

Z Gerontol Geriat 2010 · 43:13–18
 DOI 10.1007/s00391-009-0090-0
 Eingegangen: 13. Oktober 2009
 Akzeptiert: 18. Oktober 2009
 Online publiziert: 11. Dezember 2009
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Humor as a character strength among the elderly

Empirical findings on age-related changes and its contribution to satisfaction with life

Ruch et al. [18] argued that there is a lack of empirical data on humor in the elderly. Such studies are of theoretical but also of practical value as they increase our knowledge on the topic but also may provide hints of how to use humor in daily practice. There are some older studies and reviews on the topic [4, 5, 15] and recently Proyer et al. [12] found that the sense of humor was quite stable across the lifespan. However, elderly people displayed a higher positive mood but indicated laughing less and less easily than younger participants. Similar results are not yet available for the Values in Action Inventory of Strengths (the VIA-IS) [9, 17], which is the standard instrument to assess strengths of character.

As Ruch et al. [18] pointed out, character strengths are assumed to contribute to a good life and hence a positive correlation between humor and satisfaction with life is expected. However, recent articles underline the importance of distinguishing between different aspects of satisfaction with life [7]. Thus, different measures should be included if well-being is studied. The aim of this paper is twofold. First, we want to describe age-related changes in the VIA-IS humor scale in a cross-sectional design. Second, we studied the relation between humor and satisfaction with life in the elderly. We analyzed this relation in a large data set with a special focus on aged participants. To fulfill the sug-

gestion by Park et al. [7], we not only included a measure of satisfaction with life itself but also a measure on three different orientations to happiness: a pleasurable life, a meaningful life, and an engaged life (see [14] for an overview). The latter relations will be studied for the entire sample as well as for various subgroups of elderly. This analysis allows not only the testing of direct relations but also of putative mediating effects (e.g., via hedonism, having a pleasurable life) between humor and well-being. As humor is a reliable way of inducing positive emotions, it is expected that humor will be most highly correlated with a pleasurable life. Nevertheless, humor may keep group morale high and it may be used for the benefit of others. Hence, lower but positive correlations were expected for an engaged and a meaningful life.

Method

Participants

The sample consisted of 42,964 German-speaking respondents. There were more female than male subjects (69% versus 31%), and the mean age of the respondents was 37.83 years (SD=12.80) with a range across the adult years. Relative to the general population, the sample was more highly educated and many had college degrees (66%). However, the education of the participants ranged from less than compulsory education to post-baccalaureate. Although a self-selected group was

studied, the range in professions was impressive and this sample is certainly more diverse than the typical sample of university students. Subgroups of the sample filled in other instruments, and these did not differ in the basic statistics from the total sample. For example, the 17,479 participants who completed the scale about satisfaction with life had a mean age of 38.48 years (SD=12.68) and 69% were women.

Instruments

The humor scale from the *Values in Action Inventory of Strengths* (VIA-IS; [9, 17]) consists of ten items (e.g., “Whenever my friends are in a gloomy mood, I try to tease them out of it”). It uses a five-point Likert-style answer format (1=“very much unlike me” through 5=“very much like me”). The coefficient alpha was computed and the scale demonstrated a high reliability ($\alpha=0.86$). Data on the other 23 scales were also available and will be commented upon briefly; however, the analyses focus primarily on the humor scale.

The *Satisfaction with Life Scale* (SWLS; [1]) is a five-item measure of satisfaction with life (as a global cognitive judgment of one’s own life). A sample item is “The conditions of my life are excellent.” It uses a seven-point answer format (from 1=“strongly disagree” through 7=“strongly agree”). The alpha-coefficient was 0.86 in the present sample.

The *Orientations to Happiness Scale* (OTH [10]; for the German adaptati-

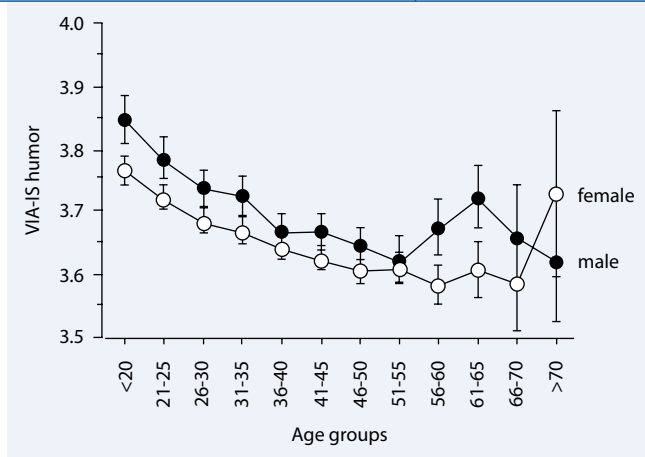


Fig. 1 ◀ Scores in VIA-IS humor scale (with 95% confidence interval) by gender and age

