BRIEF REPORT

The Tenacious Goal Pursuit and Flexible Goal Adjustment Scales: A Validation Study

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The flexible goal adjustment (FLEX) and tenacious goal pursuit (TEN) scales are used regularly in aging research. The current study examined their validity in a sample of 517 women (30–75 years) in multiple ways. Overall, the findings show that the scales do not clearly distinguish between FLEX and TEN. The direction in which the items were formulated was just as important as what was being measured. Moreover, face validity of the inversely phrased items in particular appeared to be weak. On the basis of these findings, the authors recommend a revision of the concept definitions as well as of the items.

Keywords: psychological adaptation, self-regulation, goals, validity, confirmatory factor analysis

When growing older, people face many and mostly irreversible losses, such as the loss of function and social roles. Seemingly contradictory, people generally maintain a sense of control, self-esteem, and well-being in old age (Baltes & Baltes, 1986; Fung, Abeles, & Carstensen, 1999; Rodin, 1986). The dual process theory of self-regulation (Brandstädter & Renner, 1990) offers an explanation for this "well-being paradox" (Poulin, Haase, & Heckhausen, 2005) by assuming a shift from assimilative to accommodative coping strategies when growing older. Assimilative coping implies actively adjusting developmental and life circumstances to personal preferences. Conversely, accommodative coping entails adjusting personal preferences and goal orientations to given situational forces and constraints (Brandstädter & Renner, 1990). In uncontrollable conditions or when achievement probability is low, assimilative coping strategies can be problematic, because these consume scarce resources and can lead to experiences of failure (Rothermund, 2006). In contrast, accommodative strategies gain in importance under such conditions, because these draw attention away from things in life that one cannot do or reach any longer.

In 1990, a self-report instrument was introduced to assess the individual’s dispositional tendency to use assimilative and accommodative coping strategies (Brandstädter & Renner, 1990). The tenacious goal pursuit (TEN) and flexible goal adjustment (FLEX) scales were designed to reflect two independent, orthogonal coping styles. Since its development, the instrument has been used regularly in studies on coping with goals that are blocked as a result of the aging process (e.g., Boerner, 2004; Frazier, Newman, & Jaccard, 2007; Heyl, Wahl, & Mollenkopf, 2007; Poderico, Ruggiero, Iachini, & Iavarone, 2006; Rothermund & Brandstädter, 2003; Slangen-de Kort, Midden, Aarts, & van Wagenberg, 2001). The current brief report addresses the validity of the instrument, since only a few researchers explicitly examined whether the scales meet their measurement intent (Heckhausen, 1997; Mueller & Kim, 2004).

Empirical Findings

A number of studies that made use of the scales provided support for the premises of the dual process theory. As theorized, both coping tendencies were positively related to various measures of psychological well-being (Boerner, 2004; Brandstädter & Renner, 1990; Heyl et al., 2007; Wahl, Becker, Schilling, Burnedi, & Himmelsbach, 2005). Moreover, in line with theory, flexibility was shown to mitigate the negative effect of unattained developmental goals (Brandstädter & Renner, 1990) and of various health problems (Boerner, 2004; Heyl et al., 2007; Schmitz, Saile, & Nilges, 1996). Supporting the theorized shift in coping modes, recent studies showed that an increase in flexibility at old age offsets the negative effects of aging (Frazier et al., 2007; Rothermund & Brandstädter, 2003).

However, not all findings are consistent. The theorized age-related shift from TEN to FLEX is not always confirmed by an opposite relation of the two coping tendencies with age (Boerner, 2004; Heckhausen, 1997; Mueller & Kim, 2004; Poderico et al., 2006). In addition, in a study by Bak and Brandstädter (1998), not only FLEX but also TEN was shown to mitigate the emotional effect of a...
developmental loss. Moreover, findings and interpretations regarding the interaction between tenacity and flexibility differ. Some authors reasoned that people with high scores on both tendencies might be particularly well off, because after flexible goal disengagement, new goals need to be pursued tenaciously (Preiser, Auth, & Buttkewitz, 2005). In contrast, Bak and Brandstätter (1998) suggested that high scores on both scales can be maladaptive, because people who tend to use both strategies might struggle with a regulatory dilemma. Combining both arguments, Heyl et al. (2007) suggested that the direction of the interaction effect might depend on the outcome examined, that is, high scores on both tendencies might result in negative affect as well as in positive affect.

