

# A CONFIRMATORY FACTOR ANALYSIS OF THE PERCEIVED ABILITY TO COPE WITH TRAUMA (PACT) SCALE

EMANUELA SAITA  
CATHOLIC UNIVERSITY OF MILANO

CHIARA ACQUATI  
UNIVERSITY OF HOUSTON

VALENTINA FENAROLI  
CHIARA ZULIANI  
CATHOLIC UNIVERSITY OF MILANO

GEORGE A. BONANNO  
COLUMBIA UNIVERSITY

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The present study examines the factor structure of the Perceived Ability to Cope with Trauma (PACT) scale (Bonanno, Pat-Horenczyk, & Noll, 2011) in an Italian sample. The authors investigated whether the structure which emerged in the original scale is confirmed in a culturally different sample. Using data from a non-random sample of 450 Italian youths recruited through a snowball sampling approach, an explorative and a confirmatory factor analysis were conducted. The original two-factor structure (Forward Focus and Trauma Focus) was confirmed in the study. However, only 14 of the original 20 items were included in the resulting factor structure. The study highlights the challenges of cross-cultural measurement, in particular about the adaptation of a measure for a different culture. Theoretical and methodological implications are discussed. Further studies are necessary to collect additional information about the instrument and to better adapt it for the Italian population.

Key words: Resilience; Coping flexibility; Stressful events; Confirmatory factor analysis; Scale validation.

*Correspondence concerning this article should be addressed to Emanuela Saita, Department of Psychology, Catholic University of Milano, Via Nirone 15, 20123 Milano (MI), Italy. Email: emanuela.saita@unicatt.it*

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In recent years the ability of the individual to cope with stressful events has attracted increasing attention in the literature (Bonanno, Saita, & Zuliani, 2011; Carver & Connor-Smith, 2010; Lazarus & Folkman, 1984; Morling & Evered, 2006; Skinner, Edge, Altman, & Sherwood, 2003). From a theoretical perspective, this interest originates from a critical attitude toward the dichotomy about adaptive and maladaptive coping styles, rather than focusing on the ability of the individual to adjust coping strategies to a changing environment (Alberisio & Viterbori, 2002; Bonanno & Burton, 2013; Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Kato, 2012; Zani & Cicognani, 2002).

The current reflection on emotion regulation and coping has highlighted that the relationship between coping styles and mental health outcomes is more variable than expected and that coping processes may be effective in one situation but not in another one (Bonanno & Burton, 2013; Folkman & Tedlie-Moskowitz, 2000). In particular, it is now well accepted that the relationship between coping strategy and adjustment is “moderated by the nature, duration, context and controllability of the stressor” (Carver & Connor-Smith, 2010, p. 694). As a consequence, investigators from both personality and coping literature have started to emphasize that flexibility in the use of diverse types of coping behaviors is likely to predict more adaptive outcomes, even when the individual is confronted with stressful events that can have potentially traumatic consequences (Bonanno & Burton, 2013; Bonanno et al., 2004; Cheng, 2001; Kashdan & Rottenberg, 2010).

As a result of this theoretical reflection about coping, the concept of coping flexibility has emerged as a critical aspect to understand the relationship between stress and psychological outcomes. It is broadly defined as the ability to modify coping responses according to situational demands (Cheng, 2001). Numerous authors describe coping flexibility as a form of intra-individual variability in the utilization of various coping strategies to adjust to life changes (Cantor & Fleeson, 1994; Chiu, Hong, Mischel, & Shoda, 1995). Theoretically, the concept derives from Plasticity Theory (Huxley, 1958) which assumes that adaptation to changing environments requires the ability to utilize flexible reactions. In a review of the literature, Kashdan and Rottenberg (2010) identified flexibility as a vital component of health and adjustment across a variety of settings. Since the early ‘90s, coping flexibility has been associated with enhanced well-being and greater success in facing stress (Lester, Smart, & Baum, 1994), in addition to decreased anxiety levels and symptoms severity (Cheng, 2003). Coping flexibility also predicted low level of depression (Kato, 2012, 2015) and enhanced quality of life among college students (Cheng, 2003) in Chinese and Japanese samples. Similarly, Gan, Shang, and Zhang (2007) conducted a study on burn-out among Chinese college students and identified that depressed individuals are less able to adapt their coping strategies to the situation. In studies focusing on resilience, Western individuals characterized by a high level of resilience appeared to be more able to adjust their emotional responses to changing emotional and environmental stimuli (Waugh, Thompson, & Gotlib, 2011). From these studies, which have been conducted both in Western and Eastern countries, coping flexibility appears to contribute to psychological well-being, as confirmed by the fact that individuals attending a coping flexibility intervention reported a reduction in depression and increased abilities in managing work stress (Cheng, Kogan, & Chio, 2012).

