



# Determining the Hierarchical Structure and Nature of Servant Leadership

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## Abstract

Researchers have yet to adequately identify the hierarchical structure and nature of servant leadership, and there are an excessive number of models and measures that take varying perspectives. Although the servant leadership style has been shown to be non-redundant with the dominant transformational leadership style, the lack of an understanding of its structure hinders both theoretical work and the cumulation of research findings. This study identifies the hierarchical structure of servant leadership using Goldberg's "bass backwards" approach on data from a survey administered to 1248 respondents that included the four principal measures of servant leadership. Our results make a theoretical contribution by highlighting the distinction between a follower orientation and a community orientation among servant leaders. Furthermore, this follower orientation can be either task-oriented or person-oriented. By identifying the hierarchical structure of servant leadership, our analysis suggests new insights into what distinguishes and drives servant leaders, thereby, contributing to this important stream of leadership research.

**Keywords** Servant leadership · Leadership style · Hierarchical analysis · Community leadership

While there are a vast number of other leadership styles (e.g., charismatic, transactional, consideration, initiating structure, instrumental, empowering, authentic, and ethical), many of these styles are so highly correlated with transformational leadership as to suggest construct redundancy (Banks et al., 2018; Hoch et al., 2018; Piccolo et al., 2012; Rowold et al., 2015). The most promising leadership style that is *non*-redundant with the dominant transformational leadership style is servant leadership, and it adds meaningful predictive

variance to a wide variety of outcomes (Hoch et al., 2018). It is a style in which the leader takes as his or her primary mission the growth and development of subordinates, as opposed to focusing primarily on reaching organizational goals or achieving personal ambitions (Greenleaf, 1970).

Given the distinctiveness of servant leadership, a fundamental unanswered question regarding servant leadership concerns its hierarchical structure and nature, and the extent to which existing measures capture the totality of its aspects. Like many other styles of leadership, models of servant leadership posit a two-level structure in which the overall style at the highest level consists of a number of underlying dimensions at a lower level, but the nature of these dimensions differs across models. Eva et al. (2019) suggest that the measures of servant leadership by Liden et al. (2008), van Dierendonck and Nuijten (2011), and Sendjaya et al. (2008) consist of orientations missing in others. Liden et al. (2008) have a community orientation missing in Sendjaya et al. (2008) and van Dierendonck and Nuijten (2011). Sendjaya et al. (2008) have a spiritual orientation that is missing in the other two measures, and van Dierendonck and Nuijten (2011) have a task orientation not found in the other measures. While the authors of measures are naturally partial to their own models and measures of servant leadership that

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Additional supplementary materials may be found here by searching on article title <https://osf.io/collections/jbp/discover>.

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focus on certain orientations, and particular measures were developed using superior scale development procedures (Eva et al., 2019), there have been few if any attempts to consolidate their diverse insights into a more theoretically and empirically driven understanding of the hierarchical structure of servant leadership, and whether and how that hierarchical structure reveals novel and fundamental insights into the nature of servant leaders. Furthermore, since existing models only posit a two-level hierarchy that divides the aggregate servant leadership construct into a set of between five and eight dimensions, they obscure possible levels between the overall style and the dimensions, and these intermediate levels may hold important theoretical implications for our understanding of the nature of servant leadership.

In this paper, we report the results of a study that empirically identifies a more complete hierarchical structure of servant leadership, drawing on four different models and measures, and our results suggest several notable distinctions between aspects of servant leadership at different hierarchical levels. We do this using Goldberg's (2006) so-called "bass ackward" method (also known as sequential factor analysis). This method identifies the hierarchical structure by using the factor scores derived from multiple exploratory factor analyses (EFAs) that extract different numbers of factors (Goldberg, 2006). Unlike traditional methods that adopt a bottom-up process to identify the underlying factors, this method adopts a top-down process to identify hierarchical structure for the construct (Loehlin & Goldberg, 2014). For example, when servant leadership is split into two factors, what distinction between those two factors emerges? How does this change when it is further split into three factors, and four, and five, etc. Using this approach, our study makes a significant contribution to the literature by developing a more comprehensive and empirically validated hierarchical structure of servant leadership, thus consolidating and extending what has been theorized about servant leadership to date and enabling a better understanding of its nature. In particular, our results suggest that breaking servant leadership into two and three-component models offers new insights that future research should further explore and develop.

## Current Views on the Models of Servant Leadership

The central premise of servant leadership is that the "servant-leader is servant first" (Greenleaf, 1970, p. 13), who makes sure that other people's highest priority needs are being served, with the ultimate test being others' growth and development. Greenleaf (1970) argued that this other-orientated focus extends beyond followers to consider the community they belong to. Following Greenleaf's (1970) pioneering conceptualization, Spears (1995) articulated a framework containing 10 characteristics of servant leaders.

Yet empirical research on servant leadership only began in earnest in the twenty-first century.

There have been at least three major reviews and seven meta-analyses done on servant leadership. Guides to conducting literature reviews suggest that reviews should only be done when there's a sufficient level of activity in an area (e.g., Short, 2009; Siddaway et al., 2019; Torraco, 2016). The earliest major review of servant leadership was done by van Dierendonck (2011), followed by one by Parris and Peachey (2013), and another more recently by Eva et al. (2019). A total of seven meta-analytic studies for servant leadership can be found in academic journals (Gui et al., 2021; Hoch et al., 2018; Kiker et al., 2019; Lee et al., 2020; Li et al., 2021; Miao et al., 2021; Zhang et al., 2021). Two of these find that servant leadership explains variance beyond other leadership styles such as transformational, ethical, and authentic leadership (Hoch et al., 2018; Lee et al., 2020). Kiker et al. (2019) examined the moderators of the relationship between servant leadership and several outcome variables. Other meta-analytic studies show that the association between servant leadership and several outcome variables is affected by national cultural factors (Li et al., 2021; Zhang et al., 2021). One meta-analysis has examined the impact of servant leadership in the hospitality sector (Gui et al., 2021); and another investigated the relationship between servant leadership and emotional intelligence (Miao et al., 2021).

Although these numerous reviews and meta-analytic studies demonstrate growing maturity and an increased level of activity on the topic, more work will be needed in order to reach consensus on the construct validity of the servant leadership style. This lack of consensus is seen in the central issue still plaguing the field of servant leadership, which is the excessive number of models and measures for the construct, and the fact that these models and measures comprise a diverse set of underlying dimensions (e.g., Barbuto & Wheeler, 2006; Liden et al., 2008; Sendjaya et al., 2008; van Dierendonck & Nuijten, 2011). Indeed, a major review of the servant leader literature by van Dierendonck (2011) revealed a bewildering total of 44 different dimensions drawn from different models of servant leadership. While all these dimensions are based on the overarching idea of servant leadership, and there are clear overlaps among the alternative models, there is also some diversity, and some models neglect supposedly key ideas contained in others (Eva et al., 2019; Sendjaya et al., 2019). This diversity of servant leadership *models* has also resulted in an excessive number of servant leadership *measures*. In their recent systematic review of the servant leadership literature, Eva et al. (2019) identified 16 different measures, and we uncovered an additional measure by Winston and Fields (2015). At this point, we believe that what is needed in the field of servant leadership is to resolve the discrepancies between existing models and measures, and we believe the only realistic way to do so is empirical. In this

paper we do so, and try to consolidate the current theoretical understanding of the servant leadership field—as reflected in its dominant measures. Our study considers the most statistically valid as well as the most widely used measures, that collectively cover the existing theoretical spectrum of servant leadership, and we then use these to develop a hierarchical structure that sheds insights into the current understanding of the nature of servant leadership.

Of the 17 existing measures of servant leadership, four multi-dimensional measures have been developed using rigorous scale construction procedures (Hinkin, 1998) and have been used extensively in empirical peer-reviewed studies in top journals<sup>1</sup> (see Table 1): Barbuto and Wheeler (2006), Liden et al. (2008), Sendjaya et al. (2008), and van Dierendonck and Nuijten (2011) (see Eva et al., 2019, for a review of these measures). We argue that the underlying dimensions of these four measures or models of servant leadership collectively capture the theoretical spectrum of servant leadership behaviors (Eva et al., 2019) and collectively represent the current conceptualization of servant leadership. To reach this conclusion, we initially examined all the dimensions of the 17 existing measures of servant leadership. The dimensions identified in these 17 measures used a combination of existing taxonomies of servant leadership such as Spears’ (1995) ten characteristics derived from Greenleaf (1970), insights from existing literature, and opinions of experts. They thus arguably represent the existing theoretical spectrum of servant leadership. We then categorized these dimensions into nine theoretical themes: Growing and developing people to succeed; empowering and supporting people; valuing people and enhancing community spirit within the organization; being a servant; leading as opposed to directing; task leadership; creating value for society; wisdom; and a role model of a moral and ethical person. The four measures we used in this study cover the nine theoretical themes of servant leadership (see Table 2).

