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Development of the servant leadership assessment instrument

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Abstract

Purpose – Building upon Patterson’s servant leadership theory, this study aims to present an instrument to measure the constructs of this working theory (identified as agapao love, humanity, altruism, vision, trust, service, and empowerment).

Design/methodology/approach – Specifically, the seven component concepts, as defined by Patterson, were used to build items for a servant leadership instrument. This study used DeVellis’ “Guidelines in Scale Development” to develop an instrument for Patterson’s new theory of servant leadership. The participants for the study consisted of a stratified sample taken from the study response data base. The surveys were created, and administered, using an online survey using surveysuite.

Findings – Three separate data collections were used for the development of this instrument reducing the 71-item scale to 42 items yielding five factors: empowerment, love, humility, trust, and vision.

Research limitations/implications – Recommend that future research include surveys at companies and organizations that advocate servant leadership concepts. Future research should include how each gender influences some of these items.

Practical implications – It is the intention that this instrument has the ability to predict or give measurement to the concepts of Patterson’s theory of servant leadership so that a servant leader can measure his or her effectiveness as a servant leader.

Originality/value – According to the review of the literature, this is the first instrument to measure five factors on servant leadership.

Keywords Leadership, Factor analysis

Paper type Research paper

The renewed emphasis in the field of organizational leadership on assisting leaders to measure their effectiveness as servant leaders has resulted in focus on the roots of that effectiveness in the values of a servant leader (Dennis and Winston, 2003; Laub, 1999; Page and Wong, 2000; Patterson, 2003; Russell, 2000; Russell and Stone, 2002). Bennis (2002, p. 105) stresses that leaders must generate trust. Covey (2002, p. 29) posits that empowerment is the fruit of a leader’s modeling, vision (values), and alignment. McGee-Cooper and Trammell (2002, p. 144) argue that understanding basic assumptions and background information on important issues empowers people to find deeper meaning in their jobs and to participate more fully in effective decision

The treatment of subjects was in accordance with the ethical standards of the APA (see Principles 6.1-6.20 in the “Ethical Principles of Psychologists and Code of Conduct,” APA, 1992a).



making. Finally, others (Fayol, 1949; Ciulla, 1998) emphasize that leaders must practice management that does not violate moral principles.

Focusing on values and moral premises can provide the method through which we will be able to better understand what a servant leader is. According to DePree (2002, p. 94), values provide “defining thoughts” that give leaders a clear moral purpose:

Without moral purpose, competence has no measure, and trust has no goal. A defining thought gives me a way to think about leadership and moral purpose.

The servant leadership interaction was examined in a historical context in this study. Various aspects of the relationships between the leader and followers were also examined: jealousy and envy (Vecchio, 1997; Van Sommers, 1988), values and morals (Bandura, 1986; Barnard, 1938; Burns, 1978; Selznick, 1957; Spears, 2002; Weber, 1947), relationships (Braye, 2002), responsibility and stewardship (Burkhardt and Spears, 2002; Pfeffer, 1978; Lloyd, 1996). Additionally, criticisms of servant leadership – that it has negative connotations (Bowie, 2000) and encourages passivity (Johnson, 2001) – was examined (Dennis, 2004).

Patterson’s theory of servant leadership

According to Kuhn (1996), when existing theory does not explain observed phenomena, then a new theory is needed. Patterson (2003) has developed a working theory of servant leadership that creates a platform for more specific research by defining the values on which servant leadership is based – values that she calls the component “constructs” of servant leadership. Patterson writes of the need for an instrument to measure these constructs. Therefore, as a support to Patterson’s research, this study developed an instrument to measure the constructs of Patterson’s theory of servant leadership.

