profilingvalues

Study

The Quality Criteria of profiling**values** Reports

Explore your potential

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Explore your potential

The Validation of profilingvalues

The profiling**values** Report is suitable for use in personnel selection, staff development, team building, organization development, coaching, personality development, career counseling, and assessments. The profiling**values** procedure can be conducted in any industry as well. It consists of four steps and six subscales. The aim is to place 18 items in each step in a ranking order. The procedure takes about 20 minutes to carry out and can be implemented by any certified profiling**values** partner. The rankings are scored by computer directly after the respondent has completed the test. The results are then interpreted by certified partners who have acquired the necessary knowledge and required competencies.

The method is based on the Hartman Value Profile (HVP) by Robert S. Hartman. In his research, he examined what is good and defined it as follows: "A thing is good insofar as it exemplifies its concept," (Hartman, 2011, p. 103). From this he derived three value dimensions: intrinsic (human), extrinsic (concrete), and systemic (on principle) and operationalized this concept with the HVP. This finds its application in the last two steps in the profiling**values** method (Hartman, 2011, 2013). Dr. Ulrich Vogel applied this underlying concept in the first two steps with 18 parallel items each which particularly takes the work environment into account since profilingvalues is mostly applied to the context of work.

In this study the quality criteria of profiling**values** is examined. General information is provided about principal and secondary quality criteria and then placed in relation to the profiling**values** report. For fast readers the test criteria are shown conclusively summarized in an overview beginning on p. 13.

1. Objectivity

Objectivity represents the extent to which the test results are influenced by the test administrator, testing conditions, disturbing constraints, and / or test evaluators (Rost, 2004). The objectivity is very high when it is completely independent of any influence. However, objectivity is not captured numerically but based on the level of standardization of the test procedure. Application, analysis, and interpretation are considered possible sources of interference so the objectivity can be subdivided into three subtypes: objectivity of application / of analysis / of interpretation and interpretation objectivity (Schmidt-Atzert & Amelang, 2012).

1.1 Objectivity of Application

The objectivity of application is the measure of independence from factors when administering the test which are influenced, for example, by the tester. It is achieved by an especially high standardization of the procedure so that the implementation does not vary from one application to the next. Exact instructions on how to take the test also increase the implementation objectivity.

profiling**values** has a high objectivity of application since it's computer based, no interaction between the test administrator and testee takes place, and every participant has standardized instructions and test materials (Moosbrugger & Kelava, 2012).

1.2 Objectivity of Analysis

Objectivity of analysis exists when different test evaluators reach the same results. For instance, this is ensured with a closed answer format and scoring sheet.

With computer based tests such as profiling**values**, the objectivity of analysis is ensured. (Schmidt-Atzert & Amelang, 2012).

1.3 Objectivity of Interpretation

Interpretation means to give meaning to a value (Schmidt-Atzert & Amelang, 2012, p.72), so that you can refer to the objective interpretation of a test when different users give the resulting values the same meaning and draw the same conclusions.

This is the case with profiling**values**. The test results are directly set in relation to the total population. So with the percentiles featured, the distinctness of the trait being examined is captured and compared to the population as a whole. In addition, the ranges for the individual levels of the characteristic values are explained with an illustration in the profiling**values** Report. Furthermore, detailed explanations and examples of interpretation can be found in the manual (Schmidt-Atzert & Amelang, 2012; Sedlmeier & Renkewitz, 2008).

In summary, it can be assumed that the objectivity of the profiling**values** Report is given with its three subtypes of objectivity of application, analysis, and interpretation.

2. Reliability

The reliability of a test indicates how consistently a test measures what it measures. A scale, for example, measures the weight of an object. If in further measurements it measures the same weight for the same object, it is perfectly reliable. Psychological tests, however, are not reliable to such a high degree since illogical and uncontrolled influences (called measurement error) affect the results. Such measurement errors can be, for example, fatigue, motivation, or time of day. Such a test is then perfectly reliable when it is free from measurement errors. Although no perfect objectivity in scoring is given, a test may not be reliable. The result of the test would depend on the person who evaluates it, so there is no guarantee that the same result will be given (Rost, 2004; Sedlmeier & Renkewitz, 2008).

