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Leadership and meaningful work in the public sector

Accepted article for Public Administration Review

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Abstract

In the public administration discipline, there have been a number of important studies on leadership. However, here, scholarly inquiry still lags behind related disciplines such as psychology and business administration. This article contributes by analyzing the role public leaders can play in making work more meaningful for their employees, which in turn positively influences employees' job outcomes. More specifically, it analyzes the mediating role of work meaningfulness in the relationships between Leader-Member Exchange (LMX) and organizational commitment, work effort, and work-to-family enrichment. Samples from education, healthcare, and local government are used. Results show firstly that leadership strongly influences work meaningfulness, which in turn influences job outcomes. Secondly, it was found that the impact and extent of leadership and work meaningfulness are higher in healthcare and education than in local government. The results emphasize the importance of leadership and meaningful work in the public sector.

Key words

1. Leadership
2. Leader-member exchange
3. Meaningful work
4. Organizational commitment
5. Work effort
6. Work-to-family enrichment

1 Introduction

There have been a number of important studies on leadership in the public administration, and more specifically the public management, discipline (for example Wright and Pandey 2010; Fernandez 2005; Terry 2002; Kim 2002). However, this area of scholarly inquiry still lags behind related disciplines such as business administration and psychology (Trottier, Van Wart, and Wang 2008). Hansen and Villadsen (2010:247) recently concluded that, when compared to other disciplines, “leadership theory has generally received little attention in public management research.” In a recent literature review on administrative leadership, Van Wart (2013) is more nuanced, stating that there is substantial development. However, he also noted that “fragmentation and conflicting nomenclature continue to be a problem, but at a more sophisticated level” (2013:13). More specifically, he noted that, for leadership studies in public administration, “well-designed studies would be welcomed by various public sector industries, jurisdictions, and levels of administration” (2013:17).

In response to the call for well-designed leadership studies in public administration, this article focuses on developing a theoretical model relating leadership, the meaning of work, and the resulting job outcomes. This model will be tested using data collected in three public sector settings (healthcare, education, and local government).

In the theoretical model, we build on the well-known notion of leader-member exchange (LMX) that has its roots in social exchange theory (Blau 1964). LMX describes the quality of the relationship between a leader and a member (Graen and Uhl-Bien 1995). LMX research indicates that leaders develop differentiated relationships with their employees. In relationships characterized by low LMX there is essentially an economic exchange between employer and employee (time is exchanged for money). In high quality relationships, mechanisms of reciprocity and social exchange become effective: the leader and the employee

trust each other, employees feel valued by their supervisor, and effective working relationships develop. In general, high LMX has several important positive job outcomes, such as increased job satisfaction, higher performance, and lower staff turnover (Dulebohn et al. 2012).

However, a piece of the puzzle appears to be missing when examining LMX and its outcomes. As Gerstner and Day (1997:835) observe, although there is evidence that a better employee-supervisor relationship enhances outcomes, this association needs further examination. They suggest examining variables that potentially mediate the relationship. A number of private-sector studies have examined possible mediating mechanisms, and these often use the notion of empowerment. However, results are inconsistent. While Aryee and Chen (2006) found that empowerment mediated the relationship between LMX and job outcomes, Liden et al. (2000:407) failed to find such a relationship. Further, Harris et al. (2009) argued that the relationship between LMX and job outcomes was *moderated* rather than *mediated* by psychological empowerment.

This study analyzes work meaningfulness, one of the dimensions of psychological empowerment, as a potential mediator between LMX and its outcomes. This approach seems more promising than using the broad concept of empowerment. The hypothesis tested is that when employees and managers have a good relationship (i.e. high LMX), leaders will provide their employees with greater insight into how the organization works and give them more responsibility. It seems reasonable to expect this to positively influence employees' job experience and the possibility of them making a difference in their work. In turn, one could expect this to have positive outcomes (see also Liden, Wayne, and Sparrowe 2000). In this article, the focus is on two important outcomes inside the work context (organizational commitment and work effort) and one important outcome outside the work context (work-to-family enrichment).

This article contributes to the literature by a) focusing on leadership in the public sector using an explicit theoretical model, b) analyzing one specific dimension of empowerment (work meaningfulness) to explain the relationship between LMX and certain outcomes, and c) testing the developed model using three independent public sector samples (drawn from education, healthcare, and local government). The article answers the following research question:

To what extent does the meaningfulness of work mediate the relationship between LMX and outcomes inside the work context (organizational commitment, work effort) and outside the work context (work-to-family enrichment)?

In section 2, we will discuss the theoretical framework. Section 3 describes the method used to test our hypotheses. In section 4, the results are discussed. We conclude by discussing the contribution of this article to the public management literature on leadership (section 5).

