Chapter 2
Development of a Questionnaire Measuring Art-of-Living

2.1 Introduction

2.1.1 Questions Regarding the Concept

Firstly, we perform a study aiming to investigate how people think about art-of-living: Are their opinions similar to the ones we phrased in the introduction? Do they believe that art-of-living can be learnt? Do they see a way to perform art-of-living? To answer these questions, in this study we were asking open- as well as closed questions regarding the concept of art-of-living.

To be precise, our research questions regarding the concept are:

1. What opinions do people have regarding art-of-living? Are they similar to the concepts developed by Wilhelm Schmid?
2. Do people think that art-of-living can be learned?
3. Do people think there is only one way to perform art-of-living?
4. Are there different types of artists of living?

2.1.2 Questions Regarding the Instrument and Its Validity, Reliability and Factorial Structure

Secondly, we derive a multidimensional questionnaire based on the survey results. We want to test the quality of this instrument by computing internal consistency, extracting the factorial structure and trying to validate it. To achieve this, we also used life-satisfaction as one criterion variable. Therefore, our research questions regarding the instrument are:

5. Can a reliable questionnaire with corresponding sub-constructs be developed for art-of-living?

© Springer International Publishing Switzerland 2016

B. Schmitz, *Art-of-Living*, Social Indicators Research Series 63,
DOI 10.1007/978-3-319-45324-8_2

6. Can the factorial structure of the subscales be reproduced adequately?
7. Is there a general factor model underlying the whole instrument?
8. Is our questionnaire measuring art-of-living sufficiently free from effects of social desirability?
9. Can art-of-living be used to predict happiness?

2.1.3 Sequence of Studies

This chapter describes four studies. In Study 1, a preliminary questionnaire consisting of a mixture of open (five) and closed (six) questions was used in order to analyze qualitatively and quantitatively whether our conceptions of art-of-living are similar to the conceptions held in our sample ($N = 128$). In a pilot study for study 2, we pretested our newly developed questionnaire for our 14 sub-constructs to a pilot sample ($N = 65$). On the basis of this data, some of the items were modified. This version of the questionnaire was then used in our main Study 2 with a sample of $N = 1105$.

Findings were discussed and complemented by theoretical and our own considerations in order to create the questionnaire. The resulting version contains 14 scales, which measure the different components of art-of-living.

The next step in Study 3 is to improve the questionnaire both from a theoretical and an empirical basis. Finally we discuss in Study 4 a short form of the questionnaire for application in contexts which do not allow the usage of the complete questionnaire.

2.2 Study 1: Preliminary Combined Qualitative and Quantitative Survey: How Do People Think About Art-of-Living?

Anna Schmidt

2.2.1 Method Study 1

The purpose of the preliminary interview was to find out whether our conceptions of art-of-living were shared in our sample. In order to compare our theoretical considerations with common views, we asked our sample about their ideas concerning art-of-living. Furthermore, to obtain qualitative data we posed six open questions concerning art-of-living (see Table 2.1). For gaining quantitative data we asked four questions in a closed answer format (see Table 2.2). The answers to these questions served as an additional source for developing and phrasing the final questionnaire.

Table 2.1 Open questions in the preliminary interview with exemplary answers

Question	Exemplary answer
What do you understand art-of-living to mean?	To find solutions that contribute to personal satisfaction even in difficult situations Art-of-living is to make the best out of what you have and to be happy with that/it
Which traits would you ascribe to a life artist?	Inner strengths, strong-mindedness, creativity serenity, courage
What does being a life-artist bring with it?	Serenity, satisfaction, to feel happiness in life Not to become desperate
How can art-of-living be seen in your life?	To accept day-to-day circumstances and practice serenity Creativity and improvisation
How can you bring more art-of-living into your life?	Enjoy the moment and do not get tangled up in worries about the future In not being too perfectionistic To seek new ideas and goals and fulfill them
Do you know someone who practices art-of-living? If yes, what characterizes this individual?	Independent of the opinion of others, strong personality, committed to his/her own thing

Table 2.2 Closed questions in the preliminary interview and their quantities in the responses

Item	Quantity (%)
For art-of-living you need	
Talent	16.4
Routine	29.7
Experience	36
Certain personality traits	58.6
A balance between activity and passivity	42.2
Art-of-living is	
A deliberate/conscious way of living	47.7
Desirable	37.5
Accepting things that happen	42.2
Different for each individual	49.2
Appreciating life´s little pleasures	46.9
Do you associate the term life-artist with something positive or negative?	
Positive	78.9
Negative	21.1
Art-of-living is reserved for the few people who were born as life-artists?	
Yes	18
No	68
Missings	14.1

The preliminary interview was filled out by 128 participants and completed by 92 participants. The mean age was 35 with a range of 19–79 years; about 32 % of the participants were male and about 41 % were female (27 % did not specify); as to the sample's occupation, 50 % of the participants were students, 35.9 % had a university degree, 9.8 % had a qualified job, and 4.3 % were graduates.

Table 2.1 shows the open questions with which the participants were asked to write down their personal opinions regarding art-of-living and life-artists. In order to organize and sum the answers to the open questions, a set of categories was developed. Based on the different components that were mentioned by the participants, 11 categories were generated inductively to classify the answers.

