

## The Journal of Behavioral Science (TJBS)

### Original Article

# Authentic Leadership Practices in Organizations: Development and Validation of Authentic Leadership Practices Scale in Pakistan

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### Article Information

Received: 10.11.22

Revised: 20.12.22

Accepted for initial review: 12.1.23

### Keywords

Leaders, authenticity, workplace,  
authentic leadership practices, scale  
development

### Abstract

Authentic leadership is a relatively new domain that has received attention from scholars and practitioners from different fields of behavioral science. However, the scarcity of research on authentic leadership in Pakistan and limitations in existing scales call for the development of an indigenous scale to assess authentic leadership practices. Hence, the present multiphase study aimed to develop and validate a sophisticated measure of authentic leadership practices in the specific collectivistic cultural context of Pakistan. In study 1, taking insight from the four-component model of authentic leadership, 13 leaders from academia and industry were interviewed to develop the *authentic leadership practice scale* (ALPS). In study 2, the 24-item ALPS was administered to 203 leaders for validation of self-form. Overall, confirmatory factor analysis (CFA) supported the four-factor model. The goodness-of-fit indices revealed that the model was consistent with the empirical data (RMSEA = .08, SRMR = .04, CFI = .91, IFI = .91, TLI = .90). Preliminary evidence of convergent validity and internal consistencies supported the final 22-item version of the self-form. In study 3, evidence of construct validity was established ( $n = 151$ ) for the observer form of ALPS using CFA. The goodness-of-fit indices revealed that the model was consistent with the empirical data (RMSEA = .08, SRMR = .05, CFI = .89, IFI = .89, TLI = .87) with internal consistencies. The present study contributes to research and practices of behavioral sciences by providing a psychometrically sound multidimensional scale of authentic leadership practices that may facilitate the assessment-based development of authentic leadership.

The emergence and growth of positive psychology in the last two decades (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001; Snyder & Lopez, 2002) and recent challenges faced by leadership demand for a more positive form of leadership. More specifically, recent leadership scandals point out the insufficiency of the existing leadership theories to meet the need of future leaders (Cooper et al., 2005) and call for new approaches to assess and develop leaders. Authentic leadership theory (Walumbwa et al., 2008) focuses on the authenticity of leaders and the way they practice it in the workplace. Authentic leadership emphasizes whether leadership is real and genuine (Northouse, 2013). It incorporates traits, behaviors, styles, and skills to promote ethical and honest behaviors and thus has greater positive long-term outcomes for leaders, their followers, and their organizations (Covelli, & Mason, 2017; Poohongthong et al., 2014; Tiamboonprasert & Charoensukmongkol, 2020; Zheng et al., 2022). True authenticity at the workplace emerges when top leadership aligns positive personal values and principles with their actions. It is believed that authentic leaders can create a difference at work. Authentic leaders have positive emotional orientation and self-awareness. They act considering the ethical and moral basis and are consistent in words and actions. Since authenticity is heavily dependent upon the authentic leader's

life story, it is likely to be affected by personal and demographic variables such as race, national origin, socioeconomic status, and various other factors. Moreover, the effectiveness of a leader's authenticity is relative to the situational, organizational, and cultural context (Zhang et al., 2012). In addition, the cultural dimension of collectivism is related to interpersonal relationships within a society where individuals identify themselves on the basis of group membership and prioritize groups over themselves (Hofstede, 2001). For instance, individuals from collectivistic cultures are tied up in social networks to strengthen group identity (Erez & Somech, 1996). Pakistan is categorized as a collectivistic society where aggregated group interests are vital in interpersonal relationships (Mujtaba & Habib, 2011).

Behavioral scientists and organizational psychologists applied collectivism and individualism to understand how cultural dimensions impact human behavior. Similarly, national culture has a strong impact on organizational culture and leadership practices (House et al., 2002) and needs to be aligned with each other (Newman & Nollen, 1996). Therefore, organizational theories developed in individualistic cultures may or may not be valid in other collectivistic cultures (Erez & Earley, 1993; Triandis, 1994). As such, bridging leadership and culture is necessary (Jung et al., 1995). It is observed through the impact of cultural assumptions and values on leadership styles and behavioral practices (Browaeys & Price, 2015; Hanel et al., 2018). The importance of authentic leadership and the role of culture in its practices call for an indigenous scale to measure authentic leadership practices accurately and reliably. Hence, the present study aimed to develop a scale to assess authentic leadership practice in the work setting and validate the self and observer rating forms for academic and industry leaders in Pakistan.

### Literature Review

The topic of leadership has received great attention from researchers for several decades. It is one of the most important and central topics of organizational behavior and management research (Seritanondh, 2013; Siswanto et al., 2022; Unhalekka et al., 2022; Yukl, 1989). More precisely, the study of authentic leadership at work has increased rapidly in the last decade (Abbas et al., 2023). The role of authentic leadership has been explored and established during the pandemic of COVID-19 (Chen & Sriphon, 2022; Daraba et al., 2021). Several research studies have been carried out on the antecedents and consequences of authentic leadership. Below, we review and summarize past research on authentic leadership mainly focusing on two streams of studies: a) the emergence of the construct of authentic leadership and b) the development and validation of scales to measure authentic leadership.

