Servant leadership, span of control and outcomes in a municipality context

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Abstract

The purpose of the current study was to investigate the moderating role of span of supervision in the association between servant leadership and multiple outcomes such as job satisfaction and follower performance in a municipality context in Norway. Cross-sectional research design was applied, where data was collected from 237 respondents where leaders and their followers participated. Results showed how the positive relationship between servant leadership and job satisfaction is attenuated by a larger span of supervision, resulting in poorer follower performance. The present study contributes to the servant leadership literature by showing that servant leaders do not operate in the same manner across different degrees of span of supervision. Evidence suggests that span of supervision creates distance between leaders and followers and moderates the types of leader behaviors that may emerge or are viable, such that serving every follower’s highest priority needs becomes difficult to execute.
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Introduction

The concept of servant leadership was introduced in the 1970’s by Robert Greenleaf with his seminal work *The servant as Leader* (1970, 1977). Essentially, servant leaders are expected to develop close relationships with their followers and pay close attention to the individual needs of each follower. Empirical test of the validity of the theory started more than a decade ago and has witnessed a considerable increase. Research has found servant leadership to be associated with a variety of favorable employee outcomes, including job satisfaction (Mayer, Barders & Piccolo, 2008), affective commitment (Walumbwa, Hartnell, & Oke, 2010), and improved job performance through better extra role performance (Jaramillo, Grisaffe, Chonko & Roberts, 2009). A research question that has caught social scientists attention the last decade is the suitability of servant leadership in different types of organizational contexts. Johnson (2009) posits that servant leadership does not work in every context, and can even been seen out of place in some situations. For example, Giampetro-Meyer et al. (1998) argue that servant leadership clashes with the idea of efficiency, and shareholders may be impatient with these types of leaders because they are not aggressive in making every effort to maximize short-run profits. Servant leadership has been tested in different types of organizations, such as voluntary service organizations (Schneider & George, 2010), public primary schools (Cerit, 2009), and a grocery store chain (Ehrhart, 2004). However, no study has, to our knowledge, been conducted in a municipality organization, which has left us ill-informed about the suitability of servant leadership in such a context. Municipality
organizations are established to providing different types of service to their community such as health care services, social services, and elementary school and pre-school education (Hind, Wilson, & Lenssen, 2009). However, successful implementation of service for local inhabitants create a dilemma for municipality leaders. On the one hand, there is a growing dependency on followers in providing “tailor made” service to local inhabitants, which makes leaders attention to the needs of followers essential, such as spending time and energy on coaching followers for innovative performance, and facilitating follower’s performance (Fiva, Hagen & Sørensen, 2014). As such, servant leadership should be suitable because concern for the needs of followers is more strongly emphasized in servant leadership theory than in any other leadership theory (Mayer, 2010). On the other hand, spending time and provide followers with essential support are strongly challenged by a profound trend in municipality organizations: span of supervision, which refers to the number of subordinates who are formally and directly supervised by a given manager (Schyns, Maslyn, & Weibler, 2010). Span of supervision is regarded by social scientists as an important variable of leadership effectiveness (Pawar and Eastman, 1997), such as interfere negatively with the leader’s ability to influence desirable outcomes for their subordinates (Antonakis & Atwater, 2002). Surprisingly, within the servant leadership literature no study has, to our knowledge, been conducted to examine this leadership dilemma where larger span of supervision may create boundaries for servant leaders to build close contact with their followers such as pay close attention to the individual needs of each follower and personalized interaction with their followers. In addition, increased span of supervision may also create a boundary for servant leaders to create a serving culture where desired behavior is encouraged and maintained through coworker interaction. Hence, the aim of the current study is to investigate this dilemma by focus on the moderating role of span of supervision on the association between servant leadership and a central follower attitudinal outcome, namely, job satisfaction. Job
satisfaction is a general workplace attitude measure, usually tested as an outcome of leadership style (Judge and Piccolo 2004). In addition, attitudes toward the job should be related to behaviors on the job, and the most central is performance on the job (Judge et al. 2001). We therefore also investigate whether job satisfaction, in turn, relates to follower work performance. By doing so, we aim to contribute to a better understanding of the conditions under which servant leadership relates to beneficial outcomes such as job satisfaction, and in turn, follower work performance.

