The Coping with Identity Threat Scale: development and validation in a university student sample

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Abstract

Identity process theory focuses on the impact of individual and social change on human identity and the coping strategies that are employed in response to it. In this article, the psychometric properties of the Coping with Identity Threat Scale (CITS), which is designed to assess coping styles in response to particular types of identity threat, are described. Four hundred and thirty-one university students completed the CITS and additional measures of identity threat and psychological distress. A factor analysis indicated that the CITS comprises 5 factors (social engagement, concealment/pretense, denial, self-change, and rethinking/planning), which accounted for 56.56% of the variance. These factors reflect distinct coping styles, each of which manifests acceptable to good internal consistency and satisfactory concurrent validity with relevant variables. Multiple regression indicated that threats to the distinctiveness principle were associated with the denial, social engagement and re-thinking/planning coping styles, while threats to self-esteem and self-efficacy were associated with the concealment/pretense and denial coping styles. It is suggested that coping styles are activated in accordance with type of identity threat and that coping styles can be predicted if we understand how particular events and situations are likely to impact identity.

Keywords: identity process theory; identity threat; coping styles; coping with identity threat scale

Introduction

Life events and situations can challenge our sense of identity, forcing us to rethink how we perceive ourselves and how we are perceived by others. Identity process theory (Breakwell, 2015; Jaspal & Breakwell, 2014) was proposed to describe and predict how identity is affected by change and, crucially, how individuals respond to such change. In the face of potential challenges to identity, people draw on a wide range of coping strategies. Rather than using coping strategies fortuitously, it is likely that individuals deploy 'coping styles', that is, clusters of coping strategies that they tend to use in conjunction as a habitual response to particular types of identity threat. Coping styles are generally thought to be consistent across time and context (Coppens, de Boer & Koolhaas, 2010). In this article, we describe the psychometric properties of the Coping with Identity Threat Scale (CITS), which assesses coping styles in response to identity threat. Moreover, we examine the activation of coping styles in the face of particular types of identity threat.

Approaches to coping

Coping is an important variable as effective coping is related to better psychological and physical health outcomes (Steiner et al., 2002). People who cope effectively with change and adversity tend to experience less anxiety, psychological distress and depression than those who do not cope effectively (Ben-Zur, 2009; Mahmoud et al.,

2012). Moreover, they are less likely to engage in health risk behaviors, such as condomless sex, alcohol and substance misuse, internet addiction, self-harm and suicidal behaviors (Brand et al., 2014; Horesh et al., 1996; Steiner et al., 2002). Accordingly, various theories and measures of human coping have been proposed in psychology and they are often included as correlates of behaviors and health outcomes. There have also been several conceptual reviews of coping which critically evaluate existing measurement tools (e.g. Greenaway et al., 2015; Moos & Holahan, 2003).

A key focus of this article is on the robust measurement of coping. Existing measures of coping tend to fall into two broad categories - trait- vs. state-based measures. Trait-based measures include the Miller Behavioral Style Scale (Miller, 1987), the Coping Inventory for Stressful Situations (Endler & Parker, 1994) and the Coping Orientation to Problems Experienced (COPE) (Carver et al., 1989). State-based measures include the Coping Strategy Indicator (Amirkhan, 1990) and the Ways of Coping Questionnaire (Folkman & Lazarus, 1988). On the whole, the trait-based measures tap into styles of coping which are *generally* activated in response to threats, while state-based measures focus on coping responses to *specific* situational stressors.

Measures that are specific to particular situational stressors (state-based), such as academic stress and test anxiety (e.g. Berzonsky, 1992) and in response to racial prejudice (e.g. Thomas, Witherspoon & Speight, 2008) view coping as a dynamic, context-dependent process. It is expected that different kinds of threat will induce different strategies. However, these approaches tend to have limited validity outside of the specific contexts in which they were originally developed. Conversely, trait-based measures, some of which take personality as their starting-point, view individuals as possessing an inherent coping style which is consistent and, thus, can be predicted across situational context (Costa et al., 1996; Ferguson, 2001; Kardum & Krapic, 2001). Trait-based approaches do not tend to acknowledge the situational variation that characterizes threat and coping or the multi-dimensional aspects of coping.

