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# SOEP Scales Manual (updated for SOEP-Core v32.1)

David Richter, Julia Rohrer, Maria Metzing, Wiebke Nestler, Michael Weinhardt, Jürgen Schupp

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# SOEP Scales Manual

## (updated for SOEP-Core v32.1)

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## Introduction

This manual briefly describes the theoretical background and development of all of the scales used in the Socio-Economic Panel (SOEP) study. It also provides the relevant citations as well as the items belonging to the scales and the answer format, including the verbal anchors.

The unique value of this manual lies in the presentation of each scale in the form of easy-to-understand tables listing variable names of the items in the scale in a wave-specific dataset (labels). This allows the individual items to be found and aggregated quickly.

In addition, the tables in this manual include mean values ( $M$ ), standard deviations ( $SD$ ), corrected item-total correlations (CITC), and information as to whether the item has to be recoded before aggregation (R). The number of valid cases in the particular survey years, as well as two measures of reliability, the internal consistency (Cronbach's Alpha) and test-retest correlations (if available), are also reported.

## **Affective Well-Being**

### **Summary**

Affective well-being describes the balance between positive and negative emotional experiences and is of interest for the research on well-being in psychology and economics as well as in the social sciences in general. The scale consists of four items and has been used in the SOEP since 2007.

### **Theoretical Background**

In the psychological literature, subjective well-being is assumed to consist of two components: cognitive well-being and affective well-being (Schimmack et al., 2002). Here, affective well-being represents the emotional component of subjective well-being. In contrast to cognitive well-being, which is based on reflexive evaluation of subjective well-being, affective well-being hinges on the balance between positive and negative emotions (Sumner, 1996).

The distinction between cognitive and affective well-being is important for the scientific investigation of subjective well-being and for policy considerations about public well-being. If the aim is to maximize subjective well-being on both the individual and the social level, and if the two are indeed separate components, it is crucial to measure their relative importance. Despite the importance of distinguishing between cognitive and affective well-being, their relationship has been researched little to date (Schimmack, 2009). Their relationship also highlights the need to examine factors such as unemployment that potentially influence subjective well-being (e.g., Schimmack et al., 2008). Conceptually, the relationship between affective well-being and other general personality characteristics is also of interest.

### **Scale Development**

Theoretical considerations and results from the 2006 SOEP pretest led to the construction of a scale consisting of four items. One item deals with positive experiences (“happy”), while the other three items deal with negative experiences (annoyed, afraid, sad; Schimmack, 2009). In the pilot study, the measure constructed in this manner showed a high correlation with a longer measure of affective balance consisting of 10 items and produced results that are consistent with the previous results in the relevant psychological literature (Schimmack et al., 2008).

### **References**

- Schimmack, U. 2009. Measuring wellbeing in the SOEP. *Schmollers Jahrbuch*, 129, 241-249.
- Schimmack, U. Diener, E., & Oishi, S. (2002). Life-Satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources. *Journal of Personality*, 70, 345-384.
- Schimmack, U., Schupp, J., & Wagner, G. G. (2008). The influence of environment and personality on the affective and cognitive component of subjective well-being. *Social Indicators Research*, 89, 41-60.
- Sumner, L. W. (1996): *Welfare, happiness, and ethics*. Oxford: University Press.

### **Items**

I will now read to you a number of feelings. Please indicate for each feeling how often or rarely you experienced this feeling in the last four weeks (Ich lese Ihnen eine Reihe von Gefühlen vor. Geben Sie bitte jeweils an, wie häufig oder selten Sie dieses Gefühl in den letzten vier Wochen erlebt haben):

1. Angry (ärgerlich gefühlt)?
2. Worried (ängstlich gefühlt)?
3. Happy (glücklich gefühlt)?
4. Sad (traurig gefühlt)?

Scale: 1 (Very rarely / Sehr selten) to 5 (Very often / Sehr oft)

### **Test-Retest Correlations**

In 2009, this scale was included in a retest taken by a subsample ( $N = 164$  completed the scale) within 30 to 49 days after the initial test. Test-retest correlations for the items were (in scale order) .46, .49, .51, and .46; scale scores correlated .54.

## Items and Scale Statistics

### **Affective Well-being** P (Individual Questionnaire)

Year		Item				Cronbach's Alpha
		1	2	3	4	
2007	Label	XP0601	XP0602	XP0603 (R)	XP0604	.66 (N = 20,752)
	<i>M (SD)</i>	2.89 (1.03)	1.96 (1.01)	2.53 (0.87)	2.39 (1.04)	
	CITC	.40	.49	.30	.57	
2008	Label	YP0201	YP0202	YP0203 (R)	YP0204	.68 (N = 19,564)
	<i>M (SD)</i>	2.82 (0.99)	1.94 (0.98)	2.52 (0.86)	2.38 (1.03)	
	CITC	.41	.50	.36	.57	
2009	Label	ZP11701	ZP11702	ZP11703 (R)	ZP11704	.65 (N = 20,612)
	<i>M (SD)</i>	2.78 (1.00)	1.93 (0.98)	2.55 (0.88)	2.37 (1.02)	
	CITC	.39	.49	.29	.56	
2010	Label	BAP12501	BAP12502	BAP12503 (R)	BAP12504	.66 (N = 18,816)
	<i>M (SD)</i>	2.74 (0.96)	1.95 (0.96)	2.52 (0.86)	2.38 (1.02)	
	CITC	.38	.49	.33	.58	
2011	Label	BBP15001	BBP15002	BBP15003 (R)	BBP15004	.65 (N = 20,886)
	<i>M (SD)</i>	2.75 (1.01)	1.97 (0.98)	2.49 (0.88)	2.41 (1.02)	
	CITC	.40	.50	.28	.57	
2012	Label	BCP0201	BCP0202	BCP0203 (R)	BCP0204	.67 (N = 20,714)
	<i>M (SD)</i>	2.72 (0.99)	1.91 (0.96)	2.45 (0.85)	2.33 (1.01)	
	CITC	.40	.50	.35	.56	
2013	Label	BDP0201	BDP0202	BDP0203	BDP0204	.68 (N = 25,895)
	<i>M (SD)</i>	2.81 (1.00)	1.91 (0.96)	2.43 (0.84)	2.35 (1.01)	
	CITC	.42	.50	.35	.57	
2014	Label	BEP0301	BEP0302	BEP0303 (R)	BEP0304	.68 (N = 27,379)
	<i>M (SD)</i>	2.80 (1.02)	1.90 (0.97)	2.39 (0.84)	2.34 (1.03)	
	CITC	.42	.50	.35	.56	
2015	Label	BFP0201	BFP0202	BFP0203 (R)	BFP0204	.67 (N = 25,307)
	<i>M (SD)</i>	2.79 (1.00)	1.91 (0.97)	2.40 (0.84)	2.33 (1.02)	
	CITC	.42	.49	.36	.56	

## **Anomie**

### **Summary**

Anomie describes the individual's subjective response to a community and social environment that is perceived to be threatening and unregulated. Anomie is expressed in an individual tendency towards loss of motivation and feelings of despair and helplessness (Srole, 1956). The four-item scale has been used in the SOEP at irregular intervals since 1990.

### **Theoretical Background**

Anomie refers to a condition of normlessness, that is, a lack of social norms. Durkheim (1897, 1951) introduced the concept of anomie in sociology to describe the erosion of social norms and societal rules under conditions of far-reaching structural change—for example, the conditions that arise in times of rapid social and economic transformation. The result is a breakdown of bonds between the individual and the community or society.

Merton (1938) applied and expanded the concept of anomie in his theory of deviant behavior. He extended Durkheim's understanding by observing the factors that lead to anomie. In Merton's view, anomie may occur when (1) cultural goals and desires are prescribed as normative for a society as a whole; (2) the legitimate means used to achieve these goals are strictly regulated; and (3) these legitimate means are unequally distributed in the society. Anomie is then the result of a state in which the individual adheres to the society's main cultural ideas and principles but does not possess the legitimate means to attain them. The result may be various forms of deviant behavior such as criminal acts.

Durkheim (1897, 1951) treated anomie primarily as a social condition, whereas Merton (1938) shifted the focus to the individual. Srole (1956) followed on Merton's (1938) understanding, contributing the social psychological construct of anomia to the constellation of themes surrounding anomie. Anomia relates to the individual, psychological side of a social condition that is perceived to be anomic. In this regard, the concept of anomia shows certain similarities with external locus of control.

### **Scale Development**

The anomie scale taken from the German Welfare Survey (Duttenhöfer & Schröder, 1996) was shortened for the SOEP survey and one positive item was added.

### **References**

- Durkheim, E. (1951). *Suicide, a study in sociology*. Glencoe, Ill.: Free Press.
- Duttenhöfer, S. & Schröder, H. (1996). *Die Wohlfahrtssurveys 1978-1993 - Variablenübersicht*. Zuma-Technischer Bericht 94/11. Mannheim.
- Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, 3, 672-682.
- Srole, L. (1956). Social integration and certain corollaries: An exploratory study. *American Sociological Review*, 21, 709-716.

### **Items**

#### **Anomie**

To what extent do the following statements apply to you (Wie sehr stimmen die folgenden Aussagen für Sie persönlich):

1. When I think about the future, I'm actually quite optimistic. (Wenn ich an die Zukunft denke, bin ich eigentlich sehr zuversichtlich.)
2. I often feel lonely. (Ich fühle mich oft einsam.)
3. I don't really enjoy my work. (Meine Arbeit macht mir eigentlich keine Freude.)
4. Things have gotten so complicated that I almost can't manage anymore. (Die Verhältnisse sind so kompliziert geworden, dass ich mich fast nicht mehr zurecht finde.)

Scale: 1 (Completely / Stimmt ganz und gar) to 4 (Not at all / Stimmt ganz und gar nicht)

### **Test-Retest Correlations**

In 2005, this scale was included in a retest taken by a subsample ( $N = 126$  completed the scale) within 30 to 49 days after the initial test. Test-retest correlations for the items were (in scale order) .39, .52, .30, and .52; scale scores correlated .60.



## Items and Scale Statistics

### Anomie

P (Individual Questionnaire)

Year		Item				Cronbach's Alpha
		1	2	3	4	
1990 East	Label	GP5701E (R)	GP5702E	GP5703E	GP5704E	.46 (N = 3,416)
	<i>M (SD)</i>	2.73 (0.84)	3.36 (0.97)	3.31 (0.88)	2.99 (0.94)	
	CITC	.20	.28	.23	.35	
1991 East	Label	HP87001 (R)	HP87002	HP87003	HP87004	.48 (N = 3,749)
	<i>M (SD)</i>	2.62 (0.86)	3.33 (0.94)	3.30 (0.89)	2.89 (0.92)	
	CITC	.27	.26	.23	.34	
1992	Label	IP1001 (R)	IP1002	IP1003	IP1004	.55 (N = 10,462)
	<i>M (SD)</i>	2.68 (0.80)	3.28 (0.93)	3.31 (0.85)	3.23 (0.89)	
	CITC	.27	.36	.31	.41	
1993	Label	JP0701 (R)	JP0702	JP0703	JP0704	.56 (N = 12,121)
	<i>M (SD)</i>	2.55 (0.82)	3.25 (0.94)	3.20 (0.87)	3.10 (0.93)	
	CITC	.21	.37	.35	.44	
1995	Label	LP1101N (R)	LP1102	LP1103	LP1104	.59 (N = 12,720)
	<i>M (SD)</i>	2.77 (0.75)	3.22 (0.92)	3.26 (0.83)	3.21 (0.87)	
	CITC	.29	.38	.37	.45	
1996	Label	MP1101 (R)	MP1102	MP1103	MP1104	.59 (N = 12,566)
	<i>M (SD)</i>	2.71 (0.77)	3.23 (0.90)	3.24 (0.82)	3.20 (0.84)	
	CITC	.30	.38	.37	.45	
1997	Label	NP0601 (R)	NP0602	NP0603	NP0604	.57 (N = 12,042)
	<i>M (SD)</i>	2.50 (0.79)	3.27 (0.90)	3.23 (0.82)	3.18 (0.86)	
	CITC	.25	.37	.37	.44	
2008	Label	YP7901 (R)	YP7902	YP7903	YP7904	.60 (N = 17,879)
	<i>M (SD)</i>	2.62 (0.77)	3.16 (0.88)	3.25 (0.81)	3.22 (0.84)	
	CITC	.31	.40	.36	.46	
2013	Label	BDP15201 (R)	BDP15202	BDP15203	BDP15204	.62 (N = 17,163)
	<i>M (SD)</i>	2.87 (0.71)	3.24 (0.83)	3.29 (0.83)	3.35 (0.83)	
	CITC	.35	.41	.39	.46	

## **Cognitive Competencies**

### **Symbol-Digit Test and Animal Naming Task**

#### **Summary**

The two ultra-short cognitive performance tasks allow for reliable assessment of general intellectual ability and distinguish between two components of intellectual functioning: cognitive mechanics and pragmatics (e.g., Lindenberger & Baltes, 1997). Each test takes 90 seconds and is completed on a laptop. The respondent completes the Symbol-Digit Test him/herself, whereas the interviewer documents the answers to the Animal Naming Task. Both tasks therefore require the survey mode of Computer Assisted Personal Interviewing (CAPI).

#### **Theoretical Background**

Cognitive mechanisms are hard-wired, biologically based capacities for information processing and are measured with the Symbol-Digit Test (SDT). The study of cognitive mechanics deals with differences in cognitive performance, for example, in the speed, accuracy, processing capacity, coordination, and inhibition of basic cognitive processes. Prime examples include perceptual speed, working memory, and the capacity for deductive reasoning. The cognitive mechanics usually develop in a process continuing up to early adulthood, then begin to decline gradually and may deteriorate more rapidly in some areas in old age.

Cognitive pragmatics are education- and experience-related competencies, which are measured with the Animal Naming Task (ANT). The development of cognitive pragmatics is the result of investments in the development of cognitive mechanics in selected behavioral areas early in the life course (e.g., in educational trajectories, in training). The cognitive pragmatics develop continuously throughout life, reaching their peak late in the life course and declining only marginally in old age.

Unsurprisingly, the cognitive abilities that build on pragmatic intellectual abilities (e.g., knowledge, vocabulary, wisdom) usually correlate much more strongly with socio-economic resources such as education, income, and occupational prestige, whereas the development of basic cognitive mechanisms over the life course is much more strongly affected by individual sensory and psychomotor resources (Baltes, Lindenberger & Staudinger, 1998).

#### **Scale Development**

The individual tests of perceptual speed (Symbol-Digit Test) and word fluency (Animal Naming Test) were modified for use with a computer-assisted survey mode. The decisive factor in this was the need to be able to use the tests without any special interviewer training and to reduce sources of error in the framework of Computer-Assisted Personal Interviewing (CAPI) as much as possible. Further information on the development of the tests can be found in Lang (2005), Lang, Weiss, Stocker and von Rosenbladt (2007), and in Schupp, Herrmann, Jaensch and Lang (2008).

#### **References**

- Baltes, P. B., Lindenberger, U. & Staudinger, U. M. (1998). Life-span theory in developmental psychology. In R. M. Lerner (Ed.), *Handbook of child psychology* (5th edition, Vol. 1: *Theoretical models of human development*, pp. 1029 – 1143). New York: Wiley.
- Lang, F. R. (2005). Erfassung des kognitiven Leistungspotenzials und der “Big Five” mit Computer-Assisted-Personal-Interviewing (CAPI): Zur Reliabilität und Validität zweier ultrakurzer Tests und des BFI-S (Assessment of cognitive capabilities and the Big Five with Computer-Assisted Personal Interviewing (CAPI): Reliability and validity). German Institute of Economic Research. Berlin: DIW Berlin.
- Lang, F. R., Weiss, D., Stocker, A., & von Rosenbladt, B. (2007). Assessing cognitive capacities in Computer-Assisted Survey Research: Two ultra-short tests of intellectual ability in the German Socio-Economic Panel (SOEP). *Schmollers Jahrbuch*, 127, 183-192.
- Lindenberger, U., & Baltes, P. B. (1997). Intellectual functioning in old and very old age: Cross-sectional results from the Berlin Aging Study. *Psychology and Aging*, 12, 410-432.
- Schupp, J., Herrmann, S., Jaensch, P., & Lang, F. R. (2008). *Erfassung kognitiver Leistungspotentiale Erwachsener im Sozio-oekonomischen Panel (SOEP)*. Berlin: DIW Berlin.

**Items****Symbol-Digit Test & Animal Naming Task**

1. In 30 seconds.
2. In 30-60 seconds.
3. In 60-90 seconds.

**Items and Scale Statistics****Cognitive Competencies**

Cognit (2006, 2012)

Domain	Year		Item			Cronbach's Alpha
			1	2	3	
Symbol-Digit Test	2006	Label	F99Z30R	F99Z60R	F99Z90R	.94 (N = 5,790)
		M (SD)	8.09 (4.09)	9.05 (4.10)	8.61 (3.62)	
		CITC	.86	.91	.86	
	2012	Label	F99Z30R	F99Z60R	F99Z90R	.90 (N = 7,342)
		M (SD)	8.97 (3.82)	10.22 (3.55)	9.98 (3.07)	
		CITC	.78	.86	.77	
Animal Naming Task	2006	Label	F96T30G	F96T60G	F96T90G	.65 (N = 5,790)
		M (SD)	11.83 (6.02)	7.18 (4.60)	5.06 (4.19)	
		CITC	.40	.57	.47	
	2012	Label	F96T30G	F96T60G	F96T90G	.68 (N = 1,285)
		M (SD)	12.64 (5.18)	8.86 (4.44)	6.34 (4.14)	
		CITC	.40	.58	.53	

## Multiple-Choice Vocabulary Intelligence Test (MWT)

### **Summary**

The Multiple-Choice Vocabulary Intelligence Test (*Mehrfachwahl-Wortschatz-Intelligenztest*; MWT; Lehl, 2005) aims to measure the education- and experience-related cognitive pragmatics. The test asks for knowledge and is therefore only minimally influenced by currently available cognitive capacities. The test takes about 5 minutes. The respondents are asked to find the existing and commonly known word in 37 groups of five words each with four words in each group being fictive and newly constructed (multiple-choice). The 37 groups are ordered by difficulty and the test is finished after three incorrect classifications.

### **Scale Development**

The Multiple-Choice Vocabulary Intelligence Test (Version A) was modified for use with a computer-assisted survey mode. After pretesting in 2011 the test was introduced into the SOEP in 2012 ( $N = 6,864$ ,  $M = 28.14$ ,  $SD = 6.98$ ).

### **References**

Lehl, S. (1991). *Mehrfachwahl-Wortschatz-Intelligenztest MWT-A; (Parallelform zum MWT-B)*. Erlangen: perimed-Fachbuch-Verl.-Ges.

### **Items**

The MWT items are not allowed to be published.

## I-S-T 2000 R

### Summary

In the year 2006, the SOEP included its first cognition test for adolescents in the range of SOEP survey instruments. Since then, the test has been carried out annually with each new cohort of adolescents. A specially designed questionnaire is used to measure adolescents' cognitive mechanics based on the I-S-T 2000 test in three modules (word analogies, number sequences, and matrices). In strict adherence to the test criteria, interviewer-based surveying is compulsory. Also, the use and especially design and structure of the questionnaire require that the test be conducted by an interviewer and that the time be monitored.

### Theoretical Background

The cognitive test measures adolescents' cognitive mechanics in three different modules. Cognitive mechanics refer to the hard-wired, biologically based capacities for information processing. The task set "word analogies" measures respondents' verbal cognitive potentials. Respondents are asked to assign words to a given sequence of words according to a specific rule. The test uses the individual's own vocabulary to measure combinatory ability. The task set "number sequences" measures the numerical cognitive potential of the respondents. These tasks focus primarily on the adolescents' abstract combinatory ability and logical thinking. The task set "matrices" measures the figural cognitive abilities of the respondents.

### Scale Development

To study the cognitive performance potential of adolescents, we developed a questionnaire based on the I-S-T 2000-Test (Amthauer, Brocke, Liepmann & Beauducel, 2001) that is appropriate for an individual panel survey. The modifications have been described in detail by Solga et al. (2005). Further information on test development can be found in Schupp and Herrmann (2009).