Henderson and Hoy (1982) defined leader authenticity in the first place and devised a 32-item scale leader authenticity inventory (LAI) which measures three components of leader authenticity. Later on, the Authenticity Inventory (AI-3; Kernis & Goldman, 2004) was developed to measure general authenticity with 45 items. More recently, Walumbwa et al. (2008) developed a 16-item measure authentic leadership questionnaire (ALQ) based on sound literature. However, the complete instrument is copyrighted and the authors presented only half of the items in the appendix. Considering this limitation, Neider and Schriesheim (2011) developed an authentic leadership inventory (ALI) providing self-ratings. To this end, most of the existing measures were either too old (Henderson & Hoy, 1982), measuring general authenticity (Kernis & Goldman, 2004), or copyrighted (Walumbwa et al., 2008). Further, all of the available scales relied on self-reported data (Henderson & Hoy, 1982; Neider & Schriesheim, 2011; Walumbwa et al., 2008). Moreover, none of the existing scales focused on measuring the practices of authentic leaders whereas the practices may differ based on specific culture (Hanel et al., 2018).

The extant cultural theories and research studies advocate that culture has a profound impact on the behavior of its people and leadership tendencies (Adler, 1986; Hofstede, 1980; Trompenaars, 1993). Cultural dimensions theory by Hofstede (1980, 1993) postulates that cultures could be distinguished along four dimensions: power distance, individualism-collectivism, uncertainty avoidance, and masculinity/femininity. Two of the four dimensions are particularly relevant to the scope of the present

paper. Power distance refers to the amount of authority, status, and power-sharing expected of leaders. Individualism-collectivism means the degree to which an emphasis is placed on individuals versus groups. Each of these dimensions has implications for the development and expression of authentic leadership practices. Schwartz's theory of basic cultural values (2012) identifies ten motivationally distinct types of universal values that most people in different cultures appreciate. However, individuals and groups differ considerably in the relative importance they assign to these values forming different value hierarchies.

A meta-analysis ( $N = 196,300$ ; Zhang et al., 2022) explored the moderating role of culture (nation) in the association between authentic leadership and outcomes. Findings revealed the moderating role of individualistic and power distance culture between authentic leadership and outcomes. Previously, Sanchez-Runde et al. (2011) highlighted that leadership is a cultural construct, and its meaning is based on the culture where it is applied. For instance, authentic leadership practices in an organization of individualistic culture may be considered disrespectful or rude in a collectivist culture.

Another interdisciplinary study with mixed methods was conducted by Soderlund and Wennerholm (2021) on the complexity of authentic leadership to extend understanding of the identification and development of authentic leadership focusing on the role of gender differences in authentic leadership development. The researchers have presented a multitude of viewpoints and concluded that authentic leadership is a complex subject and needs further investigation.

Further, Gardiner (2011) indicated that authentic leadership as a construct is flawed due to its incapability to consider social and historical circumstances which may affect the development process of leadership. Zhang et al. (2012) also advocated that authentic leadership theory has been tested in Western culture; however, it lacks validity in Eastern contexts. For understanding the culture-specific as well as cross-cultural nature of the construct, it can be further explored in Eastern cultures which might lead to its applicability in non-Western countries.

The criticisms did not nip the authentic leadership theory in the bud and it further progressed. Initially, three antecedents (moral reasoning, positive psychological capabilities, and critical life events) were acknowledged. Later on, the researchers agreed upon the four factors as core elements of the authentic leadership theory i.e., self-awareness, relational transparency, balanced processing and internalized moral perspective (Avolio et al., 2009; Avolio, 2010; Datta, 2015; Gardner et al., 2011; Sagnak & Kuruoz, 2017). The present study examined authentic leadership practices by taking insight from these four factors.

According to Walumbwa et al. (2008) authentic leadership is a leader's behavioral pattern that stimulates positive psychological competencies and a positive ethical environment to nurture information processing, an internalized moral perspective, self-awareness, and relational transparency of leaders with their followers to encourage positive self-development. The intrapersonal and interpersonal elements (Northouse, 2010) are two main concepts that are generally included in authentic leadership. Intrapersonal elements (related to oneself) encompass internalized moral perspective and self-awareness while interpersonal elements (related to other people) encompass relational transparency and balanced information processing. Authentic leaders are those who genuinely behave with their followers, share every single thing related to work with subordinates, and feel more optimistic and confident to own their work. Thus, they own their followers too and consider themselves equally responsible for every single thing related to work (Ilies et al., 2005; Walumbwa et al., 2010). The most important aspect of authentic leadership is the developmental process of followers which occurs as a result of direct communication and becoming positive role models. Such leaders can help their followers to achieve authenticity and self-concordant identities (Gardner et al., 2005).

More recently, Gardner et al. (2021) emphasized studying authenticity. They also highlighted the challenges in its measurement and highlighted the need for a better measure. Crawford et al. (2020)