Coping flexibility therefore has attracted significant interest across disciplines and cultures. However, limited information is available about the role culture has in contributing to the differential coping abilities, since the research to date has seemed more interested in the theoretical definition of coping flexibility rather than investigating the role of cultural factors. In the literature, numerous are the conceptualizations used when approaching the concept to the extent that, in a recent meta-analysis, Cheng, Lau, and Chan (2014) identified five main models of coping flexibility. These are broad repertoire, balanced profile, cross-situational variability, strategy-situation fit, and perceived ability. The broad repertoire model represents an initial perspective on coping flexibility influenced by the work of Pearlin and Schooler (1978). It is based on the assumption that coping repertoire characterized by numerous strategies contributes to positive appraisal of stressful events. Another conceptualization, balanced profiles, states that coping flexibility is represented by the utilization of a balanced range of coping strategies, as different types

of coping are implemented (Kaluza, 2000). When assuming a situational perspective, a cross-situational view of coping flexibility supports that coping-flexible individuals are able to adjust their strategies across stressful events (Murphy, 2001; Thompson, 2000; Westman & Shirom, 1995; Williams, 2002). Similar to the cross-situational variability view is the strategy-situation fit model, which sees variability in the coping responses as effective based on situational demands. Differently from the previous four conceptualizations, the perceived ability model is characterized by a phenomenological approach: coping flexibility is assessed relying on the individual's perception of being able to use different coping strategies as a response to environmental changes (Boerner, 2004; Slangen-de Kort, Midden, Aarts, & van Wagenberg, 2001). From the analysis conducted by the authors, only this last definition contributed to moderate effect sizes in the articles included in the meta-analytic review (Cheng et al., 2014).

Among the authors that have adopted this definition of coping flexibility, Bonanno, Pat-Horenczyk, and Noll (2011) have applied the perceived ability definition in the context of potentially traumatic events. They stated that in order to cope effectively with potentially traumatic events, two coping processes are involved: Forward Focus and Trauma Focus. The Forward Focus coping is supported by the ability of the individual to be distracted by the events and to remain focused on his/her goals. The Trauma Focus is described as the ability to refrain from social interactions, focus on the event and its emotional and cognitive significance. Results to date indicate that both coping processes are critical to promote the individual's adjustment (Bonanno, Pat-Horenczyk, et al., 2011; Galatzer-Levy, Burton, & Bonanno, 2012).

#### THE PERCEIVED ABILITY TO COPE WITH TRAUMA (PACT) SCALE

The PACT scale (Bonanno, Pat-Horenczyk, et al., 2011) is an instrument developed to examine coping behaviors in response to potentially traumatic experiences (PTE). In particular, the authors clearly stated that they had intentionally recruited and compared trauma exposed students from a university in Israel (terrorist violence) and American college students; the absence of differences in the coping strategies and flexibility scores between the groups suggests that the ability to flexibly adjust coping behaviors is more influenced by the individual characteristics of the subjects rather than the exposure to potential traumatic events. The questionnaire is composed by 20 items which ask participants to rate their ability to use different coping strategies on a 7-point scale (1 = *not at all able*, 7 = *extremely able*). Previous factor analysis (Bonanno, Pat-Horenczyk, et al., 2011) indicated the presence of two subscales: Forward Focus and Trauma Focus. Forward Focus (12 items,  $\alpha = .91$ ) was identified by the authors as the component that assesses coping abilities related to maintaining plans and goals, attending to the needs of others, thinking optimistically, remaining calm, reducing painful emotions, and being able to laugh. On the contrary, the Trauma Focus subscale (eight items,  $\alpha = .79$ ) explores the ability to fully experience the emotional and cognitive significance of a stressful and potentially traumatic event. In this case the individual is expected to withdraw from social interactions, revise his/her goals and plans, and think realistically. A single coping flexibility score is computed combining the sum and discrepancy scores into a single variable. The calculation involves three steps: in the first passage a sum coping ability score is created, then a polarity score is calculated as the discrepancy between Forward and Trauma Focus subscales. Finally, a flexibility score is obtained as total