In summary, the rationale of the dual-process theory is attractive and its predictive utility promising. However, to interpret inconsistent findings in empirical studies with more certainty and to further test the theory’s premises in detail, a valid instrument is required.

### The Instrument

Besides the original 1990 article, not many articles addressed the psychometric properties of the instrument in detail. Generally, only reliability was reported, which was consistently strong for both scales (ranging between .70 and .80). Yet, strong internal consistency is a necessary, but not sufficient condition for validity. Thus far, only Mueller and Kim (2004) tested the validity of the 30-item questionnaire in detail. They concluded that the English version did not fully support the measurement intent and that item keying, that is, the direction in which items are formulated, explained more of the variance in scores than did the two coping constructs. Similarly, Heckhausen (1997) noticed that the original German version of the TEN scale comprises two subscales, that is, one with positively phrased items and one with negatively phrased items (Heckhausen, 1997; Poulin et al., 2005). The current brief report addresses the validity of the scales and the apparent role of item keying in more detail.

Although the way people cope with disrupted goals is most frequently addressed in aging studies, goal-related coping might play a similar important role in the adjustment to sudden and nonnormative life events (Van Damme, Crombez, Goubert, & Eccleston, 2009; Wrosch & Freund, 2001). For this reason, we included the scales in our research project on psychological adjustment to breast cancer (see, e.g., Henselmanns et al., 2010). In this project, a large reference group of women (30–75 years) who were tested, but turned out not to have breast cancer, completed the TEN/FLEX scales. In the current validation study, we made use of the data of this reference sample only. First of all, we ran a confirmatory factor analysis to test the factorial validity of the instrument. We examined three models, that is, (1) a model assuming only one coping dimension with TEN and FLEX at opposite poles, (2) a model with the original two orthogonal coping factors, and (3) a model with two keying factors (direct and inverse). Factorial validity would be supported if (1a) the original model with two coping styles shows a good fit; if (1b) this model fits better than does the first model assuming only one coping dimension and also better than does the two-factor model based on item keying; and if (1c) the loadings on the two coping factors are higher than are the loadings on the two keying factors. Second, we tested convergent and divergent validity in two ways. First of all, we examined a multitrait, multimethod matrix (Campbell & Fiske, 1959). The two different methods used to assess the coping tendencies were compared, that is, the directly phrased items with the inversely phrased items. Convergent validity would be supported if (2a) the directly and inversely phrased items of the same coping style are strongly related (one construct, different methods). Divergent validity would be supported if (2b) these correlations are stronger than are the correlations between the TEN and FLEX items measured with items of similar keying (two constructs, similar method). Then, we examined the correlations between the total TEN/FLEX scales and three constructs that were used for validation in the original article (Brandstätter and Renner, 1990) and that were also available in our data, that is, depressive symptoms, perceived personal control over life, and age. Validity would be supported if (2c) TEN and FLEX are uncorrelated, (2d) both scales are negatively related to depressive symptoms, (2e) TEN is more strongly related to personal control than was FLEX, and if (2f) the scales are oppositely related to age.

In Study 2, we examined the face validity of the items by asking psychology researchers to classify the items. Face validity, the judgment of experts of whether the items seem to measure what they are supposed to measure (Streiner & Norman, 2008), would be established (3) if the expert raters are able to distinguish TEN items from FLEX items with sufficient certainty. Together, these three approaches will give more insight into the validity of the instrument designed to assess assimilative tenacity and accommodative flexibility.