highlighted the need for the development of rigorous authentic leader behavior measures as reconceptualizing authentic leadership and expanding the psychometric profile of the authentic leader construct. Based on the four-component model of authentic leadership (Walumbwa et al., 2008), the authors aimed to develop and validate two forms (self and observer ratings) of authentic leadership practices scale. Further, the interview protocol for interviews was prepared by reviewing the literature (Abbas et al., 2012; Avolio & Gardner, 2005; Britt et al., 2007; Chaiprasit & Santidhirakul, 2011; Clapp-Smith et al., 2009; Connelly & Ruark, 2010; Coutu, 2002; Ebmeier & Ng, 2005; Fields, 2007; Fry, 2003; Gardner et al., 2011; Ilies et al., 2005; Luthan et al., 2004; Luthans & Youssef, 2004; Macey & Schneider, 2008; Maenapothi, 2007; Michelle, 2012; Nelson & Cooper, 2007; Shahnawaz & Jafri, 2009; Shirey, 2009; Snyder, 2000; Stronge & Hindman, 2006; Sutton, 2004; Toor & Ofori, 2009; Walumbwa et al., 2008; Walumbwa et al., 2010; Zhang, 2007). For instance, questions related to the operationalization of authentic leadership and its dimensionality were formulated taking insight from Walumbwa et al. (2008) and a literature review article (Gardner et al., 2011). Another research by Avolio and Gardner (2005) was utilized to specify questions that tap only authentic leadership and do not tap other forms of leadership. Moreover, questions related to different domains and areas of authentic leadership such as leaders' well-being, work happiness, followers' well-being, and followers' behaviors were derived from the literature (Chaiprasit & Santidhirakul, 2011; Ilies et al., 2005; Toor & Ofori, 2009; Walumbwa et al., 2010). Since, authentic leadership should be a standard practice in academia and industry (Hsieh & Wang, 2015). Therefore, the diversity of data was considered to enhance generalizability and usage of scale across professions. In study 1, a pool of items was generated, reviewed by experts, and pre-tested. This multiphasic study was conducted by considering existing literature and the stakeholders of authentic leadership practices from academia and industry. In study 2, the self-form of authentic leadership practices scale was validated by the factor structure of the theory-based measure using confirmatory factor analysis (CFA) and zero-order correlation. This study aimed to establish the validity and reliability of the newly developed scale. Considering the recommendation about authentic leadership by Gardner et al. (2021) regarding leader/follower relations, the present study focused on self as well as other rated scales to measure authentic leadership practices. In study 3, the observer rating form of the authentic leadership practices scale (ALPS) was validated using CFA to verify the dimensionality of the self-form.

## Objectives of the Research

The present research aimed to fulfill the following objectives:

1. To develop a scale of authentic leadership practices (study 1)
2. To validate the self-form of the newly developed authentic leadership practices scale (study 2)
3. To validate the observer form of the authentic leadership practices scale (study 3)

## Study 1: Development of Authentic Leadership Practices Scale

### Method

The first study was conducted to develop an indigenous scale of authentic leadership practices. This had three phases.

### Phase 1: Item Generation

#### Sample

The first sample consisted of 13 participants who were interviewed to take their perspectives on authentic leadership practices. The sample included heads of departments and managers from universities and industries. Their experience in the leading position ranged from two to 30 years ( $M = 13$  years).

## Procedure

**Development of Interview Protocol.** An interview protocol was developed taking insight from authentic leadership theory and existing literature. Authentic leadership practices were operationalized similar to Walumbwa et al. (2008) who characterized four factors of authentic leadership such as balanced processing, self-awareness, relational transparency, and personal courage.

Taking theory and literature into consideration, we operationalized authentic leadership practices as being true to oneself, being true to work, being true to followers, and being true to values. *Being true to oneself* means that the individuals are aware of their strengths and weakness as well as regulate them well. *Being true to work* means that the individuals have a passion to do work, they work hard with a commitment to achieve work goals. *Being true to followers* means that they have relational transparency and core feelings for their followers. *Being true to values* means that individuals possess inner values and have core beliefs that they show through actions.

The final interview protocol consisted of 18 questions that tapped four operationalized aspects of authentic leadership practices. The sample item is “Which actions make you an honest and authentic leader at the workplace?”

**Interviews for Data Collection.** In-person interviews of academia and industry leaders were conducted to take indigenous perspectives on authentic leadership practices. Informed consent was taken from the participants for the recording of the interview. The content analysis was performed using an inductive process and themes were extracted from the manifest and latent content of the transcribed interviews. Further, the extracted themes were verified with existing theory (Walumbwa et al., 2008) and literature. The finding showed that transparent communication, honesty, and hard work were highly reported practices of authentic leaders followed by teamwork, positive attitudes toward work, fairness, and justice at the workplace, awareness of strengths, and improvement of weak areas of personality. Afterward, common themes were merged into main categories using thematic analysis. For instance, being true to oneself included the thematic categories of awareness of personal strengths and weaknesses, hard work, commitment, and inner voice.

**Item Generation.** The content and thematic analysis of the transcribed interviews provided the baseline for the generation of the initial item pool. A list of items was generated which contained 35 items.

## Phase 2: Item Review

### Sample

The second sample consisted of nine experts from academia and industry. Five of the experts were academicians having a doctoral degree and professional experience. The remaining four experts were business leaders from the manufacturing and service industries. They provided ratings on the initial item pool.

### Procedure

The initial pool of items was reviewed by experts on the following criteria. Firstly, the experts rated each behavior according to the operational definition of authentic leadership practices which means whether the item reflected authentic leadership practices of being true to oneself, being true to followers, being true to values, and being true to work. Secondly, the experts rated each behavior in terms of its consciousness and clarity. Lastly, the experts rated each item in terms of the degree to which it reflected a behavior relevant to a wide variety of occupations and organizations. They were also asked about their suggestion for item improvement if any. Experts rated the three criteria on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). Items were modified or eliminated based on the mean scores. For instance, items with  $M > 3.5$  were included in the final scale, items with  $M < 3.5$  were deleted while the items with  $M = 3.5$  were modified in the light of experts' opinions. Resultantly, the 35 items were reduced to 24 items.

### Phase 3: Pre-testing

#### Sample

The third sample consisted of 20 participants (13 men, 7 female) from academia that were particularly heads of their respective departments. The participants were taken from both public and private sector universities using a purposive sampling strategy. The participants have a mean age of 42 years (range = 28-65). Only those permanent employees were considered who have work experience of at least one year as experienced and permanent employees are more familiar with the work environment and systems and have different terms and conditions. However, employees on leave were excluded.

#### Procedure

Before pre-testing, the rating anchors were specified. A 7-point Likert scale was selected where 1 = strongly disagree and 7 = strongly agree. The aim of the pretest of the authentic leadership practices scale was to identify the feasibility and comprehension of the scale. For this purpose, an open-ended question was added at the end of the questionnaire to inquire about the suggestion for scale improvement. The protocol was administered to the academicians from 2 public and private universities in Lahore. Another aim of the pre-testing was to establish the psychometric properties of the scale.

