$; ** $p < .0001$

Everyday activities

Everyday activities were, as mentioned above, extracted from a typical everyday routine. Activities that were selected as the most favored ones were, for example, “reading newspaper”, “meeting friends”, “walking in the park”, and so on. These activities were estimated by the participants according to their motive-linkage by means of the same procedure as was done for the goals. Figure 5 ranks the motive-related contents of everyday activities. It becomes obvious that the order is different compared with goals (Figure 4). Activities were primarily characterized by relaxation, whereas achievement, affiliation, and power (support/dominance) only played a minor role. This becomes very clear when the latter are summed up to the “motivational triad” and are compared with what is called “leisure” (relaxation, understanding, play) in Figure 6: Motivational contents were of greater importance regarding personal goals than everyday activities which, in turn, were characterized by leisure factors to a higher degree.

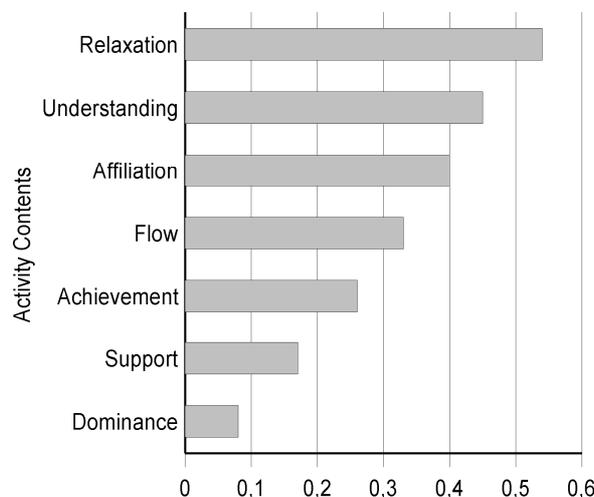


Figure 5. Contents of everyday activities (first and second goal combined)

Gender and motive dispositions had effects on everyday activities: Males compared to females significantly preferred achievement-related activities and, to some degree, also dominance-related activities. And, although motive-related contents only played a minor role in everyday activities, there was a clear effect on what activities were preferred by differently motivated persons (Table 5). As for the goals, achievement-motivated people preferred achievement- and support-oriented activities, affiliation-motivated people preferred affiliation-oriented activities, and, finally, power-motivated people preferred power- (mainly dominance-)related activities. Again, the correlations are highly significant, but also give room for other factors influencing the thematic content of daily activities.

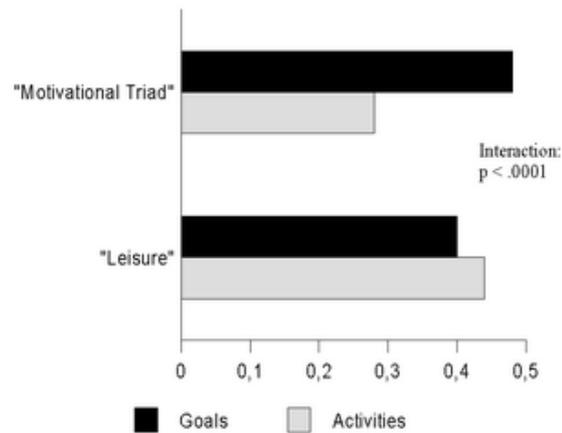


Figure 6. Contents of personal goals and everyday activities

Table 5. Motive-related contents of preferred activities as a function of motives (PRF)

Motive (PRF)	Motive-related activity contents				
	Achievement	Affiliation	Power		
			Support	Dominance	Support + Dominance
Achievement	.22 **		.21 **		.19
Affiliation		.20 *	.15		.16
Power	.19		.19	.29 **	.29 **