on see [14]) assesses three different ways to be happy (through pleasure, through engagement, and through meaning). The scale consists of 18 items (six items for each of the scales; e.g., “Regardless of what I am doing, time passes very quickly;” i.e., life of engagement). Answers are given on a five-point scale ranging from 1=“very much unlike me” through 5=“very much like me.” All three scales yielded between sufficient and high reliabilities with $\alpha=0.74$ for a life of pleasure, $\alpha=0.65$ for a life of engagement, and $\alpha=0.76$ for a life of meaning.

Procedure

All participants completed the questionnaires via an online platform (<http://www.charakterstaerken.org>). They registered, provided socio-demographic information, and then completed the measures sections. All participants received immediate feedback after completion of all questions on their individual results. We aimed at collecting a broad sample and therefore posted advertisements in newspapers and magazines. Additionally, we wrote to specific institutions (e.g., homes for elderly, clubs for seniors) to address the target population directly.

Though data collection via the Internet is sometimes criticized, there are empirical studies showing that Internet-based studies are usually as reliable and valid as paper-pencil based methods (more traditional strategies) and that samples collected via the Internet are usually more diverse than other samples [2].

Results

Humor across the lifespan

The distribution statistics for the VIA-IS humor scale ($M=3.70$, $SD=0.60$) were comparable to the norm data established for the paper and pencil administration. As in prior studies, the correlations with age were negative but marginal ($r=-0.07$; $p<0.001$) and men scored marginally higher than women ($r=-0.04$; $p<0.001$). However, age and gender were confounded with more men among the older participants ($r=-0.05$; $p<0.001$). To disentangle possible effects of age and gender, it was decided to analyze men and women for each of 12 age groups separately:

<20 years, $n=3902$, 71.4% females;
 21-25 years, $n=4,959$, 71.1% females;
 26-30 years, $n=5,536$, 70.0% females;
 31-35 years, $n=4,915$, 69.1% females;
 36-40 years, $n=5,258$, 69.9% females;
 41-45 years, $n=5,914$, 71.2% females;
 46-50 years, $n=5,091$, 71.3% females;
 51-55 years, $n=3,429$, 70.6% females;
 56-60 years, $n=2,167$, 63.5% females;
 61-65 years, $n=1,118$, 54.2% females;
 66-70 years, $n=444$, 50.5% females;
 >70 years, $n=230$, 38.7% females.

It can be seen that up to age 60 the female subjects formed about 70% of the sample, but thereafter the percentage of female subjects dropped continually up to the oldest age group ($\chi^2(11)=370.09$, $p<0.0001$).

A 12 (age groups) by 2 (gender) ANOVA was performed for the VIA-IS humor scale as dependent variables. The interaction between age and gender failed to be significant ($F(11, 42939)=1.523$, $p=0.12$).

However, overall men tended to score higher than women ($F(1, 42939)=19.841$; $p<0.0001$), and there were age-related differences ($F(11, 42939)=29.343$; $p<0.0001$). The mean scores in humor across the age groups for males and females separately are presented in **Fig. 1**.

It is shown that overall the age- and gender-related differences were not large. The largest difference between two age groups and the two genders did not exceed $1/3$ and $1/6$ of the standard deviation, respectively. Nevertheless, some trends could be observed: the scores decreased with age between those in their teenage years and those in their 50s. At least for males, higher scores were observed for the age group 61-65 years. Males tended to score higher in humor than females in the four youngest groups and between 56 and 65 years. In the oldest group, females scored numerically higher than males, but this was not significant. These groups of females also scored higher than the females of the age group 56-60 years ($p<0.05$).