2.2.2 Results of Study 1

2.2.2.1 Research Question 1, 2, 3

Table 2.3 contains the 11 categories. The answers were assigned to one or several of the categories (depending on the components that were mentioned). To ensure objectivity, the classification was conducted independently by several members of the research team (Bortz and Döring 2006). Table 2.3 also lists how many answers (from all open questions) were assigned to each category. The answer to the question "What do you understand by art-of-living?" was, for example, assigned to categories one and nine: *"To be able to accommodate to the different phases and problems of life and to gain positive strengths by these situations. Good balance between work and free time."*

Most answers (i.e., over 65 %) were assigned to the first three categories. These answers connected art-of-living to a successful handling of negative events, optimism, and a positive attitude toward life as well as a self-determined way of living.

Table 2.3 Description of empirical categories and frequencies of their answers

No.	Category	Frequencies of answers	Percentages of answers (%)
1	Handling of negative events, optimism, positive attitude towards life, humor	222	33.8
3	Self-determined way of living	127	19.3
2	Creativity, openness	104	15.8
6	Satisfaction with one's current state	41	6.2
5	Serenity	40	6.1
4	Deliberate exploration of pleasant activities	37	5.6
10	Relationships, social contact	22	3.3
7	Pragmatism/efficiency	19	2.9
9	Balance	19	2.9
8	Emphasis on the present	17	2.6
11	Reflection	9	1.4

Furthermore, art-of-living was described by many participants with openness and creativity.

Five items were framed in a closed format (see Table 2.2). They related to the concepts people have regarding the conditions for art-of-living, whether it is individual, positive, reserved for few people, and, whether it is mainly a topic for philosophers. For Items 1 and 2, the participants could choose multiple options (1 to all). Frequencies of the different answer options are shown in Table 2.2.

The evaluation of the closed questions shows that most participants connected the term life-artist' to something positive. Predominantly, they did not think that art-of-living is reserved for natural born life-artists or lies only in the interest of philosophers. The statement "For art-of-living, you need" was completed most frequently by "certain personality traits", followed by the statement "For art-of-living, you need a balance between activity and passivity." The alternatives "For art-of-living, you need experience" and "For art-of-living, you need routine" were chosen less often. The least approval was obtained for the answer "For art-of-living, you need talent." The statement "art-of-living is" could likewise be completed by different answers. For this statement, the different reply options were chosen more or less equally often. Thus, art-of-living is seen as a deliberate/conscious way of living, it is seen as desirable, as accepting of things that happen, as different for each individual, and as appreciating life's little pleasures.

In sum, it can be stated that this sample considers art-of-living to be something positive and desirable. The participants see art-of-living as learnable but facilitated by certain personality traits. They connect art-of-living mainly with a satisfying and successful life even when facing negative events and a way of living that is determined by the individual's wishes, ideas, and ideals. Furthermore, art-of-living and especially the life-artist are characterized by creativity and openness.

2.3 Study 2: The Questionnaire Measuring Art-of-Living

Anna Schmidt

2.3.1 Method of Study 2

2.3.1.1 Art-of-Living Questionnaire

For generating the art-of-living-questionnaire, 14 scales and corresponding items were generated. Thereby, the categories from the preliminary interview were taken into account, adapted and supplemented based on relevant literature and our own theoretical considerations, at which the components of art-of-living according to Schmid (2004) were considered in particular. In addition, as we consider self-efficacy to be a relevant component of art-of-living, we also included the

Table 2.4 Demographic characteristics of pilot sample and main sample

	Pilot sample (N = 64) (%)	Main sample (N = 1105) (%)
Age (years)		
13–20	3.1	9.5
21–24	12.8	25.7
25–34	56.3	30.6
35–44	11	12.9
45–54	6.3	12.8
55–64	9.4	5.7
65+	1.6	3.4
Sex		
Male	27.6	34.8
Female	56.6	65.2
Missing	15.8	
Family/relationship status		
Single	21.1	30.4
In a relationship	40.8	42.2
Married	21.1	22.3
Divorced	1.3	4.2
Widowed	–	1
Children		
Yes	19.7	24.8
No	64.5	75.2
Education		
High school	2.6	10.4
Professional education	11.8	12.2
High school graduate	36.8	46.3
University degree	32.9	33.9
Nationality		
European	100	98.2
American	–	.54
Asian	–	.81
n.s.	–	.45

general self-efficacy scale by Schwarzer and Jerusalem (Hinz et al. 2006), which is an established instrument with valid psychometric properties (Hinz et al. 2006).

A pilot sample (N = 64) was asked to fill out the questionnaire so that psychometric properties could be assessed. The demographic characteristics of the pilot sample are summarized in a column of Table 2.4.

Most scales showed satisfactory internal consistencies ranging from α = .65 to α = .89. The internal consistency of the questionnaire as whole was .92. The internal consistencies of the scales *coping* and *shaping of living conditions* were rather low at first, that is why some items were removed or rephrased to improve internal consistencies.

2.3.1.2 Sample

The sample was recruited on the basis of an online questionnaire. Table 2.4 (right column) summarizes the demographic characteristics of the sample.

The participants were mainly of German nationality with only a few other nationalities. The total sample consisted of 1105 people.

Table 2.5 lists the final subscales with one exemplary item. The participants were asked to answer each item on a 6-point scale depending on the extent the statement applied to them (1 = *does not apply at all* to 6 = *totally applies*). The questionnaire also encompassed the following demographic data: sex, age, nationality, highest level of education, occupational status (e.g., employee, executive), family/relationship status and children. Furthermore, the questionnaire included a question concerning the participants' religiousness/spirituality. To find out about the participants' view on the learnability of art-of-living, we also asked the participants whether they assume that art-of-living can be learned and whether they agree/disagree with the statement "There is only one way to live a fulfilling life."