Note. Contents for first and second preferred activities combined

Coefficients shown are $p < .01$; * $p < .001$ ** $p < .0001$

Life satisfaction and subjective well-being

First, it is noticeable that satisfaction and mood scores in our sample were generally rather positive. The mean for the Satisfaction-of-life score was 5.04 with a standard deviation of 1.07. That is, it was shifted a full scale point from the midpoint to the positive end. The same effect became strongly evident also in the Affect Balance scale. At the average our participants indicated much more an elated than a depressed mood which sums up to a rather positive affect balance (Figure 7). Obviously there is no basis -at least not from our data- to assume that older adults are prone to a depressed mood. This is in line with many other studies that show that subjective well-being does not inevitably decrease in old age, although the probability of negative life events and losses increases (cf. Brandtstädter & Greve, 1992; Diener & Suh, 1998; Diener, Suh, Lucas, &

Smith, 1999; Myers & Diener, 1995; Smith, Fleeson, Geiselman, Settersten, & Kunzmann, 1999; Staudinger & Freund, 1998).

A clear main effect of motives on satisfaction could not be detected; a small but nevertheless significant correlation of .15 points to the fact that affiliation-motivated persons have somewhat higher life-satisfaction scores. There is, however, a pronounced gender difference which is evident only as a tendency for general life satisfaction but is highly significant for the affect scales: Males had a more positive affect balance than females (Figure 7). This result seems not reasonable at first glance, and it is in contrast to most studies concerning gender differences in well-being (cf. the meta-analyses done by Haring, Stock, & Okun, 1984, and by Wood, Rhodes, & Whelan, 1989). However, it is not unusual in gerontological research (cf. Smith et al., 1999; Spreitzer & Snyder, 1974). It can be elucidated by taking into account gender differences in goal attainability (see below).

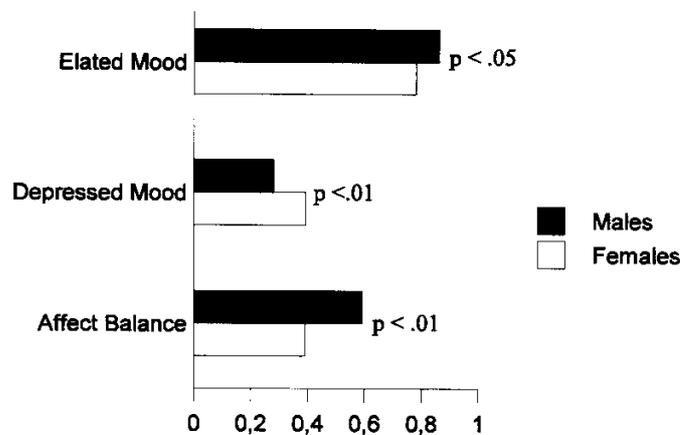


Figure 7. Elated mood and affect balance in males and females

Of special interest is how the personal goals are related to satisfaction. Table 6 shows the correlations between goal dimensions and satisfaction/mood scores. Neglect for a moment the size of the coefficients and concentrate on the difference between the upper and the lower half of the table. There are absolutely no correlations found in the upper half where the goal commitment variables are listed. Quite substantial correlations, however, are clustered in the lower half, that is, correlations between goal attainability and subjective probability on the one hand and mood scores on the other. In other words: The degree of commitment to personal goals has no effect on satisfaction, but pursuing goals that oneself estimates as attainable and probable raises one's own mood.

Of course, in a correlational study like ours the causal direction cannot really be proven, and it is not clear whether goal attainability is the cause or the effect of satisfaction. One could argue as well that positive mood enhances control beliefs (cf. Isen, 1999) and thereby raises judgments of goal attainability. Even another explanation is possible, namely, that a third variable (e.g., self-regulatory competency) raises both, goal attainability as well as mood. In that case, however, it remains to be explained why the effects are selectively confined to goal attainability, whereas goal commitment is not affected at all. Therefore, although alternative explanations cannot be completely ruled out, we prefer for the present the interpretation that adhering to reachable goals enhances one's own mood.