### References

- Amthauer, R., Brocke, B., Liepmann, D., & Beauducel, A. (2001). *Intelligenz-Struktur-Test 2000 R (I-S-T 2000 R) – Handanweisung*. Göttingen: Hogrefe.
- Solga, H., Stern, E., von Rosenblatt, B., Schupp, J., & Wagner, G. G. (2005). *The measurement and importance of general reasoning potentials in schools and labour markets*. Berlin: DIW Berlin.
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### Items

#### I-S-T 2000 R

1. Word analogies.
2. Number sequences.
3. Matrices.

### Items and Scale Statistics

#### **I-S-T 2000R**

DJ (2006-2015)

	Module			Cronbach's Alpha
	1	2	3	
Label	analog	rechenz	matrize	.67 (N = 2,576)
M (SD)	8.34 (3.66)	12.87 (4.85)	9.85 (3.45)	
CITC	.51	.47	.51	

## **Effort-Reward Imbalance Model**

### **Summary**

The Effort-Reward Imbalance Model is designed to measure occupational and job stress. In this model, stress is conceptualized as high work-related effort coupled with low control over job-related rewards. The model also considers the personality trait of excessive willingness to overexert oneself, which exacerbates the negative health consequences of occupational stress.

The SOEP uses a shortened version of the ERI questionnaire comprising a total of 16 four- or five-level items. The ERI questionnaire was used in the SOEP in 2006 and 2011.

### **Theoretical Background**

The ERI model is a newly developed instrument used to measure job stress and its negative health consequences (Siegrist, 1996). Job stress is conceptualized as the relation between demands and efforts on the one hand and rewards on the other. This conceptualization is based on the assumption that job relations are subject to the general social norm of reciprocity. The general reciprocity norm states that social interaction (here the performance of job tasks) always takes place in expectation of appropriate compensation. If this expectation is not fulfilled over the long term—that is, if the reciprocity norm is violated—in many cases the interaction will be terminated. The termination of employment relationships is often not possible on short notice or without far-reaching consequences, which means that employment relationships often have to be maintained while violating the norm of reciprocity.

The resulting imbalance between high perceived demands and low perceived rewards is referred to as a “gratification crisis.” Gratification crises lead to lower job satisfaction and high stress levels, and thus constitute a risk factor for numerous psycho-social and stress-related illnesses (Siegrist, 1996).

Alongside these external factors in work stress, the ERI model also contains an intrinsic dimension, “overcommitment,” or the excessive willingness to overexert oneself. This is based on the hypothesis that people with an excessive willingness to overexert themselves suffer more severely from gratification crises than individuals with a lower willingness to overexert themselves.

### **Scale Development**

In the previous version, the instrument only contained 23 items. With the goal of achieving a more broadly applicable instrument, it was shortened to 16 items and used for the first time in this form in the 2006 SOEP questionnaire.

Overcommitment was not shortened in the SOEP version, since the scale is already the product of various validation studies.

### **References**

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Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1, 27.

### Items

Please indicate to what degree you agree with the following statements (Bitte geben Sie an, in welchem Maße Sie den folgenden Aussagen zustimmen):

#### Effort

1. I have constant time pressure due to a heavy workload. (Aufgrund des hohen Arbeitsaufkommens besteht häufig großer Zeitdruck.)
2. I have many interruptions and disturbances while performing my job. (Bei meiner Arbeit werde ich häufig unterbrochen und gestört.)
3. Over the past few years, my job has become more and more demanding. (Im Laufe der letzten beiden Jahre ist meine Arbeit immer mehr geworden.)

Scale: 1 (Yes / Ja) – 2 (No /Nein); 1 (Not at all / Gar nicht) – 4 (Very heavily / Sehr stark) is recoded to 1 to 5

#### Reward

1. I receive the respect I deserve from my superior. (Ich erhalte von meinen Vorgesetzten die Anerkennung, die ich verdiene.) (R)
2. My job promotion prospects are poor. (Die Aufstiegschancen in meinem Betrieb sind schlecht.) (R)
3. I have experienced or I expect to experience an undesirable change in my work situation. (Ich erfahre – oder erwarte – eine Verschlechterung meiner Arbeitssituation.) (R)
4. My job security is poor. (Mein eigener Arbeitsplatz ist gefährdet.) (R)
5. Considering all my efforts and achievements, I receive the respect and prestige I deserve at work. (Wenn ich an all die erbrachten Leistungen und Anstrengungen denke, halte ich die erfahrene Anerkennung für angemessen.) (R)
6. Considering all my efforts and achievements, my job promotion prospects are adequate. (Wenn ich an all die erbrachten Leistungen und Anstrengungen denke, halte ich meine persönlichen Chancen des beruflichen Fortkommens für angemessen.) (R)
7. Considering all my efforts and achievements, my salary / income is adequate. (Wenn ich an all die erbrachten Leistungen denke, halte ich mein Gehalt / meinen Lohn für angemessen.) (R)

Scale: 1 (Yes / Ja) – 2 (No /Nein); 1 (Not at all / Gar nicht) – 4 (Very heavily / Sehr stark) is recoded to 1 to 5

#### Overcommitment

1. At work, I easily get into time pressure. (Beim Arbeiten komme ich leicht in Zeitdruck.)
2. I often am already thinking about work-related problems when I wake up. (Es passiert mir oft, dass ich schon beim Aufwachen an Arbeitsprobleme denke.)
3. When I get home, it is easy to switch off from thinking about work. (Wenn ich nach Hause komme, fällt mir das Abschalten von der Arbeit sehr leicht.) (R)
4. Those closest to me say I sacrifice too much for my career. (Diejenigen, die mir am nächsten stehen sagen, dass ich mich für meinen Beruf zu sehr aufopfere.)
5. Work seldom lets go of me; it stays in my head all evening. (Die Arbeit lässt mich selten los, das geht mir abends im Kopf rum.)
6. If I put off something that needs to be done that day, I can't sleep at night. (Wenn ich etwas verschiebe, was ich eigentlich heute tun müsste, kann ich nachts nicht schlafen.)

Scale: 1 (Yes / Ja) – 2 (No /Nein); 1 (Not at all / Gar nicht) – 4 (Very heavily / Sehr stark) is recoded to 1 to 5

### **Coding**

Please note that effort and reward are measured by two questions in the SOEP that have to be recoded to a five-point Likert scale. The first of these questions asks whether the content of the items applies to the respondent. Depending on the answer to this first question, the level of emotional burden is then evaluated in a second four-step question.

An affirmative answer to the reward item “I get the recognition I deserve from my superiors” is encoded with the highest value (5), while a negative answer is encoded depending on the burden: No reward but no burden is encoded with the value 4. No reward and a high burden is encoded with 1 on the five-point Likert scale. The same procedure applies for effort items.

When recoding, attention to the five-point scale is required because of the inverse direction of some reward items. A negative answer to an inverse reward item—for example, “The opportunities for advancement in my company are bad”—is coded with the highest value (5) for reward. An affirmative answer to this inverse reward item must be encoded with 1, 2, 3, or 4 depending on how burdened the person feels. For example: An affirmative answer to “advancement in company is bad” and a high rating for burden equals 1 for reward on the five-point Likert scale.

The Effort-Reward Ratio (ERR) is calculated by the formula  $ERR = e/(r*c)$ , where “e” stands for total effort, “r” stands for total reward, and “c” is a correction factor for the ratio of the number of items used. In this case, “c” equals  $3/7$  because effort is measured with 3 items and reward is measured with 7 items.

Thus, the total effort score ranges from 3 to 15, as three effort items with a five-point Likert scale are used in SOEP. High values correspond to high perceived effort, low values to low effort. The total score for reward is constructed analogously and ranges between 7 and 35 for seven reward items. Low values mean low reward.

A ERR value close to 0 means low perceived effort at high perceived reward. A ERR value greater than 1 indicates the opposite. In this case, there is an effort-reward imbalance.



## Items and Scale Statistics

### Effort Reward Imbalance Model

P (Individual Questionnaire)

Domain	Year	Item								Cronbach's Alpha
			1	2	3	4	5	6	7	
<i>Effort</i>	2006	Label	ERI1	ERI2	ERI3					.74 (N = 12,178)
		M (SD)	2.43 (1.31)	2.19 (1.29)	2.39 (1.31)					
		CITC	.61	.51	.57					
	2011	Label	ERI1	ERI2	ERI3					.74 (N = 11,395)
		M (SD)	2.36 (1.30)	2.23 (1.28)	2.35 (1.31)					
		CITC	.61	.53	.57					
<i>Reward</i>	2006	Label	ERI4	ERI5	ERI6	ERI7	ERI8	ERI9	ERI10	.79 (N = 10,863)
		M (SD)	4.31 (1.07)	3.83 (1.19)	4.25 (1.29)	4.48 (1.15)	4.30 (1.07)	4.24 (1.10)	3.77 (1.31)	
		CITC	.58	.51	.50	.40	.61	.61	.46	
	2011	Label	ERI4	ERI5	ERI6	ERI7	ERI8	ERI9	ERI10	.80 (N = 10,112)
		M (SD)	4.30 (1.09)	3.92 (1.16)	4.47 (1.12)	4.70 (0.90)	4.28 (1.09)	4.28 (1.09)	3.90 (1.31)	
		CITC	.63	.53	.46	.33	.66	.64	.51	
<i>Over-commitment</i>	2006	Label	WP4201	WP4202	WP4203 (R)	WP4204	WP4205	WP4206		.79 (N = 12,235)
		M (SD)	2.40 (0.88)	2.16 (0.96)	2.29 (0.94)	2.26 (0.94)	2.18 (0.92)	1.97 (0.88)		
		CITC	.45	.67	.41	.50	.72	.47		
	2011	Label	BBP5801	BBP5802	BBP5803 (R)	BBP5804	BBP5805	BBP5806		.79 (N = 11,468)
		M (SD)	2.33 (0.89)	2.12 (0.96)	2.27 (0.96)	2.23 (0.96)	2.13 (0.92)	1.93 (0.88)		
		CITC	.45	.68	.43	.52	.74	.49		

Note.

It should be noted that effort and reward are measured by two questions that have to be recoded to a five-point Likert scale in the SOEP data. Consequently, ERI1 to ERI10 refers to the following variable labels:

2006: ERI1 (WP43A01/02), ERI2 (WP43A03/04), ERI3 (WP43A05/06), ERI4 (WP43B01/02), ERI5 (WP43A07/08), ERI6 (WP43A09/10), ERI7 (WP43A11/12), ERI8 (WP43B03/04), ERI9 (WP43B05/06), ERI10 (WP43B07/08).

2011: ERI1 (BBP5901/02), ERI2 (BBP5903/04), ERI3 (BBP5905/06), ERI4 (BBP6001/02), ERI5 (BBP5907/08), ERI6 (BBP5909/10), ERI7 (BBP5911/12), ERI8 (BBP6003/04), ERI9 (BBP6005/06), ERI10 (BBP6007/08).

## Impulsiveness & Patience

### Summary

The measures of impulsiveness and patience are simple and ultra-short survey measures with the distinct advantage of gathering information on time preferences that are behaviorally relevant while at the same time being cheap to measure on a large and representative scale. Impulsiveness and patience were measured in 2008 and 2013.

### Theoretical Background

Essentially, all economic decisions involve a time dimension and thus a trade-off between different payoffs or costs that accrue at different points in time. Patience (or the rate of time preference) is the central preference parameter that shapes such decisions over time.

### Scale Development

So far, there is still no reliable measure of patience in large-scale representative surveys, since direct measures of patience are typically elicited in laboratory experiments among particular (student) subject pools only. To fill this gap, a survey measure of patience and impulsiveness has been included in the SOEP.

The measures for impulsiveness and patience were evaluated with an incentive-compatible intertemporal choice experiment for impatience. Individuals who state that they are more impatient also exhibit a higher degree of impatience in the incentivized choice experiment (see Vischer et al., 2013).

### References

Vischer, T., Dohmen, T., Falk, A., Huffman, D., Schupp, J., Sunde, U., & Wagner, G. G. (2013). Validating an ultra-short survey measure of patience. *Economics Letters*, 120, 142-145.

### Items

How would you describe yourself (Wie schätzen Sie sich persönlich ein):

#### Impulsiveness

1. Do you generally think things over for a long time before acting – in other words, are you not impulsive at all? Or do you generally act without thinking things over a long time – in other words, are you very impulsive? (Sind Sie im Allgemeinen ein Mensch, der lange überlegt und nachdenkt, bevor er handelt, also gar nicht impulsiv ist? Oder sind Sie ein Mensch, der ohne lange zu überlegen handelt, also sehr impulsiv ist?)

Scale: 0 (Not at all impulsive / Gar nicht impulsiv) to 10 (Very impulsive / Sehr impulsiv)

#### Patience

2. Are you generally an impatient person, or someone who always shows great patience? (Sind Sie im Allgemeinen ein Mensch, der ungeduldig ist, oder der immer sehr viel Geduld aufbringt?)

Scale: 0 (Very impatient / Sehr ungeduldig) to 10 (Very patient / Sehr geduldig)

### Items and Scale Statistics

#### **Impulsiveness & Patience**

P (Individual Questionnaire)

Year		Item		N min.
		1	2	
2008	Label	YP11	YP09	19,635
	<i>M (SD)</i>	5.09 (2.20)	6.07 (2.28)	
2013	Label	BDP155	BDP154	19,107
	<i>M (SD)</i>	5.18 (2.21)	4.51 (2.49)	

## Life Goals

### Summary

Respondents' life goals have been measured in the SOEP since 1990 at two- to four-year intervals with ten items that can be grouped into three scales (success, family life, and altruism).

### Theoretical Background

Life goals can be thought of as “relatively long- term, value-laden life objectives” (Meier et al., 1959). They have been conceptualized as “organizers” of developmental self-regulation that individuals use to influence their own development as they adapt to the constraints of a given situation (Heckhausen, 1999). Individual life goals correspond to societal values to the extent that they are aligned with cultural preferences, if not culturally prescribed norms. A classic example is the goal of material success as embodied in the achievement of money, power, and security, which in turn lead to prestige and social recognition. However, overarching non-monetary goals such as “the good life” or “personal development” are also taking on an increasingly important role in individuals' lives (Meier et al., 1959).

Research on life goals has investigated their impact on individuals' future orientations and their occupational, educational, and family-related decision making (Chang et al., 2006). Life goals also play a prominent role in motivational theories of life-span development, which focus on goal commitment, planning, and eventual goal attainment (Heckhausen et al., 2010). Another strand of research is concerned with the prioritization of life goals and perceived control over goal attainment (Heckhausen, 1999). Recent evidence that life goals play a role in life satisfaction has contributed to the research on subjective well-being and life satisfaction (Headey 2008).

### Scale Development

The items are based (albeit with some changes of wording) on a classification of goals and measures initially developed by Kluckhohn and Strodtbeck (1961) and translated into German by Bielski and Strümpel (1988). More information on the development of the scale is given by Headey (2008).

### References

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- Headey, B. W. (2008). Life goals matter to happiness: A revision of set-point theory. *Social Indicators Research*, 86, 213-231.
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- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, 117, 32-60.
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- Meier, D. L., & Bell, W. (1959). Anomia and differential access to the achievement of life goals. *American Sociological Review*, 24, 189-202.

**Items**

Are the following things currently ... for you (Sind für Sie persönlich die folgenden Dinge heute ...):

**Success**

1. Being able to afford to buy things for myself (Sich etwas leisten können).
2. Being fulfilled (Sich selbst verwirklichen).
3. Being successful in my career (Erfolg im Beruf haben).
4. Seeing the world and/or traveling extensively (Die Welt sehen, viele Reisen machen).

Scale: 1 (Very important / Sehr wichtig) to 4 (Not at all important / Ganz unwichtig)

**Items and Scale Statistics**

Life Goals							
P (Individual Questionnaire)							
Domain	Year		Item				Cronbach's Alpha
			1	2	3	4	
Success	1990	Label	GP0201	GP0203	GP0204	GP0210	.60 (N = 6,790)
		M (SD)	2.07 (0.62)	2.15 (0.77)	2.18 (0.92)	2.47 (0.84)	
		CITC	.36	.45	.43	.31	
	1992	Label	IP0801	IP0803	IP0804	IP0810	.61 (N = 10,604)
		M (SD)	1.96 (0.62)	2.13 (0.79)	2.11 (0.95)	2.47 (0.83)	
		CITC	.38	.47	.44	.30	
	1995	Label	LP0701	LP0703	LP0704	LP0710	.61 (N = 11,096)
		M (SD)	1.98 (0.61)	2.09 (0.76)	2.07 (0.90)	2.54 (0.81)	
		CITC	.36	.49	.45	.30	
	2004	Label	UP0601	UP0603	UP0604	UP0609	.61 (N = 20,733)
		M (SD)	1.98 (0.59)	2.15 (0.75)	2.13 (0.87)	2.56 (0.82)	
		CITC	.37	.48	.43	.30	
	2008	Label	YP7801	YP7803	YP7804	YP7809	.63 (N = 18,534)
		M (SD)	2.01 (0.60)	2.23 (0.77)	2.21 (0.90)	2.64 (0.82)	
		CITC	.37	.50	.45	.33	
	2012	Label	BCP0301	BCP0303	BCP0304	BCP0309	.62 (N = 19,038)
		M (SD)	2.08 (0.63)	2.17 (0.75)	2.22 (0.90)	2.56 (0.84)	
		CITC	.36	.50	.44	.31	

**Items**

Are the following things currently ... for you (Sind für Sie persönlich die folgenden Dinge heute ...):

**Family Life**

1. Owning a house (Ein eigenes Haus haben).
2. Having a happy marriage/relationship (Eine glückliche Ehe / Partnerschaft haben).
3. Having children (Kinder haben).

Scale: 1 (Very important / Sehr wichtig) to 4 (Not at all important / Ganz unwichtig)

**Item and Scale Statistics**

Life Goals						
P (Individual Questionnaire)						
Domain	Year		Item			Cronbach's Alpha
			1	2	3	
Family Life	1990	Label	GP0205	GP0206	GP0207	.56 (N = 7,008)
		M (SD)	2.39 (0.99)	1.44 (0.74)	1.88 (0.88)	
		CITC	.32	.40	.42	
	1992	Label	IP0805	IP0806	IP0807	.56 (N = 10,795)
		M (SD)	2.41 (1.01)	1.40 (0.73)	1.79 (0.90)	
		CITC	.31	.42	.41	
	1995	Label	LP0705	LP0706	LP0707	.54 (N = 11,400)
		M (SD)	2.33 (0.98)	1.39 (0.71)	1.77 (0.89)	
		CITC	.28	.40	.40	
	2004	Label	UP0605	UP0606	UP0607	.55 (N = 21,369)
		M (SD)	2.32 (0.98)	1.43 (0.69)	1.80 (0.89)	
		CITC	.31	.41	.39	
	2008	Label	YP7805	YP7806	YP7807	.54 (N = 19,213)
		M (SD)	2.41 (0.98)	1.45 (0.70)	1.76 (0.88)	
		CITC	.30	.39	.38	
	2012	Label	BCP0305	BCP0306	BCP0307	.52 (N = 20,198)
		M (SD)	2.43 (0.99)	1.48 (0.72)	1.77 (0.88)	
		CITC	.30	.38	.36	

### Items

Are the following things currently ... for you (Sind für Sie persönlich die folgenden Dinge heute ...):

### Altruism

1. Being there for others (Für andere da sein).
2. Spending a lot of time with friends (Viel mit Freunden zusammen sein).
3. Being politically and/or socially involved (Sich politisch, gesellschaftlich einsetzen).

Scale: 1 (Very important / Sehr wichtig) to 4 (Not at all important / Ganz unwichtig)

### Items and Scale Statistics

Life Goals						
P (Individual Questionnaire)						
Domain	Year		Item			Cronbach's Alpha
		1	2	3		
Altruism	1990	Label	GP0202	GP0208	GP0209	.40 (N = 7,105)
		M (SD)	1.90 (0.59)	2.13 (0.71)	2.99 (0.76)	
		CITC	.19	.27	.25	
	1992	Label	IP0802	IP0808	IP0809	.46 (N = 10,920)
		M (SD)	1.88 (0.60)	2.10 (0.71)	3.16 (0.73)	
		CITC	.27	.33	.26	
	1995	Label	LP0702	LP0708	LP0709	.43 (N = 11,524)
		M (SD)	1.82 (0.59)	2.09 (0.70)	3.16 (0.71)	
		CITC	.24	.32	.24	
	2004	Label	UP0602		UP0608	.24 (N = 21,801)
		M (SD)	1.83 (0.58)		2.93 (0.75)	
		CITC	.14		.14	
	2008	Label	YP7802		YP7808	.22 (N = 19,498)
		M (SD)	1.83 (0.57)		3.10 (0.75)	
		CITC	.13		.13	
	2012	Label	BCP0302		BCP0308	.22 (N = 20,660)
		M (SD)	1.75 (0.57)		2.84 (0.76)	
		CITC	.13		.13	

## **Life Satisfaction**

### **Summary**

General life satisfaction has been measured with an individual item in the SOEP on an annual basis since 1984. Domain-specific life satisfaction was initially measured with seven items (1984-1990), and since 2008 with ten items. Items 1 to 5 can be combined into one scale in all survey years (Schimmack, Krause, Wagner, & Schupp, 2009). In addition, satisfaction in 11 further domains is surveyed at irregular intervals.