Moreover, there are coping measures that focus on specific types of coping, such as emotion- vs problem-based strategies (Folkman, 1984) and active vs. avoidant strategies (Carver et al., 1989). Examples of emotion-focused strategies are denial and concealment. Those strategies fall into the avoidance type of coping because they are intended to cover up, dissimulate and avoid negative affect associated with threat. Conversely, problem-based strategies are cognitive and enable the individual to plan and to change aspects of the self and of the threatening situation. An example of problem-focused strategies is planning (Sahler & Carr, 2009). Another active coping strategy is social support, whereby people attempt to engage actively with other people and to mobilize others to cope with threat (Breakwell, 1986). These dichotomous approaches may neglect the broad plethora of coping styles and strategies employed – often in conjunction - in response to identity threat.

Aspects of both trait- and state-based measures of coping are likely to be useful in the conceptualization and measurement of coping. For instance, it is plausible that individuals use a range of coping strategies in conjunction (collectively characterized as 'coping styles') but that these coping styles vary in accordance with social context. A particular type of threat may in turn activate a particular coping style. This hypothesis draws on both the trait- and state-based models. Furthermore, research has identified and described a broad range of coping strategies which exceeds the dichotomies of active vs. avoidant and emotion- vs problem-based strategies, respectively (Breakwell, 1986; Timotijevic & Breakwell, 2000). It is

necessary, therefore, to acknowledge a broader range of coping strategies that operate at distinct relational levels (i.e. individual, interpersonal, intergroup) and at various psychological levels (i.e. cognitive, affective, behavioral).

Identity process theory

Identity process theory (Breakwell, 1986; Jaspal & Breakwell, 2014) provides an integrative model of identity construction, threat and coping in the face of change – be it individual or social. The theory has been used to examine identity management and coping in response to many situations of identity change, including unemployment, climate change, migration, coming out as gay, and diagnosis with chronic health conditions (e.g. Breakwell, 1986; Jaspal & Cinnirella, 2010; Murtagh, Gatersleben & Uzzell, 2014; Timotijevic & Breakwell, 2000). The theory proposes that individuals construct their identity by engaging in two social psychological processes:

- *Assimilation-accommodation* refers to the incorporation of new information (such as new identity labels) into the identity structure and the creation of space for it within the structure.
- *Evaluation* refers to the process of attributing meaning and value to the contents of identity.

The two identity processes are in turn guided by various motivational principles, which essentially specify the desirable end-states for identity:

- *Self-esteem* refers to personal and social worth.
- *Self-efficacy* can be defined as the belief in one's competence and control.
- *Continuity* is essentially the psychological thread between past, present and future.
- *Distinctiveness* refers to feelings of uniqueness and differentiation from others.

The first three principles can be thought of as 'inward' principles in that they focus on self-construal – these principles appear to operate primarily at a psychological level. Conversely, distinctiveness can be thought as an 'outward' principle in that it necessarily involves self-construal in relation to other people – we feel distinctive *from other people*.

When these principles are abrogated, for instance by changes in one's social context, the individual experiences identity threat. Identity threat is a habitual experience in that people do frequently experience challenges to their self-esteem, continuity, self-efficacy and distinctiveness. The experience of threat is subjective and will be evaluated differently by people. Although identity threat varies in its duration and severity, it is thought to be aversive for psychological wellbeing (Breakwell, 1986). However, the degree to which one's psychological wellbeing is compromised by threat may be determined by the number of principles curtailed by the threat and one's ability to cope effectively.

A key tenet of identity process theory is that individuals attempt to cope in response to identity threat. A coping strategy is defined as 'any activity, in thought or deed, which has as its goal the removal or modification of a threat to identity' (Breakwell, 1986, p. 78). Coping functions at three relational levels:

- *Intrapsychic strategies* function at individual psychological level. Some can be regarded as deflection strategies in that they enable the individual to deny or reconceptualize the threat or the reasons for occupying the threatening position, while others are acceptance strategies that facilitate some form of cognitive restructuring in anticipation of the threat.

- *Interpersonal strategies* aim to change the nature of relationships with others. The threatened individual may isolate himself/herself from others or feign membership of a social network of which they are not really a member, in order to avoid exposure to stigma. Conversely, some people engage in self-disclosure, that is, they may share their predicament with another individual and exchange confidences.
- *Intergroup strategies* aim to change the nature of relationships with groups. Individuals may join groups of like-minded others who share their predicament. They may create a new social group to derive support or a pressure group to influence dominant ways of thinking.