coping ability minus coping polarity (Bonanno, Pat-Horenczyk, et al., 2011). The initial validation study confirmed convergent, discriminant, and incremental validity of the scale. Both subscales were independently associated with better adjustment, and each scale moderated the impact of trauma exposure. The single flexibility score also moderated trauma exposure.

## THE PRESENT STUDY

Aim of the present study is to examine the factor structure of the PACT scale in an Italian sample. To reach this goal, authors decided to collect data from a sample that shared similar characteristics with the individuals involved in the validation study by Bonanno, Pat-Horenczyk, et al. (2011). Participants were recruited among college students not directly exposed to potentially traumatic events, even though they potentially presented high levels of distress as evidenced by scores recorded in the literature (Freire, Del Mar Ferradás, Valle, Núñez, & Vallejo, 2016).

In particular, we investigated whether the two factors which emerged in the original version of the scale are maintained when the instrument is administered in the present sample. While it was hypothesized that the two factor structure would have been confirmed — since the original instrument did not highlight cultural variations in coping flexibility — we also anticipated that there may have been differences in the factor loading of items that were mostly influenced by cultural characteristics. In order to reach this goal, a confirmatory factor analysis was conducted. This study therefore contributes to extending our knowledge about the application of coping flexibility in a cultural context different from the one where the measure was initially developed and tested.

## METHOD

### Participants and Procedures

Data for the present study were collected from a self-administered survey of young adults recruited through a snowball sampling approach in a metropolitan university in Northern Italy. Students from the BA and MA in Psychology program were invited to participate. Those who were interested in the study received an introductory cover letter, informed consent form, and the survey materials, which were completed during a session of their courses. Then, students were asked to involve in the study peers and acquaintances who meet the inclusion criteria. Potential participants then completed the instrument during a separate appointment on campus.

The cover letter explained that participation to the study was voluntary and that their responses would be kept confidential and anonymous. Institutional Review Board approval was obtained. Each participant completed the required informed consent form. The inclusion criteria for the study mandated that participants were: 1) 18 years old or older; 2) younger than 35 years of age; and 3) able to understand and speak Italian.

The final sample consisted of 450 graduate subjects, mostly women (79.4%), with a mean age of 23.34 years ( $SD = 3.92$ , range = 19-35 years of age). The majority of the sample (63%) were students at the time of the study: 80% were students in the Department of Psycholo-

gy, the remaining 20% were students from Economy, Law, and Engineering. Approximately one third of the sample (29.5%) was employed and 7.5% was looking for a job. Overall, 44.2% of the sample had a college degree or a doctoral degree, 54.7% had a high school diploma, and the remaining 1.1% a middle school diploma.

### Measure

First of all, the research team consulted with the authors of the PACT scale (Bonanno, Pat-Horenczyk, et al. 2011) to examine the meaning of the items included. Then, the instrument was translated and, afterward, back translated by two members of the research team and by an English native-speaker fluent in Italian. After an interactive adaptation process (translation, back translation, comparison between the original and back-translated version), a final Italian version was obtained. The 20 items are positively formulated, with higher scores indicating greater ability to use the coping strategies included in the Forward Focus (Items 1, 2, 3, 4, 5, 8, 9, 13, 15, 16, 17, 18) and Trauma Focus (Items 6, 7, 10, 11, 12, 14, 19, 20) subscales. Subjects were invited to think about the coping strategies they would have been able to activate in response to a stressful situation.