### Method

#### TEN/FLEX Scales

The TEN and FLEX scales (Brandstätter & Renner, 1990) consist of 15 items each. Respondents rate the degree to which they agree with each statement on a 5-point Likert scale ranging from fully disagree to fully agree. The TEN scale consists of 6 directly phrased items and 9 inversely phrased items; the FLEX scale consists of 11 directly phrased items and 4 inversely phrased items. Two bilingual persons independently translated the original German items into Dutch and then compared the two versions together with one of the researchers. Differences between the versions were resolved, and the resulting Dutch version was checked for fluency and comprehensibility by three independent Dutch-speaking persons (Werner & Campbell, 1970; the parallel blind technique).

#### Study 1

The study consists of women from the general population, ages 75 years and younger, who were initially referred to the hospital by their general practitioners upon suspicion of breast cancer, but who turned out to be cancer free. Women who were diagnosed with cancer were excluded from the present study. Six hospitals in the northern part of the Netherlands were involved in the recruitment of respondents.

A total of 3093 women were invited to the study before diagnosis, of whom 1226 gave informed consent, of whom 1094 were eligible. Of these 1094 women, 912 women confirmed their initial consent after diagnosis, of whom 670 did not have cancer. Our final sample included 517 out of the 670 women without cancer who completed all items of the coping questionnaire at 6–8 weeks after their diagnostic tests. Respondents were on average 50 years
old (SD = 10, range 30–75) and finished either basic/lower (43%), intermediate professional (31%), or higher professional/academic education (26%). The Cronbach alphas of the coping scales indicated acceptable internal consistency of both 15-item scales (TEN = .75; FLEX = .83), in line with other reports.

Depressive symptoms were assessed with the Center for Epidemiologic Studies Depression scale (Radloff, 1977). Respondents rated how often they experienced each of 20 symptoms during the past week on a 4-point Likert scale. Alpha was .90. Perceived personal control over life was assessed with the 7-item Mastery List (Pearlin & Schooler, 1978). Respondents rated their perceived personal control over events and situations in life on a 5-point Likert scale. Alpha was .82.

Study 2

Ten coworkers (with on average 11 years of psychology education or research experience, range 5–40 years) evaluated the items. In the original text on the development of the scales, it was stated that (Brandstädter & Renner, 1990):

One group of items indicated a **tendency to tenaciously pursue goals even in the face of obstacles and under high risk of failure** (or, at the opposite pole, the **tendency to give up readily**). According to our formulation, this tendency corresponds to an assimilative mode of coping or control. A second group of items indicated a **tendency to positively reinterpret initially aversive situations and to relinquish blocked goal perspectives easily** (or, at the opposite pole, **difficulty or reluctance in withdrawing emotionally from barren commitments**). This tendency obviously corresponds to an accommodative coping style.

The phrases in italics were presented to the raters, both in Dutch as well as in English. They were asked to classify each item to belong to either FLEX or TEN (or their opposites). Moreover, for each item, they were asked how certain they were of their classification on a pure guess (1) to 100% sure (10). Only correct classifications of sufficient certainty (6 or higher) were considered as support for face validity. Ratings with a certainty of 5 or lower were considered too uncertain to take into account.

### Results

**Study 1**

**Factorial composition.** The factor structure of the coping questionnaire was tested by means of confirmatory factor analysis (CFA) using LISREL version 8.51. Because the multivariate normality assumption was not met, we applied the robust maximum likelihood estimation method. Three models were tested; correlations between factors were allowed. In line with common recommendations (Diamantopoulos & Siguaw, 2000), several indexes were used simultaneously to assess model fit: the Satorra–Bentler chi-square as an index of exact fit, the root-mean-square-error of approximation (RMSEA) as an index of close fit, the comparative fit index (CFI) as an index of fit in comparison with the “null model,” and the standardized root-mean-square residuals (SRMR) as an index of the size of the residuals.