Table 6. Satisfaction as a function of goal dimensions

Goal Dimension	Life satisfaction	Mood		Affect balance
		positive	negative	
Goal commitment	Determination			
	Willingness			
	Urgency			
	Commitment			
Goal attainability	Opportunity	.25**	.17	.17
	Control	.16	.23**	.18
	Support	.30**		.17
	Attainability	.36**	.29**	-.18
	Success Probability	.25**	.21**	-.22**

Note. Goal dimensions for first and second goal combined

Coefficients shown are $p < .01$; * $p < .001$; ** $p < .0001$

Brunstein (1993, 1999) found a similar effect, but primarily due to participants with high goal commitment, which was manifested in an Attainability x Commitment interaction. In our data set such an interaction could be replicated as shown in Figure 8. Although the main effect of goal attainability on satisfaction was also found in participants with low commitment, it was especially pronounced in participants with high commitment. The main reason for the fact that the attainability effect was evident also in low committed participants can be attributed to our procedure for goal selection: The participants were to select two goals most important to them. Therefore the range of degree of commitment was narrowed down to one end: Our participants were all committed to the selected goals on a rather high level.

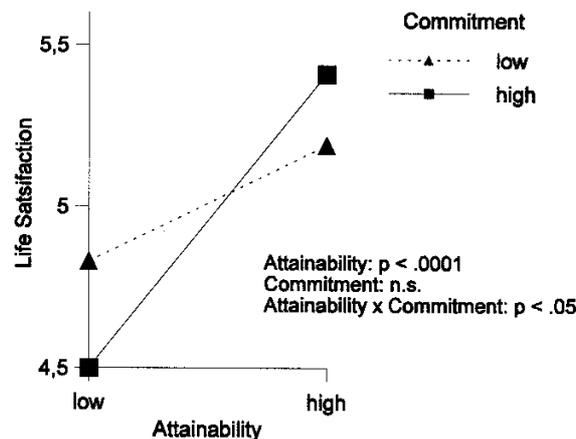


Figure 8. Life satisfaction as a function of goal commitment and goal attainability

Bringing together the effect of goal attainability on satisfaction with gender differences in personal goals mentioned above sheds a new light on the gender difference we found in life satisfaction: Males adhered to personal goals of higher attainability and probability than females (they, at least, judged their own goals that way). On the other hand, pursuing attainable and probable goals enhances subjective well-being. And this, obviously, is the reason why males indicated a greater satisfaction with life and a more positive affect balance than females.

Finally, quite a remarkable result combines satisfaction scores with recent life events. As mentioned above, we presented a list of statements containing positive or negative events to our participants and asked them whether such events had happened to them within the last 6 months and had put them into an elated or depressed mood. Factor analyses done with these 24 items resulted in three factors each for elating and depressing events, related to achievement, affiliation, and power. (Four items had to be eliminated due to their ambiguity.)

We correlated these factors with satisfaction and mood scores and came up with a correlation table (Table 7) with quite high coefficients and -even more interesting- a remarkable correlational pattern: Primarily events that are negatively related to affiliation, but also to power and achievement, corresponded with satisfaction and mood. In other words, the *absence* of need-fulfilling events had a strong negative influence on subjective well-being. We executed multiple regressions for these variables. Figure 9 shows the result for general life satisfaction. The coefficients marked in gray depict those variables that yielded a significant contribution in explaining the dependent variable: Satisfaction of life can be explained to a substantial degree by a set of three variables: the absence of affiliation events and -to a smaller degree- of power events; as a third variable, events that are positively related to achievement come into play.

Table 7. Satisfaction as a function of motive-related events

Events		Life satisfaction	positive	Mood negative	Affect balance
positively related to	Achievement	.23**	.26**		.21*
	Affiliation	.21*	.18		
	Power				
negatively related to	Achievement	-.16	-.21*	.37**	-.34**
	Affiliation	-.44**	-.45**	.49**	-.55**
	Power	.26**		.33**	-.28**