In Patterson’s view, popular leadership theories such as transformational leadership have not adequately explained the values – for example, altruism – that are sometimes demonstrated by leaders. According to Patterson and Russell (2004), “Transformational leadership shows leaders focused on the organization, and is insufficient to explain behavior that is altruistic in nature, or follower-focused; thus servant leadership theory, which is follower focused, explains such behavior”. These virtues or morals are qualitative characteristics that are part of one’s character, something that is internal, almost spiritual (Whetstone, 2001). Furthermore, virtues have the ethical characteristics of being good, excellent, or worthy (Henry, 1978, p. 697). These qualities characterize the servant leader, who is guided by virtues within, henceforth called “constructs.” These virtuous constructs define servant leaders, shaping their attitudes, characteristics, and behavior. Thus, according to Patterson, the definition of servant leadership is as follows:

Servant leaders are those who serve with a focus on the followers, whereby the followers are the primary concern and the organizational concerns are peripheral. The servant leader constructs are virtues, which are defined as the good moral quality in a person, or the general quality of goodness, or moral excellence.

The constructs of servant leadership

According to Patterson (2003), the servant leader leads and serves with:

- (1) agapao love;
- (2) acts with humility;

- (3) is altruistic;
- (4) is visionary for the followers;
- (5) is trusting;
- (6) is serving; and
- (7) empowers followers.

These are the seven constructs that comprise the servant leadership in Patterson's model. We are providing extensive definitions of the factors to support the development of constructs upon which the questions being asked of the respondents do (assumed) measure the factors.

Agapao love. The cornerstone of the servant leadership/follower relationship that Patterson describes is agapao love. Winston (2002) states that agapao means to love in a social or moral sense. According to Winston (2002), this love causes leaders to consider each person not simply as a means to an end but as a complete person: one with needs, wants, and desires. According to Winston, this love is alive and well today in organizations in which those who demonstrate it follow what Winston calls, not the Golden Rule, but the Platinum Rule (do unto others as they would want you to do unto them). Mitroff and Denton (1999, p. 149) write about the importance of value-based organizations and say that the Golden Rule of "do unto others as you would have them do unto you" applies to all. For Winston (2002), the same thing is true of the Platinum Rule, as he advocates in his work on the Beatitudes. Swindoll (1981) states that servanthood and a true love work hand in hand. Likewise, Ferch and Mitchell (2001) advocate love as a goal for leaders, and Crom (1998) points out that servant leaders genuinely care for others and are interested in the lives of followers. Russell and Stone (2002) posit that love is unconditional for the servant leader.

Humility. Humility, according to Sandage and Wiens (2001), is the ability to keep one's accomplishments and talents in perspective. This means practicing self-acceptance, but it further includes the practice of true humility, which means not being self-focused but rather focused on others. Swindoll (1981) argues that the humility of the servant is not to be equated with poor self-esteem, but rather that humility is in line with a healthy ego. In other words, humility does not mean having a low view of one's self or one's self worth; rather, it means viewing oneself as no better or worse than others do. The servant leader sees humility as reflecting an accurate self-assessment and, therefore, maintains a relatively low self-focus (Tangney, 2000). For Crom (1998, p. 6), effective leaders are those that maintain their humility by showing respect for employees and acknowledging their contributions to the team. On the other hand, for DiStefano (1995, p. 63), humility is evident in a servant leader's acceptance of mystery and comfort with ambiguity.

Altruism. Kaplan (2000) states that altruism is helping others selflessly just for the sake of helping, which involves personal sacrifice, although there is no personal gain. Likewise, Eisenberg (1986, p. 1) defines altruistic behavior as "voluntary behavior that is intended to benefit another and is not motivated by the expectation of external reward". For these authors, altruism is an ethical perspective, as it also is for Johnson (2001). Elster (1990) on the other hand, argues that not all altruistic actions are done out of love, and, in any event, that they include a measure of self-interest. For others,

altruism comes in various types or ranges of behavior. For Jencks (1990) there are three types of altruism: emphatic, communicative, and moralistic. For Oliner, on the other hand, altruism involves a range of behaviors along a continuum running from the least to the most self-sacrificing behavior: on one end lies “conventional altruism” and on the other “heroic altruism,” in which the altruistic actor is willing to lay down his or her life for another. Monroe (1994, p. 862), who applies social cognition theory to explaining altruism, focuses on factors such as identity, self-perception, worldview, and empathy. Monroe defines her definition “as behavior intended to benefit another, even when doing so may risk or entail some sacrifice to the welfare of the actor”.