**Ethical Considerations.** The Research Ethics Committee at the Center for Assessment and Research, Lahore, Pakistan provided ethical approval in January 2022. The approval number is 223REC/07836/22.

## Results

In Phase 1, the content of transcribed interviews was analyzed using thematic analysis and resultantly a pool of items was generated. During the second phase, the item pool was reviewed by experts and items of the newly developed scale were reduced to 24 items. In the last phase, the pre-testing of the final version of the scale was analyzed for basic psychometric properties. Table 1 presents an overview of the number of items, mean, standard deviation, and internal consistencies of the subscales.

**Table 1**

*Descriptive and Reliability Analysis of Final Version*

Scale	<i>k</i>	<i>M</i>	<i>SD</i>	<i>α</i>
Being true to oneself	7	5.17	0.71	.69
Being true to work	5	5.18	0.92	.82
Being true to followers	7	4.84	1.16	.90
Being true to values	5	4.87	0.89	.64

Table 1 shows that the two subscales have five items and the other two subscales have seven items. The mean scores were above the midpoints of the subscales. The alpha reliabilities indicated that the internal consistencies were satisfactory ( $\alpha = .64$ ) to excellent ( $\alpha = .90$ ). These findings provided a strong base for further validation of ALPS in the indigenous context.

### Study 2: Validation of Authentic Leadership Practices Scale (ALPS) Self-Form

#### Method

#### Sample

The sample consisted of 203 leaders from academia and industry. Most of the participants ( $n = 124$ ) were male and the remaining were female ( $n = 79$ ). The mean age of the participants was 42 years (range



= 30 years to 65 years). Half of the participants were from academia and half were from industry. Only permanent employees with at least one year were recruited. The employees on leave were not included.

## Measure

Authentic leadership practices scale (ALPS) Self form is a 24-item scale measuring the extent to which a leader perceived that he/she performs the specified authentic leadership practice. The participants rated their practices on a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree. The scale consisted of four subscales namely, being true to oneself (7 items), being true to work (5 items), being true to followers (7 items), and being true to values (5 items). Two of the items of being true to values were reversed coded. The initial reliability established in study 1 ranged between  $\alpha = .64$  to  $.90$ . A sample item is “I have a deep sense of purpose and passion to achieve my goals.” (see Appendix).

The workplace happiness questionnaire (Saleem & Anjum, 2015) is a 23-item measuring the extent to which an employee perceived happiness at work. The participants rated their practices on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The scale consisted of three dimensions namely; pleasant work life (8 items), engaged work life (7 items), and meaningful work life (8 items). The sample items are ‘At my workplace, I truly enjoy living in the present moment’ and ‘My main satisfaction in life comes from my work’. The reliabilities established in the present study were between  $\alpha = .76$  to  $.90$ .

## Procedure

Participants of the study were approached through their institutions. The data was collected in the office setting. Employees were informed about the participation procedure as well as the purpose of the research. The questionnaire was distributed to the employees who give consent for participation.

## Results

This study aimed to establish the construct validity of the authentic leadership practices scale (self-form) and to confirm the factor structure of this theory-driven scale. However, before conducting the main analysis (i.e., CFA), certain prerequisites were confirmed. For instance, all the items fulfill the assumption of normality of items as all the values of skewness and kurtosis were within the acceptable range of  $\pm 2$  (Gravetter & Wallnau, 2014). The items also fulfill the assumption of multicollinearity as the correlations between the items were below  $.80$ . Moreover, the sample of this study ( $N = 203$ ) was adequate according to Quintana and Maxwell (1999) for meaningful values of statistical indices.

To test the factor structure, we performed CFA in AMOS (Arbuckle, 2012) using the maximum likelihood estimation method. To ensure, the fit of the hypothesized model, six criteria were used; comparative fit indices Tucker Lewis index incremental fit index, root mean square error approximation, standardized root mean square residual and chi-square. These model fit indices of the initial and final models are presented in Table 2.