### Data Analysis

The analysis conducted can be summarized in four main steps. Descriptive statistics of the 20 items included in the original PACT scale were examined (means, skewness, and kurtosis) to determine the normality of the data. In the second step, the authors conducted a confirmatory factor analysis (CFA) with the goal to test the original two-factor structure of the scale. Because the original two-factor structure was not confirmed, as several authors had done, the dataset was randomly split and an exploratory factor analysis (EFA) was performed on the first subgroup of subjects ( $N = 200$ ), approximately half of the sample (third step) (see Berzonsky et al., 2013; see also Kupeli et al., 2015). The EFA, using principal axis factoring and promax rotation, was conducted with SPSS version 22. The Kaiser-Meyer-Olkin (KMO) measure was reviewed to test the adequacy of the sample and Bartlett's Sphericity Test was performed to examine the correlation among items. A fourth step involved a CFA of the model identified from the EFA on the second subgroup of 250 remaining participants using structural equation modeling (SEM; Kline, 2004). We used maximum likelihood (ML) estimation with robust standard errors. Items were freely estimated, factor variances were fixed to 1, residual covariances were fixed to 0, and the factors were allowed to covary. The CFA was evaluated by the overall goodness-of-fit of the models tested and by the value and significance of each parameter in the model (Byrne, 2001). Following Hu and Bentler's (1999) recommendations, a model is considered to fit the data if the  $\chi^2$  is non-significant. However, because the  $\chi^2$  is known to be too sensitive to sample size, it was divided by a sample size parameter ( $df$ ) to control this dependence ( $\chi^2/df$ ). To assess the adequacy of the models fit, the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were also examined. Chi-square,  $\chi^2/df$ , and RMSEA are absolute fit indices and test how well the a priori model fits the sample data; instead the CFI is an incremental fit index and compares the chi-square value to a baseline model (McDonald & Ho, 2002). The  $\chi^2/df$  equal to or

lower than 2, RMSEA value equal to or lower than .08, and the CFI value equal to or higher than .90 indicate a good model fit (Byrne, 2001). The parameters were tested using *t*-test, which verifies the hypothesis that a parameter is equal to zero. Modification indices were also used to evaluate the adequacy of adding a free parameter where it was not required by the theoretical model. AMOS version 22 was used. Modification indices (MIs) and theoretical considerations were implemented to identify a well-fitting model and every single model was re-estimated after modifications from the original model.

## RESULTS

Table 1 shows the descriptive statistics of the 20 items of the original PACT scale on the whole sample ( $N = 450$ ). Item 3 (“Look for the silver lining”) and Item 9 (“Let myself fully experience some of the painful emotions linked with the event”) have the lowest mean response. This can be associated with the fact that there is no clear translation of the expression “silver lining” (Item 3) in the Italian vocabulary and because our participants may have found it difficult to cope with the painful emotions associated with a stressful event (Item 9). All the 20 items have skewness and kurtosis below 1, indicating that they have a relative normal distribution.

TABLE 1  
PACT scale (original 20-item model): Descriptive statistics

|         | <i>M</i> | <i>SD</i> | Skewness | Kurtosis |
|---------|----------|-----------|----------|----------|
| Item 1  | 4.20     | 1.43      | −0.14    | −0.57    |
| Item 2  | 4.54     | 1.63      | −0.38    | −0.84    |
| Item 3  | 3.68     | 1.69      | 0.11     | −0.88    |
| Item 4  | 4.00     | 1.54      | 0.04     | −0.68    |
| Item 5  | 4.21     | 1.45      | −0.05    | −0.54    |
| Item 6  | 4.22     | 1.74      | −0.00    | −0.95    |
| Item 7  | 4.87     | 1.91      | −0.53    | −0.98    |
| Item 8  | 4.35     | 1.64      | −0.11    | −0.81    |
| Item 9  | 3.68     | 1.39      | 0.25     | −0.26    |
| Item 10 | 3.92     | 1.49      | 0.10     | −0.50    |
| Item 11 | 4.05     | 1.43      | 0.03     | −0.50    |
| Item 12 | 5.19     | 1.53      | −0.64    | −0.25    |
| Item 13 | 4.09     | 1.45      | 0.04     | −0.53    |
| Item 14 | 4.40     | 1.54      | −0.25    | −0.64    |
| Item 15 | 4.28     | 1.49      | 0.03     | −0.68    |
| Item 16 | 4.52     | 1.65      | −0.24    | −0.94    |
| Item 17 | 4.12     | 1.56      | −0.10    | −0.77    |
| Item 18 | 3.98     | 1.61      | 0.03     | −0.81    |
| Item 19 | 4.82     | 1.64      | −0.47    | −0.74    |
| Item 20 | 4.33     | 1.61      | −0.06    | −0.79    |