Note. Coefficients are $p < .01$; * $p < .001$; ** $p < .0001$

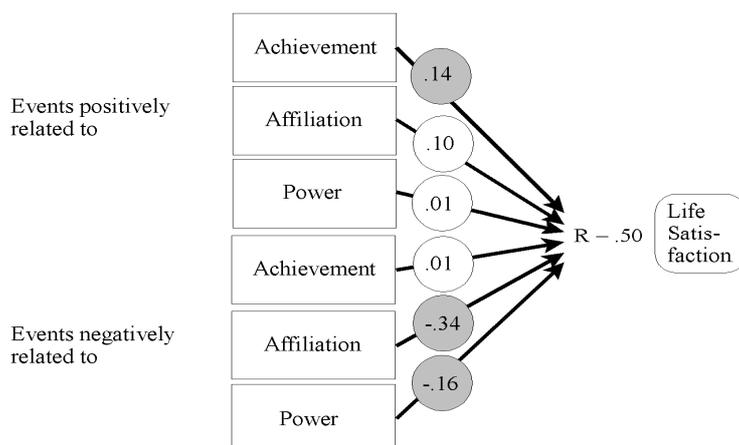


Figure 9. Life satisfaction as a function of motive-related events

Figure 10 is again concerned with gender differences. We conducted the same regression analysis separately for males and females: Whereas for women only the absence of affiliation events proved to have a significant effect on satisfaction, for men it is primarily the absence of power events, and, only in the second place, the absence of affiliation events that influences satisfaction of life.

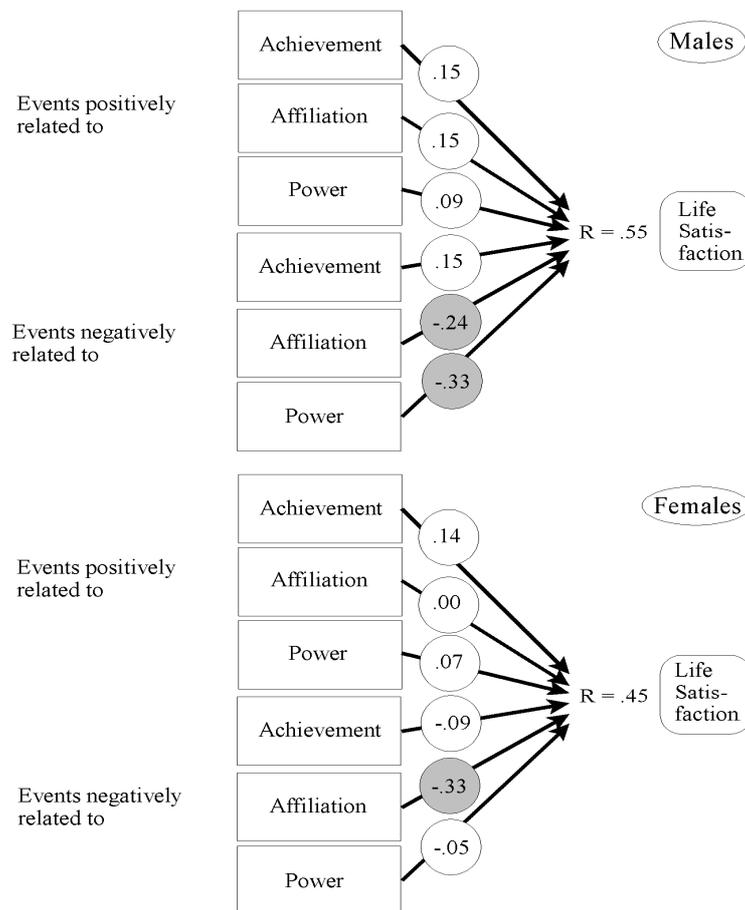


Figure 10. Life satisfaction in males and females as a function of motive-related events

SUMMARY AND CONCLUSION

First, there was a reasonable extent of coherency found between self-attributed motive dispositions and the contents of personal goals. This finding supports the proposition that goals in some sense are a “personalization of motivation” (Wurf & Markus, 1991) insofar as they direct rather global motives to individualized action goals. That goals, however, are not necessarily in thematic line with motives and that the two concepts can diverge to some degree -as was proposed by several authors (e.g. Brunstein et al., 1995; Emmons & McAdams, 1991)- was evidenced by the moderate size of correlations. The equivalent holds true for daily activities: Motive dispositions manifested themselves to some degree in what kind of activities people like to perform in their daily routine. However, the “dichotomic validity proposition”, that is, a closer correspondence between implicit motives (measured via TAT) and everyday activities on the one

hand and self-attributed motives (measured via PRF-Questionnaire) and personal goals on the other hand -that was derived from McClelland's theorem concerning the differential validity of implicit and self-attributed motive measurement (McClelland et al., 1989) - could not be proven with the data available up to now.