Reliability can be determined in different ways. For this at least two measurements from a proband are needed so that these can be placed in relation to one another. Based on the similarity of the scores, the reliability can be concluded. If the scores are very similar, there are few measurement errors and the test is regarded to be reliable (Sedlmeier & Renkewitz, 2008).

One method for detecting the reliability is to determine the test-retest reliability. Here the same test is repeated by a person after a certain interval of time. Subsequently, the correlation is determined from both test measurements to determine the extent of the test-retest reliability of both scores. In addition, the test-retest reliability also identifies the stability of an attribute, since the time interval between conducting the tests allows changes in attributes being captured. Therefore it is not infinitely possible to conclude that with a low score, a low amount of reliability exists, since it can also be an indicator for the instability of an attribute (Schmidt-Atzert & Amelang, 2012). Additional problems can come from practice effects and retrieval effects. By repeating the test, the person can handle the test better and achieve higher scores. They can also remember their answer on the earlier test and try to answer the questions consistently so that only their power of memory is verified. To diminish these effects one can choose an interval between the two surveys as great as possible but has the drawback, that many psychological characteristics may alter and just the person's stability would be captured (Sedlmeier & Renkewitz, 2008). Moreover, one cannot always expect the proband to carry out the test a second time. Furthermore, a retest is very costly and time consuming (Schermelleh-Engel & Werner, 2012).

To counteract retrieval effects, one can determine the reliability by using two parallel test forms as prescribed in the alternate forms method. The proband is given two parallel tests within a certain interval of time, whereby this can be done within a short period. However, it is difficult to construct two parallel test forms since the item universe for a trait is limited and the parallel form must have the same number of items, the same instructions, corresponding content and be similarly designed (Moosbrugger & Kelava, 2012; Sedlmeier & Renkewitz, 2008). The higher costs for this method is the reason that it is seldom used in practice (Schermelleh-Engel & Werner, 2012). Furthermore, this does not represent an original test situation. This may lead to fatigue more quickly, lower concentration, diminished motivation to take the test followed by an increase in the drop-out rate, and practice and learn effects can result (Rost, 2004).

An alternative method is split-half reliability. Instead of surveying a random sample with the same test or a parallel test, the test is split into two equal parts and so two measurement points can be recorded. This has the advantage that only one test needs to be conducted at one time which can rule out fluctuations in motivation, mood, and concentration, as well as changes in attributes (Moosbrugger & Kelava, 2012; Schmidt-Atzert & Amelang, 2012). Here it's important that both test halves have the same number of items so that they have homogeneity (Schmidt-Atzert & Amelang, 2012), since procuring equivalency of the test halves can present a problem when applying this method. The more items the test has, the greater the reliability is (Sedlmeier & Renkewitz, 2008). It is important to ensure that the test isn't too long, so that the probands find it reasonable.

The parallel construction of the first two steps with the last two steps of profiling**values** enables the split-half reliability to be determined. For economic reasons the exact test construction will not be published in this study. The analysis of the test halves from a random sample of 1803 specialists and managers, including 1069 men and 734 women resulted in a reliability score of 0.8.

3. Validity

Validity can be understood as the quality of the test method, e.g., whether it measures what it intends to measure and is, therefore, the most important quality criterion (Moosbrugger & Kelava, 2012; Schmidt-Atzert & Amelang, 2012). A scale, for instance, should measure the weight and not the color of an object. When in testing the scale records the weight, then it is valid. However, psychometric methods do not measure obvious features such as weight but latent variables instead, which are not apparent. Therefore, the quality of the operationalization of the variable is captured with the validity (Sedlmeier & Renkewitz, 2008). It is important to differentiate between internal and external validity. When it comes to internal validity, the selected items portray the attribute due to their theoretical basis with respect to their content. So the results of the test subject should reflect the assumptions about their behavioral response (Rost, 2004). However, external validity represents the transferability of the test results to other test situations. In other words, how generalizable the examined attributes are on a behavior which cannot be observed (Rost, 2004; Schmidt-Atzert & Amelang, 2012). A high validity indicates that certain conclusions from the test results regarding the behavior or trait outside of the test situation are permitted. It follows that there is no one form of validity, but that several aspects of validity must be captured (Schmidt-Atzert & Amelang, 2012).

Thus, in order to assume that a method is valid, the objectivity and reliability must be met as a prerequisite (Moosbrugger & Kelava, 2012).