### **Theoretical Background**

Since its inception, the SOEP has included cognitive measures of well-being. The first measure is the global 11-point rating of life satisfaction (Schimmack, Schupp, & Wagner, 2008). This item is used almost exclusively as a measure of well-being in the SOEP. The reasons for its popularity are its high face validity and the widespread use of life satisfaction ratings in the well-being literature.

Single-item measures of life satisfaction are a reasonably valid and common way to measure general life satisfaction: moderate associations with other well-being measures, including written interviews, informant reports, and measures of daily affect are reported by Sandvik, Diener, and Seidlitz (1993). Research using the World Value Survey (<http://www.worldvaluessurvey.org>) found single-item measures of life satisfaction to be positively related to affect balance and positive affect, and inversely related to negative affect (Suh et al., 1998).

The second measure is the average of various domain satisfactions that are routinely assessed in the SOEP (health, household income, dwelling, and leisure time). This measure has two drawbacks. First, it does not weigh domains by their subjective importance. Second, the measure fails to capture aspects of well-being that are not covered by the domains included in the survey (Schimmack, 2008). A key advantage of this measure is that it relies not solely on respondents' ability to summarize and weigh all relevant aspects of their lives in response to a single question about satisfaction with life in general.

### **Scale Development**

Information on the further development, reliability, and validity of the items can be found in Kroh (2006), in Schimmack (2008) and in Schimmack, Krause, Wagner, & Schupp (2009).

### **References**

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### **Items**

1. How satisfied are you with your life, all things considered? (Wie zufrieden sind Sie gegenwärtig, alles in allem, mit Ihrem Leben?)

How satisfied are you with (Wie zufrieden sind Sie):

2. your health (mit ihrer Gesundheit)?
3. your household income (mit dem Einkommen Ihres Haushalts)?
4. your dwelling (mit Ihrer Wohnung)?
5. your free time (mit Ihrer Freizeit / in den Jahren 1995, 1996: mit Ihrer Freizeittätigkeit)?
6. your job (mit ihrer Arbeit)?
7. your housework (mit ihrer Tätigkeit im Haushalt)?
8. the child care available (mit den vorhandenen Möglichkeiten der Kinderbetreuung)?
9. your personal income (mit Ihrem persönlichen Einkommen)?
10. your family life (mit Ihrem Familienleben)?
11. your sleep (mit Ihrem Schlaf)?

Scale: 0 (Completely dissatisfied / Ganz und gar unzufrieden) to 10 (Completely satisfied / Ganz und gar zufrieden)

### **Test-Retest Correlations**

In 2005, 2006 and 2009, item 1 to 5 were included in retests taken by subsamples within 30 to 49 days after the initial test. Pooled across the years (minimal  $N = 603$ ), test-retest correlations were (in scale order, item 1 to 5) .66, .64, .71, .67, and .56. The test-retest correlation of the scale based on these five items was .77.



## Items and Scale Statistics

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
1984	Label	AP6801	AP0301	AP0302	AP0303	AP0306	.67 (N = 11,934)	AP0304	AP0305				
	M (SD)	7.43 (2.14)	7.00 (2.67)	6.41 (2.62)	7.60 (2.54)	7.29 (2.55)		7.65 (2.28)	6.95 (2.44)				
	CITC	.56	.34	.49	.39	.35							
1985	Label	BP9301	BP0101	BP0102	BP0103	BP0106	.69 (N = 10,783)	BP0104	BB0105				
	M (SD)	7.24 (2.05)	6.93 (2.47)	6.46 (2.46)	7.59 (2.38)	7.14 (2.44)		7.52 (2.14)	6.95 (2.26)				
	CITC	.59	.37	.51	.40	.38							
1986	Label	CP9601	CP0101	CP0102	CP0103	CP0106	.70 (N = 10,434)	CP0104	CP0105				
	M (SD)	7.29 (1.94)	6.89 (2.44)	6.50 (2.35)	7.56 (2.29)	7.01 (2.44)		7.41 (2.12)	6.86 (2.20)				
	CITC	.61	.38	.53	.43	.39							
1987	Label	DP9801	DP0101	DP0102	DP0104	DP0107	.70 (N = 7,831)	DP0105	DP0106				
	M (SD)	7.14 (1.96)	6.85 (2.39)	6.52 (2.28)	7.89 (2.08)	7.07 (2.37)		7.40 (2.07)	6.91 (2.11)				
	CITC	.62	.37	.51	.43	.39							
1988	Label	EP89	EP0101	EP0102	EP0103	EP0106	.70 (N = 9,835)	EP0104	EP0105				
	M (SD)	7.08 (1.96)	6.78 (2.39)	6.51 (2.29)	7.52 (2.24)	6.92 (2.37)		7.25 (2.09)	6.80 (2.12)				
	CITC	.59	.39	.54	.43	.37							

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
1989	Label	FP108	FP0101	FP0102	FP0103	FP0107	.70 (N=9,534)	FP0105	FP0106				
	<i>M (SD)</i>	7.10 (1.94)	6.71 (2.42)	6.53 (2.25)	7.48 (2.24)	6.85 (2.37)		7.24 (2.04)	6.69 (2.13)				
	CITC	.59	.40	.54	.43	.36							
1990	Label	GP109	GP0101	GP0102	GP0103	GP0107	.74 (N=9,360)	GP0104	GP0105				
	<i>M (SD)</i>	7.27 (1.81)	6.76 (2.33)	6.61 (2.18)	7.46 (2.21)	7.09 (2.15)		7.24 (2.01)	6.69 (2.13)				
	CITC	.64	.43	.54	.44	.47							
1991	Label	HP10901	HP1001	HP1004	HP1006	HP1005	.67 (N=13,343)	HP1002					
	<i>M (SD)</i>	6.95 (1.90)	6.75 (2.34)	6.19 (2.40)	7.29 (2.32)	6.59 (2.49)		6.96 (2.28)					
	CITC	.61	.28	.51	.41	.37							
1992	Label	IP10901	IP9801	IP9804	IP9806	IP9805	.69 (N=13,115)	IP9802					
	<i>M (SD)</i>	6.92 (1.82)	6.81 (2.32)	6.12 (2.26)	7.14 (2.31)	6.64 (2.38)		7.23 (1.98)					
	CITC	.64	.31	.53	.44	.37							
1993	Label	JP10901	JP0101	JP0104	JP0106	JP0105	.69 (N=12,723)	JP0102	JP0103				
	<i>M (SD)</i>	6.88 (1.88)	6.66 (2.31)	6.15 (2.30)	7.22 (2.32)	6.58 (2.42)		7.05 (2.06)	6.51 (2.12)				
	CITC	.61	.34	.51	.43	.38							

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
1994	Label	KP10401	KP0101	KP0104	KP0106	KP0105	.70 (N = 12,959)	KP0102	KP0103				
	M (SD)	6.86 (1.85)	6.60 (2.31)	6.05 (2.33)	7.30 (2.27)	6.55 (2.43)		7.00 (2.07)	6.51 (2.12)				
	CITC	.61	.34	.51	.45	.39							
1995	Label	LP10401	LP0101	LP0104	LP0105	LP0107	.72 (N = 13,307)	LP0102	LP0103				
	M (SD)	6.89 (1.83)	6.67 (2.25)	6.12 (2.29)	7.29 (2.24)	6.80 (2.22)		6.89 (2.20)	6.52 (2.11)				
	CITC	.64	.40	.51	.44	.47							
1996	Label	MP11001	MP0101	MP0104	MP0105	MP0106	.69 (N = 13,166)	MP0102	MP0103				
	M (SD)	6.90 (1.78)	6.62 (2.24)	6.18 (2.27)	7.36 (2.19)	6.79 (2.33)		6.88 (2.16)	6.54 (2.06)				
	CITC	.61	.34	.51	.45	.38							
1997	Label	NP11701	NP0101	NP0104	NP0105	NP0106	.71 (N = 12,888)	NP0102	NP0103	NP0107			
	M (SD)	6.79 (1.79)	6.59 (2.21)	6.01 (2.24)	7.35 (2.13)	6.73 (2.33)		6.85 (2.12)	6.50 (2.05)	6.53 (2.40)			
	CITC	.62	.38	.53	.47	.38							
1998	Label	OP12301	OP0101	OP0104	OP0105	OP0106	.71 (N = 14,174)	OP0102	OP0103	OP0107			
	M (SD)	6.95 (1.78)	6.65 (2.23)	6.11 (2.28)	7.48 (2.08)	6.83 (2.30)		6.89 (2.15)	6.56 (2.06)	6.67 (2.43)			
	CITC	.61	.38	.53	.49	.39							

# Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
1999	Label	PP13501	PP0101	PP0104	PP0105	PP0106	.71 (N = 13,686)	PP0102	PP0103	PP0107			
	M (SD)	6.97 (1.78)	6.61 (2.24)	6.18 (2.25)	7.53 (2.04)	6.86 (2.29)		6.90 (2.12)	6.52 (2.05)	6.63 (2.42)			
	CITC	.60	.38	.52	.48	.38							
2000	Label	QP13401	QP0101	QP0104	QP0105	QP0106	.70 (N = 23,929)	QP0102	QP0103	QP0107			
	M (SD)	7.09 (1.78)	6.76 (2.27)	6.40 (2.30)	7.72 (2.02)	7.01 (2.29)		7.05 (2.20)	6.60 (2.11)	6.61 (2.62)			
	CITC	.62	.36	.52	.48	.38							
2001	Label	RP13501	RP0101	RP0104	RP0105	RP0106	.72 (N = 21,862)	RP0102	RP0103	RP0107			
	M (SD)	7.10 (1.74)	6.77 (2.24)	6.49 (2.24)	7.74 (1.95)	7.02 (2.25)		7.06 (2.16)	6.62 (2.08)	6.54 (2.70)			
	CITC	.62	.37	.53	.50	.39							
2002	Label	SP13501	SP0101	SP0104	SP0105	SP0106	.72 (N = 23,308)	SP0102	SP0103	SP0107			
	M (SD)	7.05 (1.74)	6.75 (2.21)	6.50 (2.22)	7.78 (1.91)	7.00 (2.20)		7.04 (2.14)	6.57 (2.06)	6.53 (2.54)			
	CITC	.64	.41	.54	.51	.37							
2003	Label	TP14201	TP0101	TP0104	TP0105	TP0106	.73 (N = 22,106)	TP0102	TP0103	TP0107			
	M (SD)	6.96 (1.78)	6.73 (2.19)	6.34 (2.29)	7.76 (1.92)	7.02 (2.19)		6.96 (2.17)	6.59 (2.02)	6.33 (2.47)			
	CITC	.63	.40	.54	.51	.40							

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
2004	Label	UP14501	UP0101	UP0104	UP0107	UP0108	.71 (N = 21,375)	UP0102	UP0103	UP0109	UP0105		
	M (SD)	6.80 (1.82)	6.61 (2.24)	6.22 (2.30)	7.85 (1.86)	6.98 (2.18)		6.87 (2.21)	6.56 (1.99)	6.35 (2.59)	5.65 (2.60)		
	CITC	.62	.39	.52	.47	.35							
2005	Label	VP154	VP0101	VP0104	VP0106	VP0107	.70 (N = 20,575)	VP0102	VP0103	VP0108	VP0105		
	M (SD)	6.95 (1.83)	6.64 (2.24)	6.25 (2.34)	7.82 (1.89)	6.98 (2.24)		6.85 (2.22)	6.58 (2.03)	6.30 (2.74)	5.65 (2.66)		
	CITC	.61	.38	.52	.49	.34							
2006	Label	WP142	WP0101	WP0104	WP0106	WP0107	.71 (N = 21,822)	WP0102	WP0103	WP0108	WP0105	WP0109	
	M (SD)	6.91 (1.80)	6.64 (2.23)	6.23 (2.33)	7.81 (1.89)	6.98 (2.25)		6.89 (2.19)	6.62 (2.02)	6.37 (2.71)	5.66 (2.62)	7.71 (1.98)	
	CITC	.63	.40	.52	.48	.35							
2007	Label	XP149	XP0101	XP0104	XP0106	XP0107	.73 (N = 20,434)	XP0102	XP0103	XP0108	XP0105	XP0109	
	M (SD)	6.95 (1.78)	6.58 (2.20)	6.26 (2.27)	7.82 (1.82)	6.96 (2.21)		6.85 (2.16)	6.64 (1.98)	6.40 (2.70)	5.63 (2.59)	7.68 (1.97)	
	CITC	.65	.42	.53	.50	.38							
2008	Label	YP15501	YP0101	YP0105	YP0108	YP0109	.72 (N = 19,266)	YP0103	YP0104	YP0111	YP0106	YP0110	YP0102
	M (SD)	6.98 (1.75)	6.56 (2.18)	6.29 (2.28)	7.96 (1.77)	7.08 (2.13)		6.90 (2.10)	6.68 (1.94)	6.78 (2.53)	5.70 (2.56)	7.80 (1.99)	6.82 (2.26)
	CITC	.63	.42	.51	.48	.39							

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
2009	Label	ZP15701	ZP0101	ZP0105	ZP0107	ZP0108	.72 (N = 20,378)	ZP0103	ZP0104	ZP0110	ZP0106	ZP0109	ZP0102
	M (SD)	6.98 (1.78)	6.57 (2.23)	6.40 (2.30)	7.91 (1.82)	7.13 (2.15)		6.88 (2.21)	6.78 (1.96)	6.78 (2.76)	5.79 (2.61)	7.84 (1.99)	6.83 (2.27)
	CITC	.62	.41	.52	.49	.39							
2010	Label	BAP160	BAP0101	BAP0105	BAP0107	BAP0108	.72 (N = 18,504)	BAP0103	BAP0104	BAP0110	BAP0106	BAP0109	BAP0102
	M (SD)	7.11 (1.75)	6.53 (2.22)	6.46 (2.28)	7.87 (1.82)	7.10 (2.14)		6.86 (2.21)	6.77 (1.95)	6.76 (2.71)	5.87 (2.59)	7.81 (1.99)	6.77 (2.27)
	CITC	.60	.41	.51	.50	.40							
2011	Label	BBP152	BBP0101	BBP0105	BBP0107	BBP0108	.72 (N = 18,088)	BBP0103	BBP0104	BBP0109	BBP0106	BBP0110	BBP0102
	M (SD)	7.02 (1.74)	6.52 (2.24)	6.56 (2.26)	7.88 (1.83)	7.17 (2.16)		6.95 (2.19)	6.82 (1.93)	6.85 (2.62)	6.02 (2.55)	7.84 (1.94)	6.77 (2.28)
	CITC	.62	.42	.52	.50	.40							
2012	Label	BCP151	BCP0101	BCP0105	BCP0107	BCP0108	.73 (N = 19,185)	BCP0103	BCP0104	BCP0109	BCP0106	BCP0110	BCP0102
	M (SD)	7.12 (1.73)	6.59 (2.22)	6.64 (2.25)	7.90 (1.82)	7.22 (2.14)		7.04 (2.09)	6.88 (1.92)	7.05 (2.44)	6.12 (2.52)	7.91 (1.91)	6.79 (2.28)
	CITC	.61	.43	.53	.49	.41							
2013	Label	BDP15801	BDP0101	BDP0105	BDP0107	BDP0108	.72 (N = 18,896)	BDP0103	BDP0104	BDP0109	BDP0106	BDP0110	BDP0102
	M (SD)	7.31 (1.75)	6.83 (2.25)	6.59 (2.30)	7.77 (2.00)	7.26 (2.13)		7.17 (2.10)	6.84 (1.96)	7.58 (2.25)	6.13 (2.56)	8.00 (1.88)	6.79 (2.27)
	CITC	.58	.41	.52	.46	.42							

### Life Satisfaction

P (Individual Questionnaire)

Year		Item					Cronbach's Alpha	Item					
		1	2	3	4	5		6	7	8	9	10	11
2014	Label	BEP151	BEP0101	BEP0104	BEP0107	BEP0108	.70 (N = 22,853)	BEP0103	BEP0104	BEP0109	BEP0106	BEP0110	BEP0102
	<i>M (SD)</i>	7.24 (1.73)	6.75 (2.21)	6.89 (1.96)	7.81 (1.95)	7.05 (2.21)		7.14 (2.10)	6.89 (1.96)	7.42 (2.26)	6.11 (2.56)	8.00 (1.86)	6.79 (2.30)
	CITC	.54	.41	.46	.43	.42							
2015	Label	BFP174	BFP0101	BFP0105	BFP0107	BFP0108	.72 (N = 25,008)	BFP0103	BFP0104	BFP0109	BFP0106	BFP0110	BFP0102
	<i>M (SD)</i>	7.38 (S.73)	6.75 (2.19)	6.69 (2.20)	7.84 (1.92)	7.08 (2.18)		7.18 (2.02)	6.89 (1.92)	7.52 (2.20)	6.24 (2.53)	7.97 (1.88)	6.81 (2.23)
	CITC	.58	.42	.52	.49	.41							

### Items

How satisfied are you with (Wie zufrieden sind Sie):

1. Your social security (soziale Sicherung)?
2. School education (Ausbildung)?
3. Duration of leisure (Freizeitumfang)?
4. Living standard (Lebensstandard)?
5. Your area (Wohngegend)?
6. The supply of goods and services in your area (Angebot von Waren und Dienstleistungen)?
7. The environmental conditions in your area (Umweltzustand)?
8. Local access to public transport (mit dem Angebot an Waren und Dienstleistungen hier am Ort)?
9. Democracy as it exists in Germany (Demokratie in Deutschland)?
10. Social life (Freundes-/Bekanntenkreis)?
11. With your volunteer work in clubs, associations, or other social service organizations (ehrenamtliche Tätigkeit)?