Servant leaders prioritize the growth and development of their direct reports by taking an interest in their career aspirations and providing them with developmental opportunities in the workplace (Liden et al., 2008). Servant leaders empower their direct reports to make decisions, share leadership, and provide them with necessary resources to independently carry out their work (Liden et al., 2008; Sendjaya et al., 2008; van Dierendonck & Nuijten, 2011).

The four measures we used in our study are all premised on the recognition that servant leaders value people and are interested in their personal well-being. They build

<sup>1</sup> We note that the unidimensional measure developed by Ehrhart (2004) has also been frequently used in empirical studies. Subsequent research has also produced short forms (unidimensional measures) of three of these scales (Liden et al., 2015; Sendjaya et al., 2019; van Dierendonck et al., 2017).

**Table 1** Overview of the four selected servant leadership scales and their sources

	Servant Leadership Questionnaire (Barbuto & Wheeler, 2006)	Servant Leadership Scale (Liden et al., 2008)	Servant Leadership Behavior Scale (Sendjaya et al., 2008)	Servant Leadership Survey (van Dierendonck & Nuijten, 2011)
Number of items	23	28	35	30
Sample	388 raters	298 students and 189 employees	277 students	1571 raters
Dimensions	Altruistic calling; emotional healing; persuasive mapping; wisdom; organizational stewardship	Emotional healing; creating value for the community; conceptual skills; empowering; helping subordinates grow and succeed; putting subordinates first; behaving ethically	Voluntary subordination; authentic self; covenantal relationship; responsible morality; transcendental spirituality; transforming influence	Standing back; forgiveness; courage; empowerment; accountability; authenticity; humility; stewardship
The range of reliability values of the dimensions	0.82–0.92	0.76–0.86	0.72–0.93	0.69–0.91
Sample questions	<ul style="list-style-type: none"> <li>• My manager has great awareness of what is going on</li> <li>• My manager is very persuasive</li> </ul>	<ul style="list-style-type: none"> <li>• My manager can tell if something is going wrong</li> <li>• My manager is always honest</li> </ul>	<ul style="list-style-type: none"> <li>• My manager considers others’ needs and interests above his or her own</li> <li>• My manager affirms his or her trust in me</li> </ul>	<ul style="list-style-type: none"> <li>• My manager tries to learn from criticism if people express it</li> <li>• My manager holds me responsible for the work I carry out</li> </ul>

**Table 2** Theoretical domains covered by the four measures of servant leadership

Domain	Barbuto and Wheeler (2006)	Liden et al. (2008)	Van Dierendonck and Nuijten (2011)	Sendjaya et al. (2008)
Growing and developing people to succeed		✓		
Empowering and supporting people		✓	✓	✓
Valuing people and enhancing community spirit within the organization	✓	✓	✓	✓
Being a servant	✓	✓		✓
Leading as opposed to directing	✓		✓	✓
Task leadership			✓	
Creating value for society	✓	✓		
Wisdom	✓	✓		
A role model of a moral and ethical person		✓	✓	✓

relationships and encourage community spirit within their organization. Barbuto and Wheeler (2006), Liden et al. (2008), and Sendjaya et al. (2008) each recognize that servant leaders consider serving as a calling; they are self-sacrificial and are imbued with values that connect serving with meaning to life. The spiritual dimension of servant leadership is recognized in the “transcendent spirituality” dimension of the Sendjaya et al. (2008) measure. Servant leaders lead by visioning, rather than directing (Barbuto & Wheeler, 2006; Sendjaya et al., 2008; van Dierendonck & Nuijten, 2011), and hold people accountable for tasks under their responsibility and control (van Dierendonck & Nuijten, 2011). Servant leaders create value for the society they and their organization operate in (Barbuto & Wheeler, 2006; Liden et al., 2008). They can recognize impending problems and issues before they arise and have the wisdom to navigate through complexities (Barbuto & Wheeler, 2006; Liden et al., 2008). They are moral and ethical role models within the organization (Liden et al., 2008; Sendjaya et al., 2008; van Dierendonck & Nuijten, 2011). Because these four measures collectively capture the existing theoretical spectrum of servant leadership, and are developed using rigorous scale production procedures, they are therefore appropriate for our study as the basis to derive the hierarchical structure of servant leadership.

### Can We Conceive of Servant Leadership as Having a Hierarchical Structure?

For a construct to exist in a hierarchical structure, the base level item measures (i.e., base behaviors) should combine to form higher-order categories that can be theoretically explained. Such hierarchical structuring of a leadership style is seen in the transformational leadership construct, where certain base behaviors aggregate to the dimensions of inspirational motivation and idealized influence, which in turn combine to represent charisma (Bono & Anderson, 2005)<sup>2</sup>;

and charisma combines with intellectual stimulation to form a change orientation meta-category (DeRue et al., 2011). In the case of servant leadership, each of the four dominant measures discussed above consist of base items that cumulate to the various dimensions posited in each respective model of servant leadership (e.g., the 28 base items in Liden et al., 2008, cumulate to seven higher-order dimensions). Existing empirical research shows that these dimensions of existing models of servant leadership are significantly correlated (e.g., Liden et al., 2008; Van Dierendonck & Nuijten, 2011), and these high correlations show that shared variance exists between the dimensions, making it possible to further cumulate to higher-order categories that can then be theoretically explained.

It is important to note that fleshing out the hierarchical structure is, by necessity, somewhat a-theoretical. The goal is to take a variety of measures that have been developed theoretically and apply an empirical approach to determine a more defensible underlying structure of these measures. When these measures are considered together, certain posited dimensions may not emerge, or several may cumulate to a unique higher-order dimension, revealing valuable insights into the structure of servant leadership. Work on servant leadership to date has paid too little attention to the underlying empirical reality regarding its dimensionality and structure. Indeed, this problem plagues the broader literature on leadership styles as a whole (e.g., Anderson & Sun, 2017, 2023; Banks et al., 2018; Hoch et al., 2018; Meuser et al., 2016; Piccolo et al., 2012; Rowold et al., 2015).

The present study therefore empirically addresses this two-part question: “What is the hierarchical structure of servant leadership, as reflected in its dominant measures, and

<sup>2</sup> We note that Van Knippenberg and Sitkin (2013) have questioned the logical basis for combining these dimensions. Others have counseled against aggregating transformational leadership dimensions (e.g., Bromiley & Rau, 2016; Rafferty & Griffin, 2004).

how does that structure help to explain the nature of servant leadership?” Our methodological approach follows that described by Goldberg (2006) as implemented by Roberts et al. (2005), who used it to identify the structure of conscientiousness from seven major personality measures, finding six distinctive lower-order dimensions and six hierarchical levels. Later studies in the personality literature have similarly used this approach to identify the underlying structure of openness to experience (Woo et al., 2014), agreeableness (Crowe et al., 2018), and the so-called “dark triad” (Bader et al., 2021). More recent research has used this approach to examine whether the common core of the “dark triad” is distinct from the Big Five personality trait of agreeableness (Vize et al., 2021), finding that it is not and is better conceptualized as merely being the low pole of this Big Five trait.

Our research question is important for several reasons. One reason relates to the bandwidth-fidelity dilemma, which concerns whether aggregated measures situated higher in the hierarchy are better predictors than dimensional measures situated lower in the hierarchy (Judge et al., 2013). Using an aggregate situated higher in the hierarchy, servant leadership composite yields greater statistical power, but likely has lower predictive validity than using lower-level dimensions of servant leadership. To test the predictive validity of servant leadership at different levels of the hierarchical structure, we examine their effect on the outcome variables of trust in the leader and turnover intentions. We also examine whether servant leadership explains additional variance beyond transformational leadership. Second, examining the hierarchical structure of servant leadership can result in novel theoretical insights, particularly whether there are key predictors that exist in between the overall style and its underlying dimensions, and how these predictors determine outcomes. When using lower-level predictors, they may work in contrary ways when predicting work outcomes. For example, Liden et al. (2014) found that servant leadership positively impacts profitability via a serving culture, while Hartnell et al. (2020) found that it negatively affects work performance through serving climate. Using lower-level predictors can potentially help surface and explain such contradictory findings. Third, by articulating the structure of servant leadership, we can assess the extent to which the dominant measures reflect the key components at various hierarchical levels, which can aid future researchers in selecting the measure that best fits their theoretical contentions, and perhaps guide future scale refinement efforts. While the dominant measures differ at the level of their underlying dimensions, it is unknown whether they converge on hierarchical levels that are in between the overall style level and these dimensions (i.e., whether they all have the same structure when broken into two or three components). Fourth, by understanding the nature of servant leadership, our study helps suggest different strategies for developing components of servant leadership in practitioners.