3.1 Content Validity

Content validity describes to the extent to which the trait is represented in terms of content in the selected items (Schmidt-Atzert & Amelang, 2012). Every trait is described by a construct domain but not all the constructs can be selected from this construct domain since the scope of the test would become immeasurable. So for every method a construct domain is selected which tries to represent the underlying construct as best as possible (Sedlmeier & Renkewitz, 2008). However, their quality cannot be described numerically, but can be won due to expertise and logical considerations (Moosbrugger & Kelava, 2012). Thus, the content validity is determined by the items describing the fundamental concepts and all relevant steps involving the item generation and selection from the creators (Schmidt-Atzert & Amelang, 2012).

profiling**values** is based on the Hartman Value Profile (HVP). It's content structure and conception are explained in detail in the works of Robert S. Hartman (Hartman, 2011, 2013), so that a thorough derivation is omitted here. The further development by profiling**values** is directly parallel to the HVP, since it is built on Hartman's ideas. Therefore, the internal validity of the profiling**values** Reports are given

3.2 Criterion Validity

When determining the criterion validity the relationship between the test results and a criterion external to the test is examined. The criterion must be concrete and relevant for the application of the method. Thus, it can be a specific performance or a behavior (Schmidt-Atzert & Amelang, 2012). There can be a difference between the concurrent validity and the predictive validity. In concurrent validity a criterion is examined with the test as in using grades as an indicator of intelligence. If the criterion lies in the future, such as success in school measured with the final grades, we refer to predictive validity. The retrospective validity describes the relationship between a previously collected criterion (Bühner, 2011). Moreover, the criterion validity shows an incremental validity which can gather more information from the test about a criterion than another test (Harting, Frey & Jude, 2012).

A survey among 122 certified profiling**values** users showed that in the areas of personnel, team building, organization development, coaching, personality development, and career counseling, as well as in personnel selection and individual assessments, 96.5% and 85.7% of those surveyed were satisfied with the significance of the profilingvalues Report in their field of human resources. Therefore, concurrent validity is given. 100% of the certified users have even confirmed the high accuracy and customer satisfaction in staff selection with the help of the profiling**values** Report. The predictive validity is also evident. Pomeroy (2005) studied the concurrent validity of the HVP with the Minnesota Multiphasic Personality Inventory (MMPI) and the Cattell Clinical Analysis Questionnaire (CAQ), which he was able to confirm.

3.3 Construct Validity

A test method has construct validity when the test measures the underlying construct which it claims to be measuring. Therefore, conclusions drawn from the behavior during testing are valid outside of the testing situation. A distinction is made between convergent and discriminant approaches. With a convergent approach there are no theoretical assumptions about an underlying construct. Using an exploratory factor analysis, the items are clustered on a factor or construct showing factor loading. The identified factors are descriptively ordered according to their theoretical concept. If previously individual factors have been established, a discriminant approach is used. This is done, for example, with a confirmatory factor analysis (Moosbrugger & Kelava, 2012). Since the underlying factor structure of profilingvalues (the HVP) has been confirmed exploratively many times (Pomeroy, 2005), a confirmatory factor analysis was carried out. The factor analysis confirmed the factor structure of the HVP (Pomeroy, 2005).

4. Standardization

The standardization of a test serves the purpose of establishing a frame of reference in order to classify the test results (Bühner, 2011). Since profilingvalues is used primarily with specialists and managers, it was the intention of this study to restrict it to this population and simply set a benchmark. In Table 1 the means are identified for each of the individual scales.

Table 1. **Mean Values of the Scales**[1]

Scale	Mean
Empathy Capacity	76.97
Practical Thinking Capacity	78.61
Structured Thinking Capacity	69.40
Personal Needs Capacity	71.31
Success Orientation Capacity	68.04
Goal Orientation Capacity	68.36
Social Competence Capacity	79.63
Solution-oriented Attitude Capacity	81.96
Structural Problem Solving Capacity	71.10
Stability/Resilience Capacity	70.90
Responsibility/Assertiveness Capacity	68.96
Decisiveness Capacity	69.74
Empathy Willingness	28.40
Practical Thinking Willingness	42.75
Structured Thinking Willingness	47.59
Personal Needs Willingness	16.79
Success Orientation Willingness	57.91
Goal Orientation Willingness	63.47
Social Competence Willingness	30.61
Solution-oriented Attitude Willingness	44.40
Structural Problem Solving Willingness	51.15
Stability/Resilience Willingness	19.44
Responsibility/Assertiveness Willingness	55.30
Decisiveness Willingness	63.48