Vision. Vision, according to *Webster’s Dictionary*, is “the act or power of imagination; mode of seeing or conceiving; or, unusual discernment or foresight” (Merriam-Webster Online Dictionary, 2003). Blanchard (2000, p. 5) defines vision as “a picture of the future that produces passion”. Vision is necessary to good leadership. Hauser and House (2000, p. 258) posit that the “development and communication of a vision is one explanation for the success of charismatic/transformational leaders and their effect on the performance”. Laub (1999) found that shared vision builds up others (empowers them) and serves others’ needs (serves them). Additionally, “Servant leaders build corporate vision from their own personal vision” (Fairholm, 1997, p. 198). While Conger (1992) posits anticipating the need for change and acting in advance, is one method of bringing the vision into focus. Bennett (2001) contends that the servant leader must dream while remaining in the past and focused on the future, because this allows the leader to take advantage of the opportunities of the present. Buchen (1998) also points out that focusing on a future state was very important to Greenleaf’s model and that servant leaders must be preoccupied with the future. According to Kouzes and Posner (1997, p. 4), leaders “breathe life into their visions and get people to see exciting possibilities for the future”. Relating vision and humility, Buchan (2002) states that servant leaders are not so full of themselves as to allow their egos to get in the way of their ability to envision a corporate future. Bennis (2002, p. 105) states that leaders must create a shared vision with meaning – a vision that involves the players at the center rather than on the periphery. Young (2002) writes this leads to developing a measurable plan.

Trust. According to Hauser and House (2000, p. 230), trust is defined as “confidence in or reliance on another team member” in terms of their morality (e.g. honesty) and competence. According to Story (2002), trust is an essential characteristic of the servant leader. Servant leaders model truth in the way they coach, empower, and persuade. This trust exists as a basic element for true leadership. However, trust involves an element of uncertainty, according to Gautschi (2000), for to trust someone inheres the possibility to become disappointed. Russell (2001) argues that the values of integrity and honesty build interpersonal and organizational trust and lead to credibility; this trust is essential in servant leadership. Fairholm (1997, p. 107) states that trust is always present as an important factor that is central to leadership. Furthermore, Melrose (1998, p. 292) states that leaders do what they say, which engenders trust. Additionally, the openness of a leader to receive input from others increases a leader’s trustworthiness (Kouzes and Posner, 1997). Followers are more likely to follow a leader whose behaviors are consistent and trustworthy and who can connect with their aspirations (Kouzes and Posner, 1993a).

Service. The act of serving includes a mission of responsibility to others (Wis, 2002). Leaders understand that service is the center of servant leadership (Russell and Stone, 2002). Leaders model their service to others in their behavior, attitudes, and values (Lytle *et al.*, 1998). According to Block (1993), service is everything. People are accountable to those they serve whether customers or subordinates. Greenleaf (1996) posits that for leaders to be of service to others, they must have a sense of responsibility.

Empowerment. Empowerment is entrusting power to others, and for the servant leader it involves effective listening, making people feel significant, putting an emphasis on teamwork, and valuing of love and equality (Russell and Stone, 2002). Covey (2002) believes that the leader serves as a role model for empowering others and for valuing their differences. McGee-Cooper and Trammell (2002, p. 144) argue that understanding basic assumptions and background information on important issues empowers people to discover deeper meaning in their jobs and to participate more fully in effective decision making. Bass (1990) posits that empowerment is power sharing with followers in planning and decision making. Ciulla (1998, p. 84) distinguishes between “bogus empowerment” and empowerment. “Bogus empowerment attempts to give employees or followers power without changing the moral relationship between leaders and followers. Empowerment changes the rights, responsibilities, and duties of leaders as well as followers.”

Method

Participants

The participants for the study consisted of a stratified sample taken from the study response data base at the Center for Science and Technology, Syracuse University, Syracuse, NY. This database assists researchers with obtaining participants for research studies. An incentive, i.e. gift certificate to Amazon.com, consisted of three prizes of \$100, \$100, \$100 and \$50, was offered to the participants to take a survey. A minimum of 355 participants was desired for the first instrument (number of items was 71). However, the revised instrument for the second and third (last data collection) called for only 210 participants (42 items) in the study in order to obtain higher reliability (DeVellis, 1991).