## Methods

### Research Participants and Process

We collected data online using the Qualtrics Panels service, which is frequently used in academic leadership research (e.g., Ferguson et al., 2015; Hewlin et al., 2017; Montgomery et al., 2020), and took explicit steps to ensure the integrity of our data (Aguinis et al., 2021). We restricted eligible participants to full-time adult employees working in the USA. At the beginning of the survey, participants were assured confidentiality and anonymity and asked to agree to complete the survey honestly and accurately (and only those who agreed continued). We took three approaches to minimize the risk of inattentive responding. We included four “instructed response items” in the survey to check whether respondents were paying attention when answering the survey items (e.g., “To confirm the validity of your responses, please select somewhat agree”), which have proven effective in screening out careless responses (Meade & Craig, 2012). We included three photos of nature scenes spread throughout the survey to provide a mental break and novel stimulation. We automatically removed respondents who answered three opposing sets of questions with the same favorable or unfavorable scores (with these sets of questions appearing in different locations of the survey). These techniques also reduce the potential risk of “bots” answering the survey. We then ran two soft launches to test the effectiveness of these data quality control settings by collecting small samples in advance of our full launch. These pretest respondents took an average of 30 minutes to complete the full survey (not included in the final data).

We obtained 1273 responses. Participants were required to answer all survey questions, so there was no missing data. An additional 25 responses were removed from the final analysis for answering more than 90% of the questions using the same scale response, yielding a final usable sample of 1248. The sample was 70% female, their average age was 44.1 (SD = 12.2), and 46% of the sample reported having male managers. The majority of participants were Caucasian (84.6%), followed by Asian (6.6%), African (3.6%), Hispanic (2.6%), and other ethnicities (e.g., Latino/a, multi-ethnic, native American). A total of 617 participants (49.4%) reported having a manager of the opposite gender. In terms of the industries, 43.6% worked for non-profits, 41.1% of them worked for for-profit organizations, 10% were in public organizations (government), and 5.3% reported “other” (own business, healthcare/hospital, no answer). Finally, 40.1% of the participants had college or university degrees, 24% had masters’ degrees, and 22.7% had college-associate degrees. Our survey asked respondents to rate their leaders on various leadership styles, including the four measures of servant leadership and transformational leadership, and to provide demographic information and assessments of two job-related outcomes: trust

in leaders and turnover intentions. We collected these latter measures to test whether servant leadership at different hierarchical levels is more or less effective in predicting stronger relationships with the leader (i.e., higher trust and lower turnover intentions). We chose trust in leaders and turnover intentions based on past research findings. Studies have demonstrated an association between servant leadership and turnover intentions (Hunter et al., 2013; Liden et al., 2014) and trust in leaders (Sendjaya & Pekerti, 2010), and we test whether servant leadership explains added variance beyond transformational leadership. Although these outcome variables were collected from the same source, that is the only feasible source for them (Conway & Lance, 2010), as participants are the only ones who are aware of their turnover intentions and their trust in the leader, and researchers have argued that they are important outcomes. In addition, we also test for common method bias.

## Measures

### Servant Leadership Measures

We included four servant leadership measures (see Table 1). To improve consistency and clarity, a few items were modified slightly to begin with the statement “My manager.” For example, we revised the item “I would seek help from my manager if I had a personal problem” to read “My manager is someone I would seek help from if I had a personal problem.” Dimensional reliabilities of these measures ranged from 0.81 to 0.95, indicating highly reliable measures.

### Transformational Leadership

To test for discriminant and incremental validity, we measured transformational leadership with the 20-item measure from the Multifactor Leadership Questionnaire<sup>3</sup> (MLQ). An example of an item is “My manager talks optimistically about the future.” The reliability of the MLQ was 0.96.

### Turnover Intentions

We used Wayne et al.’s (1997) five-item measure. To improve clarity, the original wording of “current company” was changed to “this company.” An example question is “I am actively looking for a job outside this company.” The reliability was 0.92.

### Trust in Leaders

We measured this with Robinson and Rousseau’s (1994) seven-item measure. A sample item is “My employer is open and upfront with me.” The reliability was 0.95.

## Control Variables

We also asked for respondent birth year (to measure age), gender, and the respondent’s leader’s gender. We controlled for age because individuals develop morally as they get older, and servant leaders are believed to be at the post-conventional moral stage (Graham, 1991). We controlled for gender (coded as ‘1’ for male and ‘0’ for female) because many of the servant leadership behaviors, such as empathy and emotional healing, are considered feminine traits. Last, we created a dummy variable measuring whether or not the respondent was the same gender as their leader (“1” indicating different genders).

## Analyses and Results

Our primary analyses consist of two phases. In Phase 1, we analyze the four combined measures to derive the hierarchical structure of the servant leadership construct, following the approach of Roberts et al. (2005), which is a variant of the “bass backwards” approach discussed by Goldberg (2006). Before conducting our hierarchical analysis, however, we first tested the factor structures of the four multidimensional servant leadership measures using our data and compared them with previous studies. The CFA fit indices we found for each of the measures were comparable with their initial validation studies (note that Sendjaya et al., 2008 did not report a CFA). These findings support the integrity of our data and are shown in Table 3. In Phase 2, we conducted hierarchical linear regressions to examine the predictive validity of servant leadership on trust in leaders and turnover intentions at the second and third hierarchical levels relative to the overall aggregated servant leadership construct (i.e., level 1) and the lowest hierarchical level (i.e., the dimensions).

We used a non-exhaustive cross validation method by randomly dividing our sample into two parts. We used 60% of our final dataset ( $N=762$ ) for the EFA analyses to establish the hierarchical structure (the *training set*), and the remaining 40% ( $N=486$ ) for the CFA analyses to verify the results of the EFA analysis (the *test set*). Using different data in the model derivation and testing phases increases the accuracy of the model and minimizes the risk of overfitting (Browne, 2000; De Rooij & Weeda, 2020). We used the full sample when testing the predictive validity of different hierarchical levels on trust in leaders and turnover intentions.

### Phase 1: Determining the Hierarchical Structure of Servant Leadership

#### Analyses

Our main objective is to uncover the hierarchical structure of the servant leadership style. This first involves identifying

<sup>3</sup> The MLQ was used with permission of Mind Garden, Inc.

**Table 3** CFA comparison of the four measures between what was reported in the original articles and the current sample

	Number of dimensions	Number of items	Original paper				Current sample			
			CMIN (df)	RMSEA	SRMR	CFI	CMIN (df)	RMSEA	SRMR	CFI
Barbuto & Wheeler, 2006	5	23	1410.69 (220)	0.01	–	0.96	1474.46 (220)	0.068	0.052	0.958
Liden et al., 2008	7	28	549.14 (329)	0.06	0.05	0.98	2218.31 (329)	0.068	0.054	0.948
Sendjaya et al., 2008	6	35	Not conducted <sup>a</sup>	Not conducted	Not conducted	Not conducted	5036.95 (545)	0.081	0.034	0.911
Van Dierendonck & Nuijten, 2011	8	30	1197.7 (377)	0.050	0.070	0.930	2187.13 (377)	0.062	0.035	0.947

*N* = 1248

<sup>a</sup>Sendjaya et al. (2008) did not conduct CFA in their original paper

the optimal number of distinct dimensions at the lowest level of the hierarchy using parallel analysis and O'Connor's (2000) SPSS syntax. Parallel analysis compares eigenvalues derived from the original data with the average eigenvalues derived from the random data generated from the original sample with replication. The optimal number of factors is chosen right above the line drawn where the eigenvalue from the original sample drops below the average eigenvalues from the random data (Horn, 1965; Russell, 2002).

After identifying factors at the lowest level of the hierarchy, we conducted hierarchical analysis with the training data set as per Roberts et al. (2005). To do this, we first calculated the scores for each of the 26 dimensions of the four servant leadership measures by averaging their item scores. We then used these dimension scores as inputs into multiple EFAs that extracted different numbers of factors, starting with two factors, then three, etc. We used promax rotation because the factors are correlated with each other,<sup>4</sup> and the maximum likelihood (ML) extraction method. We fixed the number of factors extracted, from one to the optimal number factors at the lowest level (derived from EFA and parallel analysis as described previously). For each EFA, we calculated the root mean square error of approximation (RMSEA) goodness-of-fit using the formula provided by Fabrigar and Wegener (2011), using chi-square and degree of freedoms. Using factor scores calculated in each step, we used the highest correlations as path coefficients.

## Results

The parallel analysis suggested a seven-factor model solution at the lowest level of hierarchy, whereas the RMSEA < 0.05 criterion (Brown & Cudeck, 1993) suggested a nine-factor solution. Since these results suggest a different optimal number of dimensions, we examined the EFA results more closely and complemented our analysis with Roberts et al.'s (2005) approach of using varimax rotation. We determined that a seven-factor solution was superior for several reasons. First, varimax rotation revealed no highest-loading dimension on the eighth and ninth factors. Although we forced the analysis to extract nine factors, all dimensions had their highest loadings on the first through seventh factors. Second, the factor structures of two varimax models forced to extract seven or nine factors are very similar except for two dimensions—“transforming influence” (Sendjaya et al., 2008) and “authenticity” (van Dierendonck & Nuijten, 2011). Neither of these dimensions loaded on the eighth or ninth factor. Third, when

<sup>4</sup> Previous studies of servant leadership have found that the dimensions are typically highly correlated. Liden et al. (2008) reported dimensional correlations ranging from 0.39 to 0.86 and van Dierendonck and Nuijten (2011) reported a range of 0.53 to 0.85.