2.3.1.3 Measures for Validation

Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale (Diener et al. 1985) was included in the final questionnaire in order to record satisfaction with life as a criterion variable.

Table 2.5 Final subscales of the questionnaire with exemplary items

No.	Final subscale	Exemplary item
1	Coping	I arise strengthened from painful experiences
2	Openness	I like to take on new challenges
3	Self-determined way of living	I work toward realizing my personal goals
4	Savoring	I spoil myself
5	Serenity	I do not easily get worked up
6	Integrating different areas of living	I take enough time for my hobbies
7	Balance	I can not only plan very well but also intuitively approach a task
8	Social contact	I know people with whom I can be who I am
9	Self-knowledge	I know my own strengths and weaknesses
10	Physical care	I pay attention to my body
11	Optimization	I arrange my strengths quite well
12	Positive attitude towards life	Altogether, I expect that I will experience more good than bad things
13	Self-efficacy	For every problem, I can find a solution
14	Shaping of living conditions	In my accommodation/home, I feel comfortable

The SWLS measures an individual's evaluation of satisfaction with life in general. Previous research has reported good psychometric properties for the SWLS (Schumacher et al. 2003; Diener 1994).

Social Desirability

To measure and control the tendency towards socially desirable behavior, we also included a social desirability scale. We assembled this scale with items from the German personality inventory FPI-R (Fahrenberg et al. 2001), for which previous research has reported satisfactory psychometric properties as well (Fahrenberg et al. 2001).

2.3.2 Results of Study 2

2.3.2.1 Overall Art-of-Living-Score

First, we calculated an overall art-of-living score as the mean of all subscales. An analysis of the distribution showed that the overall score in the main sample was normally distributed.

2.3.2.2 Demographic Variables

We also checked whether the demographic variables showed an effect on the overall art-of-living score. The evaluation indicated no significant effects of age, sex, family/relationship status, children, or education on art-of-living.

2.3.2.3 Research Questions 5, 6, and 7

Furthermore, we calculated various correlative relations. Table 2.6 shows the correlations between the scales and the correlation between the overall scale and the subscales (computed in the main sample, $N = 1105$). Cronbach's alphas are also presented in the diagonal of Table 2.6. Most scales showed internal consistencies greater than .70, whereas some were between .60 and .70. Only two scales (*coping* and *shaping of living conditions*) were lower and should be handled with caution. The overall art-of-living score had a consistency of .95.

Regarding the correlations it can be seen that the overall scale shows significant and high correlations (>.50) with all its subscales, which qualifies art-of-living as an overall construct. In addition, the correlations show that the sub-constructs have sufficient specificity to be of interest on their own.

Table 2.6 Means, SD, correlations and Cronbach's alpha of subscales

	OT	BA	SD	SE	SK	PC	SA	CO[a]	PA	SR	OP	SC	SL[a]	ID	Total	Mean	SD
Optimization	.69[b]															3.07	.63
Balance	.51**	.61														3.50	.66
Self-determined way of living	.60**	.53**	.77													3.56	.64
Self-efficacy	.68**	.55**	.65**	.88												3.18	.62
Self-knowledge	.55**	.52**	.68**	.60**	.72											3.67	.58
Physical care	.35**	.36**	.40**	.33**	.32**	.82										3.39	.83
Savoring	.33**	.33**	.38**	.31**	.30**	.29**	.64									3.23	.72
Coping[a]	.51**	.51**	.54**	.67**	.53**	.28**	.35**	.52								3.09	.57
Positive attitude towards life	.47**	.54**	.69**	.61**	.51**	.37**	.45**	.55**	.78							3.63	.67
Serenity	.39**	.27**	.29**	.32**	.21**	.20**	.30**	.35**	.34**	.77						2.50	.93
Openness	.37**	.41**	.51**	.52**	.39**	.32*	.21**	.48**	.48**	.28**	.70					3.49	.68
Social contact	.32**	.40**	.46**	.26**	.37**	.30**	.26**	.30**	.46**	.18**	.38**	.65				3.88	.71
Shaping of living conditions[a]	.40**	.32**	.55**	.38**	.37**	.29**	.25**	.30**	.44**	.19**	.24**	.46**	.53			3.56	.75
Integrating diff. areas of living	.49**	.35**	.47**	.37**	.30**	.37**	.50**	.34**	.39**	.37**	.23**	.29**	.35**	.63		2.62	.86
Overall art-of-living score	.75**	.69**	.84**	.81**	.71**	.55**	.55**	.73**	.80**	.80**	.64**	.56**	.57**	.60**	.95	46.36	6.45

$N = 1105$

OT optimization, *BA* balance, *SD* self-determined way of living, *SE* self-efficacy, *SK* self-knowledge, *PC* physical care, *SA* savoring, *CO* coping, *PA* positive attitude towards life, *SR* serenity, *OP* openness, *SC* social contact, *SL* shaping of living conditions, *ID* integrating different areas of living, *Total* overall Art-of-living score

** $p < .01$ (2-tailed)

[a]Caution: scale shows low reliability

[b]Diagonal elements = Cronbach's alpha

To show that our subscales provide acceptable factors for further analyses, we performed confirmatory factor analyses on basis of the items using the program Mplus (Muthén and Muthén 2009). Following the item-level factor analyses, the items were combined into parcels (i.e., small groups of items) to reduce the measurement error of items (cf. Little et al. 2002, for the pros and cons of using parcels).