From the socio-demographic data, the relationship status was of greatest interest, as humor was often a means for being attractive to the preferred partner and is used as a dating strategy. Among those younger than 20 years, singles had higher scores in humor than either married or separated/divorced participants. For those in their 20s, singles had higher scores than married participants. Among those between the ages of 41 and 50 years and those between 51 and 60, singles and married participants had significantly lower humor scores than separated/divorced participants ($p<0.001$). For the latter group, this was also particularly true for females, where singles had even lower humor scores than married participants. There were no differences with respect to relationship status among those between 61 and 70 and those older than 70 years.

Humor and satisfaction with life

Humor correlated with the Satisfaction with Life Scale in the total sample ($r=0.312$, $df=15,588$, $p<0.0001$). This coefficient is higher than the average of all 24 coefficients ($M=0.27$). Individual coefficients ranged from 0.02 (for modesty) to

0.58 (for hope). The coefficients for males ($r=0.33$) and females ($r=0.30$) were comparable. Within all 24 strengths, the coefficients for humor ranked seventh for females and eighth for males.

Perhaps some aspects of the humor scale are more associated with life satisfaction than others. Therefore, the individual humor items were examined separately. Spearman correlations revealed that each of the ten items correlated positively with life satisfaction with the lowest coefficient being $r=0.08$. The highest individual correlations could be found for (in descending order): "I believe life is more of a playground than a battlefield" ($r=0.39$), "I try to add some humor to whatever I do" ($r=0.27$), "I try to have fun in all kinds of situations" ($r=0.26$), "I never allow a gloomy situation to take away my sense of humor" ($r=0.24$), and "Most people would say I am fun to be with" ($r=0.23$). Thus, the highest correlation was found for the item depicting a playful attitude towards life.

Are the oldest age groups unique?

The relationship between humor and satisfaction with life might be different for older people. One argument would be that the relative importance of humor diminishes, because additional variables, for example, health or financial issues have an impact on well-being. However, one could also argue the opposite and claim that humor will determine how people deal with emerging age-related adversities. Thus, humor might be a buffer preventing stressors from reducing one's quality of life. We divided the sample into seven age-groups and computed the correlations between the humor scale, on the one hand, and satisfaction with life and the three orientations to happiness on the other (controlling for the effects of gender). The partial correlations are presented in **Tab. 1**.

It is shown that for all age groups humor correlated highest with a pleasurable life, followed by satisfaction with life, an engaged life and a meaningful life. While the size of the coefficients did not vary much, a few trends were observed. First, the coefficients for the oldest group were always the lowest, i.e., there was a drop between the 61 to 70-year-olds and the >70-year-olds. It should be noted that a re-

Abstract · Zusammenfassung

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Humor as a character strength among the elderly. Empirical findings on age-related changes and its contribution to satisfaction with life

Abstract

Background. Positive psychology studies what is best in people. In their classification of strengths and virtues, Peterson and Seligman [11] assign humor to the virtue of transcendence. Thus far, there is no specific study that deals with age-related changes in humor (as a strength of character) across a lifespan and its relation to well-being in the elderly.

Participants and methods. A total of $n=42,964$ participants completed an online questionnaire on humor as a strength of character. Participants also completed the Satisfaction with Life Scale and the Orientations to Happiness Scale.

Results. In a cross-sectional design, the scores for humor decreased until the age of 50. Men between 51 and 62 years had higher scores; there was a trend for women old-

er than 70 to score higher (but this was not statistically significant). Humor was robustly positively correlated with life satisfaction, as well with a pleasurable and an engaged life, but was lowest with a meaningful life. The oldest participants had the lowest (yet still meaningful) correlation coefficients (with the exception of a meaningful life).

Conclusion. The study contributes to the understanding of humor across the lifespan and underlines the importance of studies among the elderly within a framework of positive psychology.

Keywords

Ageing · Humor · Orientations to happiness · Positive psychology · Satisfaction with life

Humor als Charakterstärke bei älteren Menschen. Empirische Befunde zu altersabhängigen Veränderungen und zum Beitrag von Humor zur allgemeinen Lebenszufriedenheit

Zusammenfassung

Hintergrund. Die Positive Psychologie untersucht das Beste im Menschen. Humor wird als Charakterstärke verstanden, die der Tugend Transzendenz zugeordnet wird.

Stichprobe und Methoden. Insgesamt 42.964 Teilnehmer/innen bearbeiteten online einen Fragebogen für Humor als Charakterstärke, eine Lebenszufriedenheitsskala sowie eine Skala zu Orientierungen zum Glück.