Scale: 0 to 10

### Items and Scale Statistic

#### **Life Satisfaction**

P (Individual Questionnaire)

Year		Item											N min.
		1	2	3	4	5	6	7	8	9	10	11	
1987	Label	DP0103											10,281
	<i>M</i> ( <i>SD</i> )	6.75 (2.15)											
1989	Label		FP0104										8,647
	<i>M</i> ( <i>SD</i> )		6.75 (2.37)										
1990	Label			GP0106									9,482
	<i>M</i> ( <i>SD</i> )			6.72 (2.41)									



### Life Satisfaction

P (Individual Questionnaire)

Year		Item											N min.
		1	2	3	4	5	6	7	8	9	10	11	
1991	Label				HP1003	HP1007	HP1008	HP1009					13,606
	<i>M</i> ( <i>SD</i> )				6.80 (2.04)	7.32 (2.36)	6.64 (2.56)	5.63 (2.51)					
1992	Label	IP9807			IP9803		IP9808	IP9809					13,144
	<i>M</i> ( <i>SD</i> )	6.29 (2.04)			6.66 (1.98)		6.98 (2.36)	5.64 (2.29)					
1993	Label		JP0107		JP0108			JP0109					11,155
	<i>M</i> ( <i>SD</i> )		6.74 (2.30)		6.86 (1.98)			5.51 (2.22)					
1994	Label					KP0107	KP0108	KP0109					13,350
	<i>M</i> ( <i>SD</i> )					7.39 (2.19)	6.72 (2.47)	6.29 (2.16)					
1995	Label			LP0106	LP0108			LP0109					13,674
	<i>M</i> ( <i>SD</i> )			6.58 (2.49)	6.88 (1.97)			5.95 (2.12)					
1996	Label				MP0108		MP0107	MP0109					13,450
	<i>M</i> ( <i>SD</i> )				7.01 (1.90)		6.66 (2.48)	6.15 (2.04)					
1997	Label	NP0108			NP0109			NP0110					12,945
	<i>M</i> ( <i>SD</i> )	5.22 (2.31)			6.65 (1.90)			6.09 (1.98)					

### Life Satisfaction

P (Individual Questionnaire)

Year		Item											N min.
		1	2	3	4	5	6	7	8	9	10	11	
1998	Label				OP0111		OP0108	OP0110	OP0109				14,475
	<i>M</i> ( <i>SD</i> )				6.88 (1.88)		6.54 (2.47)	6.34 (1.97)	6.32 (2.57)				
1999	Label				PP0111	PP0109	PP0108	PP0110					13,972
	<i>M</i> ( <i>SD</i> )				7.00 (1.87)	7.46 (1.92)	6.55 (2.48)	6.87 (1.88)					
2000	Label		QP0109		QP0111		QP0108	QP0110					22,649
	<i>M</i> ( <i>SD</i> )		7.02 (2.13)		7.19 (1.84)		6.44 (2.70)	6.64 (1.93)					
2001	Label				RP0110		RP0108	RP0109					22,186
	<i>M</i> ( <i>SD</i> )				7.19 (1.79)		6.43 (2.64)	6.75 (1.87)					
2002	Label	SP0108			SP0110			SP0109					23,378
	<i>M</i> ( <i>SD</i> )	5.63 (2.19)			7.12 (1.81)			6.44 (1.87)					
2003	Label				TP0111		TP0108	TP0110	TP0109				22,356
	<i>M</i> ( <i>SD</i> )				7.07 (1.84)		6.40 (2.57)	6.73 (1.81)	6.38 (2.56)				
2004	Label		UP0106		UP0111		UP0110						20,447
	<i>M</i> ( <i>SD</i> )		7.01 (2.09)		7.05 (1.84)		6.31 (2.61)						

### Life Satisfaction

P (Individual Questionnaire)

Year		Item											N min.
		1	2	3	4	5	6	7	8	9	10	11	
2005	Label				VP0110		VP0109			VP0111			20,871
	<i>M</i> ( <i>SD</i> )				7.07 (1.89)		6.41 (2.63)			5.07 (2.42)			
2006	Label				WP0111						WP0110		22,233
	<i>M</i> ( <i>SD</i> )				7.19 (1.89)						7.53 (1.87)		
2007	Label	XP0111										XP0110	5,071
	<i>M</i> ( <i>SD</i> )	5.27 (2.19)										6.75 (2.55)	
2008	Label		YP0107										18,154
	<i>M</i> ( <i>SD</i> )		7.28 (2.03)										
2009	Label											ZP0111	4,721
	<i>M</i> ( <i>SD</i> )											6.89 (2.45)	
2010	Label									BAP0111			18,695
	<i>M</i> ( <i>SD</i> )									5.29 (2.27)			
2011	Label										BBP0111		18,383
	<i>M</i> ( <i>SD</i> )										7.61 (1.87)		

### Life Satisfaction

P (Individual Questionnaire)

Year		Item											<i>N</i> min
		1	2	3	4	5	6	7	8	9	10	11	
2012	Label	BCP0111											19,249
	<i>M</i> ( <i>SD</i> )	6.27 (2.10)											
2013	Label				BDP0111						f13p001j		6,822
	<i>M</i> ( <i>SD</i> )				7.52 (1.92)						8.05 (1.74)		
2014	Label		BEP011 1										25,414
	<i>M</i> ( <i>SD</i> )		7.53 (2.08)										

## **Locus of Control**

### **Summary**

The concept of locus of control describes the extent to which individuals believe they can determine events in their own lives, or conversely, the extent to which they feel dependent on factors that are outside of their control (Rotter, 1966). Locus of Control has been measured in SOEP in the years 1999, 2005, 2010, and 2015.

### **Theoretical Background**

Locus of control may be internally or externally oriented. Individuals with an internal locus of control believe that their lives are the result of their own decisions and their own behavior. Individuals with an external locus of control believe that the things that happen to them in their lives are outside their personal control.

For example, people with an external locus of control tend to avoid situations in which they feel overwhelmed. People with an internal locus of control tend to set higher goals for themselves, to persevere in difficult situations, and to pursue their goals successfully (Strauser, Ketz, & Keim, 2002).

### **Scale Development**

The Locus of Control Scale was developed by Helmut Nolte (Nolte et al., 1997). In the original conception, it covered four dimensions: 1. Internal locus of control (3 Items), 2. External locus of control (5 Items), 3. Attitudes about fairness or justice (1 Item) and 4. Individual vs. collective orientation (1 Item). Seven of the 10 items can be combined into an overall scale with good reliability (Specht, Egloff, & Schmukle, 2013).

### **References**

- Nolte, H., Weischer, C., Wilkesmann, U., Maetzel, J., & Tegethoff, H. G. (1997). *Kontrolleinstellungen zum Leben und zur Zukunft. Auswertung eines neuen, sozialpsychologischen Itemblocks im Sozioökonomischen Panel*. Ruhr-Universität Bochum: Diskussionspapiere aus der Fakultät für Sozialwissenschaft.
- Rotter, J. B. (1996). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80, 1-28.
- Specht, J., Egloff, B., & Schmukle, S. C. (2013). Everything under control? The effects of age, gender, and education on trajectories of perceived control in a nationally representative German sample. *Developmental Psychology*, 49, 353-364.
- Strauser, D. R., Ketz, K., & Keim, J. (2002). The relationship between self-efficacy, locus of control and work personality. *The Journal of Rehabilitation*, 68, 20-26.

### **Items**

The following statements apply to different attitudes towards life and the future. To what degree do you personally agree with the following statements (Die folgenden Aussagen kennzeichnen verschiedene Einstellungen zum Leben und zur Zukunft. In welchem Maße stimmen Sie persönlich den einzelnen Aussagen zu):

1. How my life goes depends on me (Wie mein Leben verläuft, hängt von mir selbst ab).
2. Compared to other people, I have not achieved what I deserve (Im Vergleich mit anderen habe ich nicht das erreicht, was ich verdient habe).
3. What a person achieves in life is above all a question of fate or luck (Was man im Leben erreicht, ist in erster Linie eine Frage von Schicksal oder Glück).
4. If a person is socially or politically active, he/she can have an effect on social conditions (Wenn man sich sozial oder politisch engagiert, kann man die sozialen Verhältnisse beeinflussen).
5. I frequently have the experience that other people have a controlling influence over my life (Ich mache häufig die Erfahrung, dass andere über mein Leben bestimmen).
6. One has to work hard in order to succeed (Erfolg muss man sich hart erarbeiten).
7. If I run up against difficulties in life, I often doubt my own abilities (Wenn ich im Leben auf Schwierigkeiten stoße, zweifle ich oft an meinen Fähigkeiten).
8. The opportunities that I have in life are determined by the social conditions (Welche Möglichkeiten ich im Leben habe, wird von den sozialen Umständen bestimmt).
9. Innate abilities are more important than any efforts one can make (Wichtiger als alle Anstrengungen sind die Fähigkeiten, die man mitbringt).
10. I have little control over the things that happen in my life (Ich habe wenig Kontrolle über die Dinge, die in meinem Leben passieren).

Scale: 1 (Not at all / Stimme überhaupt nicht zu) to 7 (Absolutely / Stimme voll zu); in 1999: 1 (Absolutely / Stimme voll zu) to 4 (Not at all / Stimme überhaupt nicht zu)

### **Test-Retest Correlations**

In 2005, this scale was included in a retest taken by a subsample ( $N = 160$ ) within 30 to 49 days after the initial test. Test-retest correlations for the scale-relevant items 1, 2, 3, 5, 7, 8, and 10 were .45, .47, .45, .33, .43, .26, .21; scale scores correlated .56.



## Items and Scale Statistics

### Locus of Control

P (Individual Questionnaire)

Year		Item							Cronbach's Alpha
		1	2	3	5	7	8	10	
1999	Label	PP10701 (R)	PP10702	PP10703	PP10705	PP10707	PP10708	PP10710	.69 (N = 13,754)
	M (SD)	3.26 (0.71)	2.85 (0.86)	2.67 (0.85)	2.99 (0.83)	2.94 (0.79)	2.28 (0.74)	3.14 (0.77)	
	CITC	.31	.41	.38	.47	.43	.29	.52	
2005	Label	VP12701	VP12702 (R)	VP12703 (R)	VP12705 (R)	VP12707 (R)	VP12708 (R)	VP12710 (R)	.69 (N = 20,509)
	M (SD)	5.44 (1.38)	4.70 (1.80)	4.33 (1.70)	4.86 (1.73)	4.66 (1.69)	3.46 (1.51)	5.24 (1.57)	
	CITC	.28	.41	.38	.47	.40	.33	.54	
2010	Label	BAP0201	BAP0202 (R)	BAP0203 (R)	BAP0205 (R)	BAP0207 (R)	BAP0208 (R)	BAP0210 (R)	.70 (N = 18,449)
	M (SD)	5.44 (1.32)	4.72 (1.78)	4.45 (1.66)	4.90 (1.70)	4.83 (1.64)	3.51 (1.46)	5.29 (1.51)	
	CITC	.30	.42	.37	.49	.42	.33	.55	
2015	Label	BFP0501	BFP0502 (R)	BFP0503 (R)	BFP0505 (R)	BFP0507 (R)	BFP0508 (R)	BFP0510 (R)	.68 (N = 26,539)
	M (SD)	5.59 (1.30)	4.76 (1.77)	4.33 (1.70)	4.96 (1.70)	4.71 (1.67)	3.56 (1.50)	5.28 (1.53)	
	CITC	.26	.39	.35	.46	.41	.32	.52	

Note.

In 1999 and 2005/2010 different scale formats were used. Therefore, means and standard deviations cannot be compared without transformations.

Although the questionnaire contains 10 items, only a subset of 7 items can be aggregated into a scale with acceptable internal consistency (cf. Specht et al., 2013).

Scale is scored so that higher values indicate an internal locus of control.



## **Optimism/Pessimism – Attitudes toward the Future**

### **Summary**

The SOEP measured respondents' attitudes toward the future with an individual item in 1999, 2005, 2010, and 2014.

### **Theoretical Background**

For pragmatic reasons and to save time, surveys usually measure attitudes about the future and future orientations by asking respondents whether they see the future positively or negatively, that is, optimistically or pessimistically.

In the analysis of attitudes toward the future, questions on the nature and emergence of future orientations are of interest (e.g., whether attitudes about the future are less positive in adults than in young people, or whether young women are less optimistic about the future than young men; Trommsdorff, 1994). Furthermore, making assumptions about the future makes it possible to plan and anticipate one's future actions. Attitudes about the future should therefore provide the basis for decisions and planning behavior.

### **Scale Development**

The question about attitudes toward the future was included in the SOEP on the recommendation of Gisela Trommsdorff. Additional information on the validity of this individual item can be found in Trommsdorff (1994).

### **References**

Trommsdorff, G. (1994). Zukunft als Teil individueller Handlungsorientierungen. In E. Holst, J. P. Rinderspacher & J. Schupp (Hrsg.), *Erwartungen an die Zukunft. Zeithorizonte und Wertewandel in der sozialwissenschaftlichen Diskussion* (pp. 45-76). Frankfurt a. M.: Campus.

### **Items**

When you think about the future (Wenn Sie an die Zukunft denken):

#### **Optimism/Pessimism**

1. Are you ( Sind Sie da ) ...

Scale: 1 (optimistic / optimistisch) to 4 (pessimistic / pessimistisch)

### **Test-Retest Correlations**

In 2009, this item was included in a retest taken by a subsample ( $N = 174$ ) within 30 to 49 days after the initial test. Test-retest correlation was .60.



### Items and Scale Statistics

#### Optimism/Pessimism – Attitudes to the Future

P (Individual Questionnaire)

Year		Item	<i>N</i>
		1	
1999	Label	PP108	13,989
	<i>M (SD)</i>	1.99 (0.80)	
2005	Label	VP132	20,981
	<i>M (SD)</i>	2.17 (0.81)	
2009	Label	ZP127	20,699
	<i>M (SD)</i>	2.23 (0.81)	
2014	Label	BEP124	27,275
	<i>M (SD)</i>	1.89 (0.75)	

## Parenting Goals

### Summary

The questions on parenting goals were taken from Kohn (1977). The 18 items can be combined into two scales: “autonomy” and “conformity.” Parenting goals have been measured in the SOEP since 2010 in the questionnaire for parents of children between the ages of 7 and 8.

### Theoretical Background

Kohn (1977) found an association between parenting goals (conformity and autonomy) and the parents’ social class: Working-class parents emphasized discipline, manners, cleanliness, good behavior in school, honesty, and obedience, whereas middle-class parents emphasized consideration, interest in why and how things happen, responsibility, and self-control. This suggests that lower-class parents place more value on conformity and higher-class parents place more value on personal autonomy.

The different values of parents from different social classes regarding childrearing are transferred to their children through their own behavior and shape their children’s social character.

### Scale Development

The scale measuring parenting goals was taken from the German General Social Survey (ALLBUS). Further information on the scale can be found in Terwey (2000).

### References

Kohn, M. (1977). *Class and conformity: A study in values*. Chicago: University of Chicago Press.  
Terwey, M. (2000). ALLBUS: A German General Social Survey. *Schmollers Jahrbuch*, 120, 151-158.

### Items

In the following, we will list a few traits and abilities that parents can foster in their children through their approach to parenting. How important do you consider the following parenting goals? That the child...: (Im Folgenden werden einige Eigenschaften und Fähigkeiten genannt, die man durch Erziehung fördern kann. Für wie wichtig halten Sie persönlich die folgenden Erziehungsziele? Dass das Kind... /)

#### Autonomy / Selbstständigkeit

1. Is interested in how and why things happen (sich dafür interessiert, wie und warum bestimmte Dinge passieren).
2. Is honest (ehrlich ist).
3. Is responsible (verantwortungsbewusst ist).
4. Has good judgment (ein gutes Urteilsvermögen besitzt).
5. Strives to achieve his/her goals (sich bemüht, seine Ziele zu erreichen).
6. Learns to overcome obstacles in life (lernt, sich im Leben auch gegen Widerstände durchzusetzen).

Scale: 1 (Not at all important / Überhaupt nicht wichtig) to 5 (Very important / Sehr wichtig)

#### Obedience / Conformity (Gehorsam / Konformität)

1. Is good in school (ein guter Schüler wird).
2. Gets along with other children (sich gut mit anderen Kindern versteht).
3. Behaves like normal girl/boy (sich wie ein normales Mädchen bzw. wie ein normaler Junge verhält).
4. Has good manners (gute Umgangsformen hat).
5. Has good self-control (Selbstbeherrschung besitzt).
6. Is considerate of others (auf andere Rücksicht nimmt).
7. Obeys his/her parents (seinen Eltern gehorcht).
8. Is neat and clean (ordentlich und sauber ist).
9. Fits in well in groups (sich gut in Gruppen einfügen kann).
10. Is satisfied with his/her own abilities (zufrieden mit dem ist, was es hat und kann).
11. Learns to avoid risks in life (lernt, Risiken im Leben zu meiden).
12. Is liked by others, friendly (von anderen gemocht wird, liebenswert ist).

Scale: 1 (not at all important / überhaupt nicht wichtig) to 5 (very important / sehr wichtig)

## Items and Scale Statistics

### Parenting Goals

Bioagel (2010-2015)

Domain		Item												Cronbach`s Alpha
		1	2	3	4	5	6	7	8	9	10	11	12	
Autonomy	Label	EDGO AL3	EDGO AL5	EDGO AL8	EDGO AL11	EDGO AL13	EDGO AL15							.78 (N = 9,760)
	M (SD)	4.48 (0.59)	4.82 (0.42)	4.63 (0.53)	4.42 (0.61)	4.52 (0.56)	4.51 (0.59)							
	CITC	.46	.43	.60	.58	.57	.54							
Obedience / Conformity	Label	EDGO AL1	EDGO AL2	EDGO AL4	EDGO AL6	EDGO AL7	EDGO AL9	EDGO AL10	EDGO AL12	EDGO AL14	EDGO AL16	EDGO AL17	EDGO AL18	.86 (N = 9,663)
	M (SD)	4.35 (0.66)	4.53 (0.56)	4.11 (0.95)	4.55 (0.57)	4.33 (0.65)	4.57 (0.56)	4.29 (0.70)	4.22 (0.70)	4.27 (0.65)	4.36 (0.74)	3.70 (1.01)	3.94 (0.79)	
	CITC	.51	.46	.54	.58	.62	.48	.61	.63	.60	.43	.59	.59	

## Parenting Role

### Summary

The questions on the parenting role were taken from the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam) project's parenting questionnaire (Wendt et. al., 2011). The ten items can be combined into three scales: "autonomy," "hostile attributions," and "willingness to make sacrifices." The questions on the parenting role have been asked in the SOEP since 2010 in the questionnaire for parents of children aged 7-8 years.

### Theoretical Background

The four items assessing "autonomy in the parenting role" are based on an instrument developed by Skinner and Regan (1992). The negative items measure the parents' feelings of irksome dependence in their interaction with the child. Furthermore, it is assumed that the feeling of autonomy in the parenting role is also expressed as positive feelings towards the child.

The three items of the scale "hostile attributions" are newly developed by pairfam and measure the parental disposition to interpret the child's behavior as intentionally hostile or egoistic.

The scale "willingness to make sacrifices" is an adapted version from the AGAPE scale developed by Bierhoff, Grau, & Ludwig (1993) to assess parents' willingness to make sacrifices in their relationship with their child.

### Scale Development

Information on the scale development can be found in the documentation provided by pairfam (Wendt et. al., 2011).

### References

- Bierhoff, H. W., Grau, I., & Ludwig, A. (1993). *Marburger Einstellungsinventar für Liebesstile (MEIL)*. Göttingen: Hogrefe.
- Skinner, E. A., & Regan, C. (1992). *Parenting sense of autonomy*. Technical Report. University of Rochester, Rochester, NY.
- Wendt, E.-V., Schmahl, F., Thönnissen, C., Schaer, M., & Walper, S.(2011). *Scales Manual of the German Family Panel*. pairfam (Panel Analysis of Intimate Relationships and Family Dynamics). Bremen, Chemnitz, Munich.

### Items

#### Autonomy

1. I have the feeling that taking care of my child/my children takes up all my strength and that my whole life revolves around it (R) (Ich habe das Gefühl, dass Betreuung und Erziehung meines Kindes mich völlig in Beschlag nehmen, mein ganzes Leben bestimmen).
2. I wish I didn't feel so trapped by my parental duties (R) (Ich wünschte, ich würde mich durch meine Elternpflichten nicht so gefangen fühlen).
3. When I am with my child/children there is nothing else I'd rather be doing (Wenn ich mit meinem Kind zusammen bin, gibt es nichts anderes, was ich lieber täte).
4. I look forward to spending time with my child/children (Ich freue mich darauf, mit meinem Kind zusammen zu sein).

Scale: 1 (Not at all / stimme überhaupt nicht zu) to 5 (Absolutely / stimme voll und ganz zu)

#### Hostile Attributions

1. When my child disobeys and breaks rules, he/she just wants to annoy me (Wenn mein Kind nicht gehorcht und etwas Verbotenes tut, will es mich ärgern).
2. If there are any problems with the way I raise my child, then it's my child's fault (Wenn es Probleme in der Erziehung gibt, liegt das an meinem Kind).
3. It seems to me that when my child misbehaves, he/she does it intentionally (Ich denke, wenn mein Kind sich falsch verhält, macht es das mit Absicht).

Scale: 1 (Not at all / stimme überhaupt nicht zu) to 5 (Absolutely / stimme voll und ganz zu)

### Readiness to Make Sacrifices

1. I am usually willing to sacrifice my own desires to satisfy those of my child (Gewöhnlich bin ich bereit, meine eigenen Wünsche denen meines Kindes zu opfern).
2. I would put up with anything for the good of my child (Ich würde alles aushalten für das Wohl meines Kindes).
3. I often stop what I am doing to offer help to my child (Ich lasse oft alles stehen und liegen, um mein Kind zu unterstützen).

Scale: 1 (Not at all / Stimme überhaupt nicht zu) to 5 (Absolutely / Stimme voll und ganz zu)

### Items and Scale Statistics

Parenting Role					
Bioagel (2010-2015)					
Domain		Item			
		1	2	3	4
<i>Autonomy</i>	Label	BEPARO3 (R)	BEPARO4 (R)	BEPARO6	BEPARO10
	<i>M (SD)</i>	3.51 (1.14)	3.85 (1.05)	3.88 (0.95)	4.58 (0.62)
	CITC	.37	.50	.21	.27
<i>Hostile Attributions</i>	Label	BEPARO2	BEPARO5	BEPARO8	
	<i>M (SD)</i>	2.00 (1.02)	1.62 (0.81)	1.72 (0.85)	
	CITC	.49	.40	.54	
<i>Readiness to make Sacrifices</i>	Label	BEPARO1	BEPARO7	BEPARO9	
	<i>M (SD)</i>	3.94 (0.88)	4.27 (0.87)	3.66 (0.97)	
	CITC	.44	.46	.44	
Cronbach's Alpha					
.54 (N = 9,764)					
.66 (N = 9,790)					
.64 (N = 9,787)					

## Parenting Style

### Summary

The questions on the parenting style were taken from the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam) project's parenting questionnaire (Wendt et. al., 2011). The 18 items can be combined into six scales: "emotional warmth," "inconsistent parenting," "monitoring," "negative communication," "psychological control," and "strict control." The questions on parenting style have been asked in the SOEP since 2010 in the questionnaire for parents of children aged 7-8 years.