The final data collection took place during mid-February 2004 for a one-week period. This collection netted 313 participants and 300 useable data after the clean up for missing values. A demographic profile of the 293 respondents (seven respondents did not list their study response ID number and their names could not be pulled from the database) revealed: the men totaled 122 (42 percent) respondents and the women 171 (58 percent) respondents. Their ages ranged in age from 18 to 67 (mean age = 34 years). They were predominantly Caucasian (80 percent). The majority of the sample (29.7 percent) had some college, no degree, while 44 percent had a bachelor’s (28 percent) through an advanced degree (about 15 percent), and were predominantly US residents (78 percent).

Procedures

This study developed a scale to measure the concepts in Patterson’s new theory of servant leadership. This study (Dissertation research, Dennis, 2004) used DeVellis (2003, 1991, pp. 60-100) “Guidelines in Scale Development” to develop an instrument for

Patterson's new theory of servant leadership. DeVellis' (1991) guidelines for scale development consists of eight steps:

- (1) determine clearly what it is you want to measure;
- (2) generate the item pool;
- (3) determine the format for measurement;
- (4) have initial items reviewed by panel of experts;
- (5) consider inclusion of validation items;
- (6) administer items to administrative sample;
- (7) evaluate the items; and
- (8) optimize scale length.

This study used the literature on servant leadership to build a set of items; gathered a jury of experts who reviewed, added, and deleted items as needed; constructed an item questionnaire in collaboration with the jury of experts – a questionnaire was then sent to a pool of participants from the study response database; and ran a factor analysis with correlation matrices and scale reliability tests to help determine which items to keep for each construct and whether sufficient items remained to make a useable scale.

Survey – surveysuite

The surveys were created, and administered, using an online survey using surveysuite (University of Virginia, Charlottesville, VA). Results from the survey were downloaded into Excel format, cleaned (participants entering no data), and then placed into SPSS 11.0 for factor analysis.

Data analysis and reliability

SPSS, Version 11.0 was used for statistical analysis to calculate both the factor analysis and the scale reliability analysis. The loadings were set at (0.70) and examined for principal components using oblimin rotation of items. DeVellis (1991) and Nunnally (1978) suggest a loading value of 0.70 as a lower acceptable boundary for α . A higher α minimizes covariation due to chance. The oblique factor rotation identifies the extent to which each of the factors is correlated (Hair and Anderson, 1998, p. 89).

Validity of data

Face and content validity was built into the test development process, following methods set in DeVellis' (1991) scale development guidelines. The criterion-related validity and construct-related validity were established empirically.

Item construction

Decisions from the expert panel committee were used to guide the construction of the instrument items. The items were arranged in a Likert-style for each construct, and they vary from a low of five items to a high of ten items. The time to complete the survey based in pre-field test, and timed test, takes between 6 and 10 min. This survey addresses the opinions on leadership of the follower only. That is, followers were asked to "respond to each statement, as you believe your leader (choose one leader for all these items) would think, act, or behave."

Results

The authors, using SPSS Version 11.0, produced a correlation matrix of the items which confirmed the authors' presumption that the items were correlated. Therefore, the authors used an Oblimin rotation method for the factor analysis. Factor loadings of the 42 items of the scale produced five factors. This is the second consecutive data collection with three factors loading: empowerment, service, and trust. The previous data collection ended on 19 January 2004 with 406 participants and with similar demographics of the February 2004 data collection. In the January data collection, five of the six items for trust loaded up as a separate factor.

A structure matrix of items revealed that the items were correlated, thus, an Oblimin Rotation method was used for the factor analysis. A factor analysis was completed on the remaining 25 items with a suppressed coefficient absolute value of (0.76) as the remaining items were loading at higher values (Table I). Factor loadings of the 25 items of the scale produced six factors. Table II shows that love items 2, 3, 4, 5, and 6 loaded on factor 1. The Cronbach α score for factor 1 is 0.94.

The following empowerment items loaded on factor 2: 1, 3, 4, 5, and 6 (Table III). The Cronbach α score for factor 2 is 0.94. Factor 3 loaded with vision items 1, 2, 3, 4, and 5 (Table IV). The Cronbach α score for factor 3 is 0.89. Removing any of the items would have lowered the Cronbach α ; thus, all were kept. Factor 4 loaded with only one service item, 6, and thus, was not included as a factor.