The parcels were generated using the data analysis program R with an algorithm contained in the package "Psych" (Revelle 2012). The loading matrix produced by the confirmatory factor analyses is shown in Table 2.7, which also shows that all the loadings were significant. The correlations between the factors were all significant as well. The statistics assessing model fit showed an acceptable fit of the model, although the fit was not perfect: The Root Mean Square Error of Approximation (RMSEA) was .05, the fit indices were .92 for the Comparative Fit Index (CFI). Due to similarities between items we allowed 38 correlations of the item-error variables. In sum, the results of the confirmatory factor analysis justify performing studies on the level of the subscales.

Exploratory factor analyses based on the subscales resulted in a one-factor solution. The scree-test revealed a clear break after the first eigenvalue, which was 6.35 and explained 45 % of the total variance.

We also computed confirmatory factor analyses to further support this general factor model of art-of-living.

When we computed a one-factor model on the basis of the subscales, we got an RMSEA of .086, a CFI of .92, a TLI of .90, and an SRMR of .043 with highly significant loadings (cf. Table 2.8). These results show that a general factor model can be applied.

2.3.2.4 Research Questions 8 and 9

Table 2.9 contains the correlations with the scale social desirability in one column. It can be seen that even though there were a lot of significant correlations between art-of-living subscales and social desirability, there was only one correlation higher than .15 in absolute value. In sum, the analyses show that the answers on art-of-living questionnaire were hardly influenced by social desirability.

To test the hypothesis that art-of-living is positively correlated with satisfaction with life, we calculated the correlation between the overall art-of-living score and the satisfaction with life score (cf. Table 2.8). The resulting correlation of the overall scale was $r = .69$ ($p < .001$), being highly significant, which indicates that art-of-living is highly related to happiness and well-being. In matters of the relations of the subscales, each correlation was significant. The highest relation was found for a *self-determined way of living* ($r = .73$) and the lowest for *serenity* ($r = .26$).

Table 2.7 Loadings of factor analyses based on parcels

	OT	BA	SD	SE	SK	PC	SA	CO[a]	PA	SR	OP	SC	SL[a]	ID
P_ OT1	.47/.03													
P_OT2	.71/.02													
P_OT3	.73/.02													
P_ BA1		.69/.03												
P_ BA2		.52/.03												
P_SD1			.73/.02											
P_SD2			.75/.02											
P_SD3			.66/.02											
P_SE1				.80/.01										
P_SE2				.79/.01										
P_SE3				.68/.02										
P_SE4				.78/.01										
P_SE5				.71/.02										
P_SK1					.72/.02									
P_SK2					.60/.02									
P_SK3					.66/.02									
P_ PC1						.90/.02								
P_ PC2						.87/.02								
P_ SA1							.57/.03							
P_ SA2							.63/.03							
P_CO[a]1								.72/.02						
P_CO[a]2								.47/.03						
P_CO[a]3								.35/.03						

(continued)

Table 2.7 (continued)

	OT	BA	SD	SE	SK	PC	SA	CO[a]	PA	SR	OP	SC	SL[a]	ID
P_PA1									.73/ .02					
P_PA2									.82/ .01					
P_PA3									.53/ .03					
P_ SR1										.69/ .01				
P_ SR2										.91/ .02				
P_OP1											.74/ .02			
P_OP2											.47/ .03			
P_OP3											.62/ .02			
P_ SC1												.66/ .03		
P_ SC2												.62/ .03		
P_SL[a]1													.35/ .04	
P_SL[a]2													.45/ .04	
I_ID1														.57/ .03
I_ID2														.68/ .02
I_ID3														.55/ .03

Values loadings/*SD;* correlations of measurement errors were admitted according to the level of Modification Indices

[a]Caution: scale shows low reliability

OT optimization, *BA* balance, *SD* self-determined way of living, *SE* self-efficacy, *SK* self-knowledge, *PC* Physical care, *SA* savoring, *CO* coping, *PA* positive attitude towards life, *SR* serenity, *OP* openness, *SC* social contact, *SL* shaping of living conditions, *ID* integrating different areas of living, *P* paracel, *I* Item

In addition, we performed a multiple regression analysis to predict subjective well-being by all art-of-living subscales. All variables were included in the prediction equation and showed a significant contribution to the prediction, except *physical care*, *coping* and *serenity*. The remaining 11 variables resulted in $R = .78$, $R^2 = .61$, $F(11,1093) = 170{,}4$; $p < .001$. Thus it appears that well-being can be predicted very well by art-of-living, nearly all variables contribute to the prediction and more than 60 % of the variance of the criterion can be explained.