In practice, individuals experiencing identity threat tend not to rely exclusively on one coping strategy (e.g. denial) or on coping strategies operating at just one level (e.g. intrapsychic). Rather, empirical research in various contexts of identity threat shows that, in seeking to assuage or resolve identity threat, people utilize various coping strategies perceived to be available to them (Jaspal & Cinnirella, 2010; Timotijevic & Breakwell, 2000). In this study, we test the hypothesis that individuals utilize distinct 'coping styles'. It is possible that particular clusters of coping strategies are activated because the strategies within them operate coherently and fruitfully in unison. For instance, the strategies of denial and concealment may complement one another given that, if one conceals an identity element that one wishes to deny, one is less likely to be exposed to comments from others about this identity element.

In order to assess coping style, it is important to develop and validate an appropriate measure which captures various levels of coping, includes a broad range of coping strategies and incorporates elements of both trait- and state-based measures. Accordingly, the psychometric properties of the CITS are described in this article. Moreover, in order to examine the activation of coping styles in response to different types of identity threat, the CITS is validated in a sample of university students.

The present study

This study focuses on identity threat and coping among university students because they constitute a population characterized by significant personal and social change. Going to university often coincides with one's transition from adolescence to adulthood. In the United Kingdom (UK), most students move away from the family home and acquire their own accommodation (Papworth, 2013). Moreover, at university, students build new friendships and relationships, enter new social groups, and develop future aspirations in relation to their career (Patton, Renn, Guido & Quaye, 2016). Some feel homesick when moving away from the family home and may face peer pressure, which can challenge psychological wellbeing (Binfet & Passmore, 2016). Furthermore, universities are increasingly diverse contexts with students from a wide range of cultural backgrounds and geographical areas, which means that universities are a context in which difference is encountered - sometimes for the first time (Jaspal, 2015). These situational factors may also represent threats to identity when they disrupt the principled operation of identity processes, that is, their ability to produce adequate levels of self-esteem, continuity, distinctiveness and self-efficacy.

Therefore, using data from a sample of university students, the following hypotheses are tested in this study:

Hypothesis 1: There are distinct coping styles that emerge within the CITS.

Hypothesis 2: Consistent with identity process theory, the more identity principles that are threatened, the greater the psychological distress will be.

Hypothesis 3: Threats to the principles of self-esteem and of self-efficacy will be mostly associated with use of the denial and of concealment/pretense coping styles, while threats to the identity principle such as distinctiveness will be most associated with use of the social engagement and re-thinking/planning coping styles.

Method

Participants

A sample of 431 undergraduate students was recruited on three universities in the Midlands and Southern regions of England, UK. Although English universities are increasingly diverse, with over half of all students choosing to move to another city to study, it was deemed advantageous to include universities in different regions in order to increase also the socio-economic diversity of the sample. For example, one of the universities included in the study had a higher proportion of students from economically disadvantaged backgrounds. Approximately two thirds of the students were studying toward an undergraduate degree in psychology and received course credits in exchange for participation, and a third were recruited in the university library and in other campus settings using a convenience sampling approach and thanked for their time. The former completed the questionnaire online and the latter completed the questionnaire in hardcopy format.

Participants were aged between 18 and 50 years (M=21, SD=3.39). There were 262 females (61%), 167 males (39%), and 2 self-reported non-binary individuals (.5%). Most participants reported British citizenship (N=295, 69%); a quarter reported European Union (EU) citizenship (N=106, 25%); and a small minority reported citizenship of a non-EU country (N=24, 6%). Most respondents were White British (N=237, 55%); followed by White Other (N=95, 22%); African (N=16, 4%); Pakistani (N=13, 3%); and Indian (N=13, 3%); Other Asian (N=11, 3%); White and Asian (N=9, 2%); Other Mixed (N=9, 2%); Other (N=7, 1.6%); Caribbean (N=6, 1.4%); Other Black (N=4, 0.9%); White and Black African (N=4, 0.9%); and Bangladeshi (N=2, 0.5%). In terms of religion, 305 (71%) of participants reported no religion, followed by 68 (16%) who reported Christian religion; 15 (4%) Islam; 13 (3%) Hinduism; 12 (3%) Sikhism; 9 (2%) 'Other' religion; 7 (1.6%) Buddhism; and 2 (0.5%) Judaism.

