Identity Leadership Going Global: Validation of the Identity Leadership Inventory (ILI)

across 20 Countries

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Abstract

Recent theorizing applying the social identity approach to leadership proposes a four-dimensional model of identity leadership that centers on leaders' management of a shared sense of "we" and "us". The present research validates a scale assessing this model — the Identity Leadership Inventory (ILI). We present results from an international project with data from all six continents and from more than 20 countries/regions with 5,290 participants. The ILI was translated (using back-translation methods) into 13 different languages (available in the Appendix) and used along with measures of other leadership constructs (i.e. LMX, transformational, and authentic leadership) as well as employee attitudes and (self-reported) behaviors — namely identification, trust in the leader, job satisfaction, innovative work behavior, organizational citizenship behavior, and burnout. Results provide consistent support for the construct, discriminant, and criterion validity of the ILI across countries. We show that the four dimensions of identity leadership are distinguishable and that they relate to important work-related attitudes and behaviors above and beyond other leadership constructs. Finally, we also validate a short form of the ILI, noting that is likely to have particular utility in applied contexts.

Keywords: leadership; social identity; identity leadership inventory; cross-cultural validation

Practitioner Points

- the Identity Leadership Inventory (ILI) has a consistent factor structure and high predictive value across 20 countries and can thus be used to assess a leader's ability to manage (team and organizational) identities in a range of national and cultural contexts.

- Identity leadership as perceived by employees is uniquely related to important indicators of leadership effectiveness including employees' relationship to their team (identification and perceived team support), well-being (job satisfaction and reduced burnout), and performance (citizenship and innovative behavior at work).

- the ILI can be used in practical settings to assess and develop leadership, for instance in 360 degree feedback systems.

- the short form of the ILI is also a valid assessment of identity leadership and this is likely to be useful in a range of applied contexts (e.g., those where there is a premium on cost and time or when comparing multiple leaders or multiple time points).

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(ILI) across 20 Countries

The social identity approach to leadership asserts that leadership is a social influence process that is structured by people's social group memberships. This approach is informed by almost four decades of research inspired by twin social psychological theories — social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). It argues that while people can gain a sense of who they are (a sense of self and identity) by thinking of themselves as "I" and "me" and reflecting on what makes them unique, special, and different from other individuals (in terms of personal identity), they also often gain a sense of identity by thinking of themselves as "we" and "us" in terms of the social groups that they are members of and by reflecting on what makes "us" unique, special, and different from other groups. For example, Antonia can derive a sense of who she is by reflecting on her personal, idiosyncratic characteristics and the attributes that make her different from Jack and Maria (i.e., her personal identity); however, she can also derive a sense of self by reflecting on what she has in common with Jack and Maria (as "us psychologists"; i.e., her social identity) and on what makes "us" unique and different from other groups (e.g., "them biologists").

This distinction between personal and social identity is important because theory and evidence suggest that when people internalize a sense of shared group membership, this leads to a qualitative change in the self that is the basis for a range of group and organizational behaviors (Ashforth & Mael, 1989; Ellemers, 2012; Turner, 1982). For instance, meta-analytic evidence indicates that when we perceive ourselves and others to share a sense of collective identity, then this is the basis not only for job satisfaction and motivation, but also for in-role performance and organizational citizenship behaviors (Lee, Park, & Koo, 2015; Ng, 2015). As a large body of research suggests, a sense of shared collective identity is also a key

determinant of social influence (Turner, 1991), and therefore fundamental for leadership and followership.

The Social Identity Approach to Leadership

The social identity approach to leadership argues that leadership does not operate in a vacuum but centers on a sense of shared group membership between leaders and followers within a given social context (e.g., as members of a team, department, or organization). Here, the more leaders are attuned to the social identity that they share with followers (a sense of "we-ness"), the more influential and trusted they are likely to be. Many studies have supported these ideas and shown, for instance, that the more prototypical leaders are of the group that they are leading (i.e. the more they are seen to embody the norms, values, and goals of their group), the more effective they are — for example, being trusted more, securing more follower support, and having greater leeway to make decisions (Barreto & Hogg, 2017; Hogg, van Knippenberg, & Rast, 2012; Platow, Haslam, Reicher, & Steffens, 2015; Turner & Haslam, 2001; van Knippenberg, 2011).

However, leadership does not only rest on perceptions of a leader's group prototypicality ("being one of us"). Indeed, proponents of the social identity approach have argued that theory in this area needs to move beyond considerations only of a leader's prototypicality to also consider other ways in which leaders can achieve influence through attention to their ingroup and its identity (van Dick & Kerschreiter, 2016). In particular, social identity researchers have argued that leaders need not only to represent the groups they want to lead but also to actively shape and manage the identities of those groups. In line with this reasoning, in addition to identity prototypicality, Haslam, Reicher, and Platow (2011) have identified three further dimensions of identity leadership: identity advancement ("doing it for us"), identity entrepreneurship ("crafting a sense of us"), and identity impresarioship ("making us matter"). An increasing body of empirical evidence speaks to the importance of each of these three dimensions for effective leadership (e.g., Haslam et al., 2001; Reicher,

Haslam, & Hopkins, 2005; Steffens, Haslam, Kessler, & Ryan, 2013; van Dick, Hirst, Grojean, & Wieseke, 2007; for an overview, see also: van Dick, & Kerschreiter, 2016). However, previous research has mainly used either experimental or qualitative methods to test these ideas and until recently there has been no standardized and validated assessment tool to support this expanded model of identity leadership.

Validating an Expanded Four-Dimensional Model of Identity Leadership

To address this lacuna, Steffens, Haslam, Reicher, Platow, Fransen, Yang, Ryan, Jetten, Peters and Boen (2014) developed the *Identity Leadership Inventory* (ILI). This 15-item scale assesses all four dimensions of identity leadership (i.e. identity prototypicality, identity advancement, identity entrepreneurship, and identity impresarioship; with four items for all dimensions except for impresarioship which is measured with three items). Moreover, initial evidence of the ILI's construct validity was obtained from four studies in which exploratory and confirmatory factor analyses showed that the ILI differentiated between these four underlying dimensions. This research also showed that different ILI dimensions predict key leadership outcomes including perceived leader influence, team identification, team confidence, and cohesion. The four-dimensional model developed by Steffens, Haslam, Reicher et al. (2014) is represented schematically in Figure 1, while the formal definitions of each dimension, some illustrative references, and the items that assess each dimension are presented in Table 1.

To date, the ILI has been used in several studies that have employed either the full inventory or a short four-item form or used only one specific subscale (as suggested by Steffens, Haslam, Reicher et al., 2014). For example, Steffens, Haslam, Kerschreiter, Schuh, and van Dick (2014) found that the extent to which employees perceived their direct supervisor to be engaging in identity entrepreneurship (by creating a sense of "us") was associated with them reporting less burnout, greater work engagement, and perceiving their teams to be performing better. Other research shows that followers see leaders as more

authentic and are also more likely to support them to the extent that those leaders are true to the group in being seen to be acting as identity champions who are advancing the *collective* interests of the group (Steffens, Mols, Haslam, & Okimoto, 2016). Other research by Thomas, Amiot, Louis, and Goddard (2017) examined identity leadership as a pathway to collective self-determination and found that the more leaders are perceived to engage in identity leadership, the more followers perceive that they have ownership of other group members' actions and outputs in ways that fostered a sense of collective self-determination.

Yet despite the strong theoretical rationale for the ILI and promising results that have emerged from initial studies in which it has been used to shed light on particular phenomena, there remain several important unanswered questions. In particular, these concern (a) the generalizability of the model across countries, (b) the internal integrity and construct validity of the ILI, (c) its criterion validity as a predictor of key organizational behaviors, and (d) its incremental validity over and above established models of leadership (e.g., LMX, transformational, and authentic leadership). We will outline these limitations concerning the state of the science in turn.

First, Steffens, Haslam, Reicher et al. (2014) developed the ILI using data from samples from three different countries (the US, China, and Belgium). While this provides an initial indication of the instruments' general validity, the countries from which participants have been sampled are clearly limited and the extent to which the instrument retains construct validity across a larger set of cultural contexts remains to be established.

Second, although these initial scale development studies provided some evidence of the validity of the ILI's operationalization of the four-dimensional model of identity leadership, the fit of this model was not always strong. On the plus side, following scale development procedures outlined by Schriesheim, Powers, Scandura, Gardiner, and Lankau (1993), quantitative analysis provided evidence of construct validity in showing that each item mapped more clearly onto the definition of the dimension that it was expected to load

onto than onto any alternative dimension. Likewise, confirmatory factor analyses on the factor structure indicated that the four-dimensional model provided better fit to the data than alternative models. Nevertheless, some of the fit indices provided only moderate fit to the data, indicating there is a need for more extensive testing to validate the ILI's operationalization of the four dimensions of identity leadership.

Third, while previous research has provided evidence of the identity leadership inventory's criterion validity, this has been limited. More specifically, there is evidence that identity leadership is associated with group members' identification, confidence in the group, and cohesion as well as their evaluations of leader influence (Steffens, Haslam, Reicher et al., 2014) but social identity research suggests that issues related to group membership should have far more wide-ranging implications for organizational behavior. In particular, recent meta-analyses by Lee and colleagues (2015) and Ng (2015) indicate that a shared sense of "we" with other members in an organization is a basis not only for individuals' attitudes (e.g., job satisfaction) but also for behavioral outcomes (e.g., their contribution to group goals and organizational citizenship behaviors; for earlier meta-analytic evidence see Riketta, 2005; Riketta, & van Dick, 2005). Indeed, scholars have argued that effective management of a shared sense of "we" and "us" should be a primary determinant of team members' work attitudes and behaviors (e.g., Ellemers et al., 2004; Haslam, 2004). Identification with teams and organizations has thus been shown to relate to a number of variables that are relevant for both the employee's well-being and for the organization's success.

A goal of the present research was therefore to garner evidence of the broader relevance of identity leadership for organizational behavior. In this regard, we identified five constructs against which to test the criterion validity of the ILI that seemed to capture both the range and the thrust of those organizational outcomes which are understood to flow from effective leadership (e.g., following Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014). These were (1) team identification and trust in the leader (proximal criteria that should be sensitive

to whether or not leader is seen as a prototypical team member and is successful in creating a shared team identity), (2) job satisfaction and burnout (as key indicators of employee well-being), and (3) innovative work behavior and organizational citizenship behaviors (as central indicators of employee performance that are largely under their volitional control; see van Knippenberg, 2000). Here, then, we hypothesize that:

H1. The four dimensions of identity leadership will be positively associated with team members' (a) identification with the team, (b) trust in their leader, (c) job satisfaction, (d) innovative work behaviors, and (e) organizational citizenship, but (f) negatively associated with their burnout.