Theory and hypotheses

Even though servant leadership was introduced four decades ago and empirical test of the validity of the theory started more than 10 years ago, no consensus exist among social scientists concerning a definition and theoretical framework of servant leadership (van Dierendonck, 2011). A number of definitions and models have been introduced based on different interpretations of Greenleaf’s 1970 work (Spears 1995; Laub, 1999; Russell and Stone, 2002; Patterson, 2003). As such, there is a compelling need for an operational definition of the key characteristics of servant leadership based on theoretical insights learned from research over the past 10 years. In a review of servant leadership, van Dierendonck (2011) incorporated key insights learned from research the last decade by combining the conceptual models with the empirical evidence and distinguished six key characteristics of servant leader behavior, as experienced by followers, which bring order to the conceptual plurality. (1) Empowering and developing people by encouraging self-directed decision-making and information sharing and coaching for innovative performance. As such, servant leaders’ gives followers a sense of personal power and encourages their personal development; (2) Humility, which refers to modesty where a servant leader retreats into the background when a task has been successfully accomplished. Furthermore, humility shows
that the leader puts the interest of others first by facilitating their performance, and provides them with essential support; (3) Authenticity, which manifests itself in doing what is promised, honesty, and vulnerability. As such, a servant leader expresses oneself in ways that are consistent with inner thoughts and feelings and being true to one self. Authenticity is also related to integrity, the adherence to a generally perceived moral code; (4) Interpersonal acceptance, which includes empathy that focuses on being able to adopt the psychological perspectives of other people and experience feelings of warmth, compassion, and forgiveness when others are confronted with offences, arguments, and mistakes; (5) Provide direction to ensure that people know what is expected of them. A servant-leader’s take on providing direction is to make work dynamic and “tailor made” based on follower abilities, needs, and input; (6) Stewardship, which is the willingness to take responsibility for the larger institution. In addition, leaders should act as role models for others by stimulate others to act in the common interest.

We first turn to the potential relationship between servant leadership and job satisfaction with the span of supervision as a moderator. The association between servant leadership and job satisfaction has been tested in several studies, such as Jaramillo, Grisaffe, Chonko, & Roberts (2009b); Mayer, Bardes, & Piccolo (2008), and West, Bocarnea, & Maranon (2009), and a positive association has been obtained in these studies. According to servant leadership theory, servant leaders are sensitive to the needs of followers and are therefore likely to treat them in an interpersonally sensitive manner and their focus on the growth and well-being of followers is likely to enhance job satisfaction. However, servant leaders may experience challenges in adapting to follower expectations and needs in larger groups than in smaller work groups. According to Antonakis and Atwater (2002, p. 674), “the dynamics of the influencing process differ depending on how “close” or “distant” followers are from their
leader.” As such, leaders can appear distant to followers if leaders are physically distant from followers and/or maintain infrequent contact with followers. Servant leaders’ span of control could affect the degree of interaction with followers because it becomes increasingly difficult for leaders to spend more time with all of their followers. Specifically, a large span of supervision may limit the servant leader’s ability to show trust to followers and respond positively when they experience setbacks, help and assistance, advice to overcome setbacks, and help followers solve problems. In addition, larger distance may also affect how servant leaders influence their followers. A large span of supervision creates larger social distance, because the leader probably treats followers more homogenously and with less individualized attention as suggested in servant leadership theory (Antonakis and Atwater, 2002). This should foster greater differentiation in follower membership in either in- or out-group. Members of out-groups developed weak ties with their servant leaders and the relationship between the servant leader and most followers can be best described as an economic exchange involving minimum trust, interaction, and support. In contrast, with smaller span of supervision, servant leaders have the opportunity to build a sense of community based on trust and caring, and establish and maintain positive working relationships. Hence, we suggest the following hypothesis:

*Hypothesis 1: The positive relationship between servant leadership and job satisfaction is attenuated by larger span of supervision.*

Job satisfaction is in turn, likely to have positive consequences for the leader and organization in terms of follower performance. According to social exchange theory (Blau, 1964) followers who are satisfied with their job should repay the organization by way of increased follower performance. In support of this notion, empirical studies have shown a
significant positive association between job satisfaction and job performance. Judge et al. (2001), for instance, conducted a meta-analysis on 312 samples with a combined N of 54,417, and estimated the mean correlation between job satisfaction and job performance to be .30. A more recent meta-analysis on 48 samples found correlation between the two variables also to be .30 (Devar & Bala, 2012). The idea that job satisfaction is positively associated with work performance is also implicitly grounded in the broader attitudes literature in social psychology. Most attitude researchers, for instance, assume that attitudes have behavioral implications such that employees who evaluate an attitude positively tend to engage in behaviors that support it, while employees who evaluate an attitude negatively tend to engage in behaviors that oppose it (Eagly and Chaiken, 1993). Accordingly, we expect job satisfaction to be positively related to performance on the job:

_Hypothesis 2: Job satisfaction is associated with higher levels of follower performance._

**Method**

**Participants**

The study population was drawn from a large–sized municipality in Norway where leaders and followers contributed with data. Data were collected from leaders and their followers at different organizational levels (top, middle, and operational). The respondents were full-time employed. The _leader_ sample consisted of 31 participants where 33.5% was males. The leaders’ mean age was 51.9 years, reporting an average education of 16.4 years and were employed as director, district director, heads of departments, assistant director general, institutional directors, institutional directors, heads of units, team leaders, and area director. The _follower_ sample consisted of 206 participants, where 27.9% was males. Their mean age
was 31.7 years, with average education of 16.4 years. They held various positions including senior executive officers, specialist consultants, specialist executive officer, executive officer, consultant, doctors, psychologists, nurses, public health nurse, child welfare consultant, and welfare consultant. The researchers were informed about the organizational structure, showing leaders and their followers and given the E-mail address to all the respondents. Questionnaires were distributed electronically to leaders and their followers while at work. Further more, the respondents were informed that the data were being collected for academic research. Respondents were anonymous and questionnaires were returned directly to the researchers. 70.7 percent ($N = 335$) of employees returned a completed survey.

**Instruments**

The instruments, which was originally developed in the English language were put through a back translation conversion process to ensure equivalence of item meaning (Cavusgil and Das, 1997; Nachmais and Nachmais, 1992). A pilot study further tested the instruments, distribution of questionnaires, and data collection procedure. Some minor adjustments was done such as before the instruments were finally administered to the respondents.

Each **supervisor** rated followers by completing a following instrument: **Performance rating:**

A five-item performance rating scale developed by Liden and Graen (1980), (sample items: “Overall Present Performance”; “Expected Future Performance”; anchors: 1 = Unsatisfactory, 7 = Outstanding). Responses to these five items were then summed to provide a measure of performance for each subordinate. The Performance Rating questionnaire has been used by Vecchio, Bullis and Brazil (2006), and Fernandez and Vecchio (1997). The use of this measure has shown consistent criterion-related validity, and internal consistency reliability estimates have ranged from .83 to .88 (Scandura and Graen, 1984; Scandura, Graen and
Novak, 1986; Thompson and Vecchio, 2009). By applying leader rating of follower work performance, we use two sources (leader and follower self-report) in order to reduce the possibility of common-method bias resulting from the use of self-reported measures only. Span of supervision. Leaders reported the number of their subordinates in each work group.