**Table 4** The seven-factor EFA solutions for four servant leadership models

Original scale	Original dimension label	Humility and authenticity	Community engagement	Engaging with tasks and careers	Emotional healing	Calling	Leader cognition	Morality and spirituality
SL3	Forgiveness	<b>[0.916]</b>	0.084	−0.079	−0.045	0.035	−0.019	−0.276
SL4	Authentic self	<b>[0.695]</b>	−0.030	0.244	−0.009	0.001	0.071	0.040
SL3	Humility	<b>[0.510]</b>	0.029	0.173	0.043	0.038	0.031	0.133
SL4	Covenantal relationship	<b>[0.453]</b>	−0.035	0.399	0.201	0.028	−0.074	0.049
SL3	Standing back	<b>[0.410]</b>	−0.052	0.000	−0.031	0.365	0.011	0.238
SL1	Organizational stewardship	0.074	<b>[0.903]</b>	0.058	0.006	−0.067	0.035	−0.050
SL2	Creating value for community	0.038	<b>[0.810]</b>	−0.130	0.055	0.163	−0.068	0.007
SL3	Stewardship	0.125	<b>[0.512]</b>	0.325	−0.107	−0.078	−0.001	0.188
SL3	Empowerment	0.006	−0.022	<b>[0.985]</b>	−0.053	0.105	−0.062	−0.015
SL2	Empowering	0.205	−0.061	<b>[0.779]</b>	0.051	0.070	−0.004	−0.274
SL2	Helping subordinates grow and succeed	−0.157	0.134	<b>[0.529]</b>	0.079	0.412	0.041	−0.065
SL3	Courage	−0.190	0.107	<b>[0.382]</b>	0.028	0.059	0.106	−0.019
SL3	Accountability	0.058	0.017	<b>[0.712]</b>	−0.051	−0.338	0.136	0.034
SL4	Transforming influence	0.030	0.054	<b>[0.408]</b>	0.027	0.120	−0.001	0.401
SL2	Emotional healing	0.064	0.040	0.050	<b>[1.030]</b>	−0.078	−0.005	−0.093
SL1	Emotional healing	−0.097	−0.011	−0.105	<b>[0.700]</b>	0.172	0.052	0.160
SL1	Altruistic calling	0.175	0.031	−0.136	0.070	<b>[0.872]</b>	0.060	−0.130
SL2	Putting subordinates first	0.095	0.049	−0.113	0.049	<b>[0.913]</b>	0.012	−0.052
SL2	Conceptual skills	0.046	0.048	0.269	0.089	−0.085	<b>[0.640]</b>	−0.009
SL1	Wisdom	0.039	−0.053	0.114	−0.008	0.106	<b>[0.770]</b>	−0.034
SL1	Persuasive mapping	−0.093	0.126	0.244	0.053	0.243	<b>[0.417]</b>	−0.033
SL3	Authenticity	0.125	0.161	0.149	0.136	0.108	−0.077	<b>[0.272]</b>
SL4	Responsible morality	−0.038	0.149	−0.048	0.034	−0.112	−0.020	<b>[1.006]</b>
SL4	Transcendental spirituality	−0.068	0.142	0.170	0.008	0.086	−0.017	<b>[0.673]</b>
SL2	Behaving ethically	0.314	0.115	−0.132	0.033	−0.021	0.190	<b>[0.471]</b>
SL4	Voluntary subordination	0.293	0.064	0.094	0.067	0.182	0.020	<b>[0.336]</b>

The most significant factor loadings are indicated by bold and bracketed data

Maximum likelihood extraction with Promax rotation. Using training set ( $N=762$ ). *SL1* = Barbuto and Wheeler (2006); *SL2* = Liden et al. (2008); *SL3* = van Dierendonck and Nuijten (2011); *SL4* = Sendjaya et al. (2008)

we forced an eight-factor extraction with varimax rotation, there was again no highest loading dimension on the eighth factor, suggesting the seven-factor model is the most stable. Fourth, we compared three varimax rotation EFA results (seven- to nine-factor models) with promax rotations and replicated it with different random training sets (60% samples randomly chosen multiple times), and only the seven-factor model showed similar highest-loading patterns for each factor (see Table 4). Lastly, we found that the seven-factor model showed acceptable fit among the three models ( $\chi^2=650.458$ ,  $df=144$ ,

$CFI=0.94$ ,  $RMSEA=0.10$ , and  $SRMR=0.03$ ); all dimensional scores loaded significantly on the seven latent factors.

After a thorough review of the dimensions included in each factor, we labeled these seven factors as follows<sup>5</sup>: (1)

<sup>5</sup> Some of the factors are composed of more than three dimensions as can be seen in Table 4. For example, the humility and authenticity factor has five dimensions – forgiveness, authentic self, humility, covenantal relationship and standing back. Following Roberts et al. (2005), we created the factor scores by summing only the dimensions with the three highest loadings that constituted those factors.



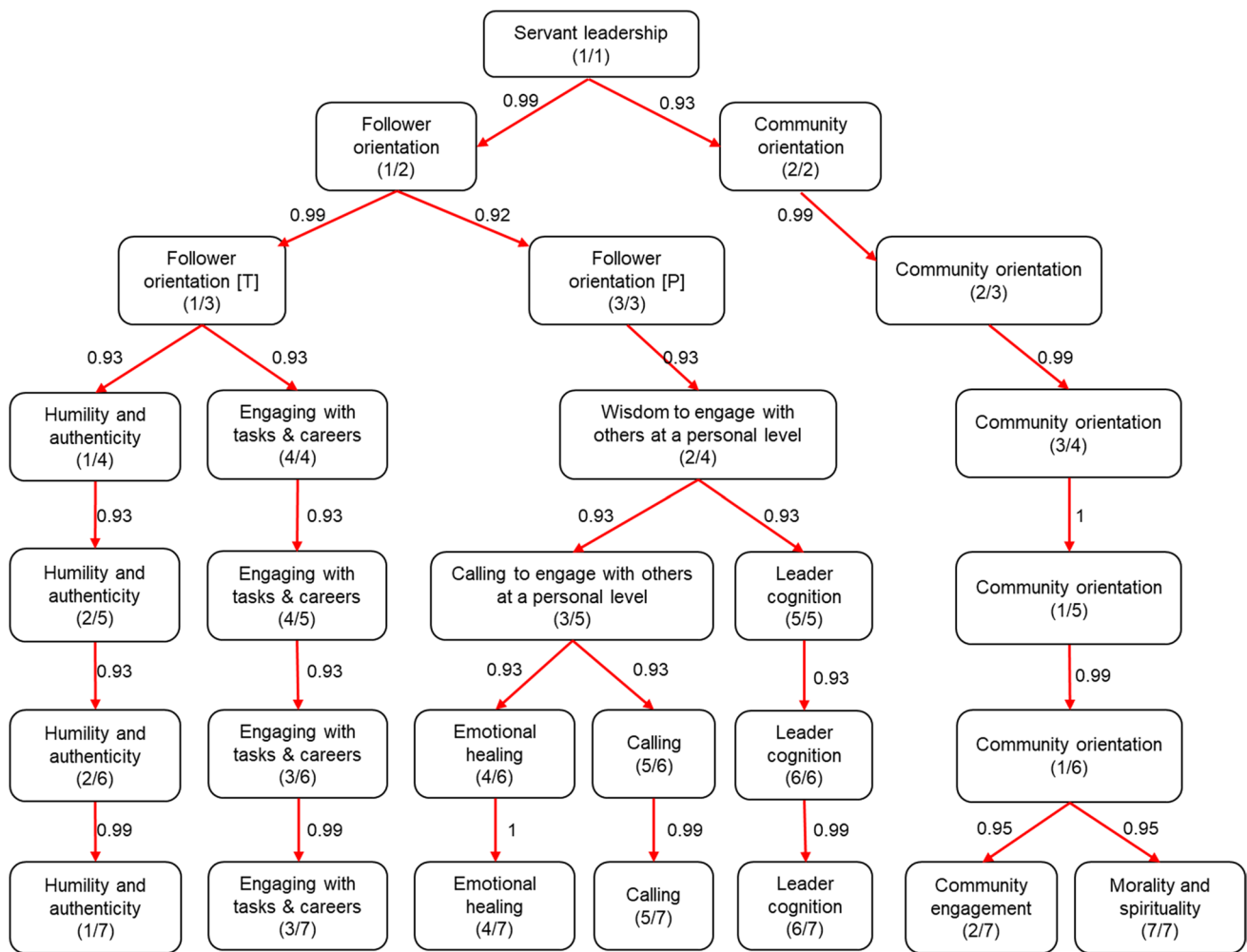


Fig. 1 The hierarchical structure of the 26 servant leadership dimensions

*community engagement*, composed of the stewardship dimensions from Barbuto and Wheeler (2006) and van Dierendonck and Nuijten (2011), as well as creating value for community dimension from Liden et al. (2008); (2) *engaging with tasks and careers*, which is about empowering subordinates, composed of the empowerment dimension from van Dierendonck and Nuijten (2011), helping subordinates grow and succeed from Liden et al. (2008), and the accountability dimension from van Dierendonck and Nuijten (2011); (3) *emotional healing*, which is being sensitive to other people’s personal concerns, is composed of two similar dimensions from Barbuto and Wheeler (2006) and Liden et al. (2008); (4) *morality and spirituality*, which concerns the moral, spiritual, and ethical nature of the leader. The dimensions included in this factor are responsible morality and transcendental spirituality from Sendjaya et al. (2008) and behaving ethically from Liden et al. (2008); (5) *humility and authenticity*, which relates to leader traits and characteristics that enable strong interpersonal