Measures
Identity Threat
The 6-item Identity Threat Scale was adapted from the Identity Principles Scale (Murtagh, Gatersleben & Uzzell, 2014) and measures the individual's overall perceptions of self-efficacy, self-esteem, continuity, and distinctiveness (the identity principles). Items included "I have not changed in time" (continuity) and "I see myself as someone who has high self-esteem" (self-esteem). The items were measured on a 5-point scale (1=not true of me to 5=very true of me). Items were reversed scored and a mean score provided an overall score of identity threat - the higher the score, the more threatened identity was. The Identity Threat Scale manifested acceptable internal reliability (α=.66). In addition to its use as an overall measure of identity threat, items from the scale can be, and were, extracted to measure threats to particular principles.

Psychological Distress

The 18-item Brief Symptom Inventory (Derogatis, 2001) was used to tap into participants' psychological distress over the past 7 days. Items included physical symptoms of depression, anxiety and stress, e.g. "Faintness or dizziness"; psychological symptoms of anxiety/ panic and stress, e.g. "Feeling no interest on things", "Feeling tense or keyed up", "Spells of terror or panic"; and suicidal ideation "Thoughts of ending your life". Items were measured on a 5-point scale (1=not at all to 5=extremely). A mean score provided an overall score of psychological distress - the higher the score, the more psychological distress. The scale manifested excellent internal reliability (α=.93).

Coping Styles
The 20-item Coping with Identity Threat Scale (CITS) was constructed to measure different coping styles in response to identity threat.

 The first step of the process for developing the scale was to conduct individual interviews with young people regarding their experiences of a specific type of threat, namely being gay and of religious faith, the strategies that they used to cope, and how they described these strategies (Jaspal & Cinnirella, 2010). The same process was repeated in an unpublished focus group study of young university students responding to cultural diversity in the university environment, whose theoretical implications were described in Jaspal (2015). It was deemed advantageous to generate the initial items in the context of distinct contexts (i.e. being gay and of religious faith; coping with diversity in the university setting) and of different types of threat (i.e. to the various identity principles) in order to identify general coping styles.

 On the basis of the results of these studies, focusing on how individuals described their coping styles and how these corresponded to the coping strategies described in identity process theory, a pool of 24 items was created. These items were then piloted with a small sample of 20 participants, and subsequently discussed with members of the research team, each of whom had experience of investigating identity threat, and with the founder of identity process theory to ensure correspondence with the theory. Four items were excluded because of vagueness and uncertainty reported by participants in the pilot study and by members of the research team. The final set of 20 items (listed in Table 1) was then administered to a sample of university students, as described in this article.

 Before completing the scale, participants were presented with the following introduction, which encouraged them to think about events that can cause identity threat (that is, challenges to continuity, self-esteem, self-efficacy and distinctiveness):

> *Some events and situations require you to make changes in your life – some may be positive, others more negative. Some events and situations can make you feel less good about yourself, less in control of situations, and less different from other people. The following questions focus on how you react when events and situations of this kind arise.*

Each of the intrapsychic, interpersonal and intergroup coping strategies outlined in Breakwell's (1986) original statement of identity process theory was captured using a single item. Examples include "I tend to convince myself that it is not really happening" (denial); "I tend to re-think what things really mean" (reconceptualization); " I tend to engage with other people to learn more about relevant issues" (social support); " I tend to pretend to be someone that I am not" (passing); and "I tend to change something minor about myself" (minor change). Items were measured on a 5-point scale (1= not at all true of me to 5=very true of me). The aim was to conduct a factor analysis in order to identify coping styles. On

each factor, a mean score provides an overall score of coping style - the higher the score, the more significant the coping style for that individual.

Statistical analyses

SPSS version 20 was used. A factor analysis with Principal Components Analysis (PCA) with a promax-oblique rotation was performed to test hypothesis 1 and explore the dimensions of coping with identity threat. Pearson-product moment correlations were performed to analyze relationships between dimensions of coping with identity threat, identity threat dimensions and psychological distress, thereby testing hypothesis 2. Assumptions about normality of errors, multicollinearity (VIF<10 and Tolerance >.2), homescedascity (plot of residuals vs. predicted value), linearity, presence of outliers (Cook's distance <1) and independence (Durbin-Watson statistic) were met and hence multiple regressions bootstrapped at 1000 samples were conducted test hypothesis 3.

Results

Factor analysis

The structure of the CITS was examined. All inter-item correlations were positive and significant at the 0.05 level. All items were therefore included in subsequent analyses.

A principal components analysis with promax-oblique rotation was carried out with a cut of 0.4 for the inclusion of a variable in the interpretation of a factor. The Kayser-Meyer-Olkin measure showed a value of .80, demonstrating good sample adequacy for the analysis. The Bartlett's test of sphericity was also statistically significant [$\chi^2(190)=2599.937, p<.001$].