Ergebnisse. In einem Querschnittsdesign sanken die Humorwerte der Teilnehmer bis zum Alter von 50 Jahren. Männer zwischen 61 und 65 erzielten höhere Werte. Humor war bedeutsam mit Lebenszufriedenheit korreliert und ebenso mit dem „vergnüglichen

Leben“, dem „engagierten Leben“, aber am niedrigsten mit dem „bedeutsamen Leben“. Dies fand sich (mit Ausnahme des „bedeutsamen Lebens“) auch für die ältesten Teilnehmer/innen.

Fazit. Die Studie trägt zum Verständnis von Humor über die gesamte Lebensspanne bei und zeigt den Nutzen, Humor im Rahmen von Konzepten aus der Positiven Psychologie bei älteren Menschen zu erforschen.

Schlüsselwörter

Altern · Humor · Lebenszufriedenheit · Orientierungen zum Glück · Positive Psychologie

Tab. 1 Partial correlations between humor and satisfaction with life and three orientations to happiness in different age groups (controlled for gender)

	Age groups						
	≤20	21–30	31–40	41–50	51–60	61–70	>70
Pleasure	0.450***	0.440***	0.433***	0.463***	0.440***	0.441***	0.378***
Engagement	0.233***	0.282***	0.287***	0.303***	0.288***	0.281***	0.247**
Meaning	0.159***	0.206***	0.210***	0.237***	0.229***	0.236***	0.145
<i>n</i>	1,556	4,999	5,101	5,367	2,629	738	117
SWLS	0.339***	0.324***	0.297***	0.318***	0.326***	0.310***	0.261**
<i>n</i>	1,288	4,121	4,267	4,609	2,375	689	109

SWLS Satisfaction with Life Scale. ** $p < 0.01$; *** $p < 0.001$.

duced variability in humor scores can not fully account for the effects. While the two oldest groups had the lowest standard deviation in most of the scales, the 61 to 70-year-old group had the lowest variability but correlations were not reduced. Thus, one might look for content-related interpretations. For example, this could mean that humor is less integrated into the three orientations to happiness and is less predictive of satisfaction with life during that age period. Second, for two variables (satisfaction with life and life of pleasure) the coefficients tended to decline with age (i.e., those variables seemed to be more predictive during earlier years than during later years), while engagement and meaning seemed to have an inverted U-shape (i.e., they were also less predictive for people younger than 20 years). However, the differences in the correlations can partly be accounted for by differences in the standard deviations, which, in turn, are a function of the means. For example, for satisfaction with life and life of pleasure, the medians and standard deviations had a correlation of -0.80 . Higher means went along with smaller standard deviations, perhaps mainly due to a ceiling effect. Nevertheless, these trends do not account for the results found for the oldest group, which at the same time has the most unstable parameters due to having the smallest number of people in the sample. Thus, for the group of older participants the findings regarding satisfaction with life and orientations to happiness still hold.

Discussion

Humor as a character strength is an interesting addendum to the various trait con-

cepts of humor, and by pursuing a positive psychology approach, one can focus on what role humor plays in various aspects of a good life among the elderly. The present study shows that the VIA-IS humor scale is a very reliable measure of humor as a character strength and it can also be used with older populations.

Humor from a positive psychology lifespan perspective

Overall, the humor scores did not vary much across the lifespan, but a few trends are noteworthy. In the cross-sectional design in our study, humor declined with age but was higher again for people in their 60s. Thus, there was a decline but this was not linear; in addition there seems to be a trend for higher scores for people in the older age groups. The pattern was similar for males and females; males scored higher in most of the age groups.

— Therefore, it can be concluded that there seem to be some changes across the lifespan.

These changes might be related to different roles that people have to fulfill at certain stages in their lives.

However, as a limitation of the research design, it has to be noted that we conducted an online survey. Therefore, one might conclude that those elderly persons who had access to the Internet and were able to complete the study online might differ from others in their age group who are less active and less interested in modern technology. Furthermore, people interested in positive psychology and wanting to learn more about their strengths might be overrepresented. In addition,

higher levels of education were overrepresented, and the data might reflect a cohort effect that may not be found in longitudinal data.