**Table 2**

*Model Fit Indices of Confirmatory Factor Analysis (n= 203)*

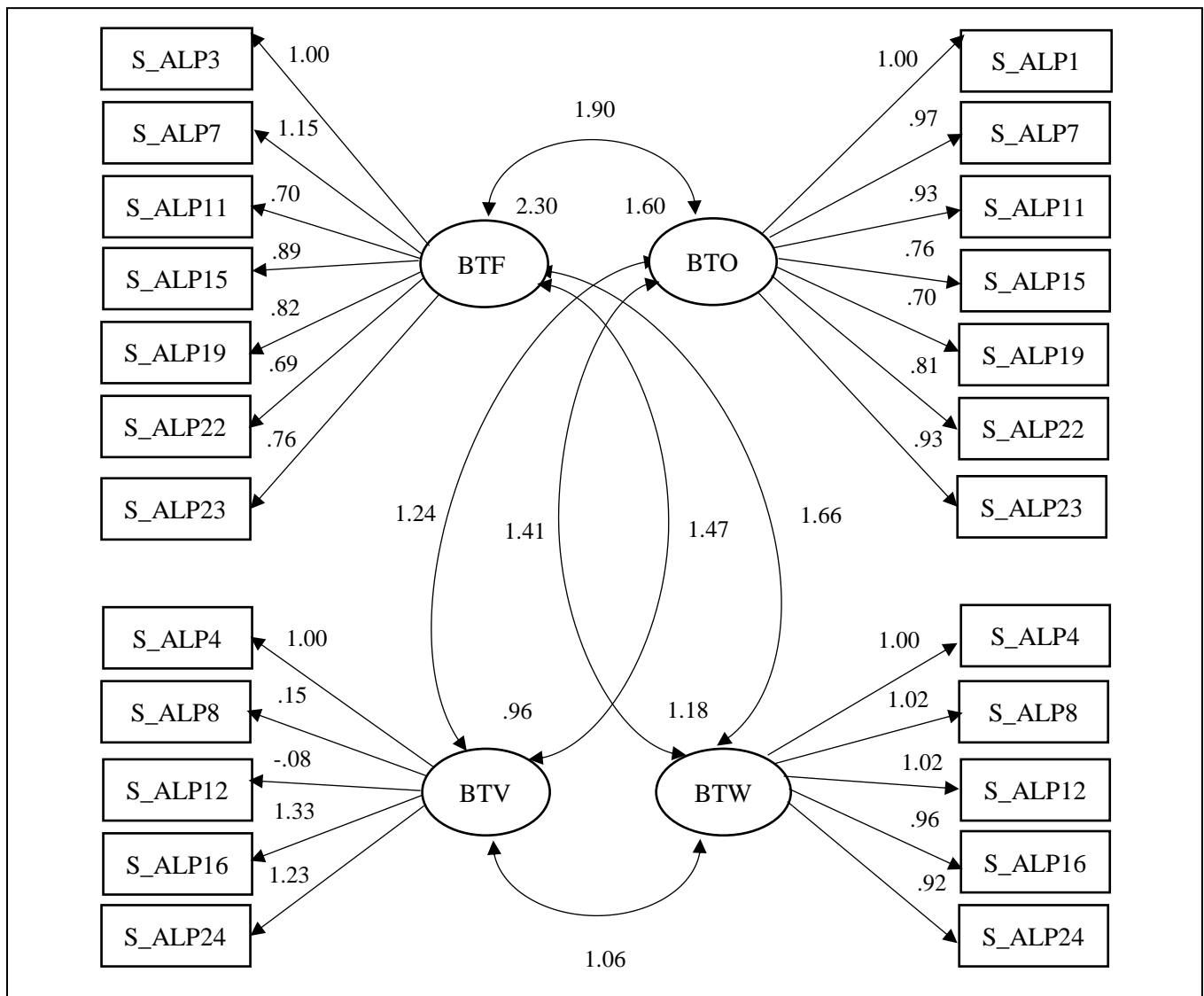
Model	$\chi^2$	df	CFI	IFI	TLI	SRMR	RMSEA
Initial Model	621.35***	246	0.89	0.89	0.88	0.05	0.09
Final Model	530.36***	239	0.91	0.91	0.90	0.04	0.08

*Note.* All changes in the chi-square values are computed relative to the model, CFI = Comparative Fit Indices, df = degree of freedom, ILI = Incremental Fit Index, TLI= Tucker Lewis Index, RMSEA= Root Mean Square Error Approximation, SRMR = Standardized Root Mean Square Residual,  $\chi^2$  = chi-square.

Table 2 shows that the fit indices of the initial model indicated poor model fit (Hu & Bentler, 1999). Therefore, the model was modified as per the criteria of Arbuckle (2012) that the modification indices for covariance should be at least 4.0. In total, seven covariances have been drawn between the error terms of items within a similar factor. The fit indices of the final model indicated model fit as CFI, IFI, and TLI values were .90 or greater (Byrne, 1994; Hu & Bentler, 1999), RMSEA and SRMR values of less than .08 (Browne & Cudeck, 1992), and non-significant value of chi-square indicate an acceptable fit. The chi-square value was reported but not used as a criterion due to its sample size dependency (Schweizer, 2010). The standardized coefficients of the final model are presented in Figure 1.

**Figure 1**

*Confirmatory Factor Analysis of Authentic Leadership Practice Scale Self Form*



Note.  $n = 203$ . BTO = Being true to oneself, BTW = Being true to work, BTf = Being true to followers, BTv = Being true to values, ALP = Authentic leadership practices.

Figure 1 shows the regression coefficients and correlations of the model. All of the regression coefficients were significant except for two of the reverse-coded items (item 8 and item 12). So, these two items were removed from the final version of the scale. The reliabilities of the finalized subscales are given below in Table 3 along with the correlation with workplace happiness to establish convergent validity. It was expected that authentic leadership practices were positively associated with workplace happiness.



**Table 3**

*Zero Order Correlations of the Authentic Leadership Practices Scale (ALPS) Self-form with Workplace Happiness Questionnaire*

Variables	<i>k</i>	$\alpha$	Pleasant work life	Engaged work life	Meaning work life
Being true to oneself	7	.88	.21**	.21**	.22**
Being true to work	5	.88	.18**	.18*	.18**
Being true to followers	7	.91	.13	.16*	.15*
Being true to values	3	.76	.12	.13	.15*

*Note.*  $N = 203$ , \* $p < .05$ , \*\* $p < .01$ .

Table 3 shows that the internal consistency of the authentic leadership practice scale self-form was good ( $\alpha = .76$ ) to excellent ( $\alpha = .91$ ). The four dimensions of authentic leadership practices showed a positive association with subscales of workplace happiness which established the convergent validity of the scale.

### Study 3: Validation of Authentic Leadership Practices Scale Observer Form

#### Method

##### Sample

The sample consisted of 151 employees (male = 81, female = 71) from academia and industry. The mean age of the participants was 33 years (range = 21 years to 65 years). The data was collected from permanent employees having at least one year of work experience whereas employees on leave were excluded.