2 Theoretical framework

2.1 Background on leadership

In broad terms, there are two contrasting views on leadership in organizations (Howell and Hall-Merenda 1999). One view is leader-focused and attempts to explain performance by analyzing specific leadership behaviors and linking these directly to outcomes. This view is adopted in theories on transactional and transformational leadership (for a recent public sector example, see Wright and Pandey 2010). The second view is relationship-based, analyzing how leaders interact with their employees. This view is best exemplified by the concept of leader-member exchange (LMX) (Howell and Hall-Merenda 1999:680; Wang et al.

2005:420). Given the aim of this research, analyzing the role of work meaningfulness in the relationship between LMX and outcomes, the second view is most appropriate.

LMX is defined as the quality of the relationship between a leader (supervisor) and a member (employee) (Graen and Uhl-Bien 1995). Although whether LMX is a management practice or a leadership practice is open to debate (Zaleznik 1977), we follow mainstream LMX research and view LMX as a leadership practice (Graen and Uhl-Bien 1995; Liden, Sparrowe, and Wayne 1997; Dulebohn et al. 2012).

The impact of LMX on several outcomes has been studied extensively. In a meta-study, Gerstner and Day (1997) noted that LMX is positively related to several work outcomes, such as supervision satisfaction, overall satisfaction, and commitment. More recently, Dulebohn et al. (2012) conducted a meta-analysis of 247 studies and found a possible 16 important outcomes of LMX quality, such as behavioral outcomes (lower turnover intention and higher job performance), attitudinal outcomes (higher job satisfaction and organizational commitment), and perceptual outcomes (higher perceived procedural justice and empowerment).

There are some studies that examine the influence of LMX on variables outside of work, such as on work-life balance and work-family arrangements. For instance, Brunetto et al. (2010) found that LMX predicted perceptions of work-family conflicts in particular for public sector employees. However, this area is far less studied than work-related outcomes (Culbertson, Huffman, and Alden-Anderson 2009).

2.2 Background on meaningfulness

In this article, the concept of meaningfulness at work is considered as a potential mediator between LMX and outcomes. Here, it is useful to first describe the background of meaningfulness. We will discuss the background of the meaningfulness concept, linking it to

various literature streams, such as work and organizational sociology (particularly alienation studies) and work and organizational psychology (empowerment, job characteristics model, engagement).

The concept of meaningfulness builds on the alienation tradition that comes from the sociology of work and organization field. Alienation broadly refers to a sense of social estrangement, an absence of social support or meaningful social connection. The intellectual roots of the alienation concept are found in the work of Karl Marx (1961 [1844]) who focused on objective work alienation: workers become alienated when they do not own the means of production or the resulting product. Many sociologists writing on alienation draw on Marx although, in contrast to Marx, they focus on *subjective* work alienation: alienation as *perceived* by the worker (DeHart-Davis and Pandey 2005).

Social scientists have used the (subjective) alienation concept in various studies and a number of meanings have been attributed to the term. In an attempt to provide clarity, Seeman (1959) broke these meanings down into five alienation dimensions: powerlessness, meaninglessness, normlessness, social isolation, and self-estrangement. Of these dimensions, powerlessness and meaninglessness are considered to be particularly important (DeHart-Davis and Pandey 2005; Tummers 2011). This article focuses on the role of meaningfulness/meaninglessness. In a work setting, meaninglessness can occur “when workers are not able to understand the complex system of goals in the organization and its relationship to their own work” (Kanungo 1982:26).

The meaninglessness/meaningfulness of work concept can also be found in the work and organizational psychology field. Here, it is firstly related to literature on psychological empowerment literature. Spreitzer (1995:1443) notes that meaning of work is one of the four components of psychological empowerment. It is described as the fit between the requirements of a work role and one’s own beliefs, values, and behaviors. In a recent review

by Maynard et al. (2012) it was concluded that, of the four components of psychological empowerment, meaning of work had the strongest relationship with job satisfaction (see also Liden, Wayne, and Sparrowe 2000). Overall, it was found that certain components of psychological empowerment are potential mediators between various work antecedents (such as leadership) and work outcomes (such as job satisfaction and organizational commitment). This article follows a similar line of reasoning in analyzing work meaningfulness as a potential mediator between LMX and outcomes.

Next, the concept of meaningfulness is also discussed in the job characteristics model of Hackman and Oldham (1980). The meaningfulness experienced in work is seen as a key psychological state that mediates the relationships between core job characteristics and outcomes. In a meta-analysis, Humphrey et al. (2007) found that experienced meaningfulness was the primary mediator between job characteristics and outcomes. As such, meaningfulness seems to be an important mediator when relating job characteristics to outcomes (see also Arnold et al. 2007; Clausen and Borg 2011).