Item	Factor						
	1	2	3	4	5	6	7
Love2	0.79						
Love6	0.84						
Love3	0.85						
Love4	0.79						
Love5	0.83						
empr6		0.85					
empr5		0.91					
empr3		0.92					
empr1		0.8					
empr4		0.91					
vis1			0.8				
vis5			0.78				
vis4			0.86				
vis2			0.81				
vis3			0.87				
Hum1							0.83
Hum3							0.87
Hum5							0.75
Hum4							0.88
Hum6							0.82
altr6					-0.9		
altr2					-0.8		
Serv6				0.93			
Trus4						0.9	
Trus5						0.79	

Table I.
Structure matrix of
removed items for third
data collection – 25 items
rotated

Factor 5 loaded with Altruism items 2 and 6 in negative loadings (Table V). No Cronbach α score is available with less than three items. Factor 6 loaded with trust items 4 and 5 (Table VI). No Cronbach α score is available with less than three items. Table VII is from the second data collection and reveals five trust items loading on a separate factor. Factor 7 loaded with humility items 1, 3, 4, 5, and 6 (Table VIII). The Cronbach α score for factor 6 is 0.92.

The data was examined for normality, linearity, homoscedasticity, as well as homogeneity of sample. Normality was not necessary, as multicollinearity is desired to identify interrelated sets of variables (Hair and Anderson, 1998, p. 99). The data matrix

Scale item	Load
My leader is genuinely interested in me as a person	0.79
My leader has shown his or her care for me by encouraging me	0.85
My leader has shown compassion in his or her actions toward me	0.79
My leader shows concern for me	0.83
My leader creates a culture that fosters high standards of ethics	0.84

Table II.
Factor 1: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

Scale item	Load
My leader empowers me with opportunities so that I develop my skills	0.80
My leader turns over some control to me so that I may accept more responsibility	0.92
My leader entrusts me to make decisions	0.91
My leader gives me the authority I need to do my job	0.91
My leader lets me make decisions with increasing responsibility	0.85

Table III.
Factor 2: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

Scale item	Load
My leader has sought my vision regarding the organization's vision	0.80
My leader has shown that he or she wants to include employees' vision into the firm's goals and objectives	0.81
My leader seeks my commitment concerning the shared vision of our company	0.87
My leader has asked me what I think the future direction of our company should be	0.86
My leader and I have written a clear and concise vision statement for our company	0.78

Table IV.
Factor 3: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

was examined for sufficient correlations to justify further factor analysis. Methods used included visual inspection of number of correlations greater than 0.30, anti-image correlation matrix, Bartlett's test of Sphericity (significance met), and the measure of sampling adequacy (MSA). All methods indicated further factor analysis as appropriate. The MSA averaged in the 0.95-0.98 ranges, well above 0.80 or higher cited as meritorious by Hair and Anderson (1988, p. 99). As a MSA, the Bartlett's Test of Sphericity was significant ($\chi^2 = 11,751.89, p = 0.000$) (Table IX).

The total amount of variance for the 42-item instrument is explained by the four extracted factors in Table X. Communalities for the 42-item instrument ranged from

Table V.
Factor 5: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

Scale item	Load
My leader has made personal sacrifice(s) for me	- 0.90
My leader has endured hardships, e.g. political, "turf wars," etc. to defend me	- 0.80

Table VI.
Factor 7: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

Scale item	Load
My leader knows I am above corruption	0.90
My leader trusts me to keep a secret	0.79

Table VII.
Summary of principal components factor analyses with oblimin rotation of items ($N = 406$) – second data collection

Scale item	Load
The level of trust my leader places in me increases my commitment to the organization	0.71
My leader shows trustworthiness in me by being open to receive input from me	0.74
My leader knows I am above corruption	0.83
My leader trusts me to keep a secret	0.83
My leader communicates trust to me	0.75

Table VIII.
Factor 6: summary of principal components factor analyses with oblimin rotation of items ($N = 300$)

Scale item	Load
My leader does not overestimate her or his merits	0.83
My leader is not interested in self-glorification	0.87
My leader is humble enough to consult others in the organization when he or she may not have all the answers	0.75
My leader does not center attention on his or her own accomplishments	0.88
My leader's demeanor is one of humility	0.82

0.43 (Trust4: My leader knows I am above corruption) to 0.82 (Empr3: My leader turns over some control to me so that I may accept more responsibility). The median communality for the 42-item instrument was 0.71.