Each follower completed the following instruments: A 30 item version of Servant Leadership Survey (SLS), developed by van Dierendonck and Nuijten (2011), which measure the following eight dimensions: standing back, forgiveness, courage, empowerment, accountability, authenticity, humility, and stewardship. Followes range their supervisors by applying a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Presently, there have been developed at least seven multidimensional measures and two one-dimensional measures, such as Laub (1999), Page and Wong’s (2000), and Liden et al. (2008). However, instruments constructed to measure the multi-dimensional structure of servant leadership does not hold across several different samples but collapsed into one (e.g., Dannhauser and Boshoff, 2007; Dennis and Winston 2003). In addition, researchers did not present data for factorial validity of their overall dimensional model (Sendjaya et al. 2008). The present study therefor apply van Dierendonck and Nuijten (2011) version, which portray stronger psychometric properties. Several field studies confirm SLS’s construct validity and stable factor structures across multiple samples and adequate internal consistency of the subscales (Dierendonck and Nuijten, 2011). Job Satisfaction questionnaire was used to measure a three-item scale adopted from Cammann, Fichman, Jenkins and Klesh (1983), with sample items: “All in all, I am satisfied with my job”; “In general, I like working here;” anchors: 1 = Strongly disagree, 2 = Disagree somewhat, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = Agree somewhat, 7 = Strongly agree. The index was used to measure overall job satisfaction. Reliability and validity analysis of the job
satisfaction scale is reported in a number of studies to be adequate (Okan & Akyüz, 2015). The instruments were originally developed in the English language. Hence, we used a translation-back translation conversion process to ensure equivalence of item meaning. Also, this translation process was used to avoid the risk of misunderstanding or misconception (Cavusgil & Das, 1997).

**Control variables.** We used gender as a control condition because female leaders are expected to be more understanding, helpful, sophisticated, and aware of the feelings of others (Ryan and Haslam, 2007). Age was also used as control variable as evidence suggest younger supervisors engage in more relationship-oriented activities than older supervisors (Gilbert, Collins, & Brenner, 1990). In addition, we controlled for education, as higher education may increase a more personal, individualized, and cooperative leadership style (Liden et al. 2014). Finally, when testing the hypothesized relationship between job satisfaction and performance, we controlled for span of supervision and servant leadership, which could provide alternative explanations for the relationships outlined in our hypotheses.

**Confirmatory factor analysis**

MPlus was used to estimate Confirmatory factor analysis (CFA) to test how well the predicted interrelationships between the variables matched the interrelationships between the observed interrelationships. The results of CFA displayed the following results: CFA provided excellent fit to the data ($\chi^2 [662] = 1026.65, p < 0.05$; RMSEA = 0.04; CFI = 0.95; NNFI/TLI = 0.94). When comparing the results with frequently used rules of thumb, CFA achieved good model fit (e.g. Hair, Black, Babin & Anderson, 2010).
Results

Table 1 displays the intercorrelations. As expected, the results in show that servant leadership was significantly and positively correlated with job satisfaction \( (r = .38, p < .01) \) and job satisfaction correlated positively with performance \( (r = .19, p < .05) \). Cronbach’s alphas for the multi-item scales are listed on the primary diagonal of the correlation matrix. The alpha coefficients were in an acceptable range for all the variables of interest (.72-.95).