Table 1 shows the fit indices of the three tested CFA models. Model 1, assuming one underlying coping dimension, did not fit well. RMSEA indicated mediocre fit and the CFI and SRMR were not within the acceptable range. The original Model 2 fit somewhat better. Chi-square was lower, RMSEA indicated just reasonable fit, and the CFI was somewhat higher. Last, Model 3, with two factors based on item keying (direct and inverse), fit even somewhat better than did the original model. Yet, CFI and SRMR in neither Model 2 nor Model 3 were within the acceptable range.

Table 2 presents the completely standardized factor loadings of Models 2 and 3, which indicate the correlation between the item scores and the underlying factor. Most items loaded just as strongly on the coping factors as on the keying factors. The direction in which the items were formulated (mean direct 28%, mean inverse 22%) explained a similar percentage of variance in the item scores as the coping content of the items (mean FLEX 31%, mean TEN 19%). In particular, the variance in TEN item scores was not explained well by the latent coping factor.

**Convergent and divergent validity.** The multitrait, multimeath method matrix (Table 3) shows the Pearson correlations between the sum scores on the 11 directly phrased FLEX items, the 4 inversely phrased FLEX items, the 6 directly phrased TEN items, and the 9 inversely phrased TEN items. The correlations between the directly and inversely phrased items of the same coping style (Table 3, in boldface type) were moderate (TEN) or strong (FLEX). The correlations between item sets of similar keying (in italic type) were, however, equal to or even slightly higher than the correlations between sets of items representing the same coping style (boldface).

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1 To learn more about the data prior to the CFA, an exploratory factor analysis with Varimax rotation was performed. The scree plot suggested three factors (20%, 10%, and 9% explained variance). Most FLEX items loaded on the first factor, most inversely phrased TEN items on the second, and most directly phrased TEN items on the third factor. Some FLEX items also had high loadings on the third factor, and vice versa. TEN seems to comprise two scales based on keying instead of content, similar to the observation of Heckhausen (1996). When ignoring this methodological split and extracting only two factors (30% explained variance), the 11 directly phrased FLEX items loaded on Factor 1 (seven items with loadings >0.6) and eight out of nine inversely phrased TEN items loaded on Factor 2 (four items with loadings >0.6). Yet six items (two reverse FLEX, one reverse TEN, and three direct TEN) could not be classified (loadings were too low or differences too small), and three inversely phrased TEN items loaded most strongly on the “wrong” factor (FLEX). In summary, the two factors consisted mostly of directly phrased FLEX items and inversely phrased TEN items. Both content and keying seem to play a role; this was further tested in CFA.
Table 2
Factor Loadings in Models 2 and 3, Number of Uncertain and Certain (Correct and Incorrect) Classifications by 10 Raters