The analysis produced a solution with five factors having eigenvalues greater than one. Those five factors accounted for 56.56% of the variance in the factor space (Factor 1 accounted for 23.74% of the variance; Factor 2 for 13.32% of the variance; Factor 3 for 7.55% of the variance; Factor 4 for 6.79% of the variance; and Factor 5 for 5.16% of the variance) (see Table 1).

Insert Table 1 here

Factor 1 consisted of items 17, 18, 19 and 20, which contribute to a factor of *social engagement*. Factor 2 consisted of items 12, 14, 15 and 16, which focus on *concealment/pretense*. Factor 3 consisted of items 1, 2, 3, 9 and 13, which contribute to a factor of *denial*. Factor 4 consisted of items 4, 5, 6, 10 and 11, which contribute to a factor of *rethinking/planning*. Finally, factor 5 included items 7 and 8, which focus on *self-change*.

Consistent with hypothesis 1, the CITS manifests different styles of coping: concealment/pretense, denial, rethinking/planning and self-change coping styles and also a social engagement coping style.

Internal consistency of the scale

All items of the CITS have item-total correlations equal to and above .30. The Cronbach alpha for the scale was .82 (20 items). The internal reliability of each of the five dimensions of the CITS were acceptable to good, given the small number of items in each sub-scale: social engagement (4 items) α=.77; concealment/pretense (4 items) α=.73; denial (5 items) α=.69; rethinking/planning (5 items) α=.69; and self-change (2 items) α=.74. Also supporting the internal reliability of the scale, the

sub-dimensions of CITS were moderately and positively interrelated with each other (see Table 3).

Descriptive statistics
Please see Table 2 for the descriptive statistics for the main variables of interest, including the subscales of the CITS.

Insert Table 2 here

Construct and concurrent validity
Correlations with identity threat & types of identity threat
Correlations between the subscales of the CITS and identity threat dimensions were examined (see Table 3). The concealment/pretense subscale had a moderate, positive relationship with overall identity threat, and threats to distinctiveness, self-esteem and self-efficacy. This suggested that concealment/pretense strategies were associated with threats to distinctiveness, self-esteem and self-efficacy, as well as overall identity threat.

The social engagement subscale had a negative relationship with overall identity threat, and with threats to distinctiveness, self-esteem and self-efficacy. This suggested that the more people engaged socially with others to cope, the less they reported general identity threat and threats to distinctiveness, self-esteem and self-efficacy.

The denial subscale did not correlate with overall identity threat but correlated weakly and positively with threats to self-esteem and self-efficacy. This suggested that the more participants used denial to cope with identity threat, the more they experienced threats to self-esteem and self-efficacy.

The self-change subscale did not correlate with overall identity threat but did correlate weakly and negatively with threats to distinctiveness, suggesting that the more one coped by self-change, the less one experienced threats to distinctiveness.

The re-thinking/planning subscale did not correlate with identity threat or with threats to the identity principles.

Correlations with psychological distress
Identity threat correlated positively with psychological distress, as did the specific types of identity threat: distinctiveness; self-esteem; and self-efficacy. Consistent with hypothesis 2, this suggests that identity threat is aversive for psychological wellbeing and can be manifested in the form of psychological distress.

It is noteworthy that the CITS subscales also correlated positively with psychological distress. However, social engagement did not correlate with psychological distress. This suggests that these coping styles are activated in response to psychological distress (itself a correlate of identity threat).

Insert Table 3 here

Multiple regressions
Assumptions about multicollinearity (VIF<10 and Tolerance >.2), homoscedascity (plot of residuals vs. predicted value), linearity, presence of outliers (Cook's distance <1) and independence (Durbin-Watson statistic) were met and hence multiple regressions were conducted to evaluate how much each type of identity threat predicts the variances of each coping style.

The independent variables were the types of identity threat (i.e. continuity, distinctiveness, self-esteem and self-efficacy) and the dependent variables were the coping styles (i.e. social engagement, concealment/pretense, denial, rethinking/planning and self-change).

First, the model was statistically significant for the dependent variable of the social engagement coping style. Threats to distinctiveness emerged as a statistically significant predictor of the variance of the social engagement coping style.

Second, the model was statistically significant for the concealment/pretense type of coping. Threats to self-esteem emerged as a statistically significant predictor of the variance of concealment/pretense coping style.