Fourth, we have little knowledge of the extent to which identity leadership explains any unique variance beyond other well established leadership constructs — notably LMX, transformational, and authentic leadership. We chose to examine these three concepts as each has some association with principles of identity leadership. More specifically, first, leader–member exchange theory argues that the group-based relationships between a leader and their followers is important because ingroup followers have a more trusting relationship and more elaborate interactions with their leaders (which result in greater satisfaction and better performance evaluations) than outgroup followers (who interact with their leader on a more formal basis). However, if we can show that the ILI explains variation when controlling for these aspects of ingroup/outgroup differentiation in leaders' one-on-one relationships with followers, we would demonstrate that identity leadership involves more than simply being (seen to be) in the same group as one's followers. Second, transformational leadership theory argues that it is important for leaders to develop and communicate a common vision while also motivating followers to enact this vision. However, controlling for this construct would show that identity leadership involves more than simply being a visionary leader. Finally, authentic leadership theory argues that a leader needs to live and act in ways that accord with their own values and standards, thus influences employee proactivity and reflects perceptions

of effective leadership (Zhang, Song, Wang, & Liu, 2018). However, controlling for these aspects of leadership would show that identity leadership involves more than simply being true to oneself. Accordingly, if we can demonstrate that the ILI explains variation in criterion variables when also controlling for these three constructs, this would provide a much stricter test of its distinctive contribution to the field than would be the case had we had chosen concepts that are beyond the nomological and analytical scope of identity leadership.

At the same time, it should be noted that addressing questions of incremental criterion validity of this nature is uncommon in scale development and validation research. That is, few studies test incremental criterion validity by examining the relationship between the scale in question and outcome criteria while controlling for other relevant constructs. Moreover, when this has been done with leadership scales, researchers typically include just one (or occasionally two; e.g., Kerr & Jermier, 1978, Liden, Wayne, Zhao, & Henderson, 2008)) other leadership constructs. We are not aware of a study that has assessed three (or more) other leadership constructs beyond the focal construct being validated. We therefore believe that by controlling for LMX, transformational, and authentic leadership simultaneously, the present analysis provides an unusually rigorous test of the criterion validity of the ILI.

It is also the case that while the leadership scales that researchers have previously developed tend to reflect important theoretical distinctions and aim to assess perceptions of different behaviors, these scales nevertheless tend to be highly intercorrelated (with rs mostly in the range of .50 to .90; Brown, Treviño, & Harrison, 2005; Kalshoven, Den Hartog, & De Hoogh, 2011; Liden et al., 2008; Riggio, Zhu, Reina, & Maroosis, 2010; van Dierendonck & Nuijten, 2011; Yukl, Mahsud, Hassan, & Prussia, 2013; for reviews, see Banks, McCauley, Gardner, & Guler, 2016; Hoch, Bommer, Dulebohn, & Wu, 2018). Researchers have suggested, for instance, that perceptions of transformational leadership reflect perceptions of effective leadership (van Knippenberg & Sitkin, 2013; Zhu & Mu, 2016), and there is evidence that perceptions of authentic leadership are determined to some degree by

(experimentally manipulated) identity advancement (Steffens et al., 2016). Similarly, the core components of a good working relationship between leader and follower (as characterized by mutual respect, trust, and obligation within LMX) may be important ingredients in effective leadership but also to some extent outcomes of other forms of effective leadership. We therefore expected that identity leadership would be positively associated with transformational leadership, authentic leadership, and LMX. Yet beyond this expected overlap, given the collective focus of identity leadership around leaders' cultivation of a shared sense of "we" and "us", we anticipate that the relationships between identity leadership and the criteria reviewed above would not be entirely accounted for by these other forms of leadership. More specifically, then, we hypothesize that:

H2. Identity leadership will be positively associated with perceptions of (a) authentic

leadership, (b) transformational leadership, and (c) LMX.

But also that:

H3. Identity leadership will be positively associated with team members' (a)

identification with the team, (b) trust in the leader, (c) job satisfaction, (d) innovative

work behaviors, and (e) organizational citizenship and (f) negatively associated with their

burnout, when also controlling for authentic leadership, transformational leadership, and

LMX.

The Present Research

The main goal of the present research was to explore the ILI's operationalization of an expanded model of identity leadership in a broad range of cultural contexts. For this purpose, we initiated the *ILI-Global Project*. This involved administering the ILI with samples drawn from 20 different countries/regions. The project had three key aims. First, to establish the ILI's *construct validity* by examining the extent to which the instrument's four-dimensional factor structure holds and whether there is also evidence of a higher-order single factor (of identity leadership). Second, to assess the ILI's *discriminant and criterion validity* by

comparing the relationships between scores on its four sub-scales and important work-related attitudes and self-reported behaviors with relationships observed for other well-established leadership concepts — namely transformational leadership, authentic leadership, and the relationship quality between leader and followers (i.e. leader-member exchange; LMX). In this way, third, the project sought also to establish the ILI's *incremental criterion validity* by assessing its relationship with key outcome variables that we expected identity leadership to be related to while controlling for well-established other leadership constructs (as per H3). At the same time, to assess the model's practical utility, we also sought to establish the goodness of fit of the short four-item version of the ILI (as suggested by Steffens, Haslam, Reicher et al., 2014).

Method

Sample and Procedure

The *ILI-Global Project* was conducted by scholars from social and organizational psychology and management sciences. Data collection was centrally organized by the first author and a core research team whose members provided a platform to create an online survey in each country and also coordinated data collection and handling. The aim was to collect data from at least 200 participants in each of 20 countries. This was achieved for 14 countries: Australia ($n = 311$), Chile ($n = 286$), China ($n = 353$), Finland ($n = 307$), France ($n = 286$), Germany ($n = 460$), Greece ($n = 271$), Hungary ($n = 324$), Israel ($n = 308$), Japan ($n = 337$), the Netherlands ($n = 203$), Norway ($n = 329$), South Africa ($n = 291$), and Turkey ($n = 253$) and the continent of North America ($n = 302$, comprising 25 Canadian and 277 US employees). In another three countries we were successful in collecting over 100 complete data sets: Belgium ($n = 141$), India ($n = 196$), and Italy ($n = 169$). In addition, we also included data from countries with fewer participants with a view to maximizing the available data base and testing hypotheses across a larger number of different countries. The final data set thus included responses from participants in the Balkan region ($n = 61$), the French-

speaking part of Belgium ($n = 14$), and Nepal ($n = 88$). The total sample thus included 5,290 participants.

In each country, researchers used snowball techniques to distribute the link to the online survey. The aim here was to gather data from heterogeneous working samples. This aim was accomplished as the total sample comprised participants from all age groups (16.4% 18-25 years; 34.8% 26-35 years; 21.4% 36-45 years; 15.1% 46-55 years; 5.7% over 55 years; 6.6% missing values), and with various amounts of work experience (7.6% less than one year; 19% 1-3 years; 26.9% 4-10 years; 22.3% 11-20 years; 19.8% over 20 years; 4.4% missing values). Roughly half of participants (53%) were female. Tenure with respondents' current organization also varied greatly (19.5% less than one year; 29% 1-3 years; 17.1% 4-6 years; 10.9% 7-10 years; 19.1% over 10 years; 4.4% missing values). Participants worked in a wide range of industries across the private and public sector. Participants' current organization had on average 20,518 employees with a median of 150 but there was a large range in organization size with about 3.8% of the sample working for very small organizations of five or fewer employees and 1.9% working for organizations that employed 100,000 people or more. Table 2 provides an overview of sample characteristics for the total sample and for each country.

Measures

Contributors in each country translated all items for all constructs (except for the countries/regions in which the original English items were used; i.e., Australia, Balkans, India, South Africa, Nepal, and North America) using the standard procedure (see Brislin, 1970) of translation, back-translation, and resolving inconsistencies by discussion. For the ILI in particular, we resolved inconsistencies in correspondence among its original authors. The translated items of the ILI scales are provided in the Appendix.

We first provided participants with the 15-item *Identity Leadership Inventory* developed by Steffens, Haslam, Reicher et al. (2014). Four items measure leader

prototypicality (e.g., "My leader exemplifies what it means to be a member of the group"),

four items measure identity advancement (e.g., "This leader acts as a champion for the

group"), four items measure identity entrepreneurship (e.g., "This leader creates a sense of

cohesion within the group"), and three items measure identity impresarioship (e.g., "This

leader creates structures that are useful for group members"). All items (and all other

measures) referred to participants' immediate supervisor (who had formal responsibility for

the team they worked in). Responses to all items were made on 7-point scales with endpoints

labeled "completely disagree" (1) and "completely agree" (7).

Transformational leadership was assessed using the Global Transformational

Leadership scale (GTL), a 7-item short scale developed by Carless, Wearing, and Mann (2000,

e.g., "My immediate supervisor communicates a clear and positive vision of the future").

Authentic leadership was measured with an 8-item scale based on the ALQ by

Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008). We used two items for each of

the four dimensions (self-awareness: e.g., "My immediate supervisor seeks feedback to

improve interactions with others"; relational transparency: e.g., "My immediate supervisor

says exactly what he or she means"; internalized moral perspective: e.g., "My immediate

supervisor makes decisions based on his/her core beliefs"; balanced processing: e.g., "My

immediate supervisor seeks feedback to improve interactions with others"). Responses on all

items were made on 7-point scales with endpoints labeled "to a very small extent" and "to a

very large extent".

Leader-member exchange was measured with the LMX-7, a 7-item measure

developed by Graen and Uhl-Bien (1995; e.g., "How would you characterize your working

relationship with your leader?"). Responses on all items were made on 7-point scales with

relevant endpoints (e.g., "very effective", and "very ineffective" for the sample item).

Team identification was measured with Doosje, Spears, and Ellemers' (1995) four-item scale (e.g., "I consider myself as part of my team"). Responses on all items were made on 7-point scales with relevant endpoints.

Trust in the leader was measured with the 6-item scale by Podsakoff, MacKenzie, Moorman, and Fetter (1990; e.g., "I have complete faith in the integrity of my supervisor"). Responses on all items were made on 7-point scales with endpoints labeled "completely disagree" and "completely agree".