Scale	Mean
Dif1	74.94
Dif2	64.21
Dim1	54.89
Dim2	53.65
Dim%1	53.53
Dim%2	60.44
Int1	74.46
Int2	60.95
Int%1	54.64
Int%2	41.55
Dis1	80.75
Dis2	90.32
D.I.1	69.07
D.I.2	65.20
VQ1	74.81
VQ2	47.43
SQ1	64.07
SQ2	37.06
BQr1	76.48
BQr2	63.28
Atychal1	1.52
Atychal2	4.56
BQa1	79.50
BQa2	40.80

[1] Since the scale of profilingvalues relates to the total population, a distortion based on the sample can be expected. We can assume that professionals and managerial staff show a higher level, and therefore, do not represent a normal distribution.

5. Scaling

With scaling it is important that the resulting test scores adequately reflect the degree of expression of the trait which is derived from specific allocation rules. This is determined by the level of the scale (Moosbrugger & Kelava, 2012).

The profiling**values** Report is based the level of the ratio scale which allows conclusions to be made on the test performance of various test persons, for instance, how the performance differs from another person's or in which relation it stands to the other results.

6. Test Efficiency

A test is economical when it consumes as little time and financial resources in comparison to the knowledge gained. This includes the costs for acquisition, any training, license fees, or test materials. In addition, the length of time for the preparation, implementation, evaluation, and reporting of the findings are also factored in (Moosbrugger & Kelava, 2012). Test efficiency, for example, with the computer-based methods like profilingvalues is given since they need little time for preparation and evaluation and use hardly any material (Bühner, 2011).

Since the efficiency can be only determined in comparison to similar methods, (Moosbrugger & Kelava, 2012), profiling**values** is especially distinguished with its short implementation time of about 20 minutes. For application in the professional field, this is a great advantage since the candidates often have a full schedule and a long completion time would be an additional inconvenience. The scoring is prompt, and the results illustrated in user-friendly graphics so that this also promotes efficiency. The costs for licensing and training are compatible with the market.

7. Utility

The utility of the test method refers to the practical relevance to the measured traits, meaning the test provides more benefits than it hinders (Moosbrugger & Kelava, 2012). The profiling**values** Report measures personality traits and competencies as well as the current use of the individual's potential. Thus, the profiling method sets itself apart from the others since the internal values are highlighted and the strengths and weaknesses as well as the present well-being of the person are deduced. This added value justifies the utility of the profilingvalues Report, since it is unique on the market.

8. Reasonableness

If a test is very tedious, physically exhausting, or contains sensitive questions, one should ask whether a test person can be expected to conduct it. Therefore, a test should be conducted only when the probands are not overly stressed physically or mentally from the duration according to social norms. It is also important to weigh the imposition with the benefit of the conclusions drawn (Moosbrugger & Kelava, 2012; Schmidt-Atzert & Amelang, 2012).

With the short duration of 20 minutes needed to conduct the test online, the profiling**values** method enables the candidate to choose when and where it will be filled out. Therefore, reasonableness is also given.

9. Unfalsifiability

Gaining representative results it is important so that a test person cannot steer the results – willingly or unwillingly – in a certain direction. This occurs when the proband is able to see through the measurement principles or intentionally provides socially desirable answers (Bühner, 2011; Moosbrugger & Kelava, 2012).

When conducting profiling**values**, there is no manipulation possible of implicated theories or social desirability since the formulation of the items hardly allows one to draw inferences about the underlying concept.

10. Fairness

The criterion fairness ensures that no person is systematically disadvantaged because they belong to a certain ethical, socio-cultural, or gender group (Moosbrugger & Kelava, 2012).

According to Robert S. Hartman, value psychology as the basis for the profiling**values** method, is equal for everyone regardless of their ethics, status, or gender so that no group is disadvantaged (Vogel, 2009).

Reference List

Bühner, M. (2011). Einführung in die Test- und Fragebogenkonstruktion (Always learning, 3., aktualisierte und erweiterte Auflage). München: Pearson Studium.