Third, the model was statistically significant for the denial coping style. Identity threats to distinctiveness, self-esteem and self-efficacy all emerged as statistically significant predictors of the variance of the denial coping style.

Fourth, the model was also statistically significant but less strong than the previous models for the re-thinking/planning coping style. Of all the predictors, identity threat to distinctiveness once again emerged as a statistically significant predictor of the variance of the re-thinking/planning coping style.

Finally, the model was not statistically significant for the self-change coping style, suggesting that the different dimensions of identity threat do not statistically significantly predict the variance of the self-change coping style.

See Table 4 for full information.

Insert Table 4 around here

Discussion

The aim of this study was two-fold: first, to describe the development and validation of the CITS (derived from identity process theory) in a sample of university students in the UK; and second, to examine the activation of specific coping styles in response to particular types of identity threat. In this article, the reliability of the five dimensions of the CITS has been demonstrated, as has their concurrent validity with relevant variables. Moreover, the results provide preliminary evidence of relationships between types of identity threat and coping styles.

The Coping with Identity Threat Scale

Identity process theory postulates that, in response to threat, individuals draw on a broad range of coping strategies which operate at intrapsychic, interpersonal and intergroup levels (Breakwell, 1986). The aim of the present study was to understand how the coping strategies operate in conjunction with one another in response to particular types of identity threat. The factor analysis revealed the following five coping styles, that is, clusters of coping strategies that individuals tend to employ in conjunction as a habitual response to identity threat:

- social engagement, which reflects a style of coping that is characterized by engaging socially with groups and mobilizing others in response to identity threat;
- concealment/pretense, which is a coping style that favors hiding aspects of one's identity from other people and inauthentic self-presentation;
- denial, which entails rejection of one's identity;
- rethinking/planning, which reflects a coping style that favors the re-evaluation of one's identity and active engagement with the threat to plan for the future;

- self-change, that is, a coping style which involves actively changing aspects of one's identity in response to threat.

These coping styles include strategies that function at various relational levels (i.e. intrapsychic, interpersonal and intergroup) and at various psychological levels (e.g. cognitive, affective). Social engagement is a coping style that involves engagement with, and the mobilization of, other people in order to cope with identity threat. The other four coping styles seem to be generally self-focused in that they reflect self-consciousness about denying, concealing, rethinking or changing elements of the self.

Moreover, the correlations indicate concurrent validity between the five dimensions of the CITS (i.e. the coping styles) and relevant variables, namely identity threat, particular types of identity threat and psychological distress. Identity threat is discussed in more detail below but it is noteworthy that there were relationships between identity threat and the coping styles, suggesting that they are activated in response to particular types of threat. There were moderate positive correlations between concealment/pretense and rethinking/planning and psychological distress, indicating that these coping styles may have limited efficacy as coping styles, although it is acknowledged that the nature of identity threat is likely to be an important consideration (Jaspal, 2018). Moreover, it is possible that some coping styles are activated progressively, and that effective coping may eventually be achieved. For instance, there is evidence that denial tends to be a first-line coping strategy for some in the immediate aftermath of identity threat, but that this is often replaced by more effective coping strategies as one begins to confront the source of the threat (e.g. Vos & Haes, 2006).

Predicting coping styles

Using the CITS, a series of multiple regressions suggested that coping styles are associated with particular types of identity threat, that is, threats to particular identity principles.

The distinctiveness principle is concerned principally with comparison of the self with others and, thus, it appeared that social engagement (being conceptually described as one's relations with others) was preferred by those facing threats to distinctiveness. However, it was also found that threats to distinctiveness were associated with three of the coping styles that are focused on the self (e.g., denial), as social engagement is likely to lay the foundations for coping at a psychological level. Indeed, it has been found that engagement with social groups leads people to engage more fruitfully at a psychological level by reconstruing existing images of their identity, for instance, which can decrease depression and other poor mental health outcomes (Sani et al., 2012).

Conversely, self-esteem and self-efficacy seem to be more self-focused, and operate at, an intrapsychic level. They therefore tend to require other coping styles that focus on the self rather than social engagement which, conversely, focuses on relationships and engagement with others. Crucially, only threats to self-esteem predicted the variance of concealment/pretense, while threats to self-esteem predicted rethinking/planning.