Job satisfaction was measured with 11 items from the Job Diagnostic Survey (Hackman & Oldham, 1980; e.g., "Generally speaking, I am very satisfied with this job"). Responses on all items were made on 7-point scales with endpoints labeled "completely disagree" and "completely agree".

Innovative work behavior was measured with Janssen's (2000) 9-item scale (e.g., "How often do you generate original solutions for problems?"). Responses on all items were made on 7-point scales with endpoints labeled "never", and "always".

Organizational citizenship behavior was measured with van Dick and colleagues' 5-item scale (van Dick, Grojean, Christ, & Wieseke, 2006). Responses on all items were made on 7-point scales with endpoints "completely disagree" and "completely agree" (e.g., "I am always very punctual", "I help colleagues who have heavy workloads").

Burnout was assessed with the 9-item subscale of Maslach and Jackson's (1981) Burnout Inventory (e.g., "I feel burned out from my work"). Responses on all items were made on 7-point scales with endpoints labeled "never", and "every day".

Analytic Procedure

We conducted four key analyses to address our research questions. First, in order to test the ILI's construct validity (i.e., its internal item loadings and factor structure), we performed confirmatory factor analyses (CFAs) using the lavaan package (Rosseel, 2012)

from the R software (R Core Team, 2013). The CFAs were conducted on the full scale and on the short four-item form on both the entire sample and at the country level.

Second, we assessed measurement invariance between countries with multi-group CFAs following the "step-down" methodology (Brown, 2006) and using the semTools package (Pornprasertmanit, Miller, Schoemann, & Rosseel, 2013). In the first step, we tested whether the basic model structure was invariant across groups (configural invariance; Horn & McArdle, 1992). Multi-group CFAs were conducted in which all parameters were freely estimated across groups in order to establish a baseline unconstrained model. Then, to assess whether the relationships between the items and the latent constructs to which they are associated were similar across different groups, we constrained factor loadings to equality across groups (metric invariance; Horn & McArdle, 1992). In the next step, we constrained item intercepts to equality to test whether items scores are related to latent scores independently of group affiliations and thus whether items scores have the same meaning across different groups (scalar invariance; Steenkamp & Baumgartner, 1998). If metric or scalar invariance were rejected, we assessed less strict invariance hypotheses (the partial metric or the partial scalar invariance respectively; Cheung & Rensvold, 2002). We estimated differences between nested multigroup models using the difference in CFI scores. If the ΔCFI $\leq .01$, the null hypothesis of invariance should not be rejected (Cheung & Rensvold, 2002).

Third, to assess discriminant validity, we conducted CFAs using ILI and other leadership models (i.e., ALQ, LMX-7, and GTL).

Finally, we performed linear multiple regression analyses to test the predictive validity of the ILI in relation to the six other concepts associated with leadership, namely team identification, trust, job satisfaction, innovation, organizational citizenship behaviors and burnout. We used the car package (Fox & Weisberg, 2011) and the lm.beta package (Behrendt, 2014) to assess multicollinearity and obtain beta values, respectively.

Results

Participants with more than 10% of missing values were removed from the analyses. The remaining missing values were computed with the mice package (Buuren & Groothuis-Oudshoorn, 2011). Univariate and Multivariate normality assumptions were assessed by examining skewness and kurtosis using the psych package (Revelle, 2014) and Mardia's multivariate test (Mardia, 1970) with the MVN package (Korkmaz, Goksuluk, & Zararsiz, 2014). Univariate and multivariate patterns indicated that the data were not normally distributed (Kline, 2011). Inter-correlations among the ILI subscales, the ALQ, the LMX-7, the GTL, and six outcomes (team identification, trust, job satisfaction, innovation, organizational citizenship behaviors and burnout) are presented in Table 3.

Construct Validity

Factor structure of the Identity Leadership Inventory (ILI) based on entire sample. We conducted CFA to assess the structure of the ILI in the whole sample. As the data were not normally distributed we used the Satorra-Bentler chi-square which is robust to non-normally distributed data (Satorra & Bentler, 1988). We tested the oblique model (Steffens, Haslam, Reicher et al., 2014) proposing that the ILI is composed of (a) four correlated factors (Model A) along with competitive models including (b) a single-factor model (Model B), (c) a four orthogonal-factors model (Model C), and (d) a four-factor with a higher-order factor model (Model D). In line with Hu and Bentler (1999), Jöreskog and Sörbom (1989) and Kline (2011), we interpreted model fit using the Chi-square (χ^2), the Comparative Fit Index (CFI; Bentler, 1990), the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973), the Root Mean Square Error of Approximation (RMSEA; Steiger, 1990) with a 90% confidence interval, and the Standardized Root Mean Square Residual (SRMR; Jöreskog & Sörbom, 1989). In line with the recommendations of Marsh, Hau, and Wen (2004) and Chen, Curran, Bollen, Kirby, and Paxton (2008), we interpreted global model fit based on the constellation of these indices rather than a universal cut-off value for a particular index.

Table 4 shows that both Model A (the oblique model) and Model D (the higher-order factor model) fit well the data. The chi-square difference test adapted for the Satorra-Bentler chi-square (Satorra & Bentler, 2010) indicates that while Model A is less parsimonious than Model D, the former fits the data better ($\Delta\chi^2$ (2) = 122.95, $p < .001$). However, since this difference is very small given the sample size, the analysis suggests that both models fit the data well and are supported. All indicators of both Models A and D loaded significantly ($p < .001$) on their respective latent factor with standardized regression weights above the .70 threshold (Hair, Black, Babin, & Anderson, 2010; Kolenikov, 2009), ranging from .82 to .93 for both models. Moreover, in Model D, the four factors load significantly on the higher-order factor with factor loadings ranging from .88 to .98. Overall the results indicate that models A and D fit the data well and fit the data better than the two other competitive models.

As the previous analyses revealed a good fit for Model D, we tested whether the data support the existence of a higher-order model following the recommendations of Credé and Harms (2015). The RMSEA-P (McDonald & Ho, 2002) equals .11[1], while both the target coefficient (TC; Marsh & Hocevar, 1985), and the Relative Normed-Fit Index (RNFI; Mulaik et al., 1989) equal .99. These results indicate that Model D provides a good reproduction of the observed covariation among lower-order factors. In addition to the high factor loadings between the first-order factors and the second-order factor (.88 - .98), the average variance extracted (AVE) for the second-order factor equals .88, which is above the 50% threshold (Fornell & Larcker, 1981). Both of these results indicate that the four-factor with higher-order factor model explains most of the variation in lower-order factors. Finally, the average variance of the manifest variables explained by the second-order factor equals 71%. This is well above the 24% that would result when following the .70 rule-of-thumb regarding factor loadings in CFA (Credé & Harms, 2015; Hair et al., 2010; Kolenikov, 2009).

Factor structure of the Identity Leadership Inventory (ILI) at country/region level. In the subsequent analyses, we examine the extent to which both the four correlated

factors model (Model A) and the four factors with higher-order factor model (Model D) fit the

data in each of the 20 countries/regions involved in this study. We conducted CFAs for each

country/region. Results indicate that Model A represents a good fit to the data in 18 countries,

an acceptable fit in Turkey, and a poor fit in Nepal (see Table 5 for fit indices; factor loadings

of the 40 CFAs are available by the first author upon request). Model D represents a good fit

to the data in 17 of the 20 countries/regions. There are negative variance estimates (i.e.,

Heywood cases) in the three remaining countries (Japan, Nepal, and Turkey).

Factor structure of the Identity Leadership Inventory-Short Form (ILI-SF). The

ILI-SF is composed of the four items which load most strongly on their respective factor

(Items 3, 6, 10, and 15; Steffens, Haslam, Reicher et al., 2014). We conducted CFAs to assess

the structure of the ILI-SF in the whole sample and at the country level. The analyses were

similar to those for the whole scale except that the RMSEA was not considered because of its

shortcomings in models with small degrees of freedom (Kenny, Kaniskan, & McCoach, 2014).

Results show that the unidimensional ILI-SF represents a good fit to the data in all countries

except Nepal[2] (see Table 6 for fit indices; factor loadings of the CFAs at the country level are

available by the first author upon request).

Measurement Invariance

Measurement invariance of the Identity Leadership Inventory. Multi-group CFAs

were performed on the ILI across the different combinations of countries. The results

displayed in Table S1 (in the online supplement) indicate that there was evidence of metric

invariance across all combinations of countries[3]. Moreover, results indicate that there was

scalar invariance in 144 combinations of countries out of 171. For the 27 combinations of

countries for which full scalar invariance was not achieved, we sought to estimate partial

scalar invariance. Partial invariance releases non-invariant items while keeping all invariant

ones constrained. Partial scalar invariance was found by releasing the non-invariance

constraint on the intercepts of (only) one or two items in each analysis[4].

Measurement invariance of the Identity Leadership Inventory-Short Form. We conducted multi-group CFAs based on the ILI-SF across the different countries. The results are displayed in Table S2 (in the online supplement) and indicate that there was metric invariance across 154 combinations of countries[5] out of 171. For the remaining 17 combinations, partial metric invariance was obtained by freeing one factor loading. Furthermore, results indicate that there was scalar invariance in 107 combinations of countries and partial scalar invariance in the 47 other combinations. For the 47 combinations of countries for which full scalar invariance was not achieved, partial scalar invariance was obtained by freeing the intercepts of one or two items. Accordingly, it appears that the ILI-SF scale can be used in cross-cultural settings across 19 of the countries included in this study.

Discriminant Validity

To assess discriminant validity, we conducted CFAs with the 15 items of the ILI, the 8 items of the ALQ, the 7 items of the LMX-7, and the 7 items of the GTL. This involved testing different competing models: a single-factor model (i.e., in which all items load on one single 'leadership' factor, thereby indicating low discriminant validity), a four correlated-factors model composed of one factor for each scale (i.e., in which all items from the same scale load together on the same factor, thereby indicating discriminant validity of the different leadership measures — ILI, ALQ, LMX-7, GTL — but no internal differentiation across the four ILI dimensions), and a seven correlated-factors model (i.e., in which the ILI items load on their expected factors and the items of the three other scales load on three different factors, indicating internal differentiation in the four ILI dimensions and discriminant validity in the different leadership measures: ILI, ALQ, LMX-7, GTL).

The results presented in Table S3 (in the online supplement) indicate that the seven correlated factors model fitted the data best. Moreover, the chi-square differences test adapted for the Satorra-Bentler chi-square indicates that it fits the data better than both the single-factor model ($\Delta\chi^2(21) = 5333.10$, $p < .001$) and the four correlated factors model composed of

one factor for each scale ($\Delta\chi^2(15) = 3678.78$, $p < .001$). Results therefore support the discriminant validity of the ILI as well as that of the other leadership concepts measured by the ALQ, the LMX-7, and the GTL.