### Theoretical Background

The scale "emotional warmth" comprises three items indicating the degree of affirmative attention and care in parenting. The items are based on mothers' and fathers' actual parenting behavior (see the corresponding scale of Jaursch, 2003, based on Perris et al., 1980, and Schuhmacher, Eisemann, & Brähler, 1999).

The scale "inconsistent parenting" comprises three items indicating the degree of inconsistent behavior in parenting. The items are based on a questionnaire on parenting from Reichle and Franiek (2005).

The scale "monitoring" comprises three items indicating the degree to which parents are informed about their child's activities and social contacts. The items are based on a questionnaire on parenting from Reichle and Franiek (2005).

The scale "negative communication" comprises three items indicating the degree to which parents behave negatively toward their child. The items are based on the instrument developed by Schwarz, Walper, Gödde, and Jurasic (1997).

The scale "psychological control" consists of three items. The items assess negative intrusive thoughts, feelings, and behavior of parents toward their child and are a shortened and adapted version of the scale "psychological pressure" from the "Zurich Brief Questionnaire for the Assessment of Parental Behaviors" (Reitzle et al. 2001).

The scale "strict control" comprises three items indicating harsh control and authoritarian behavior of parents. The items are based on the instrument of Schwarz et al. (1997).

### Scale Development

Information on the scale development can be found in the documentation of pairfam (Wendt et. al., 2011).

### References

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- Wendt, E.-V., Schmahl, F., Thönnissen, C., Schaer, M., & Walper, S.). *Scales Manual of the German Family Panel*. pairfam (Panel Analysis of Intimate Relationships and Family Dynamics). Bremen, Chemnitz, Munich.

## **Items**

### **Emotional Warmth**

1. I show my child with words and gestures that I care about him/her (Ich zeige meinem Kind mit Worten und Gesten, dass ich es gerne habe).
2. I console child up when he/she is sad (Ich tröste mein Kind, wenn es traurig ist).
3. I praise my child (Ich lobe mein Kind).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

### **Inconsistent Parenting**

1. I reduce punishments or end them early (Ich schwäche eine Bestrafung ab oder hebe sie vorzeitig auf).
2. I threaten my child with a punishment but don't actually follow through (Ich drohe meinem Kind eine Strafe an, bestrafe es aber dann doch nicht).
3. I find it hard to set and keep consistent rules for my child (Es fällt mir schwer in meiner Erziehung konsequent zu sein).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

### **Monitoring**

1. I try to actively influence my child's circle of friends (Ich versuche den Freundeskreis meines Kindes aktiv zu beeinflussen).
2. When my child goes out, I ask what he/she did and experienced (Wenn mein Kind unterwegs war, frage ich nach, was es getan und erlebt hat).
3. When my child goes out, I know exactly where he/she is (Wenn mein Kind außer Haus ist, weiß ich genau, wo es sich aufhält).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

### **Negative Communication**

1. I criticize my child (Ich kritisiere mein Kind).
2. I yell at my child when he/she does something wrong (Ich schreie mein Kind an, wenn es etwas falsch gemacht hat).
3. I scold my child when I am angry at him/her (Ich beschimpfe mein Kind, weil ich wütend auf es bin).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

### **Psychological Control**

1. I am disappointed and sad when my child misbehaves (Ich bin enttäuscht und traurig, wenn sich mein Kind schlecht benommen hat).
2. I think my child is ungrateful when he/she does not obey me (Ich halte mein Kind für undankbar, wenn es mir nicht gehorcht).
3. I don't talk to my child for a while when he/she does something wrong (Ich rede eine Zeit lang nicht mit meinem Kind, wenn es etwas angestellt hat).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

### **Strict Control**

1. I tend to be a strict parent (Ich bin eher streng zu meinem Kind).
2. If my child does something against my will, I punish him/her (Wenn mein Kind etwas gegen meinen Willen tut, bestrafe ich es).
3. I make it clear to my child that he/she is not to break my rules or question my decisions (Ich gebe meinem Kind zu verstehen, dass es sich meinen Anordnungen und Entscheidungen nicht widersetzen soll).

Scale: 1 (Never / nie) to 5 (Frequently / sehr häufig)

## Items and Scale Statistics

Parenting Style					
Bioagel (2010-2015)					
Domain		Item			Cronbach's Alpha
		1	2	3	
Emotional Warmth	Label	EDBEH1	EDBEH8	EDBEH13	.74 (N = 9,805)
	M (SD)	4.43 (0.65)	4.47 (0.70)	4.33 (0.66)	
	CITC	.57	.56	.58	
Inconsistent Parenting	Label	EDBEH5	EDBEH16	EDBEH18	.71 (N = 9,762)
	M (SD)	2.46 (0.99)	2.66 (0.96)	2.49 (0.94)	
	CITC	.56	.52	.49	
Monitoring	Label	EDBEH3	EDBEH6	EDBEH15	.38 (N = 9,786)
	M (SD)	4.33 (0.71)	4.44 (0.78)	2.22 (1.05)	
	CITC	.31	.28	.13	
Negative Communication	Label	EDBEH2	EDBEH9	EDBEH14	.63 (N = 9,786)
	M (SD)	3.11 (0.71)	2.29 (0.82)	1.89 (0.84)	
	CITC	.35	.52	.45	
Psychological Control	Label	EDBEH10	EDBEH11	EDBEH17	.50 (N = 9,797)
	M (SD)	1.54 (0.76)	1.46 (0.78)	2.69 (0.89)	
	CITC	.38	.30	.28	
Strict Control	Label	EDBEH4	EDBEH7	EDBEH12	.55 (N = 9,758)
	M (SD)	2.67 (0.79)	2.98 (0.89)	2.99 (0.98)	
	CITC	.43	.33	.33	



## **Personality – Big Five**

### **Big Five (Adults)**

#### **Summary**

The Big Five concept makes it possible to describe human personality traits in terms of individually differing behaviors and experiences. At the heart of this approach lies the assumption that there exist five broad, non-overlapping dimensions of personality that can be used to describe human personality: openness, conscientiousness, extraversion, agreeableness, and neuroticism. The scale consists of 15 items measuring the “Big Five” and was used in the SOEP in 2005, 2009, and 2013. In 2009 and 2013 the scale was extended by one additional item measuring openness.

#### **Theoretical Background**

The Big Five Model of personality traits, or the “Five-Factor Model,” is a psychological approach aimed at comprehensively describing the human personality. According to this model, intra-individual personality differences can be measured in five broad dimensions – the so-called “Big Five.” Personality traits are coherent and constant structures of feelings, thoughts, and forms of behavior that influence psychological conditions and individual actions (Costa & McCrae, 1985). The Five-Factor Model assumes that values in these different dimensions vary from one individual to the next, but that the basic structure of the personality, at least for individuals from Western cultures, remains constant. The five personality dimensions are: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Individuals with high openness to experience describe themselves as having a lively imagination, being original and creative, and appreciating artistic and aesthetic experiences. Individuals with high conscientiousness describe themselves as highly motivated, success-oriented, thorough in their work, and as completing their tasks effectively and efficiently. Individuals with high extroversion see themselves as communicative, talkative, open, and outgoing. In contrast, introverted individuals describe themselves as reserved or shy. Individuals with high values for neuroticism describe themselves as nervous, often worried, and as having difficulties dealing with stress. The antithesis of neuroticism is emotional stability. Finally, individuals with high agreeableness describe themselves as considerate and friendly, willing to forgive, and as not being unkind to others. The Big Five approach has its origins in two distinct traditions in psychology: first, in the psycho-lexical tradition of Allport (1937) and Cattell (1946), and second, in the differential diagnosis or clinical tradition of personality research pioneered by Stern (1911) and Eysenck (1947). Both lines of research were ultimately brought together into a single model and formalized by Costa and McCrae (1985). Since then, the validity of this approach has been confirmed in a number of studies of different groups of individuals from different countries including the USA, England, Germany, Spain, Sweden, and China.

#### **Scale Development**

For reasons of space and time, the SOEP required a short and efficient scale that is nevertheless capable of reflecting the basic structure of the Five-Factor Model in a robust and reliable way. The choice of items was made based on five criteria: (1) the conditions and limitations that result from the SOEP questionnaire, (2) the aim of achieving balanced coverage of the basic personality dimensions, (3) the internal consistency of the scale, (4) the dimensionality of the items, and (5) the correspondence with other, established measurement instruments. The guideline in developing the short scale was to use at least three items per latent construct. The development and validation of the scale took place in the framework of a SOEP pretest, which represents an independent representative survey of the resident population of Germany. The items were taken from the Ten-Item Personality Inventory (TIPI; Gosling et al., 2003) and the BFI-25. The BFI-25 was developed based on a principal component analysis carried out with the entire inventory by John et al. (1991): the five items for each personality dimension with the highest factor loadings were included. Further information can be found in Gerlitz und Schupp (2005) and in Lang et al. (2011).

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## **Items**

I see myself as someone who (Ich bin jemand, der):

### **Openness**

1. is original, comes up with new ideas (originell ist, neue Ideen einbringt).
2. values artistic, aesthetic experiences (künstlerische, ästhetische Erfahrungen schätzt).
3. has an active imagination (eine lebhaft Phantasie, Vorstellungen hat).
4. is eager for knowledge (wissbegierig ist).

Scale: 1 (Not at all / Trifft überhaupt nicht zu) to 7 (Absolutely / Trifft voll zu)

### **Conscientiousness**

1. does a thorough job (gründlich arbeitet).
2. tends to be lazy (R) (eher faul ist).
3. does things effectively and efficiently (Aufgaben wirksam und effizient erledigt).

Scale: 1 (Not at all / Trifft überhaupt nicht zu) to 7 (Absolutely / Trifft voll zu)

### **Extraversion**

1. is communicative, talkative (kommunikativ, gesprächig ist).
2. is outgoing, sociable (aus sich herausgehen kann, gesellig ist).
3. is reserved (R) (zurückhaltend ist).

Scale: 1 (Not at all / Trifft überhaupt nicht zu) to 7 (Absolutely / Trifft voll zu)

### **Agreeableness**

1. is sometimes somewhat rude to others (R) (manchmal etwas grob zu anderen ist).
2. has a forgiving nature (verzeihen kann).
3. is considerate and kind to others (rücksichtsvoll und freundlich mit anderen umgeht).

Scale: 1 (Not at all / Trifft überhaupt nicht zu) to 7 (Absolutely / Trifft voll zu)

### **Neuroticism**

1. worries a lot (sich oft Sorgen macht).
2. gets nervous easily (leicht nervös wird).
3. is relaxed, handles stress well (R) (entspannt ist, mit Stress gut umgehen kann).

Scale: 1 (Does not apply to me at all / Trifft überhaupt nicht zu) to 7 (Applies to me perfectly / Trifft voll zu)

## **Test-Retest Correlations**

The Big Five inventory was included in retests taken by subsamples in 2005 and 2009 within 30 to 49 days after the initial test. Pooled across both occasions, test-retest correlations were .64 for the 3-item version of openness ( $N = 325$ ) and .66 for the 4-item version ( $N = 167$ ); .53 for conscientiousness; .64 for extraversion; .57 for agreeableness; and .62 for neuroticism.

# Big Five (Adults)

P (Individual Questionnaire)

Domain	Year	Item				Cronbach's Alpha
		1	2	3	4	
O	2005	Label	VP12504	VP12509	VP12514	.63 (N = 20,768)
		M (SD)	4.57 (1.44)	4.11 (1.82)	4.80 (1.53)	
		CITC	.46	.39	.47	
	2009	Label	ZP12004	ZP12009	ZP12014	.67 (N = 20,430)
		M (SD)	4.51 (1.44)	3.99 (1.85)	4.70 (1.55)	
		CITC	.49	.42	.49	
	2013	Label	BDP15104	BDP15109	BDP15114	.66 (N = 18,939)
		M (SD)	4.67 (1.39)	4.25 (1.83)	4.83 (1.50)	
		CITC	.48	.41	.48	
C	2005	Label	VP12501	VP12507 (R)	VP12511	.62 (N = 20,803)
		M (SD)	6.18 (1.03)	5.74 (1.53)	5.78 (1.13)	
		CITC	.53	.37	.45	
	2009	Label	ZP12001	ZP12007 (R)	ZP12011	.59 (N = 20,472)
		M (SD)	6.14 (1.06)	5.57 (1.58)	5.75 (1.15)	
		CITC	.50	.33	.43	
	2013	Label	BDP15101	BDP15107 (R)	BDP15111	.58 (N = 18,997)
		M (SD)	6.15 (0.99)	5.54 (1.59)	5.79 (1.08)	
		CITC	.49	.33	.43	
E	2005	Label	VP12502	VP12508	VP12512 (R)	.66 (N = 20,901)
		M (SD)	5.50 (1.34)	5.09 (1.45)	3.90 (1.63)	
		CITC	.54	.53	.36	
	2009	Label	ZP12002	ZP12008	ZP12012 (R)	.66 (N = 20,521)
		M (SD)	5.43 (1.37)	4.98 (1.46)	3.91 (1.59)	
		CITC	.54	.53	.36	
	2013	Label	BDP15102	BDP15108	BDP15112 (R)	.66 (N = 19,024)
		M (SD)	5.55 (1.30)	5.15 (1.41)	3.87 (1.59)	
		CITC	.54	.54	.36	

**Big Five (Adults)**  
P (Individual Questionnaire)

Domain	Year		Item				Cronbach's Alpha
			1	2	3	4	
A	2005	Label	VP12503 (R)	VP12506	VP12513		.51 (N = 20,890)
		<i>M (SD)</i>	5.07 (1.66)	5.51 (1.32)	5.79 (1.10)		
		CITC	.29	.27	.45		
	2009	Label	ZP12003 (R)	ZP12006	ZP12013		.50 (N = 20,551)
		<i>M (SD)</i>	4.96 (1.64)	5.38 (1.35)	5.70 (1.12)		
		CITC	.29	.27	.43		
	2013	Label	BDP15103 (R)	BDP15106	BDP15113		.48 (N = 19,019)
		<i>M (SD)</i>	4.96 (1.67)	5.43 (1.32)	5.80 (1.06)		
		CITC	.28	.26	.41		
N	2005	Label	VP12005	VP12010	VP12015(R)		.60 (N = 20,882)
		<i>M (SD)</i>	4.72 (1.67)	3.71 (1.73)	3.45 (1.51)		
		CITC	.35	.49	.39		
	2009	Label	ZP12005	ZP12010	ZP12015(R)		.62 (N = 20,561)
		<i>M (SD)</i>	4.35 (1.68)	3.61 (1.68)	3.52 (1.50)		
		CITC	.40	.49	.40		
	2013	Label	BDP15105	BDP15110	BDP15115 (R)		.62 (N = 19,019)
		<i>M (SD)</i>	4.24 (1.68)	3.64 (1.69)	3.41 (1.48)		
		CITC	.39	.50	.41		

# Big Five (Youth)

## Items and Scale Statistics

Big Five (Youth)						
PAGE17 (Youth Questionnaire; 2006-2015)						
Domain		Item				Cronbach's Alpha
		1	2	3	4	
O	Label	J9104	J9109	J9114	J9116	.59 (N = 3,192)
	M (SD)	4.85 (1.31)	3.93 (1.82)	5.26 (1.45)	5.03 (1.41)	
	CITC	.41	.37	.39	.33	
C	Label	J9109	J9107 (R)	J9111		.66 (N = 3,230)
	M (SD)	5.23 (1.34)	4.07 (1.75)	5.21 (1.19)		
	CITC	.57	.40	.50		
E	Label	J9102	J9108	J9112 (R)		.74 (N = 3,229)
	M (SD)	5.25 (1.46)	5.15 (1.44)	4.18 (1.72)		
	CITC	.62	.60	.49		
A	Label	J9103 (R)	J9106	J9113		.47 (N = 3,237)
	M (SD)	4.64 (1.60)	5.62 (1.24)	5.78 (1.10)		
	CITC	.25	.25	.42		
N	Label	J9105	J9110	J9115 (R)		.54 (N = 3,239)
	M (SD)	4.47 (1.69)	3.98 (1.64)	3.45 (1.47)		
	CITC	.33	.42	.31		

Big Five (11-12 year olds, self-report)

Items and Scale Statistics

Big Five (11-12 year olds, self-report)						
Bioagel (2014-2015)						
Domain		Item				Cronbach's Alpha
		1	2	3	4	
<b>O</b>	Label	CHAR14	CHAR19	CHAR24	CHAR26	.56 (N = 1,159)
	<i>M (SD)</i>	4.76 (1.54)	4.16 (2.07)	5.37 (1.62)	4.87 (1.62)	
	CITC	.43	.32	.36	.28	
<b>C</b>	Label	CHAR11	CHAR17 (R)	CHAR21		.67 (N = 1,191)
	<i>M (SD)</i>	4.75 (1.40)	4.48 (1.81)	4.71 (1.45)		
	CITC	.57	.40	.52		
<b>E</b>	Label	CHAR12	CHAR18	CHAR22 (R)		.62 (N = 1,173)
	<i>M (SD)</i>	5.21 (1.59)	4.94 (1.55)	4.29 (1.79)		
	CITC	.50	.47	.33		
<b>A</b>	Label	CHAR13 (R)	CHAR16	CHAR23		.54 (N = 1,190)
	<i>M (SD)</i>	5.12 (1.56)	5.52 (1.48)	5.69 (1.24)		
	CITC	.31	.32	.45		
<b>N</b>	Label	CHAR15	CHAR20	CHAR25 (R)		.50 (N = 1,184)
	<i>M (SD)</i>	3.42 (1.83)	3.44 (1.71)	3.86 (1.59)		
	CITC	.35	.40	.20		

### Big Five (9-10 year olds & 5-6 year olds, parent reports)

#### **References**

- Asendorpf, J. B., & van Aken, M. A. G. (2003). Validity of Big Five personality judgments in childhood: A 9 year longitudinal study. *European Journal of Personality*, 17, 1-17.
- Weinert, S., Asendorpf, J. B., Beelmann, A., Doil, H., Frevert, S., Lohaus, A., & Hasselhorn, M. (2007). *Expertise zur Erfassung von psychologischen Personmerkmalen bei Kindern im Alter von fünf Jahren im Rahmen des SOEP*. Berlin: DIW Berlin.

#### **Items**

How would you rank your child in comparison to other children of the same age (Wie würden Sie Ihr Kind im Vergleich zu anderen Kindern gleichen Alters beurteilen):

##### **Openness/Intellect**

1. Child is not that interested – hungry for knowledge (ist wenig interessiert – ist wissensdurstig).
2. Child understands quickly – needs more time (begreift schnell – braucht mehr Zeit).

Scale: 0 to 10

##### **Conscientiousness**

1. Child is tidy – untidy (ist unordentlich – ist ordentlich).
2. Child is focused – easy to distract (ist konzentriert – ist leicht ablenkbar).

Scale: 0 to 10

##### **Extraversion**

1. Child is talkative – quiet (ist gesprächig – ist still).
2. Child is withdrawn – sociable (ist zurückgezogen – ist kontaktfreudig).

Scale: 0 to 10

##### **Agreeableness**

1. Child is good-natured – irritable (ist gutmütig – ist reizbar).
2. Child is obstinate – compliant (ist trotzig – ist fügsam).

Scale: 0 to 10

##### **Neuroticism**

1. Child is self-confident – insecure (hat Selbstvertrauen – ist unsicher).
2. Child is fearful – fearless (ist ängstlich – ist unängstlich).