relationships. This factor includes the authentic self dimension from Sendjaya et al. (2008) and the forgiveness and humility dimensions from van Dierendonck and Nuijten (2011); (6) *calling*, which consists of the altruistic calling dimension from Barbuto and Wheeler (2006) and the putting subordinates first dimension from Liden et al. (2008); and (7) *leader cognition*, which comprises the mental processes involved in gaining understanding and knowing how to act. This includes the leader conceptual skills dimension from Liden et al. (2008), and the wisdom and persuasive mapping dimensions from Barbuto and Wheeler (2006).

After identifying the seven factors at the lowest level of hierarchy, we then obtained the hierarchical structure of servant leadership style as shown in Fig. 1. The path coefficients in Fig. 1 are the correlations between the factor scores (i.e., factor score at each level with those at levels above and below it). For example, the composite servant leadership at the top of the figure is correlated with its two lower factors by 0.99

and 0.93, and the second factor of the fifth layer (2/5) is correlated with the second factor of sixth layer (2/6) by 0.99.<sup>6</sup>

As shown in Fig. 1, the 26 dimensions first separate into two broad orientations: a follower orientation (1/2) and a community orientation (2/2). At the third hierarchical level, the follower orientation (1/2) splits into two components – one that is task related (T) (1/3), and one that is related to personal issues of followers (P) (3/3).<sup>7</sup> Below that, the task-oriented follower orientation (T) (1/3) further splits into humility and authenticity (1/4) and engaging with tasks and careers (4/4). On the other hand, person-oriented follower orientation (P) (3/3) is related at the lower level to wisdom required to deal with personal issues (2/4), which then splits at the 5th level of the hierarchy into a calling to engage with others at a personal level (3/5) and leader cognition (5/5). Lastly, the community orientation (2/2) is interesting, as it remained stable and did not split until the 6th level, when it split into community engagement (2/7) and morality and spirituality (7/7). We discuss the theoretical significance of these results in our “[Discussion](#).”

<sup>6</sup> In conducting our hierarchical analysis, we used the scores of the 26 dimensions from the four measures and conducted seven EFAs—forcing the number of factors beginning with one and going to seven. We then used the factor scores derived from each EFA step and created a correlation table. In other words, we created a correlation table using 28 factor scores (one factor score from the first EFA, two from the second EFA, ... seven from the seventh EFA). The highest correlations between one level to the higher level are the path coefficients. For this reason, it is possible to see the same combination of dimensions appearing at multiple levels. For example, although humility and authenticity dimensions appeared from 4 to 7th level, the factor score that we used to derive the correlation table were all different because the number of factors at each level was different. This is also seen in the study of the hierarchical structure of conscientiousness by Roberts et al. (2005), where, for example, traditionalism and virtue dimensions appeared repeatedly at the 5th and 6th levels.

<sup>7</sup> We also extracted the hierarchical structure for servant leadership using the item-level measures of all the four servant leadership scales (instead of dimension measures as per Roberts et al., 2005). We then analyzed the factors at the 2nd and 3rd level hierarchies and they were similar to the factors extracted using dimension measures. In addition, we also derived the hierarchical structure for each of the four servant leadership measures separately, using the bass backward method that uses scale *items* rather than dimensions (Goldberg, 2006). At the second and third level of hierarchy, only the Barbuto and Wheeler (2006) and Liden et al. (2008) measures had dimensions corresponding to a community orientation and an orientation towards followers (i.e., prioritizing followers and concerned about their emotional wellbeing). These orientations were missing in Sendjaya et al. (2008) and van Dierendonck and Nuijten (2011) measures. van Dierendonck and Nuijten (2011) measure had an accountability orientation (i.e., holding subordinates accountable for their task) at the second and third levels. All of the items for Sendjaya et al.’s (2008) transcendent spirituality dimension extracted to one orientation at the second and third level of hierarchy. Such a spirituality orientation was missing in the other measures.

## Phase 2: Testing the Predictive Validity

### Analysis

We examined whether each of the models (i.e., one-factor model at the highest hierarchical level, two-factor at the 2nd hierarchical level, three-factor model at the 3rd hierarchical level, and seven-factor model as the lowest hierarchical level) showed acceptable fit using the test set. We conducted CFAs using Mplus 7.0 based on the factor structure identified in Phase 1. Using a different data set (i.e., our test set) from the one used in previous analyses increases the robustness of our analysis. Following Roberts et al.’s (2005) approach, we then calculated the factor scores using the three dimensions that showed the highest loading on each factor, then standardized and summed them to obtain a single score for each factor.

We tested the predictive validity for the overall servant leadership composite as well as the components at the 2nd, 3rd, and the 7th levels in order to examine which hierarchical levels best predict trust in leaders and turnover intentions. The 2nd and 3rd layers are broader orientations, and are particularly useful in determining the nature of servant leadership (as we discuss below). In doing so, we first analyzed the correlations between seven factors of servant leadership and trust in leaders and turnover intentions—and second, conducted hierarchical linear regression analyses. For these regressions, we created scores for each factor within each hierarchical layer from one to seven, and used those scores to predict those outcome variables by hierarchical level. We controlled for three variables: respondent’s gender, age, and gender similarity to their manager. We then replicated the same analyses but first entered the transformational leadership variable before entering the servant leadership scores to demonstrate discriminant and incremental validity. We used the full sample of  $N = 1,248$  for testing predictive validity.<sup>8</sup>

### Results

Table 5 shows the correlations between the variables used in our analyses. As expected, all seven factors of servant leadership are reasonably highly correlated with one another. Consistent with previous work, both the composite score and factor scores are all positively related to trust in leaders and negatively correlated with turnover intentions. The composite score has the highest correlations with trust in

<sup>8</sup> The predictor variables trust in leaders and turnover intentions can only be reliably assessed by the survey participants. However, for all our regression analyses, we tested for common method variance using Harman’s single factor test. To do this, we included all of our independent variables in a single factor (without any rotation) and found that the total variance explained by that single component ranged from 46 to 49%, a level that is adequate according to the criteria suggested by Podsakoff and Organ (1986).

leaders ( $r=0.86, p<0.01$ ). Among the servant leadership factors, trust in leaders showed the strongest association with engaging with tasks and careers factor ( $r=0.84, p<0.01$  for trust in leaders).

Table 6 shows the hierarchical regression analyses. The composite score of the seven servant leadership factors significantly predicted trust in leaders and turnover intentions after controlling for demographic variables. In the two-dimensional model, trust in leaders was predicted with the  $R^2$  of 76% (standardized  $\beta$  for follower orientation = 0.82, standardized  $\beta$  for community orientation = 0.07, all significant at  $p=0.00$ ), while  $R^2$  of 22% for turnover intentions (standardized  $\beta$  for follower orientation = -0.32, standardized  $\beta$  for community orientation = -0.17, all significant at  $p=0.00$ ).

When considering three factors at the third hierarchical level, similar patterns emerged where we have a community orientation and where we then separate the follower orientation into task-oriented (labeled follower orientation (T)) and person-oriented (labeled follower orientation (P)) components, but not all predictors were significant in predicting outcomes. Community orientation was not significant in predicting trust in leaders, whereas follower orientation (P) was not significant in predicting turnover intentions. When considering the seven factors (at the seventh hierarchical level), all seven factors significantly predicted trust in leaders, and  $R^2$  values are high and significantly increased from the prior models with control variables (e.g., the  $R^2$  for trust in leaders model was 80%). *Engaging with tasks and careers* and *humility and authenticity* were the only two significant and positive factors that predicted both outcome variables.

We also conducted analyses by first entering transformational leadership scores before adding the servant leadership scores. The composite servant leadership score explained as much as 15% more incremental variance than transformational leadership for trust in leaders. The two-factor and three-factor models showed similar patterns as the analyses without transformational leadership. When controlling for transformational leadership, follower orientation was the only orientation significant in predicting trust in leaders and turnover intentions. In the three-factor model, all factors were significant in predicting trust in leaders, but only the follower orientation (T) was a significant predictor for turnover intentions.