Predictive Validity

We conducted linear multiple regression analyses to assess the predictive validity of the ILI in relation to the six key outcomes that we assessed: team identification, trust, job satisfaction, innovation, organizational citizenship behaviors and burnout. The results of the six linear multiple regressions are presented in Table 7. Team identification was mainly predicted by the entrepreneurship subscale ($\beta = .30$). Trust was mainly predicted by the advancement ($\beta = .34$), entrepreneurship ($\beta = .25$), and prototypicality ($\beta = .23$) subscales. All ILI subscales predict job satisfaction: advancement ($\beta = .23$), entrepreneurship ($\beta = .21$), impresarioship ($\beta = .14$), and prototypicality ($\beta = .10$). Innovation ($\beta = .21$) was primarily predicted by the impresarioship subscale. Organizational citizenship behavior was mainly predicted by the entrepreneurship subscale ($\beta = .15$) and burnout by the advancement subscale ($\beta = -.22$). These results together with the correlations indicated in Table 3, provide strong support for H1.

Finally, we examined the relationships between the ILI and transformational leadership, authentic leadership, and LMX as well as the relationship between the ILI and the criteria when controlling for these other leadership constructs. In line with expectations, as can be seen in Table 3, the ILI is positively associated with transformational leadership, authentic leadership, and LMX (supporting H2). As a next step, we examined incremental criterion validity. Table 8 provides results of the regression analyses for the dependent variables using the ILI total score as predictor in the second step after inclusion of all three traditional leadership concepts (transformational leadership, authentic leadership, and LMX) in the first step. Even though the four leadership measures are highly correlated, the variance inflation factors for the four measures are below the threshold of 10 (Myers, 1990) which

provides evidence that results are not influenced by issues of multicollinearity. In line with H3, results show that for all variables except burnout, the ILI contributes uniquely to the explanation of variation above and beyond established leadership constructs. More specifically, while all three established leadership constructs explain significant variation in the first step for all dependent variables, the ILI explains additional variation in team identification, trust, job satisfaction, innovation and OCBs above and beyond the other leadership scales in the second step.

Discussion

The results of the *ILI-Global Project* provide strong support for the quality and utility of the Identity Leadership Inventory. Across 20 countries/regions from all six continents and using 14 different languages, the theoretically proposed structure of four dimensions contributing to a higher-order construct of identity leadership fits the data very well. In the total sample and in almost every single country/region (except Nepal) we found two theoretically meaningful factor structures supported by the data. In this way, the data provide good support for the structure proposed by Steffens, Haslam, Reicher et al. (2014) — namely a four-factor correlated model in which the four dimensions of identity leadership are represented as separate factors.

However, we also found empirical support for a higher-order model with a general 'identity leadership' factor. Both models fit the data equally well (and much better than any other alternative model). From a theoretical perspective this suggests that all four dimensions share common ground in that they all revolve around the common notion of managing a shared sense of 'we' and 'us' (in ways suggested by Haslam et al., 2011). And although they each entail different ways of achieving this, this common ground is reflected in the general conception of a leader whose effectiveness derives from his or her ability to engage in (social) identity leadership.

Our tests for invariance across countries provide evidence of metric invariance across all combinations of countries. More specifically, in 144 out of 171 combinations of countries, scalar invariance was found and for the remaining 27 combinations, partial scalar invariance was found. These patterns indicate that the ILI scales can be used in cross-cultural settings across all the countries/regions included in this study with the exception of Nepal. It would clearly be interesting for future research to try to establish why the results for Nepalese respondents were different from those obtained in all other countries. One potential reason for this is that Nepal represents a unique societal context. It is by far the least developed and poorest of all countries that we studied here, and as a society it faces a range of very particular economic, social and political challenges. Future research should seek to assess the role that such factors may have played in our findings, potentially by including an even broader range of countries. In the specific case of Nepal there would also be value in collecting data from a larger sample and using of local language translations along with the English original scale (for English-speaking employees).

The fact that we found evidence for a general identity leadership factor across cultural contexts also speaks to the utility of a short 4-item scale to measure identity leadership. This is of practical relevance because in many research projects as well as in organizational practice it will often not be possible to include the full 15-item scale (e.g., due to time or cost constraints). For instance, if researchers are conducting a diary study in which identity leadership needs to be assessed several times a week, they may require a measure that is reliable and valid but also short and easy to administer. Similarly, in employee opinion surveys that seek to monitor employee morale on many dimensions as well as in research projects that aim to compare the leadership of many different leaders, it may be expeditious to include the short-form ILI. Along similar lines, when the ILI is used to assess leadership within a network and each person has to evaluate the identity leadership of every other person in a team, using the full questionnaire would not be practicable. We do recommend, however,

that where time and space permit, researchers use the full scale as doing so will allow them to better capture the richness and nuance of identity leadership and also to delve deeper into unique aspects of leadership that are explained by its four dimensions.

Finally, the results of regression analyses indicate that the total ILI score explains additional variation — above and beyond the variance accounted for by transformational and authentic leadership as well as LMX — for all dependent variables except burnout. More specifically, all three established constructs explain significant variation in the first step for all dependent variables, but above and beyond this, the ILI explains variation in team identification, trust, job satisfaction, innovation, and OCBs. As we noted in the introduction, it is rare in the scale development literature for researchers not only to explore the construct in which they are interested but also to assay its predictive value against a number of other established concepts. Accordingly, the fact that the ILI explains variation above and beyond these other measures speaks to the uniqueness and importance of identity leadership. At the same time, though, the fact that in some analyses some of the established constructs lose their predictive power in the second step points to potential mediation effects that would be interesting to explore in future studies employing longitudinal and experimental designs.

Limitations and Outlook

All studies have limitations and the *ILI-Global Project* is no exception. First, we need to acknowledge that there is no reason to assume that the participants in each country are representative of the respective country's population. Nevertheless, the heterogeneity both of the full sample and of the samples in each country together with the fact that CFA results are consistent across this heterogeneous sample composition makes us reasonably confident that the results are broadly generalizable to other populations within and beyond the countries and populations under investigation. This confidence is increased by the fact that we tested for invariance of sex and age and did not find any effects for these (suggesting that the patterns

we have observed are very stable) when conducting exploratory multi-group CFAs using the ILI full scale on the full sample.

Second, our data are based on self-report and this may have artificially inflated relationships between variables. At the same time, though, this was an issue that we were sensitive to when selecting established leadership concepts against which to test the ILI's construct and criterion validity. The fact that CFAs in almost all countries demonstrated good fit when the ILI was conceptualized as separate from these other leadership concepts and that the ILI related to five out of the six outcome variables that we included as correlates (above and beyond the three other leadership concepts) makes us confident that common method bias is not driving the results. That said, future research should certainly look to validate the patterns observed here by triangulating results across multiple data sources — for example, by also including behavioral outcomes (e.g., innovation or OCB) assessed by colleagues or leaders and/or by gathering objective data (e.g., of followers' performance or health status). In light of results showing that leadership scales are often found to be highly correlated, we also believe that reliance exclusively on standard scales will provide us with only a very limited picture of the process of leadership, and hence that it is important that such analyses are complemented by studies which shed light on the dynamics of identity leadership by employing a range of methods (including observational, qualitative, and experimental/intervention designs).

Third, the design of the present study is cross-sectional. Accordingly, we are not in a position to make causal inferences about the relationships we have uncovered (Antonakis, Bendahan, Jacquart, & Lalive, 2010). At the same time, though, we have been careful to avoid drawing such inferences in the presentation of our results. Certainly we concede that while identity leadership may exert a positive impact on followers' attitudes and behaviors (as social identity theorizing would suggest; Haslam et al., 2011) it is also the case that the reverse may also be true (e.g., so that well-performing employees encourage leaders to invest

more time in identity-building activities). We would also note that many of the patterns observed above are consistent with those observed in a range of experimental studies in which the manipulation of identity leadership allows for causal inferences to be drawn about its impact on followers (e.g., Haslam & Platow, 2011; Platow et al., 2006; Reicher et al., 2005; Steffens et al., 2013). Nevertheless, there is clearly still scope for future research to confirm some of the novel patterns observed here (e.g., concerning the relationship between identity impresarioship and creativity) using both experimental and longitudinal designs.

Finally, we would point out that the sample sizes for some countries were quite small. This was particularly true in the case of Nepal and the Balkan countries. Recognizing this as a weakness, we hope that one non-trivial contribution of our work is to stimulate further research in these countries.

Conclusion

The *ILI-Global Project* recruited a large and heterogeneous sample of participants from 20 countries/regions speaking 14 different languages to assess the validity of the four-dimensional identity leadership model. The results clearly demonstrate that the ILI can be used — as a full scale, in its short form, or as subscales measuring particular dimensions of identity leadership — to reliably assess followers' perceptions of leaders' ability to create, represent, advance, and embed shared social identity. Indeed, the excellent fit of our models in the total sample and in almost every single country lends support to claims that the ILI is a useful tool with which to explore the dynamics of leadership in a wide range of countries and cultural contexts around the world (Steffens, Haslam, Reicher et al., 2014).

Nevertheless, future research may clearly want to build on the demonstrated utility of the ILI. On the one hand, it might do this by identifying boundary conditions and mediating processes related to the patterns revealed above. On the other hand, it might explore the ways in which development programs can encourage and help would-be leaders to engage more

effectively in identity leadership with a view to securing the energies and enthusiasm of followers (e.g., Haslam et al., 2017).

As Akerlof and Kranton (2010; see also Akerlof, 2011) have argued in their work on identity economics, the "old model" of leadership in which individual actors use their power and control *over* followers is not only costly but also signals mistrust and creates a divide between those who lead and those who are being led. Because it centers on power *through* followers (Turner, 2005), identity-based leadership, they argue, is a much more promising "new" model of leadership. This should not only be true for leadership in business contexts but also in politics, volunteer work, or in fields of education, health care, and sports. In line with Akerlof's urgings, the *ILI-Global Project* signals a willingness amongst researchers around the world to work together to advance and apply this approach to key leadership problems. This, we hope, is a model of constructive identity-focused collaboration that will be emulated in future efforts to address the very pressing leadership challenges that the world faces.

Endnotes

1. Our RMSEA-P is slightly above the .08 threshold proposed by Williams and O'Boyle (2011); however, higher-order models were not considered in Williams and O'Boyle's studies.