##### Measure

Authentic leadership practices scale (ALPS) Observer form is an adapted version of the self-form, a 22-item scale measuring the extent to which employees perceived that his/her leader performs the specified authentic leadership practice. The participants rated their leader's practices on a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree. The scale consisted of four subscales namely; being true to oneself (7 items), being true to work (5 items), being true to followers (7 items), and being true to values (3 items). The initial reliability established in study 2 for self-form ranged between  $\alpha = .76$  to .91. A sample item is "My leader has a deep sense of purpose and passion to achieve his/her goals." (see Appendix).

##### Procedure

Participants of the study were approached through their institutions. The data was collected in the work setting. Employees were guided about the purpose of the research and their rights to confidentiality, privacy, and withdrawal. The questionnaire was distributed to the employees who gave consent for participation.

#### Results

This study aimed to confirm the factor structure of the observer form of the authentic leadership practices scale developed and validated in study 1 and study 2 respectively. At first, the descriptive statistics and reliabilities of the adapted version were computed (see Table 4).

Table 4 indicates that the alpha reliabilities of four factors of the observer rating form were satisfactory to excellent as ranging from  $\alpha = .64$  to .84. The mean scores were slightly above the midpoint of the scales. The normality of the data was indicated by the low values of skewness and kurtosis (within  $\pm 1$ ).

**Table 4**

*Descriptive, Reliabilities and Normality of Authentic Leadership Practices Scale-Observer Form*

Variables	<i>k</i>	$\alpha$	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Being true to oneself	7	.79	4.79	0.94	-0.69	0.32
Being true to work	5	.83	4.98	1.04	-0.80	0.99
Being true to followers	7	.84	4.86	1.04	-0.61	0.24
Being true to values	3	.64	4.75	1.13	-0.86	0.09

Note.  $n = 203$ ,  $*p < .05$ ,  $**p < .01$ .

After ensuring the normality of the sample, the pre-requisite of multicollinearity was ensured by assessing the inter-item correlation which was below .8. Moreover, the sample of this study was 150 which although deviated from the sample adequacy criteria of Quintana and Maxwell (1999) who suggested a sample size of 200 for meaningful values of statistical indices. However, it fulfilled the criteria of Muthén and Muthén (2002) who suggested that a reasonable sample size for a simple CFA model is about 150.

Similar to study 2, we use CFA with AMOS (Arbuckle, 2012) using maximum likelihood estimation and six criteria for model fit; comparative fit indices tucker lewis index incremental fit index, root mean square error approximation, standardized root mean square residual and chi-square. The model fit indices of the initial and final models are presented in Table 5.

**Table 5**

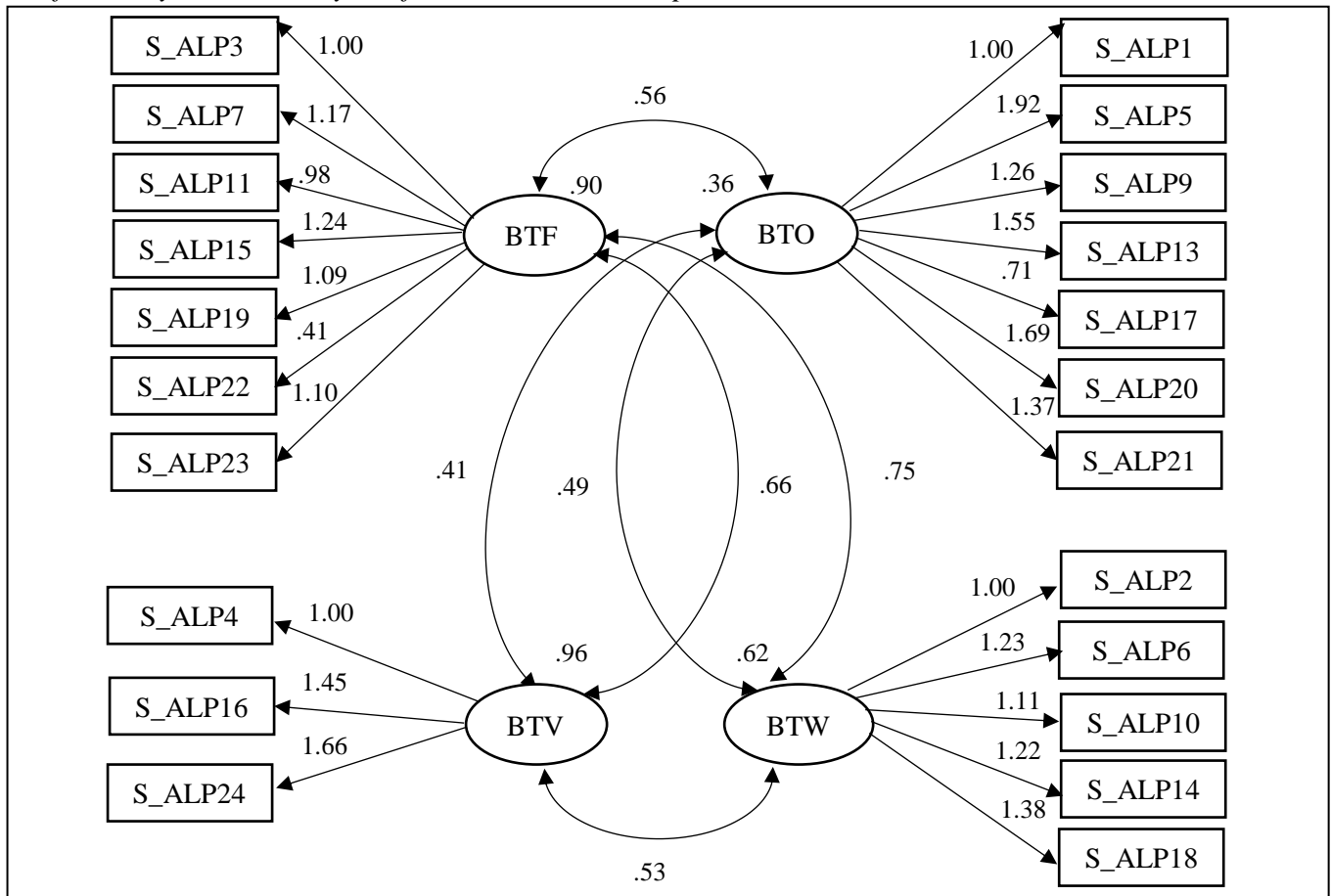
*Model Fit Indices of Confirmatory Factor Analysis ( $N = 151$ )*