Second, comparing goals with activities revealed that personal goals were characterized by contents that are related to the "motivational triad" of achievement, affiliation, and power to a higher degree than daily activities in which leisure factors are of greater importance. Goals were mostly characterized by affiliative contents and activities by relaxation contents. This corroborates the proposition made by many authors (e.g., Harlow & Cantor, 1996) that after retirement social and leisure pursuits become prominent.

Third, we found life satisfaction and well-being to be on a rather high level. Of course, one has to be cautious in interpreting self-report data on life satisfaction in the elderly. Euler (1992), for example, has warned against interpreting questionnaire-based life-satisfaction scores as indicators of "deep" psychological well-being. On the other hand, this result is completely in line with other reports studying life-satisfaction in old age. Usually it is found that in spite of an increasing probability of negative life events and losses in old age life satisfaction does not necessarily decrease (Brandstädter & Greve, 1992; Diener & Suh, 1998; Diener et al., 1999; Halisch & Geppert, in press; Myers & Diener, 1995; Smith et al., 1999; Staudinger & Freund, 1998). Likewise, generally even people in disadvantaged groups on average report positive well-being (Diener & Diener, 1996; Myers & Diener, 1995). For the missing decline in satisfaction we would prefer a motivational explanation that is based on age-related change in reference-norms for self-evaluation, as was exemplified recently in a very sophisticated study by Filipp, Ferring, Mayer, and Schmidt (1997; see also Filipp & Ferring, 1998). But such considerations are outside the scope of this report.

Fourth, attainability and probability of, but not commitment to, personal goals exerted a strong positive influence on life satisfaction and emotional well-being. This replicates Brunstein's (1993, 1999) results who, however, found the effect of goal attainability on well-being only in highly committed subjects. Due to the method of assessment of goals we used, all of our participants were highly committed to the selected goals. Therefore we found a very strong main effect of goal attainability in addition to the attainability by commitment interaction. This very pronounced effect was probably also responsible for the somewhat surprising gender difference in life satisfaction: Males showed higher grades of emotional well-being than females. Smith et al. (1999) attributed this difference to the better financial and social life circumstances of males in old age. Our data suggest a complementary motivational explanation: Males judged their own goals as more attainable and more probable than females; goal attainability and probability enhance satisfaction and, therefore, males indicated a more positive emotional state.

Fifth, life satisfaction and well-being could be shown to be dependent on recent motivation-related events in life. Primarily the absence of affiliation-related but also of power-related events within the last 6 months lowered the mood of our participants. This was additionally qualified by gender: The role power events play in influencing the mood was solely found in males; with females only affiliation events affected their mood. Incidentally, this gender-specific result corresponds to a recent study by Herringer (1998) who found that in a sample of university students life satisfaction of men and women was related to different facets of extraversion: 'Assertiveness' was the most powerful predictor of life satisfaction for males, and the only such predictor for females was 'positive emotion'.

A final point should be made. Our results clearly evidence a substantial impact of motivational determinants on well-being in old age. However, all the findings reported here are based on self-report measures only. That does not devalue them, but in the light of the complete network

of variables (Figure 1) it is important to keep in mind that it is only one half. For an evaluation of the entire network we need data on implicit motives as well as expert ratings of the motive-related contents of personal goals and everyday activities. And, we should -as far as possible- take into consideration the influence of other external variables in order to estimate the degree to which our motivational determinants can add in explaining life satisfaction. The present report allowed, so to speak, only some glimpses at separate puzzle-pieces of the whole network. When all data are available more sophisticated analyses trying to comprise all the variables of the network will be conducted.

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