Scale: 0 to 10

## Items and Scale Statistics

### Big Five (9-10 year olds, parent reports)

Bioagel (2012-2015)

Domain		Item		Cronbach's Alpha
		1	2	
O	Label	CHAR7	CHAR4 (R)	.56 (N = 4,672)
	<i>M (SD)</i>	7.63 (2.21)	6.90 (2.82)	
	CITC	.40	.40	
C	Label	CHAR5	CHAR2 (R)	.46 (N = 4,664)
	<i>M (SD)</i>	4.85 (2.78)	5.32 (3.06)	
	CITC	.30	.30	
E	Label	CHAR1B (R)	CHAR9	.64 (N = 4,670)
	<i>M (SD)</i>	7.29 (2.53)	7.54 (2.30)	
	CITC	.47	.47	
A	Label	CHAR6 (R)	CHAR3	.51 (N = 4,655)
	<i>M (SD)</i>	6.98 (2.58)	5.65 (2.51)	
	CITC	.34	.34	
N	Label	CHAR8	CHAR10 (R)	.59 (N = 4,670)
	<i>M (SD)</i>	3.49 (2.61)	3.75 (2.51)	
	CITC	.42	.42	



## Items and Scale Statistics

### **Big Five (5-6 year olds, parent reports)**

Bioagel (2008-2015)

Domain		Item		Cronbach's Alpha
		1	2	
<b>O</b>	Label	CHAR7	CHAR4 (R)	.53 ( <i>N</i> = 4,764)
	<i>M (SD)</i>	8.33 (1.94)	7.62 (2.40)	
	CITC	.37	.37	
<b>C</b>	Label	CHAR5	CHAR2 (R)	.42 ( <i>N</i> = 4,768)
	<i>M (SD)</i>	5.57 (2.51)	6.06 (2.82)	
	CITC	.27	.27	
<b>E</b>	Label	CHAR1B (R)	CHAR9	.65 ( <i>N</i> = 4,759)
	<i>M (SD)</i>	7.73 (2.38)	7.92 (2.11)	
	CITC	.48	.48	
<b>A</b>	Label	CHAR6 (R)	CHAR3	.52 ( <i>N</i> = 4,761)
	<i>M (SD)</i>	7.21 (2.32)	5.69 (2.37)	
	CITC	.35	.35	
<b>N</b>	Label	CHAR8	CHAR10 (R)	.64 ( <i>N</i> = 4,764)
	<i>M (SD)</i>	3.14 (2.51)	3.64 (2.46)	
	CITC	.47	.47	

### Big Five (2-3 year olds, parent reports)

#### References

- Asendorpf, J. B., & van Aken, M. A. G. (2003). Validity of Big Five personality judgments in childhood: A 9 year longitudinal study. *European Journal of Personality*, 17, 1-17.
- Weinert, S., Asendorpf, J. B., Beelmann, A., Doil, H., Frevert, S., Lohaus, A., & Hasselhorn, M. (2007). *Expertise zur Erfassung von psychologischen Personmerkmalen bei Kindern im Alter von fünf Jahren im Rahmen des SOEP*. Berlin: DIW Berlin.

#### Items

How would you rank your child in comparison to other children of the same age (Wie würden Sie Ihr Kind im Vergleich zu anderen Kindern gleichen Alters beurteilen):

##### Openness/Intellect

1. Quick at learning new things – needs more time (begreift eher schnell – braucht mehr Zeit).

Scale: 0 to 10

##### Conscientiousness

1. Focused – easily distracted (ist konzentriert – ist leicht ablenkbar).

Scale: 0 to 10

##### Extraversion

1. Shy – outgoing (ist eher schüchtern – ist eher kontaktfreudig).

Scale: 0 to 10

##### Agreeableness

1. Obstinate – obedient (ist eher trotzig – ist eher fügsam/folgsam).

Scale: 0 to 10

#### Items and Scale Statistics

Big Five (2-3 year olds, parent reports)			
Bioagel (2005-2015)			
Domain		Item	N
		1	
O	Label	CHAR4	7,511
	M (SD)	2.17 (2.23)	
C	Label	CHAR2	7,494
	M (SD)	4.12 (2.64)	
E	Label	CHAR1A	7,518
	M (SD)	7.38 (2.49)	
A	Label	CHAR3	7,492
	M (SD)	4.87 (2.52)	

## **Reciprocity**

### **Summary**

Reciprocity is understood as the tendency to respond in kind to the actions of other people, that is, to respond to actions directed at oneself by acting in the same or a similar way (Fehr & Schmidt, 2005; Perugini et al., 2003). A distinction is drawn here between negative and positive reciprocity. Negative reciprocity is the tendency to respond to bad treatment by another person in a similarly negative way. Positive reciprocity relates to the tendency to respond positively to a positive experience. Reciprocity was measured in the SOEP in 2005, 2010, and 2015.

### **Theoretical Background**

The scale is designed to measure reciprocity as an internalized norm within individuals. Reciprocity is understood as the tendency to respond to the actions of other people in kind, that is, to respond to actions directed at oneself by acting in the same or a similar way (Fehr & Schmidt, 2005; Perugini et al., 2003). The action may either have already occurred or be expected in the future. The concept of reciprocity can be used on three levels: 1. To describe real patterns of social exchange in society, 2. To describe the belief of social actors themselves that (and to what extent), from their point of view, relationships are regulated by the norm of reciprocity, 3. To describe the extent to which reciprocity is a norm that governs social actors in their daily interactions and internalized by individuals (Gouldner, 1960). Gouldner also argues that reciprocity is a basic norm that can be found in all historically known societies. Negative reciprocity can be distinguished from positive reciprocity. Negative reciprocity describes the tendency to respond negatively to negative treatment by another person and thus to negatively sanction this behavior. Positive reciprocity describes the tendency to approve and positively sanction positive interpersonal experiences, that is, to return favors. This distinction is required because different individuals respond more or less sensitively to positive or negative experiences and tend toward more or less positive or negative sanctions. Thus, individuals may be careful to always return favors but may at the same time (possibly motivated by Christian norms of forgiveness) refrain from taking revenge or imposing penalties on others (Perugini et al. 2003). Empirically, positive and negative reciprocity are uncorrelated (Egloff, Richter & Schmukle, 2013). Both positive and negative reciprocity could be of interest in research on the motives for providing support of various kinds to friends and relatives or to engage in volunteer work, behavior in dilemma situations (game theory), and on forms of reciprocity as determinants of stability in social relationships.

### **Scale Development**

The original scale (Perugini et al., 2003) consists of 27 items (nine per subscale) that were shortened for use in a survey to a total of nine (three per subscale), taking the three items with the highest factor loadings for each of the subscales. The three original dimensions could not, however, be extracted by means of principal component analysis in the 2004 SOEP pretest: the dimension “belief in reciprocity” is comprised of the dimensions “positive reciprocity” and “negative reciprocity.” That is, the theoretically postulated dimension “belief in reciprocity” is not empirically orthogonal to behavior. Thus, only the two factors “negative reciprocity” and “positive reciprocity” can be found consistently in the sample. Thus, in the shortened version of the questionnaire, only the six items in these two dimensions were used in the main SOEP survey. Further information on scale development and validity can be found in Dohmen et al. (2008, 2009).

### **References**

- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2008). Representative trust and reciprocity: Prevalence and determinants. *Economic Inquiry*, 46, 81-90.
- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2009). Homo reciprocans: Survey evidence on behavioral outcomes. *Economic Journal*, 119, 592 - 612.
- Egloff, B., Richter, D., & Schmukle, S. C. (2013). Need for conclusive evidence that positive and negative reciprocity are unrelated. Comment on Yamagishi, T., et al. (2012) Rejection of unfair offers in the ultimatum game is no evidence of strong reciprocity. *Proceedings of the National Academy of Sciences of the USA*, 110, 786.

- Fehr, E. & Schmidt, K. M. (2006). The economics of fairness, reciprocity and altruism. Experimental evidence and new theories. *Handbook of the Economics of Giving, Altruism and Reciprocity*, 615-691.
- Gouldner, A. W. (1960). The Norm of Reciprocity: A Preliminary Statement. *American Sociological Review*, 25, 161-178.
- Perugini, M., Gallucci, M., Presaghi, F., & Ercolani, A. P. (2003). The personal norm of reciprocity. *European Journal of Personality*, 17, 251-283.

### **Items**

To what degree do the following statements apply to you personally (In welchem Maße treffen die folgenden Aussagen auf Sie persönlich zu):

#### **Positive**

1. If someone does me a favor, I am prepared to return it (Wenn mir jemand einen Gefallen tut, bin ich bereit, dies zu erwidern)
2. I go out of my way to help somebody who has been kind to me in the past (Ich stenge mich besonders an, um jemandem zu helfen, der mir früher schon mal geholfen hat)
3. I am ready to assume personal costs to help somebody who helped me in the past (Ich bin bereit, Kosten auf mich zu nehmen, um jemanden zu helfen, der mir früher geholfen hat )

Scale: 1 (Does not apply to me at all / Trifft überhaupt nicht zu) to 7 (Applies to me perfectly / Trifft voll zu)

### **Test-Retest Correlations**

Positive reciprocity was included in a retest taken by subsamples ( $N = 158$ ) in 2005 within 30 to 49 days after the initial test. Test-retest correlations of the items were (in scale order) .25, .35, and .36; test-retest correlation of scale scores was .42.

### **Items and Scale Statistics**

Positive Reciprocity						
P (Individual Questionnaire)						
Domain	Year		Item			Cronbach's Alpha
			1	2	3	
	2005	Label	VP12601	VP12604	VP12506	.64 (N = 20,908)
		M (SD)	6.45 (0.88)	5.90 (1.17)	5.28 (1.48)	
		CITC	.41	.55	.45	
	2010	Label	BAP12401	BAP12404	BAP12406	.61 (N = 18,764)
		M (SD)	6.42 (0.90)	5.88 (1.18)	5.22 (1.49)	
		CITC	.38	.50	.43	
	2015	Label	BFP0601	BFP0604	BFP0606	.61 (N = 26,877)
		M (SD)	6.40 (0.94)	5.90 (1.18)	5.31 (1.49)	
CITC		.35	.52	.43		

### Items

To what degree do the following statements apply to you personally (In welchem Maße treffen die folgenden Aussagen auf Sie persönlich zu):

#### Negative

1. If I suffer a serious wrong, I will take revenge as soon as possible, no matter what the cost (Wenn mir schweres Unrecht zuteilwird, werde ich mich um jeden Preis bei der nächsten Gelegenheit dafür rächen)
2. If somebody puts me in a difficult position, I will do the same to him/her (Wenn mich jemand in eine schwierige Lage bringt, werde ich das Gleiche mit ihm zu machen)
3. If somebody offends me, I will offend him/her back (Wenn mich jemand beleidigt, werde ich mich ihm gegenüber beleidigend verhalten)

Scale: 1 (Does not apply to me at all / Trifft überhaupt nicht zu) to 7 (Applies to me perfectly / Trifft voll zu)

### Test-Retest Correlations

Negative reciprocity was included in a retest taken by a subsample ( $N = 158$ ) in 2005 within 30 to 49 days after the initial test. Test-retest correlations of the items were (in scale order) .44, .42, and .58; test-retest correlation of scale scores was .64.

### Items and Scale Statistics

Negative Reciprocity					
P (Individual Questionnaire)					
Domain	Year	Item			Cronbach's Alpha
		1	2	3	
Negative Reciprocity	2005	Label	VP12602	VP12603	.83 ( $N = 20,854$ )
		$M (SD)$	3.21 (1.73)	2.88 (1.63)	
		CITC	.71	.73	
	2010	Label	BAP12402	BAP12403	.82 ( $N = 18,720$ )
		$M (SD)$	3.18 (1.69)	2.83 (1.59)	
		CITC	.70	.73	
	2015	Label	BFP0602	BFP0603	.81 ( $N = 26,921$ )
		$M (SD)$	2.77 (1.67)	2.47 (1.53)	
		CITC	.68	.72	

## **Risk Aversion**

### **Summary**

The global and dimension-specific measurement of risk aversion consists of seven items and was used in the SOEP in 2004 and 2009. An individual item on general risk aversion has been included in the SOEP at irregular intervals since 2004.

### **Theoretical Background**

Risks and uncertainties play a role in almost all important life decisions. In their pioneering work on the subject, Kahneman and Tversky (1979) developed a theoretical foundation for the analysis of risk attitudes in the form of “Prospect Theory.” This theory describes the process of decision making in situations of uncertainty, and postulates that the consequences of a decision are evaluated relative to a reference point as either gains or losses, also considering the probability of their occurrence. Here, individual risk attitudes affect not only how individuals evaluate the potential gains and losses but also how they evaluate the respective probabilities of the event’s occurrence. In the economic research, individual risk attitudes are used to explain decisions about financial investments, labor market behavior and success, and health behavior (e.g., Dohmen et al., 2011). More recent work in the field of educational sociology has studied the influence of individual risk aversion on educational decisions (Hartlaub & Schneider, 2013).

### **Scale Development**

The scale was first piloted in the 2003 SOEP pretest and was then used in the 2004 main SOEP survey. Simultaneously to the SOEP pretest, a behaviorally oriented experiment on risk attitudes was carried out with respondents (see Dohmen et al., 2011). In this experiment, respondents were shown a table consisting of 20 text lines and were given the task of deciding in each line whether they would prefer to receive a fixed amount of money or take part in a lottery with a 50% chance of winning 300 euros. In the case of the “safe” option, the amount paid increased progressively from one line to the next (0 euros in the first, 10 euros in the second, and so on up to 190 euros in line 20). Since the expected lottery winnings would be 150 euros, more risk-averse respondents should take the safe option below this value, while risk-seeking participants can be expected to decide for the lottery even with safe options of 160, 170, 180, or 190 euros. The amount paid for the safe option at the time of switching to this option was regressed on the value of the questionnaire on risk aversion. Here, the behavior in the experiment could be predicted well based on the survey responses ( $\beta = .61$ ,  $p < .001$ ).

### **References**

- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual Risk Attitudes: Measurement, Determinants and Behavioral Consequences. *Journal of the European Economic Association*, 9, 522-550.
- Hartlaub, V. & Schneider, T. (2013). Educational choice and risk preferences: How important is relative vs. individual risk preference? Manuscript submitted for publication.).
- Kahneman, D. & Tversky, A. (1979). Prospect Theory: An analysis of decision under risk. *Econometrica: Journal of the Econometric Society*, 47, 263-291.

### Items

How do you see yourself (Wie schätzen Sie sich persönlich ein):

#### Risk Aversion in General

1. Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? (Sind Sie im Allgemeinen ein risikobereiter Mensch oder versuchen Sie, Risiken zu vermeiden?)

Scale: 0 (Risk averse / Gar nicht risikobereit) to 10 (Fully prepared to take risks / Sehr risikobereit)

### Test-Retest Correlations

Risk aversion in general was included in retests taken by subsamples in 2005, 2006, and 2009 within 30 to 49 days after the respective initial tests. Test-retest correlation pooled across all three waves ( $N = 607$ ) was .60.

### Items and Scale Statistics

#### **Risk Aversion (in General, Adults)**

P (Individual Questionnaire)

Year		Item	N
		1	
2004	Label	UP119	21,881
	M (SD)	4.42 (2.38)	
2006	Label	WP123	22,210
	M (SD)	4.77 (2.29)	
2008	Label	YP10	19,639
	M (SD)	4.46 (2.31)	
2009	Label	ZP121	20,707
	M (SD)	3.74 (2.21)	
2010	Label	BAP123	18,848
	M (SD)	4.31 (2.31)	
2011	Label	BB121	21,011
	M (SD)	4.54 (2.27)	
2012	Label	BC148	20,730
	M (SD)	4.76 (2.24)	
2014	Label	BEP04	27,275
	M (SD)	4.77 (2.42)	

#### **Risk Aversion (in General, 11-12 year olds, self-report)**

Bioagel (2014-2015)

	Item	N
	1	
Label	CHAR30	1,189
M (SD)	5.30 (2.42)	

### Items

How would you rate your willingness to take risks in the following areas? How is it ... (Wie würden Sie Ihre Risikobereitschaft in Bezug auf die folgenden Bereiche einschätzen? Wie ist das ...):

#### Risk Aversion in different Domains

1. While driving (beim Autofahren)?
2. In financial matters (bei Geldanlagen)?
3. During leisure and sport (bei Freizeit und Sport)?
4. In your occupation (bei Ihrer beruflichen Karriere)?
5. With your health (bei Ihrer Gesundheit)?
6. Your faith in other people (bei Vertrauen in fremde Menschen)?

Scale: 0 (Risk averse / Gar nicht risikobereit) to 10 (Fully prepared to take risks / Sehr risikobereit)

### Test-Retest Correlations

Risk aversion in different domains was included in a retest of a subsample ( $N = 120$ ) in 2009 within 30 to 49 days after the respective initial tests. Test-retest correlation of the items were (in scale order) .67, .48, .58, .69, .51, and .37; scale scores had a test-retest correlation of .69.

### Items and Scale Statistics

#### **Risk Aversion in Different Domains**

P (Individual Questionnaire)

Year		Item						Cronbach's Alpha
		1	2	3	4	5	6	
2004	Label	UP12001	UP12002	UP12003	UP12004	UP12005	UP12006	.85 ( $N = 19,076$ )
	$M (SD)$	2.93 (2.53)	2.41 (2.23)	3.49 (2.61)	3.60 (2.71)	2.93 (2.47)	3.35 (2.40)	
	CITC	.63	.62	.68	.68	.65	.50	
2009	Label	ZP11801	ZP11802	ZP11803	ZP11804	ZP11805	ZP11806	.82 ( $N = 17,352$ )
	$M (SD)$	2.98 (2.57)	1.90 (2.14)	3.20 (2.63)	3.21 (2.72)	2.71 (2.44)	3.23 (2.39)	
	CITC	.62	.56	.67	.64	.63	.43	
2014	Label	BEP12501	BEP12502	BEP12503	BEP12504	BEP12505	BEP12506	.82 ( $N = 23,532$ )
	$M (SD)$	3.51 (2.63)	2.37 (2.25)	3.82 (2.60)	3.87 (2.65)	3.21 (2.45)	3.60 (2.41)	
	CITC	.59	.58	.65	.64	.62	.43	



## Self Esteem

### Summary

Global self-esteem—a person's overall evaluation or appraisal of his or her worth— was measured in the SOEP in 2010 with an individual item.

### Theoretical Background

Self-esteem is a central construct in psychology and has value both as a predictor variable (e.g., for the occurrence of various life events) and as a target variable with great potential significance for numerous research questions.

### Scale Development

In the SOEP, following on the paper by Robins, Hendin, & Trzesniewski (2001), an individual item was used to measure self-esteem.

### References

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 27, 151-161.

### Items

#### Self Esteem

To what degree do the following statements apply to you personally (In welchem Maße treffen die folgenden Aussagen auf Sie persönlich zu):

1. I have a positive attitude toward myself (Ich habe eine positive Einstellung zu mir selbst).

Scale: 1 (Does not apply to me at all / Trifft überhaupt nicht zu) to 7 (Applies to me perfectly / Trifft voll zu)

### Items and Scale Statistics

#### **Self Esteem (Adults)**

P (Individual Questionnaire)

Year	Item		N
		1	
2010	Label	P12411	18,817
	M (SD)	5.58 (1.28)	
2015	Label	BFP0611	26,964
	M (SD)	5.65 (1.29)	

#### **Self Esteem (11-12 year olds, self-report)**

Bioagel (2014-2015)

Item		N
	1	
Label	CHAR27	1,186
M (SD)	5.15 (1.46)	

## Sources of Social Inequality

### Summary

The scale measures respondents' attributions of upward mobility and success in society to the use of legitimate or illegitimate means, whereby the categories of "legitimate" and "illegitimate" are evaluated from the perspective of the prevailing universalistic ideology of meritocratic achievement. The scale has been used in the SOEP youth questionnaire since 2001.

### Theoretical Background

The scale measures a non-normative aspect: namely, beliefs about the extent to which success can be achieved by specific means. Theoretically, the scale is implicitly oriented toward measuring respondents' perceptions of legitimacy or their critique of the social status assignment process. The legitimization of existing social inequality is necessary for the functioning of a society, independent of the form that this legitimization takes. In German society, as in most Western societies, social inequalities are legitimized meritocratically, that is, inequalities are considered justified if they are based on non-ascriptive characteristics such as individual abilities and achievements, as expressed, for example, in educational degrees. To this end, it must be determined, first, whether the individual supports the normative basis for this meritocratic ideology, and second, to what extent the respondent views these normative standards as being realized in the society. The second, cognitive aspect is measured with the items described below. Both aspects together allow for an estimation of whether the inequality that exists in a society is perceived as legitimate or as worthy of criticism.

### Scale Development

For the SOEP surveys, 11 items from the original scale by Sandberger (1983) were selected. Item 11 (having the right gender) was added later.