Nevertheless, it is difficult to argue that this will affect certain age groups but not others. Further data will be needed (e.g., collected in paper–pencil format or with different research methods, which may include personal interviews or behavior observations) to test empirically whether our oldest group differs in any way from the others. In any case, humor seems to be relevant among elderly people. As there are studies that support the notion of a positive influence of positive affectivity on aging (e.g., [6]), humor might be a potential cue for positive aging—perhaps in the sense of a mature defense mechanism as put forward by Vaillant [19, 20, 21, 22].

Humor and satisfaction with life among the elderly

Overall, humor correlates with satisfaction with life with a coefficient of 0.31. Thus, humor explains about 10% in the variance in satisfaction with life. The coefficient certainly would be higher if corrected for disattenuation. However, such a correction is not undertaken as one could also argue that the correlation is based on self-reports and therefore might be inflated. Six or seven strengths did yield a higher correlation coefficient, namely hope, zest, love, curiosity, gratitude, persistence, and bravery (males only), while 17 strengths for females and 16 strengths for males had lower coefficients. The first five strengths have been repeatedly identified as having greater importance than the others [8] and humor is not a candidate for this list. However, humor is second or third in the second group of important predictors of satisfaction with life. More importantly, previous results do not indicate that there can be “too much” of a strength. A more detailed analysis of these data [13] showed that increases in humor tended to result in increments in satisfaction with life. The function was linear for most of the humor continuum (if not the entire spectrum). For very low levels of this strength the relationship might be steeper suggesting a mild quadratic trend superimposed on a dominant linear func-

tion. However, this will need to be verified for samples that in general are low in humor as a strength of character. It should be noted that strengths are unipolar and we did not measure “humorlessness” but just low levels of this strength.

► **Increases in humor tended to result in increments in satisfaction with life**

Humor and happiness were also correlated among the oldest groups. While the coefficient is lower one can not say with certainty that this is indeed a reduction in the strengths of the relationship or whether this is merely a peculiarity of this subsample (i.e., bias due to small sample size). It might be of interest to replicate this finding with a sample of elderly, and to see whether other forms of humor (e.g., humor representing a more philosophical view of the world, or humor as a coping tool) become increasingly more predictive with increasing age.

Of course, a correlation does not prove causality, which is implicitly assumed. To test for causality, one would need to conduct a training of humor and see whether satisfaction with life increases thereafter. Nevertheless, the data show that humor is at least an indicator of satisfaction with life, if not an antecedent condition.

Further analyses of these data [13] show that the relationship between humor and satisfaction with life is only partially mediated by the three known orientations to happiness and humor contributes to satisfaction with life beyond the effects of these. As expected, the present study showed that humor was most strongly associated with a pleasurable life. This was true for all age-spans that were studied including the sample of elderly participants.

— **Humor is conducive to laughter and positive emotions and, thus, is an easy way to add enjoyment to daily life.**

Fun-loving and pleasure-seeking individuals will involve in humorous interactions more often and approach life more playfully. However, humor correlates with satisfaction with life even after the contribution of the life of pleasure is controlled for [13]. Thus, the relation between humor and satisfaction with life goes beyond hedonistic aspects. Humor was also correlated with the engaged life and this accounted for another part of the relation between humor and satisfaction with life, and finally a life of meaning. The analysis of individual items showed that the latter was particularly correlated with humor aimed at helping others [13]. What remains is a coefficient of 0.18 that is unexplained by the three orientations (and age and gender) and this is then unique to humor. However, it is not implausible that humor has effects on satisfaction with life that go beyond pleasure, engagement and meaning. For example, one might think that humorous people have more friends and engage in more so-

Hier steht eine Anzeige.

cial activities, which, in turn, enhances their satisfaction with life. Being a humorous person might also facilitate intimate relationships, which again might have a positive impact on well-being. Last but not least, humor and laughter might have health consequences (e.g., humor as a buffer against stress, laughter as a pain killer). Clearly, the overlap between humor and the three orientations to happiness in a prediction should involve other aspects of humor as well, especially when the study is aimed at illuminating the good life among the elderly. For example, it is likely that meaning and a more philosophical humor will be more directly correlated among the elderly than among adolescents.

A comprehensive positive psychological account of humor in the elderly should not only study humor as a strength, but also look at the nature of positive experiences, such as amusement or hilarity (and their consequences), the role of humor in positive relationships (e.g., joking relationships; supporting vs. destructive nature of the humor used), and the role of humor in the definition of positive environments. The latter is of special importance as humor is beginning to be recognized as a quality feature in health care institutions (e.g., [3, 16]).