2. Fit indices suggest that the ILI-SF represent a good fit to the Nepal data; however, the factor loadings range from .29 to .67.

3. Due to the poor fit of the Nepalese sample, Nepal was not considered for the invariance analyses.

4. We also performed the same analyses on Model D (four-factor with a higher-order factor model). Results were very similar except that we could not test invariance for Japan, Nepal, and Turkey because of Heywood cases. Otherwise scalar or partial scalar invariance held for all other country combinations except for the one between China and Israel.

5. Due to the poor fit of the Nepalese sample, Nepal was not considered for the invariance analyses.

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Tables and Figures
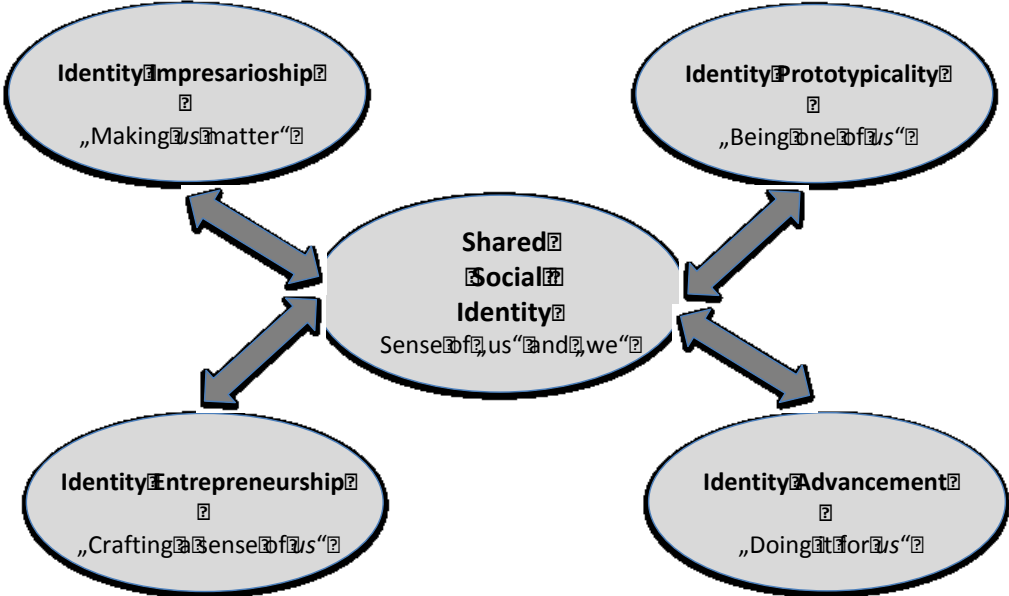
Figure 1. A four-dimensional model of identity leadership (adapted from Steffens, Haslam, Reicher et al., 2014, p. 1003).

Table 1. *Definitions of the four dimensions of identity leadership including the items of the Identity Leadership Inventory.*

Dimension	Illustrative References	Definition (from Steffens et al., 2014)	ILI Items
Identity Prototypicality	Recent reviews by Bareto & Hogg (2017), Haslam, Reicher, & Platow (2011); Hogg, van Knippenberg, & Rast (2012); van Knippenberg (2011)	Representing the unique qualities that define the group and what it means to be a member of this group. Embodying those core attributes of the group that make this group special as well as distinct from other groups. Being an exemplary and model member of the group.	1. [This leader] embodies what [the group] stands for. 2. [This leader] is representative of members of [the group]. 3. * [This leader] is a model member of [the group]. 4. [This leader] exemplifies what it means to be a member of [the group].
Identity Advancement	Giessner, van Knippenberg, van Ginkel, & Sleebos (2013); Haslam & Platow (2001); Haslam et al. (2001); Steffens, Mols, Haslam, & Okimoto (2016); van Knippenberg & van Knippenberg (2005)	Advancing and promoting core interests of the group. Standing up for, and if threatened defending, group interests (and not personal interests or those of other groups). Championing concerns and ambitions that are key to the group as a whole. Contributing to the realization of group goals. Acting to prevent group failures and to overcome obstacles to the achievement of group objectives.	5. [This leader] promotes the interests of members of [the group]. 6. * [This leader] acts as a champion for [the group]. 7. [This leader] stands up for [the group]. 8. When [this leader] acts, he or she has [the group's] interests at heart.
Identity Entrepreneurship	Augoustinos & De Garis (2012); Gleibs, Hendricks, & Kurz (2017); Haslam & Reicher (2007); Hopkins & Reicher (1997); Reicher, Haslam, & Hopkins (2005); Reicher & Hopkins (1996a; 1996b; 2001; 2003); Seyranian (2014); Seyranian & Bligh (2005); Steffens & Haslam (2013); Steffens, Haslam, Ryan, & Kessler (2013); Weiss, Kolbe, Grote, Spahn, & Grande (2017)	Bringing people together by creating a shared sense of 'we' and 'us' within the group. Making different people all feel that they are part of the same group and increasing cohesion and inclusiveness within the group. Clarifying people's understanding of what the group stands for (and what it does not stand for) by defining core values, norms, and ideals.	9. [This leader] makes people feel as if they are part of the same group. 10. * [This leader] creates a sense of cohesion within [the group]. 11. [This leader] develops an understanding of what it means to be a member of [the group]. 12. [This leader] shapes members' perceptions of [the group's] values and ideals.
Identity Impresarioship	Haslam, Reicher, & Platow (2011)	Developing structures, events, and activities that give weight to the group's existence and allow group members to live out their membership. Promoting structures that facilitate and embed shared understanding, coordination, and success (and not structures that divide or undermine the group). Providing a physical reality for the group by creating group-related material and delivering tangible group outcomes. Making the group matter by making it visible not only to group members but also to people outside the group.	13. [This leader] devises activities that bring [the group] together. 14. [This leader] arranges events that help [the group] function effectively. 15. * [This leader] creates structures that are useful for [group members].

Note: The words in parenthesis in the ILI items ([This leader] and [the group]) should be adapted to the specific context and be replaced by the name of the leader and the group in question. The items marked with an asterisk * comprise the four-item Identity Leadership Inventory–Short Form (ILI-SF).

Table 2. *Sample characteristics*

Nation	Data collection site(s)	Survey language	Participant number	Age: % 16-25	Age: % > 55	Gender: % female	% Leadership responsibility	ILI total score
Australia	Brisbane	English	311	7.4	10.6	45.3	31.5	4.9
Balkan	Thessaloniki	English	61	1.6	0.0	45.9	52.5	4.1
Belgium	Leuven	Dutch	141	15.6	10.6	46.8	26.2	4.6
Belgium	Leuven	French	14	14.3	0.0	78.6	35.7	5.1
Chile	Santiago de Chile	Spanish	286	35.7	3.8	60.1	26.6	4.7
China	Shanghai; Beijing	Chinese	353	28.9	0.8	50.4	24.1	5.5
Finland	Helsinki	Finnish	307	1.6	19.6	9.8	29.0	3.5
France	Reims	French	286	21.0	6.6	72.0	14.3	3.8
Germany	Frankfurt; Berlin	German	460	27.8	5.2	64.8	22.8	4.5
Greece	Thessaloniki; Athens	Greek	271	5.2	4.1	65.3	26.2	4.3
Hungary	Budapest	Hungarian	324	11.1	4.6	82.4	19.8	4.0
India	Udaipur	English	196	19.4	0.5	27.6	44.9	4.8
Israel	Ramat Gan	Hebrew	308	16.9	24.0	49.4	31.2	4.6
Italy	Trento	Italy	169	29.0	7.7	62.1	42.0	4.1
Japan	Kyoto	Japanese	337	3.0	5.3	51.9	16.0	4.1
Nepal	Kathmandu	English	88	15.9	1.1	22.7	31.8	4.8
Netherlands	Rotterdam	Dutch	203	36.9	4.9	49.3	16.3	4.8
North America	London, Ontario	English	302	6.3	11.3	48.0	33.1	5.2
Norway	Oslo	Norwegian	329	29.2	7.9	43.5	69.0	4.7
Southafrica	Johannesburg	English	291	16.5	1.7	70.1	30.2	4.4
Turkey	Izmir	Turkish	253	8.7	1.6	60.5	28.1	4.5
Total sample			5290	16.8	5.4	52.7	31.0	4.5

Table 3. *Means, standard deviations, and bivariate correlations between variables*

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. ILI	4.50	1.62	.98														
2. ILI-SF	4.91	1.13	.98	.92													
3. Prototypicality	4.54	1.67	.94	.92	.93												
4. Advancement	4.70	1.72	.94	.92	.85	.94											
5. Entrepreneurship	4.51	1.74	.96	.94	.87	.87	.95										
6. Impresarioship	4.18	1.78	.90	.87	.77	.77	.85	.93									
7. GTL	4.46	1.69	.87	.86	.81	.83	.85	.78	.96								
8. ALQ	4.37	1.52	.83	.81	.78	.78	.80	.74	.90	.93							
9. LMX-7	4.49	1.51	.78	.76	.73	.75	.74	.67	.83	.80	.93						
10. Team identity	5.12	1.46	.50	.48	.46	.46	.50	.45	.50	.49	.51	.93					
11. Trust	4.67	1.46	.74	.73	.71	.72	.71	.61	.78	.75	.80	.53	.87				
12. Job satisfaction	4.65	1.16	.64	.62	.59	.61	.61	.57	.67	.64	.69	.64	.69	.87			
13. Innovation	4.79	1.18	.31	.30	.28	.27	.30	.31	.30	.31	.34	.40	.29	.38	.93		
14. OCB	5.78	0.90	.22	.21	.21	.21	.22	.19	.21	.21	.24	.37	.26	.31	.34	.78	
15. Burnout	3.25	1.48	-.28	-.27	-.26	-.28	-.26	-.23	-.30	-.28	-.34	-.36	-.36	-.48	-.17	-.13	.92

Note: Cronbach's alphas in the diagonal in italics; all correlations are significant with $p < .001$

Table 4. *Fit indices ILI models, full sample*

	Model A Four correlated factors model	Model B One factor model	Model C Four orthogonal factors model	Model D Four factors model with second-order factor
Satorra-Bentler χ^2	1381.5	5249.37	17204.31	1502.34
Df	84	90	90	86
Scale correction	1.79	1.86	1.44	1.79
Robust CFI	.98	.90	.74	.97
Robust TLI	.97	.88	.70	.97
Robust RMSEA	.07	.14	.23	.08
Robust RMSEA CI	[.07, .08]	[.14, .15]	[.23, .23]	[.07, .08]
Robust SRMR	.03	.04	.56	.03
ΔS-B χ^2	-	2580.37	6366.98	122.95
Δdf	-	6	6	2
P	-	< .001	< .001	< .001