### References

Sandberger, J.-U. (1983). Zwischen Legitimation und Kritik. Vorstellungen von Akademikern, Studenten und Bevölkerung zur sozialen Ungleichheit. *Zeitschrift für Soziologie*, 12, 181-202.

### Items

In your opinion, what are the most important factors for achieving success and improving one's social situation in Germany (Wovon hängt es Ihrer Meinung nach in Deutschland tatsächlich ab, ob jemand Erfolg hat und sozial aufsteigt):

#### Legitimate instruments (Legitime Mittel)

1. Working hard (Man muss sich anstrengen und fleißig sein)
2. Being gifted and intelligent (Man muss begabt und intelligent sein)
3. Having good training in a specialized field (Man muss gute Fachkenntnisse auf seinem Spezialgebiet haben)
4. Having good grades at school (Man muss einen möglichst guten Schulabschluss haben)
5. Being dynamic and exhibiting initiative (Man muss dynamisch sein und Initiative haben)

Scale: 1 (I agree completely/Stimme voll zu) to 4 (I don't agree at all/Stimme überhaupt nicht zu)

#### Illegitimate instruments (Illegitime Mittel)

1. Exploiting others (Man muss andere ausnutzen)
2. Being from the right family (Man muss aus der richtigen Familie stammen)
3. Having a lot of money and assets (Man muss Geld und Vermögen haben)
4. Being tough and ruthless (Man muss rücksichtslos und hart sein)
5. Having connections to the right people (Man muss Beziehungen zu den richtigen Leuten haben)
6. Being politically active in the right party (Man muss sich auf der richtigen Seite politisch engagieren)
7. Having the right gender; men have better career opportunities (Man muss das richtige Geschlecht haben; Männer haben bessere Aufstiegschancen)

Scale: 1 (I agree completely / Stimme voll zu) to 4 (I don't agree at all / Stimme überhaupt nicht zu)

## Items and Scale Statistics

### Sources of Social Inequality

Bioage17 (Youth Questionnaire; 2001-2015)

Domain	Item							Cronbach's Alpha
	1	2	3	4	5	6	7	
<i>Legitimate Instruments</i>	Label	BYEFF LEI	BYEFIN T	BYEFF ACH	BYEFS ABS	BYEFI NI		.62 (N = 6,523)
	M (SD)	1.41 (0.56)	1.92 (0.70)	1.62 (0.65)	1.52 (0.66)	1.69 (0.63)		
	CITC	.33	.40	.39	.38	.38		
<i>Illegitimate Instruments</i>	Label	BYEFA USN	BYEFFA M	BYEFG ELD	BYEF HART	BYEFB EZ	BYEFP OLI	.78 (N = 6,372)
	M (SD)	3.27 (0.81)	2.67 (0.91)	2.80 (0.85)	3.08 (0.85)	2.03 (0.78)	2.93 (0.78)	
	CITC	.52	.54	.57	.56	.52	.39	

## **Strengths and Difficulties Questionnaire (SDQ)**

### **Summary**

The Strengths and Difficulties Questionnaire (SDQ; Goodman 1997; German version by Woerner et al. 2002) captures the child's behavior on five scales "hyperactivity," "emotional problems," "prosocial behavior," "conduct problems," and "peer problems." The Strengths and Difficulties Questionnaire has been given to parents of children aged 5-6 years since 2008 and to parents of children aged 9-10 years since 2012. Since 2014, children aged 11-12 years fill in the questionnaire themselves.

### **Theoretical Background**

The SDQ is currently one of the most frequently used screening instruments for child and adolescent mental health throughout the world. The instrument includes four problem subscales of five items each that also yield a total difficulties score, in addition to a prosocial dimension.

### **Scale Development**

The scale was shortened for the SOEP to 17 items for the bioage06 questionnaire and to 18 items for the bioage10 questionnaire. The answer format was modified to seven levels. For the 11-12 year olds, the full version of the SDQ with an answer format of three levels was used.

### **References**

- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38, 581-586.
- Woerner, W., Becker, A., Friedrich, C., Klasen, H., Goodman, R. & Rothenberger, A. (2002). Normierung und Evaluation der deutschen Elternversion des Strengths and Difficulties Questionnaire (SDQ): Ergebnisse einer repräsentativen Felderhebung. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*, 30, 105-112.

### **Strengths and Difficulties Questionnaire (5-6 year olds & 9-10 year olds, parent reports)**

#### **Items**

To what extent do the following statements apply to your child (Inwieweit treffen folgende Aussagen auf ihr Kind zu):

#### **Hyperactivity**

1. Child is agitated, hyperactive, cannot sit still (ist unruhig, überaktiv, kann nicht lange stillsitzen)
2. Child is fidgety (ist ständig zappelig)
3. Child is easily distracted and lacks concentration (ist leicht ablenkbar, unkonzentriert)
4. Child finishes tasks, is able to concentrate (führt Aufgaben zu Ende; kann sich lange konzentrieren)
5. Child thinks before acting (Denkt nach bevor es handelt)

Scale: 1 (Does not apply at all / Trifft überhaupt nicht zu) to 7 (Applies completely / Trifft voll zu)

#### **Emotional Problems**

1. Child is often unhappy or dejected (unglücklich, niedergeschlagen)
2. Child is nervous or clingy in new situations, loses self-confidence easily (ist nervös oder anklammernd in neuen Situationen; verliert leicht das Selbstvertrauen)
3. Child has many fears, becomes frightened easily (hat viele Ängste; fürchtet sich leicht)

Scale: 1 (Does not apply at all/Trifft überhaupt nicht zu) to 7 (Applies completely /Trifft voll zu)

#### **Prosocial Behavior**

1. Child is considerate (ist rücksichtsvoll)
2. Child likes to share with others (sweets, toys, crayons) (teilt gerne mit anderen Kindern (Süßigkeiten, Spielzeug, Buntstifte usw.))
3. Child is helpful if others are hurt, sick, or sad (ist hilfsbereit, wenn andere verletzt, krank oder betrübt sind)
4. Child helps others of his/her own accord (parents, teachers, other children) (hilft anderen oft freiwillig (Eltern, Erziehern, anderen Kindern))

Scale: 1 (Does not apply at all / Trifft überhaupt nicht zu) to 7 (Applies completely / Trifft voll zu)

### Conduct Problems

1. Child often has tantrums, has a temper (hat oft Wutanfälle, ist aufbrausend)
2. Child quarrels a lot with other children, picks on them (streitet oft, schikaniert Kinder)

Scale: 1 (Does not apply at all / Trifft überhaupt nicht zu) to 7 (Applies completely / Trifft voll zu)

### Peer Problems

1. Child is a loner, usually plays by him/herself (ist ein Einzelgänger, spielt meist alleine)
2. Child is popular with other children (ist im Allgemeinen bei anderen Kindern beliebt)
3. Child is often made fun of or picked on by other children (wird von anderen gehänselt oder schikaniert)
4. Child gets along better with adults than with other children (kommt besser mit Erwachsenen aus)

Scale: 1 (Does not apply at all / Trifft überhaupt nicht zu) to 7 (Applies completely / Trifft voll zu)

### Items and Scale Statistics

#### **Strengths and Difficulties Questionnaire (5-6 year olds, parent reports)**

Bioagel (2008-2015)

Domain		Item				Cronbach's Alpha
		1	2	3	4	
<i>Hyper-activity</i>	Label	BEHAV2	BEHAV7	BEHAV11	BEHAV17 (R)	.82 (N = 2,710)
	<i>M (SD)</i>	3.01 (1.80)	2.71 (1.77)	3.35 (1.75)	3.22 (1.63)	
	CITC	.69	.67	.66	.58	
<i>Emotion</i>	Label	BEHAV9	BEHAV12	BEHAV16		.63 (N = 2,731)
	<i>M (SD)</i>	1.99 (1.34)	3.03 (1.74)	2.70 (1.66)		
	CITC	.37	.47	.49		
<i>Prosocial</i>	Label	BEHAV1	BEHAV3	BEHAV6	BEHAV14	.68 (N = 2,709)
	<i>M (SD)</i>	5.41 (1.24)	5.42 (1.37)	5.93 (1.26)	5.46 (1.40)	
	CITC	.45	.43	.50	.46	
<i>Conduct</i>	Label	BEHAV4	BEHAV8			.48 (N = 2,732)
	<i>M (SD)</i>	2.92 (1.69)	2.10 (1.36)			
	CITC	.33	.33			
<i>Peer</i>	Label	BEHAV5	BEHAV10 (R)	BEHAV13	BEHAV15	.63 (N = 2,711)
	<i>M (SD)</i>	2.34 (1.67)	2.14 (1.16)	1.72 (1.09)	2.66 (1.54)	
	CITC	.41	.41	.43	.43	

## Items and Scale Statistics

### Strengths and Difficulties Questionnaire (9-10 year olds, parent reports)

Bioagel (2012-2015)

Domain		Item					Cronbach's Alpha
		1	2	3	4	5	
<i>Hyper-activity</i>	Label	BEHAV2	BEHAV7	BEHAV11	BEHAV17 (R)	BEHAV18 (R)	.85 (N = 1,704)
	M (SD)	2.87 (1.92)	2.59 (1.80)	3.56 (1.95)	3.31 (1.79)	3.38 (1.57)	
	CITC	.68	.66	.71	.68	.56	
<i>Emotion</i>	Label	BEHAV9	BEHAV12	BEHAV16			.71 (N = 1,706)
	M (SD)	2.22 (1.50)	2.88 (1.77)	2.54 (1.65)			
	CITC	.46	.54	.58			
<i>Prosocial</i>	Label	BEHAV1	BEHAV3	BEHAV6	BEHAV14		.69 (N = 1,700)
	M (SD)	5.54 (1.35)	5.48 (1.46)	6.12 (1.28)	5.49 (1.46)		
	CITC	.45	.45	.52	.48		
<i>Conduct</i>	Label	BEHAV4	BEHAV8				.50 (N = 1,707)
	M (SD)	2.86 (1.75)	2.13 (1.51)				
	CITC	.34	.34				
<i>Peer</i>	Label	BEHAV5	BEHAV10 (R)	BEHAV13	BEHAV15		.69 (N = 1,694)
	M (SD)	2.27 (1.66)	2.21 (1.29)	2.06 (1.49)	2.67 (1.66)		
	CITC	.43	.51	.50	.50		

## Strengths and Difficulties Questionnaire (11-12 year olds, self-report)

### Items

#### Hyperactivity

1. I am restless, I cannot stay still for long (Ich bin oft unruhig, ich kann nicht lange stillsitzen)
2. I am constantly fidgeting or squirming (Ich bin dauernd in Bewegung und zappelig)
3. I am easily distracted, I find it difficult to concentrate (Ich lasse mich leicht ablenken; ich finde es schwer, mich zu konzentrieren)
4. I think before I do things (Ich denke nach, bevor ich etwas tue)
5. I finish the work I'm doing. My attention is good (Was ich angefangen habe, mache ich zu Ende; ich kann mich lange genug konzentrieren)

#### Emotional Problems

1. I get a lot of headaches, stomach-aches or sickness (Ich habe häufig Kopfschmerzen oder Bauchschmerzen oder mir wird oft schlecht)
2. I worry a lot (Ich mache mir häufig Sorgen)
3. I am often unhappy, depressed or tearful (Ich bin oft unglücklich oder niedergeschlagen; ich muss häufig weinen)
4. I am nervous in new situations. I easily lose confidence (Neue Situationen machen mich nervös; ich verliere leicht das Selbstvertrauen)
5. I have many fears, I am easily scared (Ich habe viele Ängste; ich fürchte mich leicht)

#### Prosocial Behavior

1. I try to be nice to other people. I care about their feelings (Ich versuche, nett zu anderen Menschen zu sein, ihre Gefühle sind mir wichtig)
2. I usually share with others, for example CD's, games, food (Ich teile gerne mit anderen)
3. I am helpful if someone is hurt, upset or feeling ill (Ich bin hilfsbereit, wenn andere verletzt, krank oder traurig sind)
4. I am kind to younger children (Ich bin nett zu jüngeren Kindern)
5. I often offer to help others (parents, teachers, children) (Ich helfe anderen oft freiwillig (Eltern, Lehrern oder Gleichaltrigen))

#### Conduct Problems

1. I get very angry and often lose my temper (Ich werde leicht wütend; ich verliere oft meine Beherrschung)
2. I usually do as I am told (Normalerweise tue ich, was man mir sagt)
3. I fight a lot (Ich schlage mich häufig mit anderen)
4. I can make other people do what I want (Ich kann andere zwingen zu tun, was ich will)
5. I am often accused of lying or cheating (Andere behaupten oft, dass ich lüge oder mogle)
6. I take things that are not mine from home, school or elsewhere (Ich nehme Dinge, die mir nicht gehören (von zu Hause, in der Schule oder anderswo))

#### Peer Problems

1. I would rather be alone than with people of my age (Ich bin meistens für mich allein; ich beschäftige mich lieber mit mir selbst)
2. I have one good friend or more (Ich habe einen oder mehrere gute Freunde oder Freundinnen)
3. Other people my age generally like me (Im Allgemeinen bin ich bei Gleichaltrigen beliebt)
4. Other children or young people pick on me or bully me (Ich werde von anderen gehänselt oder schikaniert)
5. I get along better with adults than with people my own age (Ich komme besser mit Erwachsenen aus als mit Gleichaltrigen)

Scale: 1 (Not True / Trifft gar nicht zu) 2 (Somewhat True / Trifft teilweise zu) 3 (Certainly True / Trifft voll zu)

## Items and Scale Statistics

### Strengths and Difficulties Questionnaire (11-12 year olds, self-report)

Bioagel (2014-2015)

Domain		Item						Cronbach's Alpha
		1	2	3	4	5	6	
<i>Hyper-activity</i>	Label	BEHAV2_FULL	BEHAV10_FULL	BEHAV16_FULL	BEHAV22_FULL (R)	BEHAV26_FULL (R)		.71 (N = 1,198)
	<i>M</i> ( <i>SD</i> )	1.81 (0.69)	1.83 (0.74)	1.83 (0.69)	1.78 (0.58)	1.79 (0.58)		
	CITC	.57	.47	.50	.39	.43		
<i>Emotion</i>	Label	BEHAV3_FULL	BEHAV8_FULL	BEHAV14_FULL	BEHAV17_FULL	BEHAV25_FULL		.61 (N = 1,185)
	<i>M</i> ( <i>SD</i> )	1.50 (0.65)	1.77 (0.68)	1.32 (0.54)	1.66 (0.68)	1.48 (0.63)		
	CITC	.26	.39	.38	.35	.44		
<i>Prosocial</i>	Label	BEHAV1_FULL	BEHAV4_FULL	BEHAV9_FULL	BEHAV18_FULL	BEHAV21_FULL		.62 (N = 1,198)
	<i>M</i> ( <i>SD</i> )	2.62 (0.50)	2.38 (0.56)	2.73 (0.48)	2.76 (0.48)	2.36 (0.56)		
	CITC	.37	.34	.42	.37	.39		
<i>Conduct</i>	Label	BEHAV5_FULL	BEHAV7_FULL (R)	BEHAV12_FULL	BEHAV13_FULL	BEHAV19_FULL	BEHAV23_FULL	.58 (N = 1,180)
	<i>M</i> ( <i>SD</i> )	1.66 (0.68)	1.72 (0.54)	1.15 (0.41)	1.16 (0.42)	1.38 (0.58)	1.13 (0.38)	
	CITC	.35	.25	.37	.27	.40	.34	
<i>Peer</i>	Label	BEHAV6_FULL	BEHAV11_FULL (R)	BEHAV15_FULL (R)	BEHAV20_FULL	BEHAV24_FULL		.55 (N = 1,174)
	<i>M</i> ( <i>SD</i> )	1.65 (0.68)	1.14 (0.42)	1.60 (0.60)	1.28 (0.53)	1.45 (0.59)		
	CITC	.41	.41	.43	.43			



## **Supportive Parenting**

### **Summary**

Supportive parenting describes a style of childrearing based on warmth, love, constructive communication, and a generally positive way of interacting in the parent-child relationship. The scale has been used in the SOEP youth questionnaires since 2001.

### **Theoretical Background**

Parenting is not understood here as a series of techniques and abilities, but as a special form of relationship between parents and children. The concept is based on the idea that efforts by parents to create a supportive, wholesome environment have a positive impact on the cognitive and social development of the children. A supportive parenting style is part of such a supportive environment (Simons et al., 1992) and can be described as follows: Supportive parents express interest in children's activities, talk to or play games with them, provide help with everyday problems and schoolwork, express enthusiasm and praise over accomplishments, and show affection and love (Amato, 1990).

### **Scale Development**

The scale is based on the Supportive Parenting Scale (SPS) of Simons et al. (1992), and this version was translated into German by Schwarz et al. (1997).

### **References**

- Amato, Paul R. 1990. Dimensions of the family environment as perceived by children: A multidimensional scaling analysis. *Journal of marriage and family*, 52, 613\_620.
- Schwarz, B., Walper, S., Gödde, M., & Jurasic, S. (1997). *Dokumentation der Erhebungsinstrumente der 1. Hauptbefragung. Berichte aus der Arbeitsgruppe "Familienentwicklung nach der Trennung."* University of Munich: Unpublished manuscript.
- Simons, R. L., Lorenz, F. O., Conger, R. D., & Wu, C.-I. (1992). Support from spouse as mediator and moderator of the disruptive influence of economic strain on parenting. *Child Development*, 63, 1282-1301.

### **Items**

How often do the following situations occur with your mother and father? How often... (Wie häufig treten in Ihrer Beziehung zu Ihren Eltern die folgenden Situationen auf? Wie häufig kommt es vor...):

1. Do your parents talk to you about things you do or experience (dass Ihre Eltern mit Ihnen über Dinge sprechen, die Sie tun oder erlebt haben)?
2. Do your parents bring up things that bother or worry you (dass Ihre Eltern Dinge ansprechen, die Sie ärgern oder belasten)?
3. Do your parents ask you for your opinion before they decide something that affects you (dass Ihre Eltern nach Ihrer Meinung fragen, bevor sie etwas entscheiden, das Sie betrifft)?
4. Do your parents express their opinion when you do something that they like or approve of (dass, wenn Sie etwas tun, was Ihre Eltern gut finden, Ihre Eltern Ihnen auch zeigen, dass sie sich darüber freuen)?
5. Are you and your parents able to find a solution together to problems you have with each other (dass, wenn Sie und Ihre Eltern ein Problem miteinander haben, Sie dann gemeinsam eine Lösung finden können)?
6. Do your parents give you the impression that they really trust you (dass ihre Eltern Ihnen das Gefühl geben, dass sie Ihnen wirklich vertrauen)?
7. Do your parents ask for your opinion before they make decisions on family matters or issues (dass Ihre Eltern nach Ihrer Meinung fragen, bevor sie über Familienangelegenheiten entscheiden)?
8. Do your parents give you an explanation for their decisions (dass Ihre Eltern Ihnen gegenüber Entscheidungen begründen)?
9. Do your parents show you that they really love you (dass Ihre Eltern Ihnen zeigen, dass sie Sie wirklich lieben)?

Scale: 1 (Very often / Sehr häufig ) to 5 (Never / Nie)

# Items and Scale Statistics

## Supportive Parenting

Bioage17 (Youth Questionnaire; 2001-2015)

Person		Item									Cronbach's Alpha
		1	2	3	4	5	6	7	8	9	
Mother	Label	BYBZ01M U	BYBZ02M U	BYBZ03M U	BYBZ04M U	BYBZ05M U	BYBZ06M U	BYBZ07M U	BYBZ08M U	BYBZ09M U	.83 (N = 6,167)
	M (SD)	2.24 (0.93)	2.73 (1.01)	2.31 (1.08)	1.98 (0.86)	2.36 (1.01)	1.83 (0.91)	2.49 (1.05)	2.41 (1.03)	1.73 (0.88)	
	CITC	.51	.17	.53	.64	.59	.61	.60	.60	.60	
Father	Label	BYBZ01V A	BYBZ02V A	BYBZ03V A	BYBZ04V A	BYBZ05V A	BYBZ06V A	BYBZ07V A	BYBZ08V A	BYBZ09V A	.91 (N = 5,698)
	M (SD)	2.80 (1.10)	3.15 (1.08)	2.63 (1.26)	2.32 (1.10)	2.70 (1.17)	2.17 (1.16)	2.87 (1.20)	2.73 (1.19)	2.16 (1.18)	
	CITC	.69	.39	.68	.78	.72	.77	.71	.73	.74	

## **Temperament**

### **Summary**

In the SOEP since 2003, two dimensions of temperament in early childhood, “affect” and “activity,” have been measured with five items assessed by one of the parents for children below the age of 2 and for those aged 2-3.