Conclusion

Humor contributes to well-being in higher age and should be further considered in research and practice. Positive psychology provides a framework for studying the determinants of successful aging. Elderly people do not seem to be less interested in humor but it seems as if playfulness or finding humor in everyday life may sometimes need to be retrained. In both older and younger people, humor is a potent predictor of satisfaction with life. Furthermore, males scored higher than females in humor in all age groups, except in the oldest group where there is a possible change in this trend. This might imply different handling by individuals during different stages of life. Finally, humor can be trained and improved by standardized programs; however, the ap-

plicability of such programs for people of different ages needs to be tested further.

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Acknowledgments. The authors wish to thank the participants who spent their time filling in the various questionnaires at <http://www.charakterstaerken.org>.

Conflict of interest. The corresponding author states that there are no conflicts of interest.

References

- Diener E, Emmons RA, Larsen RJ, Griffin S (1985) The satisfaction with life scale. *J Pers Assess* 49:71–75
- Gosling SD, Vazire S, Srivastava S, John OP (2004) Should we trust web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *Am Psychol* 59:93–104
- Hirsch RD, Kranzhoff EU (2004) Humorgruppe mit alten Menschen: Ergebnisse einer therapiebegleitenden Untersuchung. *Gruppenpsychotherapie und Gruppendynamik* 40:106–129
- McGhee PE, Ruch W, Hehl FJ (1990) A personality-based model of humor development during adulthood. *Humor* 3:119–146
- Nahemov L, McCluskey-Fawcett KA, McGhee PE (eds) (1986) *Humor and aging*. Academic Press, New York
- Ostir GV, Ottenbacher KJ, Markides KS (2004) Onset of frailty in older adults and the protective role of positive affect. *Psychol Aging* 19:402–408
- Park N, Peterson C, Ruch W (2009) Orientations to happiness and life satisfaction: national comparisons. *J Posit Psychol* 4:273–279
- Park N, Peterson C, Seligman MEP (2004) Strengths of character and well-being. *J Soc Clin Psychol* 23:603–619
- Peterson C, Park N, Seligman MEP (2005) Assessment of character strengths. In: Koocher GP, Norcross JC, Hill III SS (eds) *Psychologists' desk reference*, 2nd edn. Oxford University Press, New York, pp 93–98
- Peterson C, Park N, Seligman MEP (2005) Orientations to happiness and life satisfaction: the full life versus the empty life. *J Happiness Stud* 6:25–41
- Peterson C, Seligman MEP (2004) *Character strengths and virtues: a handbook and classification*. APA, Washington/DC
- Proyer RT, Ruch W, Müller L (2010) Sense of humor among the elderly: findings with the German version of the SHS. *Z Gerontol Geriatr* 1:(this issue)
- Ruch W (2009) The relation among measures of humor and the VIA-IS humor scale. Unpublished raw data. Department of Psychology. University of Zurich, Switzerland

- Ruch W, Harzer C, Proyer RT et al (2009) Ways to happiness in German-speaking countries: the adaptation of German paper-pencil and online version of the Orientations to Happiness Scale. *Eur J Psychol Assess* (in press)
- Ruch W, McGhee PE, Hehl FJ (1990) Age differences in the enjoyment of incongruity-resolution and nonsense humor during adulthood. *Psychol Aging* 5:348–355
- Ruch W, Müller L (2009) Wenn Heiterkeit zur Therapie wird. *Geriatr Prax Osterr* 3:22–24
- Ruch W, Proyer RT, Harzer C et al (2009) The German version of the self- and peer-rating form of the Values in Action Inventory of Strengths (VIA-IS): adaptation and validation studies. (submitted)
- Ruch W, Proyer RT, Weber M (2010) Humor as a character strength among the elderly: theoretical considerations. *Z Gerontol Geriatr* 1:(this issue)
- Vaillant GE (1977) *Adaptation to life*. Little Brown, Boston
- Vaillant GE (1995) *Natural history of alcoholism revisited*. Harvard University Press, Cambridge/MA
- Vaillant GE (2002) *Aging well*. Little Brown, Boston
- Vaillant GE (2004) Positive aging. In: Linley AP, Joseph S (eds) *Positive psychology in practice*. Wiley, New York, pp 561–578