Table 5. *Fit indices ILI models for each country*

	Satorra-Bentler χ²	df	Scale correction	Robust CFI	Robust TLI	Robust RMSEA	Robust RMSEA CI	Robust SRMR
Four correlated factors model								
1. North America	140.75	84	2.03	.98	.98	.07	[.05, .09]	.03
2. Australia	187.52	84	1.68	.97	.97	.08	[.07, .10]	.04
3. Balkan	105.56	84	1.38	.97	.97	.08	[.00, .12]	.04
4. Belgium	154.67	84	1.45	.96	.95	.10	[.07, .12]	.03
5. Chile	145.15	84	1.59	.98	.98	.06	[.05, .08]	.02
6. China	132.84	84	2.77	.98	.97	.07	[.05, .09]	.03
7. Finland	265.30	84	1.48	.95	.94	.10	[.09, .12]	.05
8. France	191.38	84	1.41	.97	.96	.08	[.07, .09]	.04
9. Germany	286.73	84	1.47	.96	.95	.09	[.08, .10]	.06
10. Greece	193.75	84	1.66	.97	.96	.09	[.07, .11]	.04
11. Hungary	286.13	84	1.60	.95	.94	.11	[.10, .12]	.03
12. India	103.35	84	2.18	.99	.99	.05	[.00, .08]	.03
13. Israel	161.18	84	1.74	.98	.97	.07	[.06, .09]	.03
14. Italy	153.46	84	1.60	.97	.96	.09	[.07, .11]	.04
15. Japan	115.35	84	2.68	.99	.99	.06	[.03, .08]	.02
16. Nepal	130.16	84	1.53	.86	.83	.10	[.06, .13]	.08
17. Netherland	172.02	84	1.50	.96	.95	.09	[.07, .11]	.04
18. Norway	128.20	84	1.78	.99	.98	.05	[.03, .07]	.02
19. South Africa	179.59	84	1.89	.97	.97	.09	[.07, .10]	.03
20. Turkey	253.32	84	1.64	.94	.92	.11	[.10, .13]	.05
Four factors with higher-order factor model								
1. North America	145.90	86	2.03	.98	.98	.07	[.05, .09]	.03
2. Australia	196.68	86	1.68	.97	.96	.08	[.07, .10]	.04
3. Balkan	108.79	86	1.39	.97	.97	.08	[.01, .12]	.05
4. Belgium	165.04	86	1.44	.96	.95	.10	[.07, .12]	.04
5. Chile	151.98	86	1.59	.98	.98	.07	[.05, .08]	.02
6. China	141.01	86	2.79	.98	.97	.07	[.05, .09]	.03
7. Finland	271.19	86	1.49	.95	.94	.10	[.09, .12]	.05
8. France	195.56	86	1.41	.97	.96	.08	[.07, .09]	.04
9. Germany	300.00	86	1.47	.96	.95	.09	[.08, .10]	.06
10. Greece	215.10	86	1.64	.96	.96	.10	[.08, .11]	.04
11. Hungary	292.66	86	1.60	.98	.94	.11	[.10, .12]	.03
12. India	108.87	86	2.16	.99	.98	.05	[.01, .08]	.03
13. Israel	167.34	86	1.73	.98	.97	.07	[.06, .09]	.04
14. Italy	155.57	86	1.59	.97	.96	.09	[.07, .11]	.04
15. Netherland	180.97	86	1.48	.95	.94	.09	[.07, .11]	.05
16. Norway	146.80	86	1.80	.98	.98	.06	[.05, .08]	.03
17. South Africa	191.30	86	1.89	.97	.96	.09	[.07, .11]	.03

Table 6. *Fit indices ILI-Short Form (full sample and per country)*

	Satorra-Bentler χ^2	df	Scale correction	Robust CFI	Robust TLI	Robust SRMR
Full sample	41.24	2	1.65	1.00	.99	.01
1. North America	0.25	2	1.67	1.00	1.00	.00
2. Australia	1.55	2	1.78	1.00	1.00	.01
3. Balkan	5.8	2	0.99	.98	.93	.04
4. Belgium	4.09	2	1.62	.99	.98	.02
5. Chile	10.16	2	1.22	.99	.97	.01
6. China	5.06	2	1.83	1.00	.99	.01
7. Finland	2.39	2	1.53	1.00	1.00	.01
8. France	9.92	2	1.35	.98	.94	.03
9. Germany	7.2	2	1.23	.99	.98	.01
10. Greece	9.68	2	1.31	.99	.97	.01
11. Hungary	20.46	2	1.39	.98	.93	.02
12. India	14.74	2	1.28	.97	.91	.03
13. Israel	0.31	2	2.34	1.00	1.00	.00
14. Italy	0.73	2	1.76	1.00	1.00	.01
15. Japan	1.01	2	3.07	1.00	1.00	.01
16. Nepal	1.73	2	1.79	1.00	1.00	.04
17. Netherland	0.25	2	1.67	1.00	1.00	.00
18. Norway	1.3	2	1.41	1.00	1.00	.01
19. South Africa	10.35	2	1.95	.98	.95	.02
20. Turkey	4.45	2	1.27	1.00	.99	.01

Table 7. Predictive validity (multiple regression analyses with ILI-subscales as predictors)

Independent variable	B	Std. Err.	Beta	t-value
Dependent variable: team identification (regression R^2 = .251; $F[4,4977]$ = 418.88, p < .001)				
Prototypicality	0.05	0.02	0.06	2.31*
Advancement	0.07	0.02	0.08	2.97**
Entrepreneurship	0.25	0.03	0.30	9.09***
Impresarioship	0.07	0.02	0.09	3.72***
Dependent variable: trust (regression R^2 = .563; $F[4,5285]$ = 1701.32, p < .001)				
Prototypicality	0.20	0.02	0.23	11.42***
Advancement	0.29	0.02	0.34	16.64***
Entrepreneurship	0.21	0.02	0.25	10.48***
Impresarioship	-0.03	0.01	-0.04	-2.22*
Dependent variable: job satisfaction (regression R^2 = .406; $F[4,5285]$ = 904.34, p <. 001)				
Prototypicality	0.07	0.02	0.10	4.47***
Advancement	0.16	0.02	0.23	9.82***
Entrepreneurship	0.14	0.02	0.21	7.29***
Impresarioship	0.09	0.01	0.14	6.83***
Dependent variable: innovation (regression R^2 = .101; $F[4,5285]$ = 149.73, p < .001)				
Prototypicality	0.03	0.02	0.05	1.6
Advancement	0.00	0.02	0.00	0.07
Entrepreneurship	0.05	0.02	0.07	2.1*
Impresarioship	0.14	0.02	0.21	8.66***
Dependent variable: organizational citizenship behaviors (regression R^2 = .051; $F[4,5285]$ = 71.5, p < .001)				
Prototypicality	0.04	0.02	0.08	2.73**
Advancement	0.01	0.02	0.02	0.77
Entrepreneurship	0.08	0.02	0.15	4.1***
Impresarioship	-0.01	0.01	-0.02	-0.65
Dependent variable: burnout (regression R^2 = .081; $F[4,5285]$ = 118.2, p < .001)				
Prototypicality	-0.02	0.03	-0.02	-0.76
Advancement	-0.19	0.03	-0.22	-7.37***
Entrepreneurship	-0.06	0.03	-0.07	-1.93
Impresarioship	0.01	0.02	0.01	0.51

Note: *p<.05; **p<.01; ***p<.001

Table 8. Predictive validity (multiple regression analyses with ILI-total scale as predictors above and

beyond GTL, ALQ and LMX-7)

DV: Team identification

Independent variable	B	Std. Err.	Beta	t-value
Step 1				
Dependent variable: team identification (regression $R^2 = .281$, $F[3,4978] = 650.08$, $p < .001$)				
GTL	0.12	0.03	0.14	4.67***
ALQ	0.12	0.03	0.13	4.46***
LMX-7	0.28	0.02	0.29	13.17***
Step 2				
Dependent variable: team identification (regression $R^2 = .289$, $F[4,4977] = 506.34$, $p < .001$, $\Delta R^2 = .008$)				
GTL	0.03	0.03	0.03	0.88
ALQ	0.09	0.03	0.09	3.26**
LMX-7	0.26	0.02	0.26	11.85***
ILI	0.17	0.02	0.19	7.37***

DV: Trust

Independent variable	B	Std. Err.	Beta	t-value
Step 1				
Dependent variable: trust (regression $R^2 = .685$, $F[3,5286] = 3837.92$, $p < .001$)				
GTL	0.26	0.02	0.29	15.12***
ALQ	0.13	0.02	0.13	7.32***
LMX-7	0.43	0.01	0.44	31.44***
Step 2				
Dependent variable: trust (regression $R^2 = .688$, $F[4,5285] = 2921.49$, $p < .001$, $\Delta R^2 = .003$)				
GTL	0.19	0.02	0.22	10.27***
ALQ	0.11	0.02	0.11	6.03***
LMX-7	0.42	0.01	0.43	30.06***
ILI	0.11	0.01	0.12	7.41***

DV: Job satisfaction

Independent variable	B	Std. Err.	Beta	t-value
Step 1				
Dependent variable: job satisfaction (regression $R^2 = .504$, $F[3,5286] = 1791.51$, $p < .001$)				
GTL	0.19	0.02	0.27	11.03***
ALQ	0.05	0.02	0.07	3.15**
LMX-7	0.31	0.01	0.40	22.78***
Step 2				
Dependent variable: job satisfaction (regression $R^2 = .507$, $F[4,5285] = 1360.38$, $p < .001$, $\Delta R^2 = .003$)				
GTL	0.14	0.02	0.20	7.29***
ALQ	0.04	0.02	0.05	2.15*
LMX-7	0.30	0.01	0.39	21.66***
ILI	0.09	0.01	0.12	5.81***

Table 8. (continued)

DV: Innovation

Independent variable	B	Std. Err.	Beta	*t*-value
Step 1				
Dependent variable: innovation (regression R^2 = .120; F[3,5286] = 242.34, p < .001)				
GTL	-0.02	0.02	-0.03	-0.77
ALQ	0.08	0.02	0.10	3.36***
LMX-7	0.22	0.02	0.28	11.98***
Step 2				
Dependent variable: innovation (regression R^2 = .123; F[4,5285] = 186.24, p < .001, ΔR^2 = .003)				
GTL	-0.06	0.03	-0.09	-2.48*
ALQ	0.06	0.02	0.08	2.65**
LMX-7	0.21	0.02	0.27	11.22***
ILI	0.08	0.02	0.11	3.99***