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Scale</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Face validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>I find it easy to see something positive even in a serious mishap.</td>
<td>FLEX</td>
<td>.64</td>
<td>.70</td>
<td>Uncertain: 0, Correct: 9, Incorrect: 1</td>
</tr>
<tr>
<td>08</td>
<td>When (…) wrong, I can usually find a bright side in a situation.</td>
<td>FLEX</td>
<td>.65</td>
<td>.73</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>15</td>
<td>In general, I am not upset very long about a missed opportunity.</td>
<td>FLEX</td>
<td>.63</td>
<td>.59</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>16</td>
<td>I adapt quite easily to changes in plans or circumstances.</td>
<td>FLEX</td>
<td>.68</td>
<td>.61</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>17</td>
<td>I usually find something positive even when giving up something I cherish.</td>
<td>FLEX</td>
<td>.67</td>
<td>.66</td>
<td>Uncertain: 0, Correct: 10, Incorrect: 0</td>
</tr>
<tr>
<td>19</td>
<td>I usually have no difficulties in recognizing where my limits are.</td>
<td>FLEX</td>
<td>.51</td>
<td>.47</td>
<td>Uncertain: 7, Correct: 2, Incorrect: 1</td>
</tr>
<tr>
<td>21</td>
<td>After a serious drawback, I soon turn to new tasks.</td>
<td>FLEX</td>
<td>.51</td>
<td>.55</td>
<td>Uncertain: 1, Correct: 8, Incorrect: 1</td>
</tr>
<tr>
<td>23</td>
<td>If I don’t get something I want, I take it with patience.</td>
<td>FLEX</td>
<td>.49</td>
<td>.44</td>
<td>Uncertain: 5, Correct: 4, Incorrect: 1</td>
</tr>
<tr>
<td>24</td>
<td>Faced with a disappointment, (…) other things in life are just as important.</td>
<td>FLEX</td>
<td>.70</td>
<td>.63</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>25</td>
<td>I find that even life’s troubles have their bright side.</td>
<td>FLEX</td>
<td>.73</td>
<td>.70</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>29</td>
<td>When I get into serious trouble (…) how to make the best out of situation.</td>
<td>FLEX</td>
<td>.58</td>
<td>.64</td>
<td>Uncertain: 4, Correct: 6, Incorrect: 0</td>
</tr>
<tr>
<td>01</td>
<td>When I get stuck on something, it’s hard for me to find a new approach.</td>
<td>FLEXb</td>
<td>.53</td>
<td>.58</td>
<td>Uncertain: 1, Correct: 8, Incorrect: 1</td>
</tr>
<tr>
<td>13</td>
<td>I create many problems for myself because of my high demands.</td>
<td>FLEXb</td>
<td>.43</td>
<td>.35</td>
<td>Uncertain: 5, Correct: 3, Incorrect: 2</td>
</tr>
<tr>
<td>26</td>
<td>It is very difficult for me to accept a setback or defeat.</td>
<td>FLEXb</td>
<td>.42</td>
<td>.37</td>
<td>Uncertain: 2, Correct: 7, Incorrect: 1</td>
</tr>
<tr>
<td>30</td>
<td>I’m never really satisfied unless things measure up to my wishes exactly.</td>
<td>FLEXb</td>
<td>.23</td>
<td>.25</td>
<td>Uncertain: 2, Correct: 2, Incorrect: 6</td>
</tr>
<tr>
<td>02</td>
<td>The harder the goal is to achieve, the more appeal it has to me.</td>
<td>TEN</td>
<td>.37</td>
<td>.32</td>
<td>Uncertain: 1, Correct: 8, Incorrect: 1</td>
</tr>
<tr>
<td>03</td>
<td>I can be very obstinate in pursuing my goals.</td>
<td>TEN</td>
<td>.27</td>
<td>.09</td>
<td>Uncertain: 4, Correct: 5, Incorrect: 1</td>
</tr>
<tr>
<td>05</td>
<td>When faced with obstacles, I usually double my efforts.</td>
<td>TEN</td>
<td>.41</td>
<td>.55</td>
<td>Uncertain: 0, Correct: 10, Incorrect: 0</td>
</tr>
<tr>
<td>07</td>
<td>Even when things seem hopeless, I keep on fighting to reach my goals.</td>
<td>TEN</td>
<td>.39</td>
<td>.46</td>
<td>Uncertain: 3, Correct: 6, Incorrect: 1</td>
</tr>
<tr>
<td>27</td>
<td>Even when a situation seems hopeless, I still try to master it.</td>
<td>TEN</td>
<td>.32</td>
<td>.53</td>
<td>Uncertain: 1, Correct: 8, Incorrect: 1</td>
</tr>
<tr>
<td>28</td>
<td>I stick to my goals and projects even in face of great difficulties.</td>
<td>TEN</td>
<td>.36</td>
<td>.39</td>
<td>Uncertain: 1, Correct: 9, Incorrect: 0</td>
</tr>
<tr>
<td>06</td>
<td>To avoid disappointments, I don’t set my goals too high.</td>
<td>TENb</td>
<td>.47</td>
<td>.46</td>
<td>Uncertain: 2, Correct: 6, Incorrect: 2</td>
</tr>
<tr>
<td>09</td>
<td>I tend to lose interest in matters where I cannot keep up with others.</td>
<td>TENb</td>
<td>.55</td>
<td>.62</td>
<td>Uncertain: 3, Correct: 7, Incorrect: 0</td>
</tr>
<tr>
<td>10</td>
<td>I find it easy to give up on a goal if it seems difficult to achieve.</td>
<td>TENb</td>
<td>.50</td>
<td>.52</td>
<td>Uncertain: 3, Correct: 4, Incorrect: 3</td>
</tr>
<tr>
<td>11</td>
<td>(…) insurmountable obstacles, I prefer to look for a new goal.</td>
<td>TENb</td>
<td>.71</td>
<td>.75</td>
<td>Uncertain: 2, Correct: 2, Incorrect: 6</td>
</tr>
<tr>
<td>12</td>
<td>Life is much more pleasurable when I do not expect too much from it.</td>
<td>TENb</td>
<td>.61</td>
<td>.66</td>
<td>Uncertain: 5, Correct: 3, Incorrect: 2</td>
</tr>
<tr>
<td>14</td>
<td>(…) tried hard but cannot solve a problem, (…) easy (…) leave it unsolved.</td>
<td>TENb</td>
<td>.05</td>
<td>.09</td>
<td>Uncertain: 5, Correct: 5, Incorrect: 0</td>
</tr>
<tr>
<td>18</td>
<td>I avoid grappling with problems for which I have no solution.</td>
<td>TENb</td>
<td>.48</td>
<td>.43</td>
<td>Uncertain: 5, Correct: 5, Incorrect: 0</td>
</tr>
<tr>
<td>20</td>
<td>(…) cannot reach a goal, (…) change my goal than to keep struggling.</td>
<td>TENb</td>
<td>.60</td>
<td>.54</td>
<td>Uncertain: 4, Correct: 4, Incorrect: 2</td>
</tr>
<tr>
<td>22</td>
<td>Faced with a serious problem, I sometimes simply pay no attention to it.</td>
<td>TENb</td>
<td>.48</td>
<td>.48</td>
<td>Uncertain: 5, Correct: 5, Incorrect: 0</td>
</tr>
</tbody>
</table>