The correlation matrix was too cumbersome for 42 items to be included, however, the item means and standard deviations are presented in Table XI. On a 6-point scale, where 0 = not applicable or total disagreement to 6 = most agreement possible, the means ranged from 2.5 (Vision 5: My leader and I have written a clear and concise vision statement for our company) to 4.5 (Trust 4: My leader knows I am above corruption). Examination of the correlation matrix (22 items of the factors that loaded up) indicated that all items correlated $\geq (0.30)$ with at least three other items in the matrix (range 20-22). Twenty of the 22 items (90 percent) had 20 or more shared correlations that exceeded $\geq (0.3)$. No interitem correlation exceeded 0.84, thus indicating no problems with multicollinearity.

Bartlett's test of sphericity and the Kaiser-Meyer-Oklin (KMO) MSA were used to evaluate the strength of the linear association among the 22 items in the correlation matrix. Bartlett's test of sphericity was significant ($\chi^2 = 5524.596, p = 0.000$), which indicated that the correlation matrix was not an identity matrix. This is important, because its presence would mean there are no interrelationships among the items. The KMO statistic (0.95), which is an index that compares the magnitude of the observed correlations with the magnitude of the partial correlation coefficients, is "marvelous" according to Kaiser's (1974) criteria. These results suggest that the factor analysis was appropriate and significant for the number of items ($N = 22$) in the correlation matrix.

Test	Measure	Value
KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.97
Bartlett's test of sphericity	Approx χ^2	11751.89
	df	861
	Sig.	0

Table IX.
Bartlett's test of sphericity

Factor	Total	Percentage of variance	Cumulative (percent)
Eigenvalues			
1	24.48	58.29	58.29
2	2.35	5.6	63.89
3	1.88	4.48	68.37
4	1.18	2.82	71.18
Extraction sums			
24.48	58.29	58.29	17.63
2.35	5.6	63.89	14.66
1.88	4.48	68.37	11.43
1.18	2.82	71.18	6.62

Table X.
Total variance for initial eigenvalues and extraction sums of square loadings

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	serv6	3.76	1.53
	love2	3.85	1.66
	trus5	4.4	1.49
	serv1	3.96	1.5
	altr3	3.59	1.69
	Empr2	3.75	1.68
	love6	4	1.61
	hum2	3.52	1.69
	altr6	2.71	1.83
	trus2	4.28	1.41
	Empr6	4.27	1.46
	hum1	3.64	1.64
	trus1	4.2	1.52
	vis1	3.5	1.73
	serv5	3.98	1.66
	altr1	3.27	1.64
	love3	3.81	1.62
	altr4	3.52	1.67
	love4	3.88	1.59
	hum3	3.49	1.77
	love1	3.72	1.68
	hum5	4.07	1.71
	altr2	2.58	1.81
	Empr5	4.31	1.48
	Empr3	4.18	1.42
	altr5	3.41	1.72
	love5	3.85	1.65
	Empr1	4	1.5
	serv2	3.16	1.71
	trus6	4.04	1.61
	trus3	4.01	1.72
	vis6	3.72	1.66
	Empr4	4.29	1.41
	vis5	2.53	2.01
	serv4	3.28	1.68
	vis4	2.73	1.98
	hum4	3.52	1.72
	serv3	4.05	1.66
	hum6	2.99	1.75
	vis2	3.36	1.81
	trus4	4.51	1.39
	vis3	3.69	1.7

Table XI.
Means and standard
deviations for the 42-item
SL-A instrument

Discussion

This study sought to answer the following question: Can the presence of Patterson's servant leadership concept be assessed through a written instrument? Statistical results indicate that the servant leadership assessment instrument measures five factors of Patterson's seven factors on servant leadership. It failed to measure the factors of altruism and service. Although Patterson's theory of servant leadership was

proven on five of the seven factors, work remains to prove the remaining two concepts of altruism and service.