Model	$\chi^2$	<i>df</i>	CFI	IFI	TLI	SRMR	RMSEA
Initial Model	498.40***	203	0.83	0.83	0.80	0.06	0.10
Final Model	380.23***	195	0.89	0.89	0.87	0.05	0.08

Note. All changes in the chi-square values are computed relative to the model, CFI= Comparative Fit Indices, *df* = degree of freedom, ILI = Incremental Fit Index, TLI= Tucker Lewis Index, RMSEA= Root Mean Square Error Approximation, SRMR = Standardized Root Mean Square Residual,  $\chi^2$  = chi-square.

Table 5 shows that the fit indices of the initial model indicated poor model fit (Hu & Bentler, 1999). Therefore, the model was modified as per the criteria of Arbuckle (2012) that modification indices for covariance should be at least 4.0. In total, eight covariances have been drawn between the error terms of items within a similar factor. The fit indices of the final model indicated model fit as CFI, IFI, and TLI values were close to .90 which is a cutoff point (Byrne, 1994; Hu & Bentler, 1999). Moreover, RMSEA and SRMR values were less than .08 (Browne & Cudeck, 1992). The chi-square value was reported but not used as a criterion due to its sample size dependency (Schweizer, 2010) which was significant in the present case. The standardized coefficients of the final model are presented in Figure 2.

Figure 2 shows the regression coefficients and correlations of the model. All of the regression coefficients were significant which confirmed the item-to-factor loadings for the observer-form of authentic leadership practices scale.

**Figure 2***Confirmatory Factor Analysis of Authentic Leadership Practice Scale\_Observer Form*

Note.  $n = 151$ , BTO = Being true to oneself, BTW = Being true to work, BTf = Being true to followers, BTv = Being true to values, ALP = Authentic leadership practices.

## Discussion and Conclusion

### Main Results

The present study developed and validated the self and observer rating forms of authentic leadership practices scale in Pakistani work context. Three studies were conducted adopting a mixed method approach (qualitative and quantitative). As a whole, the findings of ALPS are promising in terms of reliability and validity. The study laid the foundation for further research to examine antecedents and outcomes of authentic leadership. In a larger context, a psychometrically sound assessment of authentic leadership practices should be considered relevant for the assessment and subsequent promotions of more genuine and positive leadership behaviors as well as the prevention of unethical behaviors.

In study 1, ALPS was developed consisting of four subscales (being true to oneself, being true to work, being true to followers, and being true to values). The findings from the qualitative data highlighted important characteristics and practices of authentic leaders. The findings are in line with previous literature emphasizing that authentic leaders are more than ever needed who can lead with professional integrity and courage as well as guide ethical and moral behavior in organizations. In short, leaders are needed who are true to themselves and who can then, in turn, be true to others (Covelli & Mason, 2017).

In study 2, the self-form of the newly developed scale was validated and the results confirmed the four factors of ALPS. The findings were consistent with the four-component model of authentic leadership (Walumbwa et al., 2008). However, the CFA of self-form suggested the removal of two of the reverse-

coded items that were deleted in the final version. Further, the convergent validity of the self-form was established by assessing the association of authentic leadership practices with a related construct of workplace happiness. Our scale showed a moderate correlation with the theoretically relevant construct of workplace happiness consistent with the literature (Semedo et al., 2019). Literature showed that authentic leadership behavior plays an important role in teacher's happiness at work (Demir & Zincirli, 2021). Particularly the subscale of being true to oneself showed a stronger correlation with the subscales of workplace happiness. This supported the idea that hard work, commitment, and self-awareness at work may enhance one's happiness at work.

In study 3, the observer form of 22-item ALPS was validated and the factor structure of the 22-item measure was confirmed. The validation of two forms of the ALPS is a strength of this research as the findings of self and observer-reported data corroborated with one another. This research also provided support for the internal consistencies of the four factors of both forms of the scales through good to excellent Cronbach alphas. Overall, the study succeeded to provide a psychometrically sound instrument by establishing its construct validity and reliability.

Factor analysis is the best practice of behavioral science researchers to establish construct validity (Shahid, 2020). Factor loadings are correlation coefficients between observed variables and latent common factors. Factor loadings can also be viewed as standardized regression coefficients or regression weights. Factor loadings indicate the degree to which the item correlates with or "loads on" the underlying factor. Higher factor loading represents that the factor extracts sufficient variance from that variable.

In self-form, the factor loadings of one factor (i.e., being true to values) are relatively higher than the other three factors which indicated that the leaders perceived themselves as being authentic leaders for value-based practices. This shows that items of the subscale being true to values have more contribution than the items of the other three subscales. While in the case of observer form, the factor loadings of all factors were higher with being true to values as the top most. This indicated that participants perceived that the items for all the subscales/factors best fit the relevant factors.