Table 2.8 Loadings of the subscales of the one-factor solution

Optimization	.73 (.02)
Balance	.68 (.02)
Self-determined way of living	.85 (.01)
Self-efficacy	.78 (.01)
Self-knowledge	.72 (.02)
Physical care	.48 (.02)
Savoring	.47 (.03)
Coping	.68 (.02)
Positive attitude towards life	.79 (.01)
Serenity	.41 (.03)
Openness	.59 (.02)
Social contact	.54 (.02)
Shaping of living conditions	.55 (.02)
Integrating different areas of living	.53 (.02)

Values in parentheses = SD

Table 2.9 Correlations of the scales with other instruments for validation

	Subjective well-being	Social desirability	Overall art-of-living score
Subjective well-being	–	.02	.69**
Overall Art-of-living score	.69**	.14**	–
Optimization	.56**	.12**	.75**
Balance	.40**	.05	.69**
Self-determined way of living	.73**	.08**	.84**
Self-efficacy	.55**	-.01	.81**
Self-knowledge	.46**	.08**	.71**
Physical care	.32**	.02	.55**
Savoring	.35**	.02	.55**
Coping	.41**	.05	.73**
Positive attitude towards life	.63**	.09**	.80**
Serenity	.26**	.36**	.51**
Openness	.34**	.09**	.64**
Social contact	.41**	.11**	.56**
Shaping of living conditions	.56**	.08**	.57**
Integrating different areas of living	.48**	.12**	.60**

*** $p < .001$; ** $p < .01$; * $p < .05$

2.3.2.5 Research Question 4: Are There Different Types of Art-of-Living?

A cluster analysis was conducted in order to find out whether there were subgroups of participants with respect to the subscales of art-of-living. All subscales were integrated. We applied the SPSS classification program *two-step-cluster*, which automatically detects the number of clusters and computes the mean values for each cluster. The results indicated a three-cluster solution. Cluster 1 contained 265 individuals (24 %), Cluster 2 contained 576 individuals (52.2 %), and Cluster 3 contained 264 individuals (24 %). The clusters can be organized in an ascending order. In Cluster 1, the participants with low scores were assorted; in Cluster 2, the participants who achieved medium scores were merged; and classified for Cluster 3 were only individuals with high values for each subscale. The results show that the profiles are parallel, and the clusters differ only with respect to the overall score of art-of-living, no qualitatively different subtypes could be found. This brings up the fact that individuals can be characterized as either low, medium, or high in art-of-living, irrespective of the kind of subscale that was in focus. This result is in line with the high correlations of the subscales and the one-dimensional factor structure on the level of the subscales.

Note that this does not mean that all individual art-of-living profiles were similar despite their general level. In fact, there was high variability among the individual profiles, but there were no common profiles leading to subtypes.

Additionally, we performed a latent class analysis, which serves a purpose similar to the cluster analysis, but uses a totally different method. In order to allow comparison with the results from the cluster analysis, we computed a latent class analysis with three latent classes. The results are shown in Fig. 2.1.

Again, the three classes can be put into an ascending order. The means of the classes for the subscales show three classes with results similar to the cluster analysis.

Therefore, we can conclude that there were no homogeneous subtypes for art-of-living, classes and clusters differed only in the general amount of art-of-living. However, the high variability among the individual profiles shows that the individual profiles differ greatly.

2.3.2.6 Research Question 2: Can Art-of-Living Be Learned?

We presented results to this research question in study 1. We now add results from study 2. In line with Schmid's (2004) and our theory of art-of-living, one would assume art-of-living can be learned. However, this assumption has important implications, namely, whether it makes sense to teach art-of-living in schools or to develop trainings to enhance art-of-living in individuals. Therefore, we wanted to verify it relying on empirical data. Clearly, this question can be answered best by using a control group design to demonstrate that teaching or training art-of-living leads to enhancement of the same. But still, to see how our sample thought about

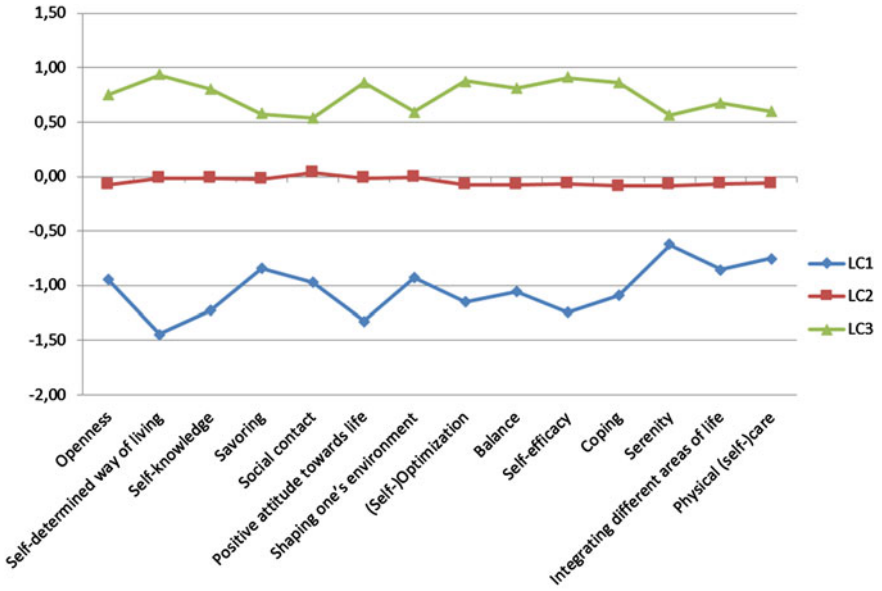


Fig. 2.1 Results of the latent class analysis, grouping the participants by their level of overall art-of-living: participants in LC1 had lower scores, participants in LC2 had medium scores and participants in LC3 had the highest scores of art-of-living

this issue, we asked our participants to evaluate the statement: "Everyone can learn how to live a full life." The frequencies of the answers were: *does not apply at all*, $n = 14$ (1.3 %); *does not apply*, $n = 42$ (3.8 %); *rather does not apply*, $n = 135$ (12.2 %); *rather does apply*, $n = 350$ (31.7 %); *applies*, $n = 408$ (36.9 %); *totally applies*, $n = 156$ (14.1 %). In sum, 82.7 % of the sample rather agreed, agreed, or totally agreed with the idea that art-of-living can be learned.