Harting, J., Frey, A. & Jude, N. (2012). Validität. In H. Moosbrugger & A. Kelava (Hrsg.), Testtheorie und Fragebogenkonstruktion. Mit 66 Abbildungen und 41 Tabellen (Springer-Lehrbuch, 2., aktualisierte und überarbeitete Auflage, S. 144–171). Berlin, Heidelberg: Springer.

Hartman, R. S. (2011). The structure of value. Fundations of scientific axiology. Eugene, OR: Wipf and Stock.

Hartman, R. S. (2013). Freedom to live. The Robert Hartman story (2. Aufl.). Eugene, OR: Wipf and Stock.

Moosbrugger, H. & Kelava, A. (2012). Qualitätsanforderungen an einen psychologischen Test (Testgütekriterien). In H. Moosbrugger & A. Kelava (Hrsg.), Testtheorie und Fragebogenkonstruktion. Mit 66 Abbildungen und 41 Tabellen (Springer-Lehrbuch, 2., aktualisierte und überarbeitete Auflage, S. 7–26). Berlin, Heidelberg: Springer.

Pomeroy, L. (2005). The new science of axiological psychology (Value inquiry book series, Bd. 169). Amsterdam: Rodopi.

Rost, J. (2004). Lehrbuch Testtheorie - Testkonstruktion. 2., vollständig überarbeitete und erweiterte Auflage. Bern u.a.: Hans Huber.

Schermelleh-Engel, K. & Werner, C. S. (2012). Methoden der Reliabilitätsbestimmung. In H. Moosbrugger & A. Kelava (Hrsg.), Testtheorie und Fragebogenkonstruktion. Mit 66 Abbildungen und 41 Tabellen (Springer-Lehrbuch, 2., aktualisierte und überarbeitete Auflage, S. 119–141). Berlin, Heidelberg: Springer.

Schmidt-Atzert, L. & Amelang, M. (2012). Psychologische Diagnostik:mit 82 Tabellen (5., vollständig überarbeitete und erweiterte Auflage). Bern u.a.: Springer.

Sedlmeier, P. & Renkewitz, F. (2008). Forschungsmethoden und Statistik in der Psychologie (Pearson Studium : PS, Psychologie). München u.a.: Pearson Studium.

Vogel, U. (2009). profilingvalues. Background and validation studies. München: profilingvalues.

An Overview of the Quality Criteria of profiling**values**

Objectivity:

As a computer-based method with a very high degree of standardization, profilingvalues can be appraised as an extremely objective instrument in application and analysis. Together with the comprehensive training provided in the certification seminar, the graphic depictions comparing the results to the overall population, as well as the detailed descriptions in the manual, the objectivity of interpretation is guaranteed.

Reliability:

The split-half reliability of profiling**values** is .80 which represents a good rating.

Validity:

A survey among certified profiling**values** users with 122 probands showed that in personnel development and selection 96.5% and 85.7% of those surveyed are satisfied with the significance of the profilingvalues Report in their corresponding fields. Thus, the concurrent validity is given. 100% of the certified users even verified the high accuracy and customer satisfaction in staffing decisions with the aid of the profiling**values** Report, so that the predictive validity could be proven.

Standardization:

The profiling**values** scales are given in percent and allow one to classify them in a normal Gaussian distribution.

Scaling:

The profiling**values** Report is based on the level of the ratio scale so that not only the individual's absolute results can be interpreted, but also an exact statement can be made about the performance level in relation to other candidates.

Test Efficiency:

With the short time needed to perform and evaluate the test, profiling**values** is particularly economical in time. The costs for licensing and training are standard for the market.

Utility:

The profiling**values** method stands out from others since it sheds light on the inner values so that a deduction can be made about the strengths and weaknesses as well as the current well-being of a person. This added value legitimizes the utility of the profiling**values** Report since it is unique on the market.

Reasonableness:

The short online implementation period of 20 minutes, which makes it possible for the respondent to choose when and where, confirms the reasonableness of profiling**values**.

Unfalsifiability:

No manipulation is possible when conducting profilingvalues resulting from implicit theories or social desirability since the formulation of the items allows hardly any conclusions of their underlying construct.

Fairness:

According to Robert S. Hartman's psychology of values which is the basis for profilingvalues, the method is equal for all persons regardless of their ethics, status, or gender. Thus, no group of persons is disadvantaged.

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