### **Limitations**

This research has a few limitations to be acknowledged. Firstly, the studies conducted in this research established the validity and reliability of the newly developed scale, however, the predictive role of authentic leadership practices in the organization was not established here. Therefore, future researchers need to use this valid and reliable measure to answer, whether authentic leadership practices enhance the overall functioning of the leaders, their employees/subordinates, and the organization? Secondly, the scale was particularly developed for the cultural context of Pakistan which may limit its use in other cultures. Since the scale has a sound theoretical background and was developed in the English language, this limitation can be overcome and the researcher can validate and adapt the scale as per their culture.

### **Implications for Behavioral Science**

The present study has important theoretical and practical implications for behavioral science. Notably, our study has an interdisciplinary focus and integrated a positive psychology approach to leadership studies and organizational behavior offering a distinctive perspective to psychological and management research.

The rigorous step-by-step development of and validation of ALPS made an original contribution to the limited literature on authentic leadership and enhanced it particularly focusing on practices. Moreover, the development of self and observer-rating forms of ALPS has important implications for future research on authentic leadership practices. The findings might argue for the application of the scale when examining authentic leadership practices taking self-ratings by the leaders whereas significant others' ratings of authentic leadership practices can also be studied such as colleagues and subordinates using observer form.

Although we established the reliability and validity of the scale, however, the scale development process is iterative and never attains completion. Therefore, this needs to be investigated further to support the present findings and conclusion. The ALPS is originally developed in the English language and provides a basis for its adaptation and validation in other languages on cross-national samples. As, literature highlighted identified differences in authentic selves across cultures (Australia and Indonesia) (Pekerti & Sendjaya, 2010). Thus, the exploration of authentic leadership practice in settings of immense diversity is worth exploring particularly considering the Eastern/Western philosophical divide. Practically, the newly developed scale may help organizations to identify authentic leadership practices to facilitate organizational functioning. As leadership behaviors matter (Chumphong & Potipiroon, 2019) particularly authentic leadership behaviors can improve employee performance (Daraba et al., 2021) and thus may facilitate organizations. Researchers and practitioners should consider the antecedents of authentic leadership behaviors to create activities for leadership training programs. Moreover, they can also focus on the outcomes of authentic leadership practices in organizations (Gardner et al., 2021). Future intervention studies can also design and test intervention programs for enhancing authentic leadership behaviors among leaders as suggested by Crawford et al. (2020).

## Conclusion

Leadership in the 21st century requires higher self-awareness and self-regulation to meet the given challenges. A focus on authentic leadership will help create greater positive long-term outcomes for the leaders, respective followers, and their organizations. Our study contributed to the behavioral science literature by developing and validating a rigorous measure of authentic leadership practices and providing evidence of its content, factorial and convergent validity as well as its association with workplace happiness. Overall, the findings highlight the significance of authentic leadership practices and can be used to design leader coaching intervention plans. Moreover, a psychometrically sound assessment of authentic leadership practices will enable management and psychological researchers to promote and develop authenticity in organizations.

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## Appendix

### Authentic Leadership Practices Scale Self-form

1. I am highly independent and self-directed.
2. I have deep sense of purpose and passion to achieve his/her goals.
3. I build enduring relationships with the people at workplace.
4. I refuse to compromise, when his/her principles are tested.
5. I am aware of his/her personal strengths.
6. I work hard to overcome barriers to attain his/her leadership objectives.
7. I appreciate and acknowledge various viewpoints of his/her team.
8. I am guided by his/her qualities of heart and mind.
9. I am persistent and committed to his/her work.
10. I have clear and transparent communication with his/her subordinates.
11. I have clear understanding about weak areas of his/her personality.
12. I plan meticulously to be self- disciplined.
13. I ensure that people are empowered and that their voices are fully heard.
14. I am able to stand alone against the majority to support a noble cause.
15. I struggle to get comfortable with his/her weaknesses.
16. I use different strategies to keep his/her calendar and to-do list in order.
17. I perform kind and thoughtful deeds for his/her employees in need.
18. I recognize his/her inner critique and the role it plays in his/her life.
19. I am devoted to his/her personal growth.
20. I trust and delegate most sensitive tasks to those employees who are authentic as compared to those who are not.
21. I offer individual learning opportunities to staff members for their professional growth.
22. I use his/her core beliefs to make decisions.

### Authentic Leadership Practices Scale Observer-form

1. My Leader is highly independent and self-directed.
2. My Leader has deep sense of purpose and passion to achieve his/her goals.
3. My Leader builds enduring relationships with the people at workplace.
4. My Leader refuses to compromise, when his/her principles are tested.
5. My Leader is aware of his/her personal strengths.
6. My Leader work hard to overcome barriers to attain his/her leadership objectives.
7. My Leader appreciates and acknowledges various viewpoints of his/her team.
8. My Leader is guided by his/her qualities of heart and mind.
9. My Leader is persistent and committed to his/her work.
10. My Leader has clear and transparent communication with his/her subordinates.
11. My Leader has clear understanding about weak areas of his/her personality.
12. My Leader plans meticulously to be self- disciplined.
13. My Leader ensures that people are empowered and that their voices are fully heard.
14. My Leader is able to stand alone against the majority to support a noble cause.
15. My Leader struggles to get comfortable with his/her weaknesses.
16. My Leader uses different strategies to keep his/her calendar and to-do list in order.
17. My Leader performs kind and thoughtful deeds for his/her employees in need.
18. My Leader recognizes his/her inner critique and the role it plays in his/her life.
19. My Leader is devoted to his/her personal growth.
20. My Leader trusts and delegates most sensitive tasks to those employees who are authentic as compared to those who are not.
21. My Leader offers individual learning opportunities to staff members for their professional growth.
22. My Leader uses his/her core beliefs to make decisions.