Hierarchical Linear Modeling (HLM) analyses

Because of the nested nature of our data (i.e. individuals nested within leaders), we tested our hypotheses using hierarchical linear modeling (HLM). Prior to these analyses we estimated unconditional models (null models) for job satisfaction and performance. Although the results did not indicate significant between-supervisor variability in job satisfaction, they did reveal significant between-supervisor variability in supervisor ratings of performance \( (\tau_{00} = .28, p < .01) \), thus underlining the appropriateness of HLM. We present the results of these analyses in Table 2 and Table 3. In Step 1 of Table 2, we entered the independent variable, servant leadership. In Step 2, we entered the moderating variable, span of supervision, and in Step 3 we entered the product term of servant leadership and span of supervision. In support of Hypothesis 1, results showed that the relationship between servant leadership and job satisfaction was significantly \( (\gamma = -.05, p < .05) \) moderated by span of supervision. To determine the significance of the simple slopes we used the HLM two-way interaction tool developed by Preacher, Curran and Bauer (2006). Specifically, the results displayed in Figure
2 show a positive relationship between servant leadership and job satisfaction only with lower levels of span of supervision ($\gamma = -1.05, p < .001$). In contrast, the relationship was not statistically significant with higher levels of span of supervision ($\gamma = .30, n.s.$), suggesting that span of supervision represents a boundary condition under which servant leadership relates to job satisfaction. Finally, in support of Hypothesis 2, the results displayed in Table 3 suggests a positive relationship between job satisfaction and performance ($\gamma = .15, p < .05$). With respect to the control variables, we note that neither leader years of education ($\gamma = .01, n.s.$) follower age ($\gamma = .00, n.s.$), nor leader gender ($\gamma = -.06, n.s.$) were significantly related to job satisfaction as displayed in Table 3.

Discussion

The aim of the present study was to investigate the moderating role of span of supervision through which servant leadership may relate to multifocal effectiveness outcomes. The results of the HLM analysis showed that the relationship between servant leadership and job satisfaction was significantly moderated by span of supervision, such that higher levels of span of supervision weakened the positive relationship between servant leadership and job satisfaction. In fact, the relationship was only significant in situations when the leader had fewer direct reports. A likely consequence of a job satisfaction is, in turn, higher levels of job performance from the followers. In this section, we outline the theoretical and practical
implications of the results, present the limitations of our study, and suggest directions for future research.

Theoretical and practical implications

What do our results mean for research on servant leadership? Organizational context is a major variable influencing behavior at the workplace (Johns, 2006) and leadership behavior and outcomes, specifically (Porter & McLaughlin, 2006). When speaking to leaders in municipality organizations in Norway, we have learned that this type of organizations are characterized by a large span of supervision. Span of supervision causes distance between leaders and followers and limits servant leader’s possibility to influence their followers, probably due to infrequent contact with followers. As stated by Antonakis and Atwater (2002), leader effectiveness is contingent on matching the degree of closeness that followers expect of their leader. Furthermore, leaders will enact different behaviors depending on the context in which those behaviors occur (Antonakis & Atwater, 2002). Hence, span of supervision limits servant leader’s possibility to spend time and energy on coaching followers for innovative performance or providing them with essential support. Large span of supervision represent an obstacle when implementing servant leadership in organizations and is detrimental to leader outcomes.

It could be argued that the validity of span of supervision as an obstacle for servant leadership may depend on follower’s competence and commitment. Kerr and Jermier (1978) argue that leadership may be unnecessary and that the degree of closeness of leader supervision will depend on various leader “substitutes,” which include among others follower competence and commitment and various organizational systems and processes. In addition, research on
situational leadership theory, which posit that delegating leadership style is favorable for followers who are competent and motivated, seems to support this argument (Thompson & Glasø, 2015). Furthermore, followers who are conducting simple repetitive tasks may provide opportunities for servant leaders to managing larger span of supervision. Future research should therefore focus on follower competence and commitment, and tasks characteristics, and examine the suitability of servant leadership under such conditions. Furthermore, the present study investigated the moderating role of span of supervision, which has become more important as current organizational structuring tends to increase span of supervision through downsizing, decentralization, and empowerment (see Schyns et al., 2010). Our results show that the positive relationship between servant leadership and job satisfaction is attenuated by larger span of supervision with poorer performance as a consequence. Hence, the present study questions the presumed effectiveness of many organizational change processes of today, which involve flattening the hierarchical organizational pyramid by increasing the span of supervision for leaders. In fact, our study seems to reveal an important boundary condition with respect to the relationship between servant leadership and job satisfaction. This result implies that servant leadership only increases follower job satisfaction when the leader has few followers to manage. Hence, a narrower span of supervision may be more effective, as a servant leader is more likely to develop close relations with their followers, and to focus their attention to each followers needs.