Finally, the seven servant leadership factor scores explained 18% added variance of trust in leaders and 3% of turnover intentions after controlling for transformational leadership. All seven dimensions except leader cognition were significant predictors for trust in leaders, whereas only engaging with tasks and careers dimension was the significant predictor of turnover intentions.

**Table 5** Intercorrelations between servant leadership dimensions and criteria variables

	SL	1	2	3	4	5	6	7	8	9	10	11	12	13
Follower oriented	0.97													
Community oriented	0.79	0.72												
Follower orientation (task)	0.97	0.97	0.74											
Follower orientation (person)	0.85	0.82	0.70	0.81										
Humility and authenticity	0.89	0.92	0.68	0.91	0.74									
Engaging with tasks and careers	0.82	0.81	0.67	0.87	0.67	0.72								
Emotional healing	0.81	0.77	0.66	0.77	0.97	0.70	0.64							
Calling	0.84	0.83	0.69	0.80	0.90	0.75	0.65	0.79						
Leader cognition	0.80	0.76	0.72	0.78	0.78	0.71	0.71	0.74	0.75					
Community engagement	0.79	0.72	1.00	0.74	0.70	0.68	0.67	0.66	0.69	0.72				
Morality and spirituality	0.93	0.89	0.84	0.89	0.81	0.83	0.76	0.77	0.80	0.78	0.84			
Transformational leadership	0.86	0.82	0.79	0.83	0.74	0.78	0.74	0.71	0.74	0.79	0.79	0.84		
Trust in leader	0.88	0.87	0.66	0.87	0.77	0.84	0.72	0.72	0.76	0.72	0.66	0.84	0.79	
Turnover intentions	-0.46	-0.44	-0.40	-0.46	-0.41	-0.42	-0.45	-0.39	-0.40	-0.40	-0.40	-0.44	-0.46	-0.49

All correlations are significant at the 0.01 level (2-tailed)

SL servant leadership aggregated score

**Table 6** Hierarchical regression analyses comparing the predictive validity of different hierarchical levels of servant leadership

Dependent variable	Model without transformational leadership						Model including transformational leadership					
	Trust in leaders			Turnover intentions			Trust in leaders			Turnover intentions		
	<i>beta</i>	Std <i>beta</i>	<i>p</i>	<i>beta</i>	Std <i>beta</i>	<i>p</i>	<i>beta</i>	Std <i>beta</i>	<i>p</i>	<i>beta</i>	Std <i>beta</i>	<i>p</i>
<b>Initial model</b>												
Transformational leadership	–	–	–	–	–	–	4.84	0.79	0.00	–2.00	–0.46	0.00
<i>R</i> <sup>2</sup>							0.62			0.22		
<b>Composite score</b>												
Transformational leadership	–	–	–	–	–	–	0.88	0.14	0.00	–1.06	–0.25	0.00
Composite SL	1.84	0.87	0.00	–0.69	–0.46	0.00	1.58	0.75	0.00	–0.38	–0.25	0.00
<i>R</i> <sup>2</sup>	0.77			0.22			0.77			0.24		
<b>Two-dimensional model</b>												
Transformational leadership	–	–	–	–	–	–	1.57	0.26	0.00	–1.22	–0.28	0.00
Follower orientation	1.76	0.82	0.00	–0.48	–0.32	0.00	1.48	0.69	0.00	–0.27	–0.17	0.00
Community orientation	0.16	0.07	0.00	–0.27	–0.17	0.00	–0.08	–0.04	0.11	–0.08	–0.05	0.23
<i>R</i> <sup>2</sup>	0.76			0.21			0.78			0.23		
<b>Three-dimensional model</b>												
Transformational leadership	–	–	–	–	–	–	1.31	0.21	0.00	–0.96	–0.22	0.00
Follower orientation (T)	1.51	0.71	0.00	–0.51	–0.34	0.00	1.29	0.60	0.00	–0.35	–0.23	0.00
Follower orientation (P)	0.43	0.19	0.00	–0.09	–0.06	0.17	0.38	0.17	0.00	–0.06	–0.04	0.39
Community orientation	0.02	0.01	0.70	–0.17	–0.11	0.01	–0.16	–0.07	0.00	–0.04	–0.03	0.54
<i>R</i> <sup>2</sup>	0.77			0.23			0.78			0.24		
<b>Seven-dimensional model</b>												
Transformational leadership	–	–	–	–	–	–	1.04	0.17	0.00	–0.90	–0.21	0.00
Community engagement	–0.33	–0.15	0.00	–0.10	–0.06	0.18	–0.42	–0.19	0.00	–0.02	–0.02	0.76
Engaging with task and careers	0.19	0.08	0.00	–0.36	–0.21	0.00	0.13	0.06	0.01	–0.31	–0.18	0.00
Emotional healing	0.22	0.07	0.00	–0.06	–0.03	0.59	0.21	0.07	0.01	–0.05	–0.02	0.63
Morality and spirituality	0.89	0.41	0.00	–0.08	–0.05	0.45	0.82	0.38	0.00	–0.01	–0.01	0.92
Humility and authenticity	0.89	0.39	0.00	–0.18	–0.11	0.02	0.83	0.36	0.00	–0.12	–0.07	0.12
Calling	0.31	0.10	0.00	–0.11	–0.05	0.30	0.29	0.09	0.00	–0.10	–0.04	0.38
Leader cognition	0.18	0.06	0.02	–0.09	–0.04	0.39	0.07	0.02	0.36	0.01	0.00	0.96
<i>R</i> <sup>2</sup>	0.80			0.24			0.80			0.25		

*N* = 1248. Servant leadership dimension scores were created by summing up standardized scores of three highest loadings from each dimension. Results are presented after controlling for gender, age, and tenure with manager. The full result tables are available upon request. All variables were standardized

## Discussion

Reviewers of servant leadership literature have noted that in “order to enhance our insight into what the core of servant leadership is, studies comparing different measures are essential” (van Dierendonck & Nuijten, 2011, p. 265). Our study addresses this by eliciting the hierarchical structure of servant leadership, building on and consolidating the four most methodologically sound and theoretically defensible measures of servant leadership in order to understand the core nature of this leadership style. Our analyses suggest that the overall servant leadership construct has a

hierarchical structure with seven levels (see Fig. 1). Most importantly, our results suggest that the 2nd and 3rd hierarchical levels (consisting of two and three components, respectively) hold novel theoretical significance. Overall, the importance of our research is that it identifies the hierarchical structure of servant leadership and suggests new insights into key distinctions between aspects of servant leadership.

Examining the lowest-order factors (i.e., in the seven-factor solution), we find that none of the four servant leadership measures have dimensions capturing all seven of the lower-order factors we found. Moving up the hierarchy to

the two-factor solution, 19 of the 26 dimensions from the servant leadership measures we used loaded on the follower orientation, compared to only seven of 26 loading on the community orientation. Moving down to the three-factor solution to further analyze the loading of follower orientation, we found that 13 dimensions from the servant leadership measures we used loaded on the follower orientation (T) and seven loaded on the follower orientation (P). For the follower orientation (P), only Barbuto and Wheeler (2006) and Liden et al. (2008) recognized the responsibility of servant leaders to engage with personal healing of subordinates. Our analysis therefore illustrates how a fuller picture of the nature of servant leadership can only be obtained by bringing together different models and measures, as different servant leadership measures focus on different aspects of servant leadership.

## The Nature of Servant Leadership Revealed Through Its Hierarchical Structure

### The Seven Dimensions at the Seventh Level of Hierarchy

The lowest level (7th level) of our hierarchical analysis has seven factors, and we argue that this is a conceptually sound structure for the lower-order domain of servant leadership. The four dominant models posit between five and eight dimensions, and our analysis is the first to integrate these models in an empirically defensible way.

The first factor of community engagement tells us that the stewardship of servant leaders goes beyond the organization to create value for the community, and represents an important social responsibility of servant leadership. This community orientation is a unique feature of servant leadership and is what differentiates it from other leadership styles (Anderson & Sun, 2017; Liden et al., 2008). The second factor of engaging with tasks and careers of subordinates means that servant leaders empower their subordinates, while also holding them accountable for the work they do. A recent meta-analytic study found that servant leadership is correlated with contingent reward behaviors (Banks et al., 2018), supporting our results and suggesting that servant leaders do exhibit task-oriented behaviors.