2.3.2.7 Research Question 3: Is There Only One Way to Live a Full Life?

We also presented results to this research question in study 1. We now add results from study 2. In a similar way, we wanted to know whether there is only one way to perform art-of-living. To find out how our sample thought about this issue, we asked our participants to respond to the statement: "There is only one way to live a full life." The frequencies of the answers were: *totally applies*, $n = 19$ (1.7 %); *applies*, $n = 31$ (2.8 %); *rather does apply*, $n = 53$ (4.8 %); *rather does not apply*, $n = 233$ (21.1 %); *does not apply*, $n = 377$ (34.1 %); *does not apply at all*, $n = 392$ (35.5 %). In sum, 90.7 % of the sample rather didn't agree, didn't agree, or totally disagreed, indicating that the majority did not believe that there is only one way of pursuing art-of-living.

2.4 Discussion Study 1 and 2

Our study and the resulting questionnaire represent theoretical progress in the field of art-of-living. The questionnaire comprises 14 scales and 79 corresponding items. It shows satisfactory psychometric properties and can be completed online in about 15 min. The measured art-of-living value is correlated with satisfaction with life. The independence of art-of-living from demographic variables supports our postulation that art-of-living can be achieved by different types of individuals.

The fact that there were no remarkable correlations with social desirability shows that it is unlikely that the answers in art-of-living questionnaire are determined by a need for positive self-description.

The cluster analysis shows that participants can be classified into three groups. The results indicate that participants generally achieve either high, medium, or low scores on all scales. There is no existence of different subtypes within the group with high scores in art-of-living. Although there is a lot of variability between the individual profiles, no common subtypes could be detected.

Different analyses indicate the importance of the scales s*elf-determined way of living, optimism*, and s*elf-efficacy* for the concept of art-of-living. The scales show the highest correlation with the overall score and with satisfaction with life. The evaluation of the preliminary interview had already indicated the relevance of these components. Most participants connected art-of-living mainly to *optimism*, *coping with negative events*, and a *self-determined way of living*.

2.4.1 Limitations Study 1 and 2

Some limitations of the study have to be taken into consideration.

The scales *coping* and *shaping of living conditions* showed low reliabilities; thus, they have to be interpreted with caution. As we still consider these components to be relevant to the construct of art-of-living, the scales and items have to be revised for future studies.

It has to be taken into account that the questionnaire was presented as an online version. Therefore, the sample is not fully representative of the whole population. People without computers and the internet were excluded from our study. This could be a disadvantage as elderly people were excluded, and they might be of special interest regarding questions about art-of-living. Another disadvantage is that the amounts of women and men were not equally distributed in our sample (more female participants). We assume that women are more interested in questions about art-of-living than men. As we did not establish any normed values with our sample, this unequal distribution should not be considered a serious problem.

Regarding the questions about the possibility of learning art-of-living and the number of ways to perform art-of-living, we used only one item for each question. Therefore, it could be assumed that these questions contain an implicit message

about how to answer (e.g., that they invite individuals to answer in a certain way). But because our open questions in the interviews (e.g., "art-of-living is something only for people who were born as artists of living.") are free of suggesting any concrete answer, the possibility of bias because of the answer format is not probable.

With respect to the conceptualization and measurement of art-of-living, we entered a new field, and therefore, we do not believe that we reached a final point. Instead, we view our concept and our questionnaire as the first steps in this direction.

2.4.2 Outlook Study 1 and 2

We tried to transfer the concept of art-of-living, which has a long tradition in philosophy, to psychological research. We pursued this idea from the 2003 special issue in the Journal of Happiness Studies (Veenhoven 2003a, b). Firstly we have conducted a study on the philosophical background by Wilhelm Schmid (2004). Now we began our empirical study by interviewing a sample of participants about their understanding of basic concepts of art-of-living. Based on this data and the philosophical background, we further elaborated our concept of art-of-living and developed a questionnaire to get an empirical foundation for its measurement. The project was successful in that we presented an instrument with satisfactory statistical properties. The overall internal consistency was quite high (which was not surprising because of the number of items), but also most of the subscales showed sufficient consistency. In addition, we demonstrated that subjective well-being could be predicted very well by art-of-living because the correlation between the overall art-of-living scale and subjective well-being was .69, the multiple correlation was .78, and the R^2 value was .61. This could be interpreted that high art-of living values can lead to high well-being. Moreover, we demonstrated that our art-of-living measure was only minimally influenced by social desirability. Regarding the factorial structure, analyses on the scale level showed that it makes sense to view art-of-living as an overall construct, whereas more detailed analyses of the items showed that it makes sense to have a look at the subscales. The analyses of the latent classes and the cluster analyses led to similar results but from different methodological perspectives. The results showed that there were not different subgroups with homogeneous profiles but rather with different general levels. The individual profiles were rather different but no common profiles were found. This is in line with the view (and also corresponding to Schmid) that there are many different ways to perform art-of-living.