Various studies have conceptualized self-esteem as a 'superordinate' principle because it is so central to the self-concept and determines psychological wellbeing (Breakwell, 1986; Pyszczynski & Cox, 2004). It is therefore unsurprising that, unlike other types of identity threat, threats to this particular principle appear to activate multiple coping styles, including concealment/pretense, denial and

rethinking/planning. Put simply, an individual experiencing threats to self-esteem will likely employ a variety of coping styles, although mainly those focusing on the self (such as denial), to restore appropriate levels of this identity principle. As indicated above, it is possible that coping styles are employed incrementally with those that are most accessible (and often least sustainable, such as denial) being employed in the first instance, followed by more adaptive coping styles (e.g. rethinking/planning) as they eventually become more available to the individual. Although this study provides some support for this hypothesis, this particular empirical question requires further research, preferably through the use of experimental methods, which can help determine causality.

It is noteworthy that the threats to continuity were unrelated to any of the coping styles in our study. The continuity principle is perhaps one of the least well understood identity principles and is inherently complex, functioning at both intrapsychic and collective levels (Smeekes & Verkuyten, 2005). The lack of effect could be attributed to a measurement issue given that the two items used to measure threats to continuity both focused on the intrapsychic level and, thus, neglected the collective dimension of the principle. This ought to be the focus of future studies on identity threat and coping.

Limitations
There are various limitations which should be addressed in future research. First, the factor structure of the CITS should be validated with additional samples using confirmatory factor analysis. Second, although the items generated for the CITS were developed in distinct populations and contexts of threat, this study draws on data from just one population characterized by change, namely university students. Some of the social psychological stressors faced by individuals from this population were summarized earlier in this article. However, it is possible that other populations (e.g. refugees, older people, and ethnic minorities) may experience distinct types and severity of identity threat. The CITS should therefore be validated in other populations. Third, as noted above, the cross-sectional design of this study precludes assertions about causality and, thus, it is not possible to ascertain the causal effect of threats to particular principles on coping style. For instance, the results show that some types of identity threat were either negatively or positively associated with particular coping styles – denial was negatively associated with threat to distinctiveness but positively associated with threats to self-esteem and self-efficacy. It is possible that, in some cases, the use of a particular coping style had successfully reduced the level of threat to a particular principle and, in others, that a coping style was being deployed in response to a more recent, unresolved threat. Our data provide only correlational evidence. In order to address this empirical question unequivocally, experimental research using sophisticated and ethically sound manipulations of identity threat will need to be conducted. Fourth, future research should focus on the continuity principle of identity which was unrelated to any of the coping styles in this study. It would be beneficial to include an experimental manipulation in future studies to challenge this principle only so that its effects for coping style can be more conclusively isolated.

Conclusions
In contrast to existing measures of coping, the five dimensions of the CITS appear to have adequate psychometric properties. The scale includes a broader range of coping strategies spanning various relational levels and including cognitive, affective and

behavioral types of coping. Moreover, most measures of coping assume either a trait- or state-based approach to coping, suggesting that people are inherently predisposed to cope in particular ways or that context determines the type of coping strategy, respectively. Conversely, the CITS takes the position that some strategies tend to be activated *in conjunction* and, thus, habitually form particular coping styles but that these styles are not necessarily inherent to the individual's personality but rather associated with type of threat to identity. While threats to the apparently inward principles (self-esteem and self-efficacy) tend to be associated with the activation of coping styles that focus on the self (e.g., concealment of self), threats to distinctiveness is related to the deployment of social engagement, focusing on relationships and engagement with others.

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Disclosure statement

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Table 1. Factor Loadings of the Coping with Identity Threat Scale

Coping with Identity Threat Scale Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
17. I tend to think about the groups that I am a member of.	.51				
18. I tend to engage with other people to learn more about relevant issues.	.80				
19. I tend to engage with other people to raise awareness of relevant issues.	.87				
20. I tend to mobilise other people in relation to relevant issues.	.83				
12. I tend to keep myself to myself.		.64			
14. I tend to hide who I really am.		.82			
15. I tend to pretend to be something I am not.		.78			
16. I tend to just do what I believe is expected of me.		.64			
1. I tend to convince myself that it is not really happening.			.84		
2. I tend to look back and think "that was not the real me".			.79		
3. I tend to feel disconnected from myself.			.52		
9. I tend to separate this from other things on my mind.			.56		
13. I tend to reject what other people say.			.43		
4. I tend to re-think what things really mean.				.74	
5. I tend to imagine another reality.				.41	
6. I tend to re-think my priorities.				.45	
10. I tend to start to prepare myself for what I think will happen next.				.79	
11. I tend to re-evaluate things about myself.				.73	
7. I tend to change something minor about myself.					.86
8. I tend to change something fundamental about myself.					.79
Eingenvalue	4.7	2.7	1.5	1.4	1.03
Variance %	23.74%	13.32%	7.55%	6.79%	5.16%