The third factor of emotional healing is the willingness of servant leaders to deal with personal issues of subordinates. This captures the interpersonal orientation of servant leadership, which is key to its relational nature (George, 2000; van Dierendonck, 2011; van Dierendonck et al., 2014). It is important for servant leaders to understand and experience the feelings of others (van Dierendonck, 2011) in order to build strong interpersonal relationships. This also makes servant leadership unique compared with other styles of leadership, as their interpersonal relationships go beyond work-related matters to embrace personal issues (Eva et al.,

2019). The fourth factor is the *morality and spirituality* dimension which reflects the morality of the servant leader. Servant leaders have internalized moral principles, uphold ethical values, transcend their self-interests to look out for the legitimate needs of others, and are spiritual. The fifth *humility and authenticity* dimension enables stronger relationships with direct reports, characterized by authenticity, acceptance of others for who they are, and genuine concern for their welfare. This is further characterized by humility, allowing others to lead in their strengths, not allowing personal hurts and feelings to affect relationships, and having a forgiving nature.

The sixth factor is a calling to serve others. Sun (2013) argued that a calling to serve others is an important attribute of leaders' servant identity. Servant leadership reflects a transcendental view to leadership in which serving others is seen as an end in itself. Organizational outcomes are not neglected, but are seen as consequences of this calling. The seventh factor of leader cognition reflects the conceptual skills and wisdom of servant leaders. These conceptual skills include the ability to have an understanding and awareness of their surroundings, and wisdom encompasses the ability to make sound judgments and decisions.

The seven factors that represent servant leadership at the lowest level of hierarchy significantly predict turnover intentions and trust in leaders. These results are consistent with those of previous studies that have examined servant leadership as a composite score (e.g., Hoch et al., 2018). Our results show that the seven servant leadership dimensions explain additional variance beyond transformational leadership, particularly for trust in leaders, which supports our assertion that servant leadership explains stronger interpersonal relationships better than transformational leadership, and the argument that servant leaders are more effective at the interpersonal level than other leadership styles (Eva et al., 2019).

### The Second and Third Hierarchical Levels

The seven dimensions at the 7th level cumulate into two broad orientations of servant leadership at the second level: a community orientation and a follower orientation. These two orientations capture the very essence of servant leadership according to Greenleaf, where serving others to grow to their best potential encompasses stakeholders within (i.e., followers) as well as outside of the organization (i.e., the stakeholders within the community).

The fact that a strong community focus comes out as one of the two distinct orientations of servant leadership is important. Liden et al. (2008) showed that valuing community is what makes servant leadership distinct, and that it explains additional variance for organizational outcomes such as community citizenship behaviors beyond

transformational leadership. Our hierarchical analysis provides further insight into how servant leaders engage with their community, something missing from previous studies. The two dimensions at the 7th level that cumulate to community orientation are community engagement and morality and spirituality. When the morality and spirituality dimension combines with community engagement, it suggests that servant leaders consider their community engagement as a spiritual and moral exercise, which transcends beyond their self-interests and organizational boundaries, and brings a sense of meaning and purpose. When serving the community, such leaders do so with internalized moral principles. Engaging with communities often requires the need to balance the tension between the good of the community with profit maximization (Waldman & Balven, 2014) and requires leaders to conceptualize new ways of engagement. Overall, this orientation shows that servant leaders' engagement with the community is based on moral reasons, rather than instrumental purposes.

The follower orientation of servant leaders is another orientation that comes through at the second level of hierarchy and explains why previous research has shown that servant leaders are better at meeting psychological needs of followers as a goal in itself, whereas transformational leadership places these needs secondary to the organization's goals (van Dierendonck et al., 2014). Our study shows, after controlling for transformational leadership, that follower orientation explains added variance in trust in leaders. Our study sheds more insight into the nature of this follower orientation.

At the third level of the hierarchy, the follower orientation splits into two components. One aspect is towards subordinates' task (labeled as follower orientation (T)—see Fig. 1). The other is directed towards personal issues of subordinates (labeled as follower orientation (P)). The way certain dimensions at the 7th level cumulate to follower orientations (T) and (P) yields insights into the nature of servant leadership. The humility and authenticity dimension combines with engaging with tasks and careers of subordinates' dimension to form follower orientation (T). The humility and authenticity dimension are characterized by authenticity, acceptance of others for who they are, allowing others to lead in their strengths, not allowing personal hurts and feelings to affect relationships, and having a forgiving nature. These characteristics enable servant leaders to genuinely engage in the tasks and careers of their subordinates by prioritizing their careers, enabling them to learn from mistakes, empowering them to make decisions, while also holding them accountable for their work. The two dimensions create strong trusting relationships with their direct reports, primarily built around tasks and careers (follower orientation (T)). After controlling for transformational leadership, our study found that follower orientation (T) was significantly positively related to followers' trust in leaders and significantly negatively related to followers' turnover intentions.

Follower orientation (P) is primarily based on personal issues and well-being of subordinates rather than on tasks and careers. The dimensions at the 7th level that cumulate to the follower orientation (P) are emotional healing, calling, and leader cognition. This suggests that to genuinely engage with personal issues and well-being of others (i.e., emotional healing) requires servant leaders to be driven by a personal calling. When leaders have an altruistic calling, they are willing to engage with personal issues of their direct reports. This calling is missing from other leadership styles such as ethical and authentic leadership (Eva et al., 2019), and may be the reason why scholars argue that “servant leader takes an interest in understanding each follower's background, core values, beliefs, assumptions, and idiosyncratic behaviors, and as such the line between professional and personal lives is blurred” (Eva et al., 2019, p. 114). The follower orientation (P) also includes the leader cognition factor, suggesting that wisdom is required when dealing with personal issues of direct reports.

Our study found that the follower orientation (P) is significantly and positively related to trust in leaders after controlling for transformational leadership, showing that the primary impact that follower orientation (P) has is on the quality of the relationship between servant leaders and their followers. The follower orientation (T) and follower orientation (P) show that servant leaders' humility and authenticity, as well as morality and spirituality, combine with their task engagement behaviors as well as engaging with personal issues of their direct reports. Because of this, there is a qualitative difference between servant leaders and that of other leadership styles such as transformational leadership. Our analysis therefore sheds insights into what creates this qualitative difference. As Eva et al., (2019, p. 113) noted: “Transformational leaders' motive when focusing on followers' career and work related needs is to enable them to better achieve organizational goals (i.e., a means to an end), whereas servant leaders' motive is on the multidimensional development of followers (i.e., an end in itself).”

## Implications for Future Research

Our research suggests six possible areas for future research. The first concern is the need to further investigate community orientation, which came up as a distinct orientation of servant leaders in the hierarchical structure. Although community orientation is what distinguishes servant leadership from other styles of leadership such as transformational leadership (Liden et al., 2008), there is surprisingly little empirical work done to examine the relationship between servant leadership and the corporate social responsibility (CSR) of firms. Christensen et al., (2014, p. 173) claim that servant leadership “is the only leadership style in which CSR is ... foundational.” Apart from these theoretical assertions,

there are two empirical works that have used servant leadership as a moderator, showing that it strengthens socially responsible behaviors in organizations (Afsar et al., 2018; Luu, 2019). Empirically examining the relationship between servant leadership and CSR is a much-needed area for future research. Given the moral driven reason for servant leaders' community orientation, it is possible for organizations led by servant leaders to engage in more implicit than explicit CSR. This means that firms engage in values and norms driven practices that consider the good of their community as part of their organizational practice, without the need for virtue-signaling these as CSR practices (Angus-Leppan et al., 2010).

A second possible area for future research is that our study will help future researchers investigate the possible downside of servant leadership, especially when examining the third level of the hierarchy. For example, our study will help future research examine the claim that servant leaders prioritize people over performance and production (Sendjaya et al., 2008), and the consequential impact this has on organizational/unit performance. While some studies show that servant leadership (as a composite) has a positive and indirect impact on the profitability of the unit via the serving culture (e.g., Liden et al., 2014), others show servant leadership (as a composite measure) has a negative and indirect impact on performance via the serving climate and organization citizenship behavior (OCB) (Hartnell et al., 2020). Hartnell and colleagues (Hartnell et al., 2020) argue that helping behaviors towards others (i.e., OCB towards individuals – OCB-I) can detract from performance. What does one make of these contradictory findings? Our hierarchical analysis could possibly provide a more finely-grained explanation. Using the three-factor model (i.e., the third level of the hierarchy), we argue that servant leaders exercising a follower orientation (T) engage in the task- and work-related issues of their followers, and therefore have a positive impact on the performance climate of the organization. However, when servant leaders exercise a follower orientation (P), they are directed at personal issues employees face. Through role modeling of follower orientation (P), this can trickle-down and engender a serving culture where employees direct helping behaviors towards others (i.e., OCB-I), possibly detracting from their own performance. It is possible therefore while the follower orientation (T) can enhance performance, the follower orientation (P) can detract from performance. This analysis of how one primary aspect of servant leadership detracts from another is possible when researchers make the distinction between the separate follower orientations (T) and (P). Understanding the hierarchical structure makes such finer-grained research possible.