The altruism and service factors

Patterson's factors of altruism and service were not found. One possibility is that the altruism and service items are still not concise enough to discriminate between individual items as a separate factor. Changes for the service items from the second revised instrument to the third instrument included a re-focusing of the leader within the environment and as a steward of the organization in general to stronger emphasis on individual subordinate interactions including a mission of responsibility. The focus to a mission of responsibility to others did show up on one factor. Stronger delineation of this item to several items may help to discretely explain the factor for future research on this instrument.

Recommendations for altruism

It is recommended that the items remain as a factor and a survey submitted to a population sample from an organization that has a leader that identifies him or her self as a servant leader. The data collections taken from the online survey database were not examined to see if they were familiar with the theory of servant leadership. Employees who have non-servant leaders may not see any of the characteristics of altruism displayed. The literature supports this concept as being unique to caring individuals who make sacrifices, and expect nothing in return.

Recommendations for service

Two recommendations are offered for Patterson's concept of service:

- (1) Review other validated instruments that have the concept of service and get permission to incorporate these items, e.g. 4-6 items, into the servant leadership assessment instrument.
- (2) Continue to use the methods as set forth by DeVellis to hone this concept.

Limitations of the study

There are several possible limitations of this research proposal that need to be addressed. An incentive of \$350 in total prizes to take the survey may have caused some to rush toward the end of the survey. During the last data collection, 13 participants were removed because either data was missing or had the same measurement, e.g. all zeros or one. Overall, based on the first data collection which included negative responses to catch the "agreeers," and a much longer survey (71 items versus 42 in last data collection), this did not appear to be a problem. A second limitation is how well the participants may understand the concept of "servant leadership" even with Patterson's definition.

Suggestions for future research

Recommend that future research include surveys at companies and organizations that advocate servant leadership concepts. This offers the luxury of comparing the instrument with people who are already familiar with servant leadership. Additionally, research should look at an assessment of an individual organization's staff reviewing an identified servant leader. Moreover, comparing one leader (same leader for

everyone) who advocates servant leadership offers more reliability for the instrument. This method would also help prepare the instrument for the next stage – designing the instrument for the leader to assess his or her perception of these factors for servant leadership and comparing them with the employees’ survey. Recommend gender directed research on the factor of trust. The second data collection was examined for homogeneity of sample and no significant differences were found for the other factors. The similarities for the genders of the factors included: factor loading for vision (but females scored for all six items to males’ three items; and Altruism and some service items loaded up for each gender, but females had these loadings on factor one (more shared variance) while males had these on factor seven (eigenvalue under one).

The dissimilarities between the genders appear pronounced. Trust items loaded five of six items as negative readings in factor 2 for females while loading as positive items in factor 3 for males. Additionally, females had almost half of the 42 items load up on factor 1 while males had only three items load up on factor 1. Moreover, males had only 25 percent of the survey load up on first three factors.

Future research should include how each gender influences some of these items. Do females have more trust issues with their leaders? What is the gender of the leader? That is, do females have more male leaders and consequently score them lower on trust issues than they do male leaders? If so, what impact does this have on servant leadership?

Conclusion

Does this instrument measure Patterson’s theory of servant leadership – that is, does the instrument have construct validity? The answer is this instrument has the beginning of establishing construct validity. Exploratory factor analysis helped to define the underlying structures to measure the concepts of Patterson’s servant leadership theory. However, confirmatory factor analysis is needed to establish construct validity (Pett *et al.*, 2003). It is recommended that structural equation modeling (SEM) and or confirmatory factor analysis be used to establish this validity. It is the intention that this instrument has the ability to predict or give measurement to the concepts of Patterson’s theory of servant leadership so that a servant leader can measure his or her effectiveness as a servant leader. It is hoped that this instrument will have significance to measure servant leadership, and thus, turn Patterson’s theory into a model of servant leadership. If this instrument will turn Patterson’s theory into a model of servant leadership.

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