### **Theoretical Background**

Temperament describes the way a person acts and reacts and is comprised of emotions, motor, attention-related reactions, and self-regulation. The concept of the “early childhood temperament” is used in developmental psychopathology and in the research and theory on child and youth psychiatry. Temperament characteristics are treated here as risk factors for the emergence of behavioral disorders, as characteristics influencing parental interactive behavior, and as characteristics that show heightened vulnerability to unfavorable environmental conditions.

### **Scale Development**

Based on an expert report by Pauen & Vonderlin (2007), the Infant Behavior Questionnaire (IBQ) of Rothbart (1981; German version by Pauli-Pott, Mertesacker, & Beckmann, 2003) was used as a point of orientation for the measurement of early child temperament, but shortened significantly.

### **References**

- Pauen, S., & Vonderlin, E. (2007). *Entwicklungsdiagnostik in den ersten drei Lebensjahren Empfehlungen zum Ausbau des Erhebungsinstrumentariums über Kinder im Sozio-oekonomischen Panel (SOEP)*. Berlin: DIW Berlin.
- Pauli-Pott, U., Mertesacker, B., & Beckmann, D. (2003). Ein Fragebogen zur Erfassung des frühkindlichen Temperaments im Elternurteil. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*, 31, 99-110.
- Rothbart, M. K. (1981). Measurement of temperament in infancy. *Child Development*, 52, 569-578.

### **Items**

How do you see your child today (Wie sehen Sie Ihr Kind heute):

#### **Affect**

1. My child is generally happy and satisfied (Mein Kind ist meist fröhlich und zufrieden)
2. My child is easily irritated and cries frequently (Mein Kind ist leicht erregbar und weint häufig)
3. My child is difficult to console (Mein Kind ist schwer zu trösten)

Scale: 1 (Applies fully / Trifft voll zu) to 4 (Does not apply at all / Trifft gar nicht zu)

#### **Activity**

1. My child is curious and active (Mein Kind ist neugierig und aktiv)
2. (since 2007) My child is more reserved (Mein Kind ist eher zurückhaltend)
3. My child is communicative and likes to talk (Mein Kind ist gesprächig und redet gern)

Scale: 1 (Applies fully / Trifft voll zu) to 4 (Does not apply at all / Trifft gar nicht zu)

## Items and Scale Statistics

### Temperament (0-1 year olds)

Bioagel (2003-2015)

Domain	Year		Item			Cronbach's Alpha
			1	2	3	
<i>Affect</i>	2003-2015	Label	TEMP1	TEMP2 (R)	TEMP3 (R)	.65 (N = 4,885)
		M (SD)	1.24 (0.46)	1.63 (0.70)	1.42 (0.60)	
		CITC	.41	.54	.48	
<i>Activity</i>	2003-2006	Label	TEMP4			(N = 1,035)
		M (SD)	1.23 (0.48)			
		CITC				
	2007-2012	Label	TEMP4	TEMP5 (R)		.39 (N = 2,738)
		M (SD)	1.22 (0.47)	1.67 (0.66)		
		CITC	.25	.25		

### Temperament (2-3 year olds)

Bioagel (2005-2015)

<i>Affect</i>	2005-2015	Label	TEMP1	TEMP2 (R)	TEMP3 (R)	.56 (N = 7,532)
		M (SD)	1.26 (0.46)	1.93 (0.73)	1.59 (0.71)	
		CITC	.32	.43	.39	
<i>Activity</i>	2005-2015	Label	TEMP4		TEMP6	.52 (N = 5,363)
		M (SD)	1.18 (0.42)		1.34 (0.62)	
		CITC	.37		.37	

## **Tendency to Forgive**

### **Summary**

The tendency to forgive is an individual disposition to forgive other people after being hurt or treated unjustly by them and was measured in SOEP in 2010.

### **Theoretical Background**

The individual tendency to forgive is the tendency to either maintain or overcome one's own anger or resentment after being personally injured: "the TTF is a simple, four-item scale designed to assess the extent to which individuals typically experience or engage in forgiveness when they have been wronged by others" (Brown, 2003). The scale is not designed to measure the process of forgiving (how or when one forgives), but to measure individual differences in the outcome of this process (to what extent an individual typically forgives). The tendency to forgive is understood as an individual disposition and not as a process linked to specific situations or actions. As a construct, the tendency to forgive shows similarities to other constructs such as revenge, feelings of aggression, desire for reconciliation, and negative reciprocity. For the research, it is of interest to study the consequences the individual tendency to forgive on mental health and life satisfaction. Furthermore, the individual tendency to forgive may play a role as a strategy in decision conflicts and dilemma situations.

### **Scale Development**

The scale is the German translation of the already validated Tendency to Forgive Scale. Information on the validity of the original scale can be found in Brown and Phillips (2005). The scale was used for the first time in the SOEP in the 2009 SOEP pretest (representative random sample of the German population,  $N = 1.007$ ) and displays, given the typical characteristics of population surveys (low number of items, high heterogeneity of survey respondents), satisfactory reliability and factorial validity (Weinhardt & Schupp, 2011). Based on the satisfactory results of the 2009 SOEP pretest, the Tendency to Forgive scale was included in the main SOEP survey in 2010.

### **References**

- Brown, R., & Phillips, A. (2005). Letting bygones be bygones: Further evidence for the validity of the tendency to forgive scale. *Personality and Individual Differences*, 38, 627-638.
- Brown, R. P. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. *Personality and Social Psychology Bulletin*, 29, 759-771.
- Weinhardt, M., & Schupp, J. (2011). *Die Messung individueller Vergebungstendenz im SOEP: Skaleneigenschaften der deutschen Version der Tendency-to-Forgive-Scale*. Berlin: DIW Berlin.

### **Items**

To what degree do the following statements apply to you personally (In welchem Maße treffen die folgenden Aussagen auf Sie persönlich zu):

1. I get over it relatively quickly when someone hurts my feelings (Ich komme relativ leicht darüber hinweg, wenn jemand mich emotional verletzt).
2. When somebody has wronged me, I often think about it for quite a while (R) (Wenn jemand mir unrecht getan hat, denke ich oft lange darüber nach).
3. I tend to bear grudges (R) (Ich bin tendenziell nachtragend).
4. When other people wrong me I try to just forgive and forget (Wenn andere mir unrecht tun, versuche ich einfach zu vergeben und zu vergessen).

Scale: 1 (Does not apply to me at all / Trifft überhaupt nicht zu) to 7 (Applies to me perfectly / Trifft voll zu)

## Items and Scale Statistics

### Tendency to Forgive

P (Individual Questionnaire)

Year		Item				Cronbach's Alpha
		1	2	3	4	
2010	Label	BAP12407	BAP12408 (R)	BAP12409 (R)	BAP12410	.57 (N = 18,706)
	<i>M (SD)</i>	3.62 (1.63)	3.26 (1.68)	4.79 (1.67)	4.16 (1.54)	
	CITC	.34	.33	.39	.35	
2015	Label	BFP0607	BFP0608 (R)	BFP0609 (R)	BFP0610	.57 (N = 26,749)
	<i>M (SD)</i>	3.59 (1.68)	3.29 (1.75)	4.81 (1.74)	4.27 (1.58)	
	CITC	.33	.34	.40	.33	

## **Trust, Trustworthiness, Fairness**

### **Summary**

Trust, trustworthiness, and fairness were measured in the SOEP in 2003, 2008, and 2013, using five items. Three of the items can be combined into a single scale for measuring generalized trust.

### **Theoretical Background**

In sociology and political science, generalized trust describes the average expectation of trustworthiness in strangers (Stolle, 2002). Trust is interpreted as a measure of cooperative relationships among citizens that allows people to interact in a complex social environment and to reduce their transaction costs (Luhmann, 2000). For sociologist James Coleman, two points are characteristic for the concept of trust: on the one hand, trust means that the person trusting entrusts specific goods to another person without being able to directly control or sanction the actions of the other person. On the other hand, there must be a potential benefit as an incentive: the person must gain some advantage from having trusted another person if the latter proves to be trustworthy. In this conception, trust is less a personality characteristic than a specific behavior.

Generalized trust (trust in strangers) also differs from trust in institutions and from trust in acquaintances. In social psychology, the concept is also important: "Interpersonal trust is defined here as an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon" (Rotter, 1967).

### **Scale Development**

The scale used to measure trust was based on the scales used in the General Social Survey (GSS) and in the World Values Survey (WVS), and an additional (Item 2) was added. The scale was first piloted in the 2002 SOEP pretest and used in 2003 in the main SOEP survey. The scale was further validated in the 2003, 2004, 2005, and 2006 SOEP pretests (through parallel surveying of the personality dimension "agreeableness: trust" from the NEO-PI-R and testing of sequence effects; Naef & Schupp, 2009). Further information can be found in Dohmen et al. (2008).

### **References**

- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2008). Representative trust and reciprocity: Prevalence and determinants. *Economic Inquiry*, 46, 81-90.
- Naef, M., & Schupp, J. (2009). *Measuring Trust: Experiments and Surveys in Contrast and Combination*. Berlin: DIW Berlin.
- Luhmann, N. (2000). *Vertrauen: Ein Mechanismus der Reduktion sozialer Komplexität*. Stuttgart: Lucius & Lucius.
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35, 651-665.
- Stolle, D. (2002). Trusting Strangers - Generalized trust in perspective. *Österreichische Zeitschrift für Politikwissenschaft*, 31, 397-412.

### **Items**

What is your opinion on the following three statements (Was ist Ihre Meinung zu den folgenden drei Aussagen):

1. On the whole, one can trust people (Im Allgemeinen kann man den Menschen vertrauen)
2. Nowadays one can't depend on anyone (Heutzutage kann man sich auf niemanden mehr verlassen)
3. When dealing with strangers, it is better to be cautious before trusting them (Wenn man mit fremden zu tun hat, ist es besser, vorsichtig zu sein, bevor man ihnen vertraut)

Scale: 1 (Agree completely/ Stimme voll zu) to 4 (Disagree completely/ Lehne voll ab)

Do you believe that most people ...(Glauben Sie, dass die meisten Leute...):

4. Would exploit you if they had the opportunity (Sie ausnützen würden, falls sie eine Möglichkeit dazu hätten) or would try to treat you fairly (oder versuchen würde, Ihnen gegenüber fair zu sein)?

Scale: 1 (Would exploit you if they had the opportunity / Sie ausnützen würden, falls sie eine Möglichkeit dazu hätten) or 2 (Or would try to treat you fairly / oder versuchen würde, Ihnen gegenüber fair zu sein?)

Would you say that the most of the time, people ... (Würden Sie sagen, dass die Leute die meiste Zeit...)

5. Attempt to be helpful? (versuchen, hilfsbereit zu sein?) Or only act in their own interests? (oder nur ihre eigenen Interessen verfolgen?)

Scale: 1 (Attempt to be helpful / versuchen, hilfsbereit zu sein?) or 2 (Or only act in their own interests / oder nur ihre eigenen Interessen verfolgen?)

### **Test-Retest Correlations**

The three trust items (1-3) which form a scale were included in a retest of a subsample ( $N = 161$ ) in 2005 within 30 to 49 days after the respective initial tests. Test-retest correlation of the items were (in scale order) .41, .42, and .28; scale scores had a test-retest correlation of .46.

### **Items and Scale Statistics**

#### **Trust, Trustworthiness, Fairness**

P (Individual Questionnaire)

Year		Item			Cronbach's Alpha	Item	
		1	2	3		4	5
2003	Label	TP0301 (R)	TP0302	TP0303	.61 ( $N = 22,377$ )	TP04	TP05
	$M (SD)$	2.63 (0.68)	2.60 (0.77)	1.69 (0.72)		1.53 (0.50)	1.64 (0.48)
	CITC	.45	.50	.33			
2008	Label	YP0301 (R)	YP0302	YP0303	.60 ( $N = 19,564$ )	YP04	YP05
	$M (SD)$	2.62 (0.67)	2.63 (0.77)	1.72 (0.72)		1.54 (0.50)	1.62 (0.49)
	CITC	.44	.49	.31			
2013	Label	BDP0301	BDP0302	BDP0302	.63 ( $N = 25,698$ )	BDP04	BDP05
	$M (SD)$	2.71 (0.65)	2.68 (0.76)	1.72 (0.71)		1.59 (0.49)	1.56 (0.50)
	CITC	.47	.50	.33			



## **Vineland Adaptive Behavior Scales**

### **Summary**

The 20-item Vineland Adaptive Behavior Scale has been used in the SOEP since 2005 to assess parents' ratings of their 2-3-year-old children in the areas of language, everyday skills, motor skills, and social relationships.

### **Theoretical Background**

Especially at an age when individual functions such as linguistic, mathematic, and social competencies are still relatively undifferentiated, adaptive behavior offers a true-to-life measure of child development in an everyday life context that is significant for the child. Measuring this adaptive behavior also does not require testing the child but rather takes place in the framework of a reporting procedure in which a person who is familiar with the child's adaptive behavior in everyday life provides specific descriptions of the child's behavior.

### **Scale Development**

The scale is based on a German adaptation (Tietze et al. 1998) of the Vineland Adaptive Behavior Scale by Sparrow, Balla und Cicchetti (1984). For use in the SOEP survey framework, the scale was reduced to 20 items. Further information can be found in Schmiade, Spieß, & Tietze (2008).

### **References**

- Schmiade, N., Spieß, C. K., & Tietze, W. (2008). Zur Erhebung des adaptiven Verhaltens von zwei- und dreijährigen Kindern im Sozio-oekonomischen Panel (SOEP). Berlin: DIW Berlin.
- Sparrow, S. S., Balla, D. A., & Cicchetti, D. V. (1984). Vineland Adaptive Behavior Scale. A revision of the Vineland Social Maturity Scale by Edbar A. Doll. Survey Form Manual. Circle Pines, Minnesota: American Guidance Service.
- Tietze, W., Meischner, T., Gänsfuß, R., Grenner, K., Schuster, K.-M., Völkel, P., & Roßbach, H.-G. (1998). Wie gut sind unsere Kindergärten? Eine Untersuchung zur pädagogischen Qualität in deutschen Kindergärten. Neuwied: Luchterhand.

### **Items**

For parents, it is always a big event when their child learns something new. Please tell us what new things your child can do (Für Eltern ist es immer ein großes Erlebnis, wenn das Kind schon wieder etwas Neues kann. Bitte geben Sie an, welche Dinge das bei Ihrem Kind sind):

#### **Talking (Sprechen)**

1. Understands brief instructions such as "go get your shoes" (Versteht kurze Anweisungen, wie z.B. „hole deine Schuhe“)
2. Forms sentences with at least two words (Bildet Sätze mit mindestens zwei Wörtern)
3. Speaks in full sentences (with four or more words) (Spricht in ganzen Sätzen (mit vier und mehr Wörtern))
4. Listens attentively to a story for five minutes or longer (Hört einer Geschichte 5 Minuten oder länger aufmerksam zu sein)
5. Passes on simple messages such as "dinner is ready" (Überbringt einfache Nachrichten wie z.B. „Essen ist fertig“)
6. (since 2010) Follows instructions (heard five minutes before) (Folgt Anweisungen, die es fünf Minuten zuvor gehört hat)
7. (since 2010) Tells his/her first and lastname when asked for it (Nennt seinen Vor- und Nachnamen, wenn es danach gefragt wird)
8. (since 2010) Listens attentively to stories for at least 15 Minutes (Hört in der Regel Geschichten mindestens 15 Min. aufmerksam zu)

Scale: 1 (Yes / ja), 2 (To some extent / teilweise), 3 (No / nein)

#### Everyday skills (Alltagsfertigkeiten)

1. Uses a spoon to eat without assistance and without dripping (Isst selbstständig mit dem Löffel, ohne zu kleckern)
2. Blows his/her nose without assistance (Putzt sich selbst die Nase)
3. Uses the toilet to do “number two” (Benutzt für „großes Geschäft“ die Toilette)
4. Puts on pants and underpants the right way around (Zieht sich Hosen und Unterhosen selbst richtig herum an)
5. Brushes his/her teeth without assistance (Putzt sich selbst die Zähne)

Scale: 1 (Yes / ja), 2 (To some extent/teilweise), 3 (No/nein)

#### Movement (Bewegung):

1. Walks forward down the stairs (Läuft Treppen vorwärts herunter)
2. Opens doors with the door handle (Öffnet Türen mit Türklinke)
3. Climbs up playground climbing equipment and other high playground structures (Klettert auf Klettergerüste und andere hohe Spielgeräte)
4. Cuts paper with scissors (Schneidet mit einer Schere Papier durch)
5. Paints/draws recognizable shapes on paper (Malt auf Papier erkennbare Formen)
6. (since 2010) Holds pens in the right way (not fist grip) when drawing (Hält Stifte richtig (nicht mit der Faust), um zu malen)

Scale: 1 (Yes / ja), 2 (To some extent/teilweise), 3 (No/nein)

#### Social relationships (Soziale Beziehungen):

1. Calls familiar people by name; for example, says “mommy” and “daddy” or uses the father’s first name (Nennt vertraute Personen beim Namen; sagt z.B. „Mama.” „Papa” oder verwendet den Vornamen des Vaters)
2. Participates in games with other children (Nimmt an Spielen mit anderen Kindern teil)
3. Gets involved in role-playing games (“playing pretend”) (Beschäftigt sich mit Rollenspielen („tun als ob”))
4. Shows a special liking for particular playmates or friends (Zeigt eine Vorliebe für bestimmte Spielgefährten oder Freunde)
5. Calls his/her own feelings by name, for example, “sad,” “happy,” “scared” (Benennt eigene Gefühle, z. B. „traurig,” „freuen,” „Angst”)
6. (since 2010) Takes turns with other children when playing without being asked to do so (Wechselt sich mit anderen beim Spielen ab, ohne darum gebeten zu werden)

Scale: 1 (Yes / ja), 2 (To some extent/teilweise), 3 (No/nein)

## Items and Scale Statistics

### Vineland Adaptive Behavior Survey

Bioaigel (2005-2015)

Domain	Year	Item									Cronbach's Alpha
			1	2	3	4	5	6	7	8	
Talking	2005-2013	Label	SPCH1	SPCH2	SPCH3	SPCH4	SPCH5				.67 (N = 1,503)
		M (SD)	1.15 (0.40)	1.08 (0.35)	1.33 (0.61)	1.56 (0.68)	1.15 (0.45)				
		CITC	.26	.54	.60	.32	.57				
	2010-2015	Label			SPCH3		SPCH5	SPCH6	SPCH7	SPCH8	.70 (N = 1,226)
		M (SD)			1.34 (0.63)		1.16 (0.47)	1.63 (0.62)	1.67 (0.78)	1.70 (0.72)	
		CITC			.57		.52	.33	.51	.40	
Every-day Skills	2005-2015	Label	SKLL1	SKLL2	SKLL3	SKLL4	SKLL5				.65 (N = 5,364)
		M (SD)	1.49 (0.60)	1.76 (0.75)	2.02 (0.91)	1.83 (0.76)	1.61 (0.68)				
		CITC	.34	.41	.41	.55	.35				
Movement	2005-2013	Label	MVMN1	MVMN2	MVMN3	MVMN4	MVMN5				.52 (N = 4,138)
		M (SD)	1.07 (0.31)	1.17 (0.52)	1.20 (0.48)	1.50 (0.75)	1.81 (0.75)				
		CITC	.30	.28	.33	.41	.29				
	2010-2015	Label	MVMN1		MVMN3	MVMN4	MVMN5	MVMN6			.55 (N = 1,236)
		M (SD)	1.07 (0.32)		1.18 (0.45)	1.48 (0.75)	1.81 (0.75)	1.64 (0.77)			
		CITC	.28		.25	.39	.36	.33			
Social Relationships	2005-2013	Label	SCLR1	SCLR2	SCLR3	SCLR4	SCLR5				.51 (N = 4,143)
		M (SD)	1.02 (0.16)	1.40 (0.59)	1.24 (0.52)	1.33 (0.60)	1.28 (0.55)				
		CITC	.24	.20	.25	.40	.40				
	2010-2015	Label		SCLR2	SCLR3	SCLR4	SCLR5	SCLR6			.63 (N = 1,235)
		M (SD)		1.42 (0.61)	1.23 (0.52)	1.36 (0.62)	1.31 (0.58)	1.58 (0.70)			
		CITC		.24	.35	.46	.45	.43			