Table 2. Means and standard deviations for the Coping with Identity Threat subscales and the variables of identity threat, types of identity threat and psychological distress

	Mean	SD	Minimum	Maximum
Age	21	.31	18	50
Factor 1: Social Engagement Coping Style	2.68	.90	1	5
Factor 2: Concealment/Pretence Coping Style	2.58	.91	1	5
Factor 3: Denial Coping Style	2.40	.77	1	5
Factor 4: Rethinking/Planning Coping Style	3.20	.76	1	5
Factor 5: Self-Change Coping Style	2.58	.56	1	5
Identity Threat score	3.23	.68	1.3	5
Identity Threat: Continuity	3.86	.94	1	5
Identity Threat: Distinctiveness	2.67	.98	1	5
Identity Threat: Self-esteem	3.43	1.23	1	5
Identity Threat: Self-efficacy	2.90	1.06	1	5
Psychological Distress	20.81	14.92	18	71

Table 3. Correlations between Coping with Identity Threat subscales, identity threat, types of identity threat and psychological distress

	1	2	3	4	5	6	7	8	9	10	11
1.Social engagement		.05	.13*	.31**	.31**	-.22**	-.02	-.23**	-.18**	-.17**	.07
2.Concealment/Pretense			.45**	.36**	.22**	.23**	-.00	.17**	.29**	.22**	.42**
3.Denial				.36**	.33**	.07	-.00	-.02	.15**	.15**	.41**
4.Re-thinking/Planning					.42**	.03	.09	-.07	.07	.01	.28**
5.Self-change						-.04	.08	-.10*	-.03	-.07	.10*
6.Identity threat							.52**	.76**	.74**	.66**	.32**
7.Threat to continuity								.03	.13**	.02	.09
8.Threat to distinctiveness									.49**	.45**	.17**
9.Threat to self-esteem										.56**	.38**
10.Threat to self-efficacy											.33**
11.Psychological Distress											

**p* <.01; **p*<.05

Table 4. Multiple regressions with predictors of types of identity threat for the dimensions of Coping with Identity Threat

Social Engagement

	R^2	F	p	β	S.E.	t	p	Bootstrapped 95% CIs
Model 1	.06	6.68	<.001					
Predictors								
Continuity				.00	.04	.06	.95	-.08, .09
Distinctiveness				-.16	.05	-3.06	.002	-.25, -.07
Self-esteem				-.04	.04	-.99	.32	-.13, .05
Self-efficacy				-.05	.05	-1.04	.30	-.15, .05

Concealment/Pretence

	R^2	F	p	β	S.E.	t	p	Bootstrapped 95% CIs
Model 2	.09	10.47	<.001					
Predictors								
Continuity				-.03	.05	-.55	.62	-.12, .08
Distinctiveness				.03	.05	.52	.60	-.07, .13
Self-esteem				.17	.05	3.79	.001	.08, .25
Self-efficacy				.08	.05	1.59	.14	-.02, .18

Denial

	R^2	F	p	β	S.E.	t	p	Bootstrapped 95% CIs
Model 3	.05	5.62	<.001					
Predictors								
Continuity				-.02	.04	-.43	.71	-.09, .07
Distinctiveness				-.13	.05	-3.01	.005	-.22, -.04
Self-esteem				.10	.04	2.57	.01	.02, .17
Self-efficacy				.10	.04	2.45	.01	.02, .18

Re-thinking/Planning

	R^2	F	p	β	S.E.	t	p	Bootstrapped 95% CIs
Model 4	.03	2.86	.02					
Predictors								
Continuity				.06	.04	1.63	.13	-.02, .15

	R^2	F	p	β	S.E.	t	p	Bootstrapped 95% CIs
Distinctiveness				-.11	.05	-2.54	.02	-.20, -.10
Self-esteem				.07	.04	1.95	.06	4.88, .16
Self-efficacy				.00	.04	.05	.96	-.08, .09
Self-Change								
Model 5	.02	1.84	.12					
Predictors								
Continuity				.08	.06	1.63	.11	-.02, .20
Distinctiveness				-.09	.06	-1.69	.09	-.20, .02
Self-esteem				.02	.05	.47	.64	-.07, .13
Self-efficacy				-.03	.06	-.62	.54	-.15, .09