DV: Organizational citizenship behaviors

Independent variable	B	Std. Err.	Beta	*t*-value
Step 1				
Dependent variable: OCB (regression R^2 = .058, F[3,5286] = 109.31, p < .001)				
GTL	0.00	0.02	0.01	0.19
ALQ	0.03	0.02	0.06	1.81
LMX-7	0.11	0.01	0.19	7.68***
Step 2				
Dependent variable: OCB (regression R^2 = .060, F[4,5285] = 85.79, p < .001, ΔR^2 = .002)				
GTL	-0.03	0.02	-0.06	-1.53
ALQ	0.02	0.02	0.04	1.16
LMX-7	0.10	0.01	0.17	7.00***
ILI	0.06	0.02	0.11	3.79***

DV: Burnout

Independent variable	B	Std. Err.	Beta	*t*-value
Step 1				
Dependent variable: burnout (regression R^2 = .117, F[3,5286] = 235.49, p < .001)				
GTL	-0.12	0.03	-0.13	-4.06***
ALQ	0.07	0.03	0.08	2.49*
LMX-7	-0.28	0.02	-0.29	-12.22***
Step 2				
Dependent variable: burnout (regression R^2 = .117, F[4,5285] = 176.59, p < .001, ΔR^2 = 0)				
GTL	-0.14	0.03	-0.14	-3.7***
ALQ	0.07	0.03	0.07	2.43*
LMX-7	-0.29	0.02	-0.29	-12.1***
ILI	0.00	0.03	0.00	0.163

Note: *p*<.05; **p*<.01; ***p*<.001

Appendix

Table S1. Translated ILI versions of the original ILI items into Chinese, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese,

Norwegeian, Spanish, and Turkish.

Dutch	English	German	Chinese	Norwegian	Greek	Japanese
1 Helemaal niet akkoord 2 3 4 5 6 7 Helemaal akkoord	1 Disagree completely 2 3 4 5 6 7 Agree completely	1 Stimme überhaupt nicht zu 2 3 4 5 6 7 Stimme voll zu	1 完全不同意 2 3 4 5 6 7 完全同意	1 helt uenig 2 3 4 5 6 7 helt enig	1 Απόλυτη διαφωνία 2 3 4 5 6 7 Απόλυτη συμφωνία	1 全くそう思わない 2 3 4 5 6 7 完全にそう思う
De leidinggevende die ik beoordeel…	My immediate supervisor…	Die Führungskraft, die ich einschätze…	我评估的领导是…	Lederen som jeg vurderer …	Ο ηγέτης που αναφέρομαι…	私のリーダーは …
belichaamt waar ons team voor staat.	embodies what [the group] stands for.	verkörpert wofür das Team steht.	我的直接上级身上体现了团队的文化与价值观。	representerer det gruppen står for	ενσαρκώνει αυτό που είναι η ομάδα.	このチームが象徴するものを体現している
is representatief voor de leden van mijn team	is representative of members of [the group].	ist ein typischer Vertreter des Teams.	我的直接上级和团队中的其他成员没什么两样，能代表团队中的其他成员。	er representativ for gruppen	αντιπροσωπεύει τα μέλη της ομάδας.	チームのメンバーを代表している
is een goed voorbeeld van een lid van ons team.	is a model member of [the group].	ist ein gutes Beispiel eines Teammitgliedes.	我的直接上级是团队的一名模范成员。	er modell for gruppen	είναι υπόδειγμα μέλους για την ομάδα.	チームでは見本となる人物である
maakt duidelijk wat het betekent om lid te zijn van dit team.	exemplifies what it means to be a member of [the group].	lebt vor, was es bedeutet, ein Mitglied des Teams zu sein.	我的直接上级本人就是最好的例子，要成为团队一员意味着什么，需要做些什么。	er et foregangseksempel som gruppemedlem	είναι παράδειγμα για το τι σημαίνει μέλος της ομάδας.	このチームの一員であるということは何を意味するかの見本となっている。

behartigt de belangen van de leden van mijn team.	promotes the interests of members of [the group].	fördert die Interessen der Teammitglieder.	我的直接上级谋求促进团队成员的利益。	fremmer gruppemedlemmenes nteresser	προωθεί τα συμφέροντα των μελών της ομάδας.	チームのメンバーたちの利益を促進しようとしている
gedraagt zich als een voorvechter voor het team.	acts as a champion for [the group].	ist ein Verfechter der Interessen des Teams.	我的直接上级充当团队的拥护者。	forfekter gruppens interesser	προασπίζεται την ομάδα.	チームの擁護者として活動している
komt op voor het team.	stands up for [the group].	setzt sich für das Team ein.	我的直接上级拥护团队。	taler gruppens sak	υποστηρίζει την ομάδα.	チームのために立ち上がる
heeft de belangen van het team voor ogen wanneer hij/zij iets doet.	has [the group's] interests at heart when he or she acts	hat bei dem, was sie tut, stets die Interessen des Teams im Blick.	我的直接上级时刻将团队利益放在心中。	har alltid gruppens interesser i tankene	ντιμετωπίζει σαν να είναι δικά του τα συμφέροντα της ομάδας.	**彼／彼女が活動するときは、チームの利害をわきまえている**
geeft mensen het gevoel dat ze deel uitmaken van één en hetzelfde team.	makes people feel as if they are part of the same group.	gibt den Mitarbeitern das Gefühl, dass alle zum selben Team gehören.	我的直接上级让人们觉得自己就是团队的一份子。	gir medlemmene følelsen av å tilhøre samme gruppe	μας κάνει να αισθανόμαστε μέλη της ίδιας ομάδας.	人々を、同じチームの一員だと感じさせるようにする
creëert een gevoel van saamhorigheid binnen het team.	creates a sense of cohesion within [the group].	schafft ein Gefühl des Zusammenhalts im Team.	我的直接上级在团队内营造凝聚力。	skaper følelsen av samhold i gruppen	δημιουργεί αίσθημα συνοχής στην ομάδα.	**チーム内で団結意識を生み出す**
creëert een beeld van wat het betekent om deel uit te maken van het team.	develops an understanding of what it means to be a member of [the group].	schafft ein Verständnis davon, was es heißt, ein Mitglied des Teams zu sein.	我的直接上级让大家理解成为团队一员意味着什么。	utvikler forståelse for gruppemedlemskap	.μας κάνει να κατανοούμε τι σημαίνει μέλος της ομάδας.	**このチームの一員であることは何を意味するのかについての理解を促進する**
vormt leden hun percepties over de waarden en idealen van het team.	shapes members' perceptions of [the group's] values and ideals.	formt die Wahrnehmung der Werte und Ideale des Teams durch die Teammitglieder.	我的直接上级塑造成员们的团队的价值观与理想。	utvikler gruppens forståelse for felles verdier og idealer	διαμορφώνει τις αντιλήψεις των μελών για τις αξίες και τα ιδεώδη της ομάδας.	チームの価値観や理想についての共通認識を形成させる
bedenkt activiteiten die het team bij elkaar brengt.	devises activities that bring [the group] together.	denkt sich Aktionen aus, die das Team zusammenbringen.	我的直接上级想出有利于团队团结的活动。	tenker ut aktiviteter som samler gruppemedlemmene	οργανώνει εκδηλώσεις για να φέρει κοντά την ομάδα.	**チームを団結させるための活動を考案する**

organiseert activiteiten die het team helpen effectiever te functioneren.	arranges events that help [the group] function effectively.	organisiert Events, die dem Team helfen, effektiv zusammenzuarbeiten.	我的直接上级安排有助于团队有效运作的活动。	gjennomfører tiltak og 'events' slik at gruppen fungerer effektivt	οργανώνει εκδηλώσεις που βοηθούν την ομάδα να λειτουργεί αποτελεσματικά.	チームが効果的に機能するようなイベントを企画する
creëert omstandigheden die bevorderlijk zijn voor het team.	creates structures that are useful for [group members].	schafft Strukturen, die für die Teammitglieder nützlich sind.	我的直接上级创建对队员有用的组织结构。	utvikler nyttige gruppestrukturer	διαμορφώνει δομές χρήσιμες για τα μέλη της ομάδας.	チームのメンバーにとって役に立つチーム内構造を作り出す

Turkish	French	Hungarian	Spanish	Finnish	Italian	Hebrew
1 Hiç katılmıyorum 2 3 4 5 6 7 Tamamen katılıyorum	1 Complètement en désaccord 2 3 4 5 6 7 Complètement d'accord	1 Egyáltalán nem értek egyet 2 3 4 5 6 7 Teljes mértékben egyetértek	1 Fuertemente en desacuerdo 2 3 4 5 6 7 Fuertemente de acuerdo		1 Completamente in disaccordo 2 3 4 5 6 7 Completamente d'accordo	1 כלל לא מסכים 2 3 4 5 6 7 מסכים לחלוטין
Değerlendirdiğim Lider…	Mon supérieur direct…	Úgy gondolom, hogy a vezetőm...	El líder, a quien evalúo…	Lähin esimieheni…	Il mio responsabile…	השאלון. המנהל שלי...
grup neyi savunuyorsa onu temsil eder.	... incarne ce que le groupe représente.	megtestesíti azt, amit a csoport képvisel.	personifica lo que el grupo representa.	…ilmentää henkilönä hyvin tämän ryhmän päämääriä.	... incarna ciò che il gruppo rappresenta	מגלם/ת את מה שהקבוצה מייצגת.
grubun örnek üyesidir.	... est représentatif des membres de l'équipe.	képviseli a csoport tagjait.	es representativo de los miembros del grupo.	…edustaa hyvin muita tämän ryhmän jäseniä.	... è rappresentativo dei membri del gruppo	מייצג/ת את חברי הקבוצה.
bir grup üyesinin nasıl olması gerektiğine örnektir.	... est un modèle dans l'équipe.	a csoport példaképe.	Es un miembro modelo del grupo.	…on ryhmän esimerkillinen jäsen.	... è un modello per il gruppo	הינו/הינה דמות מופת (מודל) של חברי הקבוצה.
bir grup üyesinin nasıl olması gerektiğine örnektir.	... illustre ce que signifie être membre de l'équipe.	példát mutat, mit jelent a csoport tagjának lenni.	Ejemplifica lo que significa ser miembro del grupo.	…havainnollistaa toiminnassaan mitä ryhmän jäsenyys todella merkitsee.	.. è un esempio di ciò che significa essere un membro del gruppo	מדגים/ה את המשמעות של להיות חבר/ה בקבוצה.