We do not assume that our concept will be the final answer to the question how art-of-living can be conceptualized and measured. We rather believe that this is a first but important step in supporting the development of the psychological study of art-of-living on an empirical basis. Future studies might add other constructs (e.g.,

personality, wisdom), which might be important or might further sharpen the contours of the concept and its measurement.

Regarding the question whether art-of-living can be learned, we, along with Schmid and our sample, agree. The instrument that was introduced in this chapter could be used to evaluate interventions that try to enhance art-of-living. The ways in which this can be done are numerous (see e.g., studies by Fordyce 1977, 1983; Sin and Lyubomirsky 2009; Seligman et al. 2006). Future studies might evaluate such interventions using our questionnaire to measure art-of-living.

2.5 Study 3

2.5.1 Art-of-Living Questionnaire: Revised Edition

In the first stage of the development of the questionnaire for art-of-living the theoretical ground was mainly Schmid's (2004) philosophical considerations. But as described in chapter one also the rapidly growing knowledge of positive psychology has to be integrated. Therefore a refinement of the first conception seems to be rational. There are empirical and theoretical considerations, because the instrument development is an ongoing process we want to optimize the instrument from the perspective of test-quality criteria, to reach better homogeneity measures but also a better theoretical representation of the core concept. Although we see *meaning* as a central component of art-of-living, until now *meaning* was only a part of *self-determined way of living*. Therefore we decided to split off *meaning* from *self-determined way of living*. From the study of humanistic literature, e.g. Maslow (1968), Rogers (1961), we believe that a tendency to self-actualization to strive for growth and personal development would be an important component that was neglected in the first concept. A third component we missed in our primary approach was reflection. Because in our personal research history we investigated learning, education and self-regulation there it become apparent that metacognition is important for learning and generally enhancing one's quality of life. Because life-long learning is important one has to think about what one has done, to evaluate one's behavior in order to find out what was good and what not and as consequence to change behavior if necessary. Note however, that reflection is a complicated topic. Well-known are the pitfalls of rumination, cf. Nolen-Hoeksema (2004) where this kind of reflection does not lead to any positive consequences. Rumination involves repeating of negative thoughts, which could lead to depression. Also ineffective is reflection without action, e.g. in case of procrastinating: having goals without doing very much to reach them (Steel, 2007). Other constructs we thought about to include to art-of-living was for example humor. But we were not sure about its status in the hierarchy. We find it very important to have humor, it helps in

Table 2.10 New scales with sample items

Scale	Sample item
Reflection	"I try to analyze and to evaluate my behavior in retrospect"
Self-actualization	"I seek to actualize my potential"
Meaning	"I work towards the achievement of my personal objectives"

many life situations (Ruch 1998). But compared to other constructs it seems to be on a hierarchical lower level, e.g. as special coping strategy. Also an important topic is transcendence, e.g. to believe in god or a higher instance. Transcendence is also contained in the Strength and Virtues catalog of Peterson and Seligman (2004). But from our perspective it is a special strategy belonging to the category of *meaning* and therefore it is also can be considered as construct on a different level.

In sum, from a theoretical perspective we additionally include *self-actualization*, *meaning* and *reflection* from an empirical test criteria perspective we try to enhance especially *shaping of living conditions* and *coping*.

Now we turn to the empirical revision. Both the scales and items included in the art-of-living questionnaire were revised. We present a brief overview over the changes and improvements.

Preparatory to another study (Sample: $N = 150$, 93 % university students, mean age 24.5, $SD = 4.7$) three scales were added (see Table 2.10). Moreover, further items were added to nearly all of the scales. Some specific scales like *coping* or *shaping of living conditions* were changed virtually completely. The core components of the scale *self-determined way of living* were divided into two separate scales as described above, one *meaning* and the other one with the same label as before: *self-determined way of living*.

2.5.1.1 Was the Revision's Outcome Satisfactory?

While analyzing the questionnaire it became evident that consistencies improved in virtually all categories. The accuracy of measurement improved particularly for *balance, coping, shaping of living conditions, enjoyment, positive attitude towards life itself, social life* and *self-knowledge,* see Table 2.11.

The revision of the art-of-living questionnaire could be viewed as successful. It is on a theoretical basis improved and the consistencies for the subscales now are sufficient.

2.6 Study 4

Janina Linten, Bettina Schumacher

Table 2.11 The scales' reliabilities in comparison between the main study and the collegiate study

Scales	Item count	α Main study	α Collegiate study
Balance	6	.61	.69
Coping	7	.52	.74
Serenity	6	.77	.79
Savoring	8	.64	.75
Shaping of living conditions	5	.53	.82
Physical care	6	.82	.86
Openness	7	.70	.68
Optimization	7	.69	.73
Positive attitude towards life	10	.78	.85
Reflection	9	–	.79
Self-actualization	8	–	.82
Self-knowledge	11	.72	.86
Self-determined way of living	7	.77	.72
Self-efficacy	7	.88	.80
Meaning	10	–	.86
Social contact	9	.65	.81
Integrating different areas of living	5	.63	.55
Art-of-living total (items)	78/127	.95	.96
Art-of-living total (scales)	14/17	.86	.91