In more practical terms, servant leaders could involve their followers in decision-making processes, explain organizational decisions to them and clarify what the organization expects from them. In support for this notion, the HLM analysis showed that servant leadership was associated with job satisfaction and job satisfaction associated with performance. However, if decreasing span of supervision is not an opportunity, then servant leaders could create sub-
groups within the larger group (Hackman, 2002). A narrow span of supervision, as in subgroups, may be beneficial in improving performance by providing greater opportunities for the manager to support followers and help them in elevating their competence by providing coaching and feedback. Alternatively, servant leaders could allocate different roles to their followers. They could offer different types of service to their coworkers, such as helping other coworkers in resolving problems, providing them with necessary information, or listening to their problems and giving recommendation to overcome setbacks. This approach, which is founded in “organizational citizenship behaviour” concept, could increase the performance of coworkers (Podsakoff, N. P., Whiting, Podsakoff, P. M., & Blume, 2009) and to some extent increase servant leadership capacity to manage larger groups. However, a more original way for leaders to manage a larger span of supervision would be to teach them self-leadership (Neck, Manz, & Houghton, 2016). Specifically, leaders can take on a super-leadership role (e.g., Glasø & Thompson, 2018), where they facilitate the conditions for employees to be able to practice self-leadership by giving them increased responsibility and authority, and by encouraging them to define their own goals, quality assure their own work, be critical, and learn from their own mistakes. Furthermore, the super-leader’s role is to ensure that organizational structures, information systems, and an organizational culture are established with values and norms that promote self-management in practice (Glasø & Thompson, 2018). As such, this would reduce the dependence between leaders and followers, and enhance feelings of autonomy and competence which would better enable them to deal with a greater span of supervision.

**Strengths, limitations, and directions for future research**

A strength of the current study is that we obtained ratings from different sources (supervisory rating of follower work performance with follower rating of servant leadership, and job
satisfaction). In addition, we used span of supervision as a third source. By applying multisource data, we limited the influence from common method variance (Podsakoff et al., 2012). Also, the leaders and followers were assured that their anonymity would be respected, and according to Podsakoff, MacKenzie, and Podsakoff (2003), such a guarantee can minimize common method bias. A limitation of the present study is the reliance on a cross-sectional measurement design, where the validity of our research model was tested by conducting a survey at a single point in time across a large number of leaders and followers. Hence, we are not able to infer causal relationships. We therefore cannot exclude alternative causal ordering, such that work performance affects follower job satisfaction, which has been demonstrated in previous research (Judge, et al., 2001). Still, our results align well with research indicating that it is follower job satisfaction that causes performance, rather than performance that allows an organization to invest in employee satisfaction (Edmans, 2012).

Future research should nevertheless apply longitudinal data, which may better allow for testing servant leadership’s influence on work-related affect and work performance, as servant leadership may require time to materialize. Even though we observed a relatively high response rate, another potential limitation of the present study is our reliance on a Norwegian (western culture) sample which consisted of a majority of women (approximately 70%) which may limit the generalizability of the results. On the other hand, the control variable gender was not related to any of the outcomes. Still, future research should therefore collect samples from other contexts in order to test the generalizability of our research model across different contexts and cultures. In addition, the present study has applied data from municipality settings. However, survey data from other contexts as well, such as other organizations within public sector (ministry or directorate) could also be examined to see whether the findings in our study hold across various public contexts. We therefore encourage future research to include factors such as culture, gender and organizational type
by comparing professionals in two or more different organizations in different countries and with a different gender distribution to test the generalizability of our hypothesized relationships. Beyond conducting similar studies in other contexts, cultures and industries by means of experimental and longitudinal data, an interesting avenue for future research would be to investigate the hypothesized relationships at the group level. Unfortunately, our data did not permit us to test these group-level relationships since job satisfaction did not vary significantly at the group level in our sample.