A third area for future research concerns the issue of the bandwidth-fidelity dilemma (Ones & Viswesvaran, 1996), which is seen in the personality literature, and we believe

that these issues are also relevant to the study of leadership styles (Anderson & Sun, 2023). In personality literature, an important question concerns which hierarchical level is optimal for predicting various outcomes (Hogan & Roberts, 1996; Paunonen, 1998; Paunonen et al., 1999; Speer et al., 2022). Studies show that predictors situated higher in the hierarchy incorporate fewer variables, and thus have greater statistical power; but they forego the potential increase in predictive validity that could come from lower-level traits (Judge et al., 2013). Furthermore, lower-level factors can work in opposing ways as seen in empirical studies in personality literature (e.g., Hirsh et al., 2010; Nusbaum & Silvia, 2011). We suggest that future research can build on the hierarchical structure we identified for servant leadership to test what level best predicts certain outcomes. For example, servant leadership has been found to predict psychological needs of competence, autonomy, and relatedness of employees while transformational leadership has not (van Dierendonck et al., 2014). In van Dierendonck et al.'s (2014) study, servant leadership was measured as a composite and broadly predicted psychological needs satisfaction. However, psychological needs consist of three components: sense of competency, autonomy, and relatedness (Ryan & Deci, 2000). Which of these psychological needs components are affected by which factors of servant leadership? To answer such questions, we need to go to down the hierarchical level to narrower factors of servant leadership. This perhaps can be best addressed with the third level of hierarchy of servant leadership, where follower orientation (T) might positively impact competency and autonomy, while follower orientation (P) positively impacts relatedness. Such nuanced studies can be done through future research drawing on our hierarchical structure for servant leadership.

The fourth area concerns the need to combine the existing four measures we have used or to develop new measures that are more comprehensive, especially when trying to predict outcomes at different hierarchical levels. Our analysis shows that none of the four measures we used capture all seven dimensions at the lowest-level hierarchy. Furthermore, certain dimensions of these measures aggregate to form important meta-categories at the 2nd and 3rd level of hierarchy that highlight the distinct nature of servant leadership and that warrant future research. For example, the follower orientation (T) at the third hierarchical level can be measured by combining several dimensions from van Dierendonck and Nuijten (2011), Sendjaya et al. (2008), and Liden et al. (2008) measures. Using the insights from our study, researchers should combine the existing four measures so that they both capture the important dimensions and so that they can be used to better investigate the differences between follower and community orientations of servant leaders, and the distinctions between follower orientations that focus on the task versus the person. We also recommend that a new measure of servant leadership be developed.

The fifth area concerns the future study of the construct of servant leadership. Our study has consolidated what we currently know of servant leadership, revealing its nature using the most dominant and empirically validated measures. Future theoretical studies should build on this, in order to reveal any additional theoretical insights.

Sixth, context matters for servant leadership. Women are rated higher on servant leadership than men (Lemoine & Blum, 2021).<sup>9</sup> It is also possible to find servant leaders in social- as well as mission-driven organizations which are targeted to serve a particular category of stakeholders (Pless et al., 2012). Does the hierarchical structure that reveals the nature of servant leadership vary across the demographic groups?<sup>10</sup> These are interesting questions that future research could investigate.

### Implications for Practice

What implications does our study have for practice? First, our results at the 2nd level of the hierarchy suggest a two-pronged approach for how leaders should engage with subordinates at the interpersonal level. Managers should show authenticity when engaging with the tasks and careers of subordinates; not with the primary intention being for the organization's benefit, but with a genuine calling to grow and develop others. They should also share leadership by allowing their subordinates to lead in the area of their strengths, and this requires the characteristic of humility. This approach, which is termed "follower orientation (T)," is what builds engagement with the organization and lowers turnover intentions. Subordinates are more likely to trust their manager and stay engaged with the organization if their manager shows genuine interest in their career growth and share leadership with them, rather than an instrumental approach. The other relational approach identified in our study—which we termed "follower orientation (P)"—is to

also consider the personal needs and wellbeing of their subordinates, meeting their subordinates at their deepest level of need. Interestingly, although follower orientation (P) builds trust in the leader, it had no significant association with turnover intentions. This shows that managers' primary focus should be on engaging with growth and career development of subordinates; but to do so with humility and with authenticity.

The above two-pronged approach, when it comes to task and interpersonal engagement, is what makes servant leaders qualitatively different from other types of leaders such as transformational leaders. Transformational leaders are concerned with the career and development needs of their subordinates, and even engage with their personal needs, but do so in an instrumental way with the ultimate intent of seeking what is best for the mission of the organization. Sometimes this instrumental focus is done for self-interest, and such an approach is termed pseudo-transformational leadership (Bass & Steidlmeier, 1999) and reflects the dark side of such leaders. People can judge character and intent, and such an instrumental approach can be damaging in the longer term. While one can be trained on the mechanics of career growth and development of subordinates, it is not easy to train character such as authenticity and humility. It is important therefore to consider these characteristics when recruiting or promoting future managers.

Our study shows that a community orientation and a follower orientation are the two most significant orientations of servant leaders. Having a community orientation is hugely important for business leaders who are under increasing pressure to report on their organization's social goals. Reporting on their organization's performance with regards to the stewardship of the environment (E), the contribution to the society (S) the organization operates in, and their governance (G), are becoming important—and this is termed "ESG" reporting. Our research suggests that business leaders should adopt an approach of servant leaders, where engagement with the community comes from a moral and ethical base. Rather than approaching ESG obligations instrumentally, they should be approached as a spiritual and moral obligation. This, combined with servant leaders' capacity to engage relationally with others, will help them to develop stronger partnership with community stakeholders. Given the importance of community for businesses today, due consideration should be given to developing business leaders to have servant leadership qualities or recruiting leaders with such qualities to strategic positions in organizations, rather than merely putting an undue emphasis on their charisma.

While our study unearthed some interesting insights into the nature of servant leadership, we note that servant leadership is not a full-range style of leadership. Servant leadership behaviors are most effective when it comes to the

<sup>9</sup> As a post-hoc analysis, we performed a t-test comparison of means of the rating of servant leadership for male and female managers. Female managers had higher servant leadership ratings than male managers.

<sup>10</sup> As a post-hoc analysis suggested by an anonymous reviewer, we analyzed the hierarchical structure based on male versus female managers. This is available as a supplementary resource. The post-hoc analysis shows that the hierarchical structures for male and female servant leaders are largely similar, except for a unique factor appearing both at the 4th and 7th hierarchical levels. At the 4th hierarchical level, a unique factor arose for female servant leaders showing them displaying wisdom and conceptual skills in trying to map out future and current issues, while a unique factor shows male servant leaders empowering their direct reports and holding them accountable for delivery of outcomes. At the 7th hierarchical level, a unique factor shows female servant leaders to be authentic and courageous when standing for their beliefs, while a unique factor shows male managers being ethical and moral in their dealings.



interpersonal context, where growth and the development of others are concerned. It is also a community-oriented leadership, enabling organizations to be effective societal citizens. However, when it comes to engaging in contexts such as driving change, making difficult restructure, and initiating redundancies, a servant leadership style may not be the most effective (Sun, 2013). A transformational leadership style is likely more effective in driving change at the organizational level (van Dierendonck et al., 2014). This shows that leadership must possess a full range of behaviors to be effective in organizational settings (Anderson & Sun, 2017).

## Limitations of the Study

While our research makes several substantial contributions to the leadership literature, those contributions should be understood in light of certain limitations. First, we note that our study examined only the four most recent and/or dominant measures that are used in servant leadership work and that were constructed with more rigorous scale construction methods, and it is possible that our results might have differed somewhat if we had included a different set of models and measures. However, given the large number of servant leadership measures that have been proposed and the fact that many of these measures were not developed using a justifiable scale construction process (e.g., a process similar to that outlined by Hinkin, 1998), it was both impractical and methodologically unsound to include all of these measures, despite their existence in the broad literature on servant leadership. Furthermore, as we discussed, the four measures we used collectively capture all the nine themes of servant leadership that our review of past theorizing suggests are important.

Second, our study could have benefited from collecting additional outcome measures from other sources (such as LMX, organizational citizenship behavior, organizational commitment, and in-role performance). By doing so, we could have tested the predictive validity at the different levels of the hierarchy (especially the 2nd, 3rd and 7th levels). However, due to our data collection using Qualtrics Services, and the need to collect large sample to develop the hierarchy, collecting outcome measures from a different source was infeasible. For this reason, we only report measures for trust in leaders and turnover intentions, which can be reliably assessed by the respondents to our Qualtrics survey. Overall, we hope our research establishes a stable foundation for future progress in understanding the importance of servant leadership to individuals, organizations, and society at large.

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**Data Availability** The data sets analyzed for the current study are not publicly available but are available from the corresponding author on reasonable request.

## Declarations

**Ethics Approval and Consent to Participate** The questionnaire and methodology for this study were approved by the Institutional Review Board of Iowa State University (IRB-ID: 17–235). Informed consent was obtained from all individual participants included in the study.

**Conflict of Interest** The authors declare no competing interests.

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