grup üyelerinin çıkarlarını gözetir.	... promeut les intérêts des membres de l'équipe.	támogatja a csoporttagok érdeklődését.	Promueve los intereses de los miembros del grupo.	…edistää ryhmän jäsenten etuja.	... promuove gli interessi dei membri del gruppo	מקדם/ת את האינטרסים של חברי הקבוצה.
grubun savunucusu olarak davranır.	...défends les intérêts de l'équipe.	a csoport számára egy bajnok.	Actúa como un impulsor del grupo.	…toimii tienraivaajana ryhmälle.	... agisce a supporto del gruppo	מגן/ה על חברי הקבוצה.
grubun tarafını tutar.	... défend l'équipe.	kiáll a csoportért.	defiende al grupo.	…puolustaa ryhmää.	... prende le difese del gruppo	מצדד/ת ותומך/ת בקבוצה.
ne yaparsa yapsın, aklında her zaman grubun çıkarları vardır.	... a à cœur les intérêts de l'équipe lorsqu'il/elle agit.	szívügyének tekinti a csoport érdekeit, amikor cselekszik.	Tiene los intereses del grupo en mente cuando actúa.	…..pitää toiminnassaan ryhmän etua sydämen asiana.	... quando agisce ha a cuore gli interessi del gruppo	נוצר/ת בליבו/בליבה את האינטרסים של הקבוצה כאשר הוא/היא פועל/ת.
insanlara aynı grubun parçası olduklarını hissettirir.	... met les gens à l'aise comme s'ils faisaient partie du même groupe.	érezteti az emberekkel, hogy ugyanahhoz a csoporthoz tartoznak.	hace sentir a la gente que son parte del mismo grupo.	… saa ihmiset tuntemaan että he kuuluvat samaan ryhmään.	... fa sentire le persone come se fossero parte dello stesso gruppo	גורם/ת לאנשים להרגיש חלק מאותה הקבוצה.
grup içinde birlik bütünlük hissi yaratır.	... créé de la cohésion au sein de l'équipe.	az összetartozás érzését teremti mega csoportban.	Crea una sensación de cohesión grupal.	…luo ryhmään yhteenkuuluvuudentun netta.	... crea coesione all'interno del gruppo	יוצר/ת תחושת לכידות בתוך הקבוצה.
grup üyeliğinin ne demek olduğuna ilişkin bir anlayış geliştirir.	... développe une vision de ce que signifie être un membre de l'équipe.	megmutatja az embereknek, mit is jelent egy csapat tagjának lenni.	Desarrolla un entendimiento de lo que significa ser parte del grupo.	…luo ymmärrystä siitä mitä merkitsee olla tämän ryhmän jäsen	... sviluppa il significato di ciò che vuol dire far parte del gruppo	מפתח/ת הבנה לגבי המשמעות של להיות חבר/ה בקבוצה.
grup değerleri ve idealleriyle ilgili, üyelerin algılarını şekillendirir.	... modèle la perception des valeurs et idéaux du groupe par ses membres.	a csoporttagok felfogását a csoport elképzelései és értékei szerint formálja.	Moldea las percepciones de los miembros sobre los valores e ideales del grupo.	…muovaa jäsenten käsityksiä ryhmän arvoista ja ihanteista.	... dà forma ai valori e agli ideali del gruppo	מעצב/ת את תפיסות החברים בנוגע לאידאלים והערכים של הקבוצה.

grubu bir araya getirecek etkinlikler bulur.	... met en place des activités qui soudent l'équipe.	olyan tevékenységeket talál ki, amik összehozzák a csapatot.	Genera actividades que aportan a la unidad del grupo.	…järjestää toimintaa joka tuo ryhmän jäsenet yhteen.	... progetta attività che tengono insieme il gruppo	מתכנן/ת פעילויות שמקרבות בין חברי הקבוצה.
grubun işlerini etkin şekilde yürütmesine yardımcı olacak faaliyetler düzenler.	... organise des évènements qui aident l'équipe à fonctionner efficacement.	olyan eseményeket szervez, amik elősegítik a csoport hatékony működését.	Coordina eventos que ayudan a que el grupo funcione efectivamente.	…järjestää ryhmän toimintaa ja yhteistyötä helpottavia tapahtumia.	... organizza eventi che aiutano il gruppo a funzionare efficacemente	מארגן/ת אירועים שמסייעים לקבוצה לתפקד ביעילות.
grup üyelerinin faydalanacakları düzenlemeler yapar.	... créé des structures qui sont utiles pour les membres du groupe.	úgy alakítja a körülményeket, hogy az hasznos legyen a csoport számára.	Crea estructuras que son útiles para los miembros del grupo.	…luo ryhmän jäsenten kannalta hyödyllisiä toimintatapoja.	... fornisce risorse strutturali utili per i membri del gruppo	יוצר/ת מבנים שימושיים לחברי הקבוצה.

Supporting Information (supplementary material for online publication)

Table S1. *Results of multigroup analyses testing for invariance between countries.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. North America	-	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca
2. Australia		-	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca
3. Balkan			-	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Balkan	Sca
4. Belgium				-	Sca	Sca	Sca	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca
5. Chile					-	Sca	Sca	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca
6. China						-	Sca	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca
7. Finland							-	Sca	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Par sca
8. France								-	Par sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Frace	Par sca
9. Germany								S15	-	Sca	Par sca	Sca	Sca	Sca	Par sca	Sca	Par sca	Sca	Par sca
10. Greece										-	Par sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca	Sca
11. Hungary	S3	S3; S6		S2; S6	S6	S2; S6	S3; S6	S6	S2; S6	S6	-	Sca	Par sca	Sca	Par sca	Par sca	Par sca	Par sca	Par sca
12. India												-	Sca	Sca	Sca	Sca	Sca	Sca	Par sca
13. Israel											S6		-	Sca	Sca	Sca	Sca	Scal	Sca
14. Italy														-	Sca	Sca	Sca	Scal	Sca
15. Japan									S7; S15		S6; S9				-	Sca	Sca	Sca	Sca
16. Netherland											S6					-	Sca	Sca	Par sca
17. Norway									S15		S6						-	Sca	Par sca
18. South Africa											S6							-	Sca
19. Turkey	S6			S2		S2	S1	S8	S7; S15		S3; S6	S1				S1	S1		-

Note. Sca = Scalar invariance; Par sca = Partial scalar invariance; S3 = intercept of item 3 is set free.

Table S2. Results of multigroup analyses testing for invariance between countries – ILI-Short Form.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. North America	-	Sca	Par met	Par sca	Sca	Sca	Par sca	Par sca	Sca	Sca	Sca	Sca	Par sca	Par sca	Sca	Par sca	Sca	Par sca	Sca
2. Australia		-	Sca	Sca	Sca	Sca	Sca	Par sca	Sca	Par sca	Par sca	Sca	Par sca	Par sca	Sca	Par sca	Sca	Sca	Sca
3. Balkan	M15		-	Sca	Sca	Sca	Sca	Par met	Sca	Sca	Sca	Sca	Par met	Sca	Sca	Par met	Sca	Sca	Sca
4. Belgium	S6			-	Sca	Sca	Sca	Par met	Sca	Sca	Par sca	Sca	Sca	Sca	Sca	Sca	Par sca	Belgia	Sca
5. Chile					-	Sca	Sca	Par sca	Sca	Par sca	Par sca	Sca	Sca	Sca	Sca	Sca	Par met	Chile	Sca
6. China						-	Sca	Par met	Sca	Par sca	Par sca	Sca	Par met	Sca	Sca	Sca	Sca	Sca	Sca
7. Finland	S3						-	Par sca	Par sca	Par sca	Par sca	Sca	Par sca	Par sca	Sca	Sca	Par met	Sca	Par met
8. France	S15	S15	M15; S15	M15; S15	S15	M6	S3; S15	-	Par sca	Sca	Par met	Par sca	Sca	Sca	Par met	Par sca	Par met	Sca	Par met
9. Germany							S3	S15	-	Par sca	Par sca	Sca	Sca	Sca	Sca	Par sca	Sca	Germany	Sca
10. Greece		S6			S6	S15	S6		S6	-	Par sca	Par sca	Sca	Sca	Par sca	Sca	Par met	Sca	Par sca
11. Hungary		S10; S15		S3; S6	S3; S6	S3; S6	S10; S15	M15; S3; S6	S6	S3; S6	-	Par sca	Par sca	Par sca	Par sca	Par sca	Par sca	Par sca	Par sca
12. India								S15		S6	S10; S15	-	Sca	Sca	Sca	Sca	Sca	Sca	Sca
13. Israel	S15	S15	M15			M15; S15	S3				S10; S15		-	Sca	Sca	Sca	Par met	Sca	Par met
14. Italy	S6	S6					S3				S6			-	Sca	Sca	Par sca	Sca	Sca
15. Japan								M15; S15		S6	S3; S6				-	Sca	Sca	Sca	Sca
16. Netherland	S6	S6	M6					S15		S10	S3; S6					-	Par sca	Sca	Par sca
17. Norway				S6	M6		M6; S3	M15; S6		M6; S6	S15		M15; S15	S6		S6	-	Sca	Sca
18. South Africa	S15										S10; S15							-	Sca
19. Turkey							M6	M15; S15		S6	S6		M6; S15			S6			-

Note. Sca = Scalar invariance; Par sca = Partial scalar invariance; Par met = Partial metric invariance; S3 = intercept of item 3 is set free; M15 = factor loading of item 15 is set free.

Table S3. Discriminant validity (Fit indices of models comprising the ILI, ALQ, LMX-7, and GTL scales).

	One factor model	Four correlated factors model	Seven correlated factors model
Satorra-Bentler χ^2	22276.20	11444.02	6773.64
Df	629	623	608
Scale correction	1.68	1.58	1.57
Robust CFI	.84	.92	.96
Robust TLI	.83	.92	.95
Robust RMSEA	.11	.07	.06
Robust RMSEA CI	[.10, .11]	[.07, .07]	[.05, .06]
Robust SRMR	.05	.03	.03
ΔS-B χ^2	5333.10	3678.78	-
Δdf	21	15	-
p	< .001	< .001	-