Note. CFA = confirmatory factor analysis; FLEX = flexible goal adjustment; TEN = tenacious goal pursuit.

a Content of item in German, used for Dutch translation: Wenn ich nicht bekomme, was ich will, sehe ich das auch als eine Möglichkeit, mich in Gelassenheit zu üben. b Inversely phrased item.
The total scores on the two scales were not independent (Table 4). Both scales were negatively correlated with depressive symptoms. TEN was not more strongly correlated with personal control than was FLEX. Last, the scales were oppositely, yet weakly, related to age.

Study 2: Face Validity

The “best” and the “worst” rater classified respectively 24 and 14 items correctly with sufficient certainty. The 11 directly phrased FLEX items were generally easy to categorize (Table 2), although several raters were uncertain about Items 19, 23, and 29. Of the four inversely phrased FLEX items, Item 13 and Item 30 were problematic. For example, 6 out of the 10 raters falsely classified Item 30 as TEN.

Similar to directly phrased FLEX items, most raters classified the six directly phrased TEN items correctly and with sufficient certainty, although Items 3 and 7 posed difficulties. More raters were, however, uncertain about the nine inversely phrased TEN items (Items 12, 14, 18, 20, 22), and some raters even classified inversely phrased TEN items as FLEX with sufficient certainty (Items 6, 10, 11, 12, 20). In summary, these ratings suggest that the directly phrased items of both scales generally had the highest face validity.

Discussion

Since 1990, the FLEX and TEN scales have been used regularly by researchers with an interest in how people deal with blocked goals over the life span. A valid instrument is crucial to interpret the findings of these studies and to further test the premises of the dual process theory. The current study could, however, not confirm the validity of the TEN/FLEX scales.