2.6.1 A Shortened Form of the Art-of-Living Questionnaire

The revised version of the art-of-living questionnaire fulfills the criterion for sufficient internal consistencies for the subscales. It allows a differentiated diagnosis of the individual status for art-of-living. But the questionnaire is rather lengthy. Compared to the VIA it consists of the half number of items, but for many contexts it needs a too long time to answer all the questions. Therefore, we want to develop a shortened version which could be applied in a multitude of situations. In a first trial, we applied an empirical approach in that we are aiming to identify the items with the highest factor loading and thereby to generate a valid, reliable and economical abbreviated version of the art-of-living-questionnaire the data from a 2015 online study ($N = 636$) was evaluated in a parallel analysis. The resulting 14-factor-model was subjected to an exploratory factor analysis with oblique rotation (*Oblimin*). The empirical χ^2-value was 6976.43 ($p < .05$), the TLI (Tucker-Lewis-Index) amounted to .875, RMSEA (Root Mean Square Error Approximation) was .033 and the BIC (Bayesian Information Criterion) was −33,317.03.

As a consequence both items with low factor loading (<.3) and those that could not be identified as a component of any factor were excluded. Afterwards the resulting data was subjected to a parallel analysis once more.

This process was repeated until the TLI reached a sound value of .988. The model was reduced to a 10-factor-model comprising 30 items. All factor loadings

exceeded .50 while the empirical χ^2-value amounted to 72.8 ($p < .1$). RMSEA was .021 and Cronbach's alpha for the entire model was .90, whereas Cronbach's alpha for each of the scales yielded between .77 and .88.

The final abridged edition consisted of 9 scales taken from the original version as well as an additional scale *goal-orientation,* which has its origin in the *meaningfulness*-scale. The scales were measured by three items each. The abbreviated edition was then validated again with a sample of students (N = 241; mean age = 25.22; SD = 4.8; 55.6 % female). The resulting reliabilities are between .74 and .89. In addition, participants also stated their satisfaction with life (SWLS). It could be shown that art-of-living predicted SWLS with R = . 65 R^2 = .42, F (1239) = 149.5, p = < .001.

Even though the fit indices are quite well, we are not fully satisfied with this short form and try to enhance it.

2.7 Overall Discussion

Designing the art-of-living-questionnaire began with the goal to merge the various theoretical and philosophical aspects and constructs into one empirically validated instrument producing precise and reliable measurements. In the process of different tests and studies including qualitative and quantitative data a valid, reliable questionnaire designed to have a psychological measure for art-of-living was created.

References

Bortz, J., & Döring, N. (2006). *Forschungsmethoden und Evaluation für Human- und Sozialwissenschaftler* (4th ed.). Heidelberg: Springer.

Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research, 31*, 103–157.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71–75.

Fahrenberg, J., Hampel, R., & Selg, H. (2001). Das Freiburger Persönlichkeitsinventar FPI-*R* (7. überarbeitete und neu normierte ed.) [The Freiburg Personality Inventory FPI-R] . Göttigen: Hogrefe.

Fordyce, M. W. (1977). Development of a program to increase personal happiness. *Journal of Counseling Psychology, 24*, 511–521.

Fordyce, M. W. (1983). A program to increase happiness: Further studies. *Journal of Counseling Psychology, 30*, 483–498.

Hinz, A., Schumacher, J., Albani, C., Schmid, G., & Brähler, E. (2006). Bevölkerungsrepräsentative Normierung der Skala zur Allgemeinen Selbstwirksamkeitserwartung [A representative normalization of the scale *general self-efficacy*]. *Diagnostica, 52*(1), 26–32.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*(2), 151–173.

Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). New York: Van Nostrand.
Muthén, B., & Muthén, B. O. (2009). *Statistical analysis with latent variables*. New York: Wiley.
Nolen-Hoeksema, S. (2004). The response styles theory. In C. Papageorgiou & A. Wells (Eds.), *Depressiv rumination: Nature, theory, and treatment* (pp. 107–124). Chichester, UK: Wiley.
Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification*. Oxford: Oxford University Press.
Revelle, W. (2012). Procedures for psychological, psychometric, and personality research. Retrieved February 16, 2012, from http://cran.r-project.org/web/packages/psych/psych.pdf.
Rogers, C. R. (1961). *On becoming a person: A therapist's viwe of psychotherapy*. Boston: Houghton Mifflin.
Ruch, W. (Ed.). (1998). *The sense of humor: Explorations of a personality characteristic* (Vol. 3). Berlin: Walter de Gruyter.
Schmid, W. (2004). *To be friends with ourselves—About the art of living with oneself*. Berlin: Suhrkamp Publishers.
Schumacher, J., Klaiberg, A., & Brähler, E. (Eds.). (2003). *Diagnostische Verfahren zu Lebensqualität und Wohlbefinden*. Göttingen: Hogrefe.
Seligman, M. E. P., Rashid, T., & Parks, A. C. (2006). Positive psychotherapy. *American Psychologist, 61*, 774–788.
Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology, 65*, 467–487.
Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65.
Veenhoven, R. (2003a). Notions of art-of-living. Introduction to this special issue. *Journal of Happiness Studies, 4*, 345–349.
Veenhoven, R. (2003b). Arts-of-living. *Journal of Happiness Studies, 4*, 373–384.

http://www.springer.com/978-3-319-45323-1

Art-of-Living
A Concept to Enhance Happiness
Schmitz, B.
2016, XVIII, 196 p. 23 illus., Hardcover
ISBN: 978-3-319-45323-1