When the original two-factor structure (Model 1) was tested through CFA, the model did not fit the data (Table 4) and the Trauma Focus variance estimate was nonsignificant. For this reason, an EFA was conducted on a randomly selected group of participants ( $N = 200$ ) to identify a factor structure that would be acceptable for the present data. The Kaiser-Meyer-Olkin value was very good ( $KMO = .80$ ) and Bartlett's Sphericity Test was significant (approximative  $\chi^2 = 1357.90$ ,  $df = 153$ ,  $p < .001$ ) (Hutcheson & Sofroniou, 1999). In accordance with the strategy implemented by Bonanno, Pat-Horenczyk, et al. (2011), we used a principal axis extraction method and a promax rotation (factor correlation allowed). A scree plot of eigenvalues suggested that, just like the original contribution, a two-factor solution would adequately describe the data. The 20 items two-factor structure explains 33.71% of total variance (Table 2). The correlation between Factor 1, Forward Focus, and Factor 2, Trauma Focus, is relatively low (.23). However, Item 10 and Item 11 have very low factor loadings in both of the two factors: respectively .36 (Factor 2) and  $-.17$  (Factor 1) for Item 10; .32 (Factor 2) and .00 (Factor 1) for Item 11. These items were therefore excluded.

TABLE 2  
Exploratory factor analysis of the PACT scale (20 items, two factors): Factor loadings

|         | Factor        |              |
|---------|---------------|--------------|
|         | Forward Focus | Trauma Focus |
| Item 3  | <b>.78</b>    | $-.14$       |
| Item 9  | <b>.72</b>    | .01          |
| Item 8  | <b>.64</b>    | $-.10$       |
| Item 14 | <b>.64</b>    | .16          |
| Item 4  | <b>.64</b>    | $-.26$       |
| Item 17 | <b>.62</b>    | .08          |
| Item 13 | <b>.58</b>    | $-.09$       |
| Item 18 | <b>.58</b>    | .08          |
| Item 15 | <b>.56</b>    | .24          |
| Item 1  | <b>.51</b>    | $-.14$       |
| Item 5  | <b>.49</b>    | $-.10$       |
| Item 2  | <b>.45</b>    | .16          |
| Item 16 | <b>.42</b>    | .35          |
| Item 6  | $-.12$        | <b>.66</b>   |
| Item 12 | .15           | <b>.55</b>   |
| Item 20 | $-.06$        | <b>.52</b>   |
| Item 19 | $-.06$        | <b>.48</b>   |
| Item 7  | .02           | <b>.47</b>   |
| Item 10 | $-.17$        | <b>.36</b>   |
| Item 11 | .00           | <b>.32</b>   |

Note. Bold numbers indicate factor loadings of the items on the Forward or Trauma Focus factor.



A final two-factor structure with 18 items emerged (Model 2), with a percentage of variance explained of 36.50%. Factor 1, Forward Focus, explained 26.70% of the variance and included all the items originally listed in this subscale plus Item 14 (Table 3), which was originally listed in the Trauma Focus subscale. As the factor loading was registered only on the first factor, and given that the item did not appear to be spurious, it was decided to retain the item in the scale. This decision was motivated by the desire to understand the underlying theoretical or cultural motivation for the different distribution of items. Overall factor loadings ranged from .41 (Item 16) to .79 (Item 3). The reliability of Factor 1 is very good ( $\alpha = .87$ ). Factor 2, Trauma Focus, explained 9.80% of the total variance and included five of the six items that were originally listed in the subscale, with factor loadings ranging from .51 (Item 12 and Item 7) to .71 (Item 6) (see Table 3). The reliability of Factor 2 is acceptable ( $\alpha = .70$ ).