First of all, factorial validity was not supported (Study 1). Even though the original two-factor structure fit better than did a model assuming one coping dimension, it did not fit well and even somewhat worse than a two-factor model based on item keying (direct or inverse). In line with earlier findings (Mueller & Kim, 2004), the direction in which the items were formulated explained the same amount of variance in item scores as coping content. Second, and related, the multitrait, multimethod matrix did not support convergent nor divergent validity, that is, groups of items with similar coping content correlated just as strongly as groups of items that were similarly keyed. Numerous studies have reported that items with the same keying within one scale tend to cluster (Kelloway & Barling, 1990; Marsh, 1996; Spector, van Katwyk, Brannick, & Chen, 1997). Apparently, people respond differently to inversely phrased items than to directly phrased items. In the current study, this method of measurement was just as important as what was being measured (Streiner & Norman, 2008), indicating that the distinction between flexibility and tenacity is rather subtle. Moreover, the scales were not independent and even though some of the predicted relations between the scales and other constructs were confirmed; some were not or only weakly. Third, face validity (Study 2) of the inversely phrased items in particular appeared to be weak, that is, raters were rather uncertain about the inversely phrased flexibility items and often classified inversely phrased tenacity items as flexibility. For example, 6 out of the 10 raters were (reasonably) certain that TEN Item 11—that is, “when I run up against insurmountable obstacles, I prefer to look for a new goal”—reflected flexibility.

We believe that the lack of validity has its origins not in item construction, but in the concept definitions on which the items are based (Brandstädter & Renner, 1990). The tendency “to give up readily” (opposite pole of TEN) is hard to distinguish from the tendency to “relinquish blocked goal perspectives easily” (part of FLEX); both seem opposites of the “difficulty or reluctance in withdrawing emotionally from barren commitments” (opposite pole of FLEX) and the tendency “to tenaciously pursue goals even in the face of obstacles and under high risk of failure” (TEN). Only the tendency “to positively reinterpret initially aversive situations” (part of FLEX) seems clearly distinctive from TEN. The overlap in definitions causes problems not only when classifying items, but also when imagining real-life situations in which people pursue or let go of goals. For example, suppose Andrew’s goal is to run the marathon for the very first time. Unfortunately, he catches a serious flu a week in advance. What if Andrew decides to try and run the marathon anyway? Does this response reflect Andrew’s tenacity or his lack of flexibility?

From what we have learned from the literature on the two coping modes (for a clear overview, see Boerner & Jopp, 2007), we believe that the answer depends on the attainability of the goal. The activation of either assimilative or accommodative processes when confronted with blocked goals depends in large part on goal attainability, which is determined by the nature both of the blocked goal (e.g., whether or not it concerns a permanent loss or constraint) and of the individual’s resources required to reach the goal (e.g., time, energy, social support, and assistive devices). Tenacious strategies will be used when goals are difficult to reach;
flexibility comes into play when the situation appears unalterable (i.e., the TEN/FLEX relation is antagonistic). Goal attainability is hard to establish with certainty in this example, as well as in most real-life situations, and will often depend on individual appraisal. Nevertheless, we believe that including this appraised attainability in the definitions of the two dispositional tendencies is the only way to ensure that FLEX and TEN are orthogonal factors, instead of simply opposites of the same dimension (from giving up easily to holding on no matter what). Thus, in our view, the distinction between the two coping tendencies could be clarified if tenacity would refer to how one generally deals with goals that are not easily reached and flexibility to how one generally deals with goals that are not or no longer attainable. Furthermore, in the definition of flexibility as the “tendency to relinquish unattainable goal perspectives easily,” it could be stressed that this is done “by positively reinterpreting initially aversive situations.” Only then the definition clearly reflects an accommodation of personal preferences to fit with circumstances.