Conclusion

Servant leadership is a leadership construct that is attracting a great deal of empirical attention and excitement in an attempt to address the suitability of this construct in different organizational contexts. At the foundation of servant leadership is the belief that leaders can express their natural selves in an open and honest manner and make sure that every follower’s highest priority needs are served. This will lead to positive and ethical work outcomes. The current study examined servant leadership in a municipality context, with particular focus on a profound trend in such organizations: span of supervision. Our study provides some initial knowledge on how the positive relationship between servant leadership and job satisfaction is attenuated by larger span of supervision, resulting in poorer follower performance. Taken together, our results indicate that servant leaders do not operate in the same manner within different degrees of span of supervision. It seems increased span of supervision create distance between leader and followers and moderate the types of leader behaviors that may emerge or are visible, such that serving every follower’s highest priority needs are difficult to match. Hopefully, our results will motivate researchers to search for
further insight into how span of supervision may shape the interaction between the servant leader and their followers.
References


Table 1

*Ments, standard deviations, reliabilities and intercorrelations*

<table>
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<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
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<th>5</th>
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<td>2. Follower age</td>
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<td>3. Leader gender *</td>
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<td>.04</td>
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<td>4. Servant leadership</td>
<td>3.52</td>
<td>.53</td>
<td>.09</td>
<td>.05</td>
<td>.08</td>
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<td>5. Span of supervision</td>
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<td>7.18</td>
<td>.35**</td>
<td>-.01</td>
<td>.06</td>
<td>-.08</td>
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<td>6. Job satisfaction</td>
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<td>-.02</td>
<td>.38**</td>
<td>-.00</td>
<td>(.72)</td>
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<td>7. Performance</td>
<td>5.67</td>
<td>1.10</td>
<td>.29**</td>
<td>.16*</td>
<td>.08</td>
<td>.29**</td>
<td>.16**</td>
<td>.19*</td>
<td>(.95)</td>
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</table>

*Note. N = 266. Cronbach’s alphas are displayed on primary diagonal; * p < .05; ** p < .01.*

*a Male = “0”; Female = “1”*
Table 2  
*Results of Hierarchical Linear Modeling Analyses*

<table>
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<th>Variables</th>
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<th>Step 2</th>
<th>Step 3</th>
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<td>Servant leadership (\times) span of supervision</td>
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Model deviance \(\chi^2\)       

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<th>Step 2</th>
<th>Step 3</th>
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<tr>
<td>399.74</td>
<td>399.71</td>
<td>393.86</td>
</tr>
</tbody>
</table>

Decrease in deviance: \(\Delta\chi^2\) \(^b\) 

|        | .03     | 5.85*   |

*Note. \(N = 266\). Non-standardized coefficients are displayed. \(*p < .05\). \(**p < .01\). \(***p < .001\).*

\(^a\) Male = 0, Female = 1;

\(^b\) The full ML estimator was used to calculate this decrease in deviance (\(\Delta\chi^2\)) which can be considered a way of expressing effect size in multilevel modeling.
Table 3
*Results of Hierarchical Linear Modeling Analyses*

<table>
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<th>Performance</th>
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<td>Leader gender a</td>
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</tr>
<tr>
<td>Span of supervision</td>
<td>.02</td>
</tr>
<tr>
<td>Follower job satisfaction</td>
<td>.15*</td>
</tr>
<tr>
<td>Servant leadership</td>
<td>.16</td>
</tr>
</tbody>
</table>

Model deviance $\chi^2$ 337.63

*Note. N = 266. Non-standardized coefficients are displayed. *$p < .05$. **$p < .01$. ***$p < .001$.  

aThe full ML estimator was used to calculate this decrease in deviance ($\Delta \chi^2$) which can be considered a way of expressing effect size in multilevel modeling.*
Figure 1
Figure 2

![Graph showing the relationship between servant leadership and job satisfaction. The graph includes two lines: one for high span of supervision (n.s.) and another for low span of supervision (p < .05). The y-axis represents job satisfaction ranging from 4.6 to 7.1, and the x-axis represents servant leadership ranging from low to high.](image-url)