TABLE 3  
Exploratory factor analysis of the PACT scale, Model 2 (18 items, two factors): Factor loadings

|         | Factor        |              |
|---------|---------------|--------------|
|         | Forward Focus | Trauma Focus |
| Item 3  | <b>.79</b>    | -.15         |
| Item 9  | <b>.73</b>    | -.02         |
| Item 8  | <b>.65</b>    | -.10         |
| Item 14 | <b>.63</b>    | .16          |
| Item 17 | <b>.63</b>    | .05          |
| Item 4  | <b>.62</b>    | -.20         |
| Item 13 | <b>.60</b>    | -.12         |
| Item 18 | <b>.56</b>    | .12          |
| Item 15 | <b>.56</b>    | .21          |
| Item 1  | <b>.49</b>    | -.07         |
| Item 5  | <b>.49</b>    | -.09         |
| Item 2  | <b>.44</b>    | .19          |
| Item 16 | <b>.41</b>    | .35          |
| Item 6  | -.16          | <b>.71</b>   |
| Item 20 | -.09          | <b>.55</b>   |
| Item 19 | -.09          | <b>.52</b>   |
| Item 12 | .14           | <b>.51</b>   |
| Item 7  | -.00          | <b>.51</b>   |

*Note.* Bold numbers indicate factor loadings of the items on the Forward or Trauma Focus factor.

Finally, a CFA of the two-factor model identified from the EFA (Model 2) was conducted on the remaining random subgroup of 250 participants. Model 2 was not confirmed, as fit indices were not acceptable (Table 4). Large modifications indices (MIs) were found, suggesting the possibility of correlations between Item 13 and Item 5, Item 1 and Item 4, and again between Item 16 and Item 2. Then, Model 3 was tested, with correlations between errors of Items 5, 1, 16,



and 13, 4, 2, respectively. Since the model fit was improving but not yet adequate, Items 5, 1, and 16 were excluded. This decision was supported by the fact that the meaning of these items was considered to be very similar to Items 13, 4, and 2, respectively. Fit indices improved, but they were still not acceptable (Model 4). Item 3 was then removed because, after the modifications were introduced, it loaded on both factors. A final model (Model 5) that included 14 of the original items was tested, and this model was supported by adequate fit indices (Table 4 and Figure 1).

TABLE 4  
Confirmatory factor analysis: Fit indices PACT structure

|  | $\chi^2$ | $df(p)$      | CFI | RMSEA | 98% CI     | $\chi^2/df$ |
|--|----------|--------------|-----|-------|------------|-------------|
| Model 1 – 20 items. Two-factor<br>(Bonanno, Pat-Horenczyk, et al., 2011)     | 753.17   | 169 (< .001) | .63 | .12   | [.11, .13] | 4.46        |
| Model 2 – 18 items. Two-factor   | 536.80   | 134 (< .001) | .73 | .11   | [.10, .12] | 4.01        |
| Model 3 – 18 items. Two-factor<br>(correlations Items 1 & 4; 5 & 13; 2 & 16) | 370.89   | 131 (< .001) | .84 | .09   | [.07, .10] | 2.83        |
| Model 4 – 15 items. Two-factor   | 231.74   | 89 (< .001)  | .86 | .08   | [.07, .09] | 2.60        |
| Model 5 – 14 items. Two-factor   | 165.80   | 76 (< .001)  | .90 | .07   | [.05, .08] | 2.18        |

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval.

## DISCUSSION

The present study was aimed at testing the factor structure of the Perceived Ability to Cope with Trauma (PACT) scale in an Italian sample. In its original version the questionnaire is organized around a two-factor structure, Forward Focus and Trauma Focus coping behaviors. When tested whether the original factor structure fit the data and whether it was possible to retain the original model in the present sample, the results provided a confirmation of the two-factor model. This is in line with the original conceptualization of coping flexibility as the ability to modify coping responses according to situational demands, which requires a broad repertoire of options (Cheng, 2001). However, some of the original items had to be excluded to maintain an adequate fit. Therefore, the most appropriate factor structure is composed by 14 items instead of the 20 originally used by Bonanno, Pat-Horenczyk, et al. (2011).

This evidence suggests that some items may not capture the coping strategies commonly implemented by individuals within the Italian culture, or that the items included in the scale are difficult to understand in an Italian context. When analyzed closely, these items represent linguistic-propositional transpositions of actions that pertain to the creation of mental images. For example, Item 5 (“Find activities to help me keep the event off my mind”) suggests things that are either inside or outside one’s mind and this transposition is influenced by figurative and non-figurative processes which use the written language; thus representing processes that are difficult to be adequately controlled through the simple translation of the meaning (Bianca, 2009). This may also contribute to a second difference, which pertains to Item 14 (“Face the grim reality head on”).