Our findings have implications both for the validity of prior findings and for the future use of the TEN/FLEX scales. To be clear, our results do not indicate that the two scales are measuring one and the same concept nor that the scales have nothing to do with coping. Moreover, most FLEX items, particularly the positive reinterpretation items, seemed to have considerable validity. This might explain why several studies do find the expected relations, such as a stress-buffering effect of FLEX (e.g., Boerner, 2004; Brandstätter & Renner, 1990). However, our results do indicate that the difference between the two scales and, more important, the underlying concept definitions is subtle. This might explain why the theorized opposite relation with age (as a proxy for the number of unattainable goals people confront) is not consistently confirmed in empirical studies. Moreover, it complicates the interpretation and the further examination of the combined effect of TEN and FLEX (Bak & Brandstätter, 1998; Preiser, Auth, & Buttkowitz, 2005). For example, Preiser et al. (2005) concluded that a high score on both tendencies is particularly adaptive, as after disengagement from an unattainable goal, new attainable goals need to be pursued. This seems to imply that the high score on FLEX determines how one deals with the unattainable and the high score on TEN determines how one deals with the attainable. Yet this does not become clear from the items nor the concept definitions on which these are based.

To enable reanalysis as well as future research with the scales, we attempted to select a valid and reliable subset of items that could serve as an alternative for the full instrument. Even though a short but reliable FLEX scale could be constructed, the additional analyses did not result in a strong TEN scale. As the usefulness of the TEN/FLEX scales largely lies in the distinction between TEN and FLEX, we believe a more thorough revision is needed. In line with the adjusted concept definitions, the instrument could be improved by introducing flexibility items with the phrase “When it turns out I cannot or no longer reach my goal or get something I want, I usually . . . .” This phrase could then be complemented with items that reflect accommodation, such as “find it easy to see something positive” or “soon realize that other things in life are more important.” Similarly, tenacity items could be introduced with “When reaching my goal or getting something I want is difficult, I usually . . . .” and could then be complemented with items that reflect assimilation, such as “double my efforts” or “try different ways to reach my goal.”

Several aspects of this study warrant discussion. First of all, because we made use of a Dutch translation of the instrument, we cannot be certain that our conclusions also pertain to the original German version. When translating, we have applied the parallel blind technique (Werner & Campbell, 1970) instead of the translation–back translation method, which might have resulted in a biased translation, for example, because of misconceptions shared by the two translators. Although the observation of Heckhausen (1997) as well as the study by Mueller and Kim (2004) demonstrated similar problems with the German and the English version of the scales, respectively, we do encourage researchers to replicate our study using the original German instrument or to apply the translation–back translation method in non-German-speaking countries. A second limitation of this study is that our sample consisted of women only. Although we have no reason to assume that results would turn out differently in a sample that includes men, we cannot rule out this possibility. The same holds true for the potential influence of the fact that all women were tested for breast cancer. Even though their levels of psychological well-being did not differ from the general female population at the time of assessment, we cannot rule out that their state of mind has affected their responses. Yet, as the scales are designed for use in (very) old samples or in samples facing disabilities, we believe stress or a lack of concentration should not affect validity.

In summary, the study findings did not support the validity of the TEN/FLEX scales. In our view, this lack of validity has its origins not in item construction but in concept definition. The definitions of flexibility and tenacity might be improved by including goal attainability, that is, whether the goal is just difficult or completely out of reach. Moreover, the difference between reaching a fit either by changing the circumstances or by changing personal preferences should be stressed. On the basis of these findings, we gave some suggestions for a revision of the instrument. We hope that our findings stimulate further discussion on how to define and measure the two coping tendencies.

2 We selected those items that best met our refined definitions and had high face validity according to our raters (TEN: 2, 5, 9, 28; FLEX: 8, 15, 16, 17, 24, 25). An exploratory factor analysis led to the exclusion of 3 of these 10 items (TEN: 9; FLEX: 8, 17). The resulting four FLEX items formed a short, but reliable scale (α = .71; mean interitem correlation = .40), yet the resulting three TEN items did not (α = .51; mean interitem correlation = .27).

References