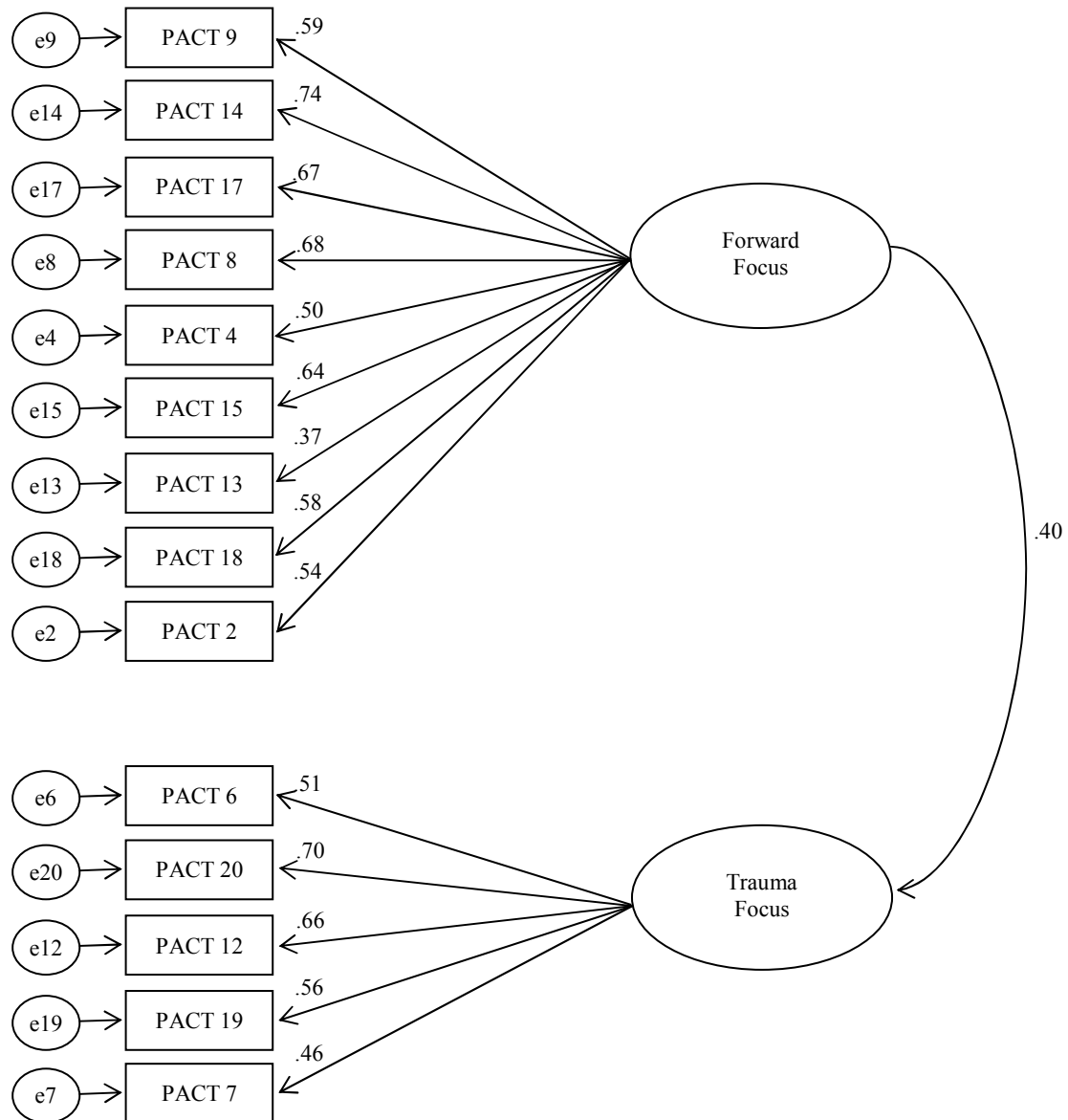


FIGURE 1  
The final factor structure of PACT (standardized estimates).

While this item was originally listed among the Trauma Focus behaviors, in all our analyses it was consistently associated with the Forward Focus factor.<sup>1</sup> It is then possible to hypothesize that in the present sample the transposition (Bianca, 2009) of this item may be culturally affected, and that this does not make possible a clear understanding of the meaning associated in the English version for the Italian respondents.

For the purpose of the current reflection it can be valuable to cite the work of authors investigating “cultural resilience,” a term that considers how the cultural background (i.e., culture, cultural values, language, customs, and norms) supports individuals and communities to overcome ad-

versity (Clauss-Ehlers, 2008; Ungar, 2008). The concept of cultural resilience indicates that individuals and communities can deal with and overcome difficulties not just based on individual characteristics, but also thanks to the support of larger sociocultural factors (Clauss-Ehlers, 2010). Hence, coping efforts may indeed be different among cultures or the translation and adaptation of items to a diverse cultural setting should be able to convey a deep understanding of the coping strategies used in that specific social context.

This leads to consider the cross-cultural translation and adaptation of questionnaires. Methodologically, the present contribution highlights the challenges associated with adapting existing instruments to a different culture. In cross-cultural research two approaches are usually followed: an emic or an etic approach (Tran, 2009; Tran, Nguyen, & Chan, 2016). From an emic perspective, phenomena are considered intrinsically different among cultural groups; therefore only measures developed within that context should be used. An etic approach, on the contrary, states that phenomena are universal in nature and that instruments developed outside a specific population could be applied to another. In our analysis we assumed that coping flexibility would have been similar across the American/Hebrew and Italian population. However, conceptual equivalence and statistical equivalence are indeed different and our analysis revealed that both may have been affected by the manner in which the instrument was translated and administered to the Italian sample.

Some limitations affect our study. First, the sample was relatively small and non-randomly selected. It is possible that by including mainly young adults attending a graduate level psychology course and their peers, our data have been biased by the sample composition. Another consideration pertains the level of distress or, better said, the exposure to potentially traumatic events: although the literature indicates that college students may experience situations or events that increase their levels of stress (Freire et al., 2016), it may be appropriate in future investigations to focus on individuals more at risk. It may also be possible, by selecting youths exposed to potentially traumatic events (like a loss in the family, loss of peers in car accidents, campus violence, etc.), to examine the relationship between the type of event and the psychological reaction to it and to test whether the variance explained by the two factors increases when working with samples at risk. Furthermore, the PACT scale was only translated and back-translated by members of the research team and measurement equivalence of the original and the translated version of the instrument was not tested before conducting the study. On the contrary, Tran (2009) highlights the relevance of the translation stage and identifies five steps to follow, from the creation of a committee, the initial translation and back-translation of the instrument, to the evaluation and pilot testing phases. As only part of these guidelines were followed, the resulting version of the instrument may have been already biased and this aspect may have affected the results of our analysis. Future studies are therefore necessary to improve the translation of the scale and to test again measurement equivalence in the two versions. Until then, our results can only be considered preliminary and need to be confirmed by further analysis. Finally, participants were asked to examine how they would have coped with “a potentially traumatic event.” It would have been interesting to conduct our analysis on specific categories or groups of stressful events to better compare our findings with the results of the authors who developed the original measure.

Despite these limitations, the study contributes to the literature about cross-cultural measurement by examining the application of the PACT scale in an Italian sample for the first time.<sup>2</sup> Specifically, our results indicate that the two-factor structure appears applicable to the pre-

sent sample, but that differences may exist in the way individuals adjust to stressful events across cultures. However, a similar organization of coping styles is maintained and a latent measure of coping flexibility can be calculated. Future studies including larger random samples may provide additional information about the scale and its applicability in the Italian context. Similarly, it would also be necessary to re-consider how the instrument can be adapted to better capture the experience of the Italian population.

#### NOTES

1. Initially, we explained the loading of Item 14 on the Forward Focus factor as a consequence of an inaccurate translation. Hence, the translation of the item was revised and discussed with the creator of the scale. The resulting indication in a preliminary analysis of 300 questionnaires confirmed the result. Finally, a third translation of the item was discussed and approved by the research team and the resulting version was used in the present paper which provided further conformation to this result.
2. The Italian version of the items is available upon request from the first author.

#### ACKNOWLEDGEMENTS

The authors would like to thank Mr. Matteo Malgaroli for his assistance with the translation of the items.

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