Work meaningfulness is also related to the concept of work engagement although these concepts also notably differ. Schaufeli et al. (2002:74) define engagement as “a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption”. They state that engaged employees have a sense of energetic and effective connection with their work activities, and see themselves as able to deal well with the demands of their jobs. In this article, work meaningfulness is defined as ‘an employee’s perception that he/she is able to understand the complex system of goals in the organization and its relationship to his/her own work’ and this has both similarities as well as differences with the work engagement concept. On the one hand, both the meaningfulness and engagement concepts refer to work-related attitudes and both are positive psychological states. However, while engagement refers to job demands in relation to an employee’s own

abilities, meaningfulness refers to the goals of the organization in relation to an employee's own work. One could argue that the concepts are related in the sense that meaningful work can result in greater employee engagement (Olivier and Rothmann 2007).

A few remarks can be made regarding analyzing the role of meaningfulness specifically in public organizations. However, it must be stated that making a simple distinction between public organizations on the one hand, and private organizations on the other, seems overly simplistic (Rainey and Bozeman 2000). Besides their public, semi-public, or private legal status, many characteristics influence organizations and their working environments such as size, location, environment, and function. Notwithstanding this remark, it can be argued that public organizations have considerable goal complexity and goal ambiguity (Rainey and Bozeman 2000; Jung 2011). In an organization with substantial goal complexity and ambiguity, it could be difficult for employees to understand the contribution of their specific work to the organization or to society or, in other words, to feel that their work is meaningful. On the other hand, many people chose to work in the public sector given that they aim to do meaningful work and contribute to society (Perry and Hondeghem 2008). Hence, studying work meaningfulness – and ways to improve it - could be quite important in public sector settings.

2.3 Leadership, meaningfulness, and outcomes

In this section, the relationships between LMX, meaningfulness, and three relevant outcomes are analyzed. Figure 1 displays the conceptual model outlining the relationships between the variables in this study.

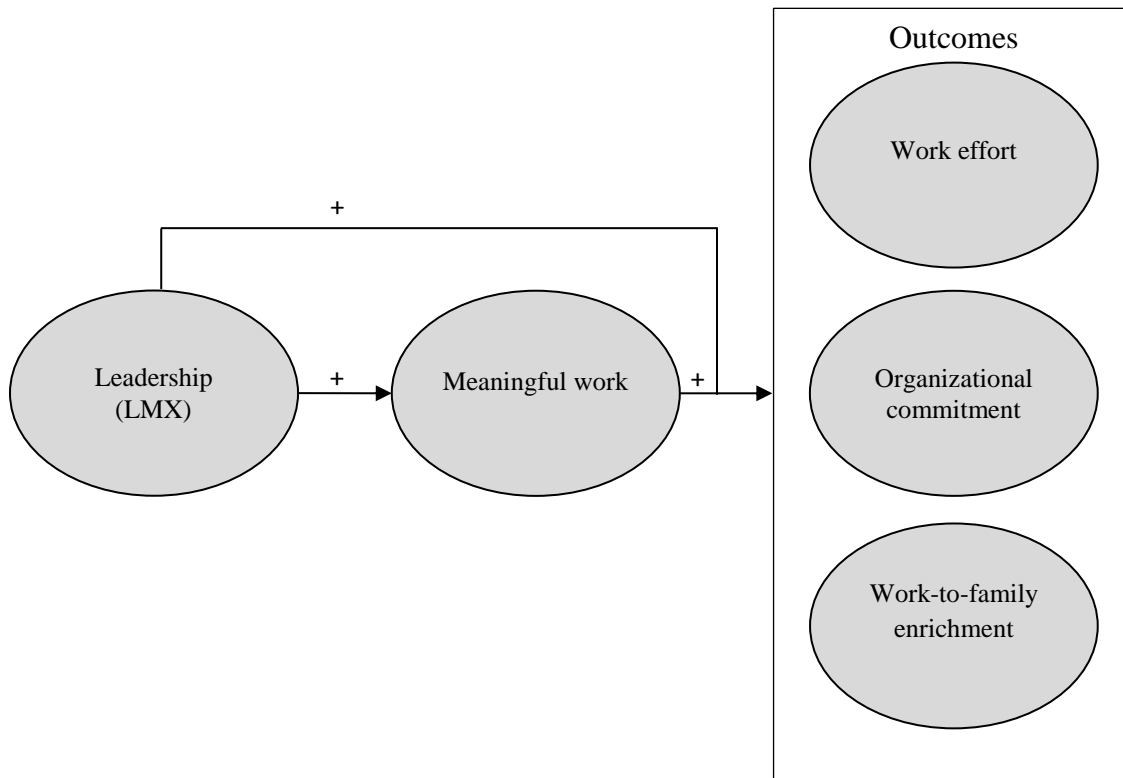


Figure 1 Hypothesized relationships between leadership, meaningful work, and outcome dimensions

We first analyze how LMX influences meaningfulness at work. One would intuitively expect the degree of LMX to positively influence experienced meaningfulness. When the relationship between leaders and employees is of high quality, employees are given greater decisional latitude and are provided with more opportunities to participate. This makes it easier for them to make meaningful contributions to the organization and to society, and increases their understanding of their role within it. Hence, it can enhance their experienced meaningfulness at work (see also Aryee and Chen 2006).

On this basis, one can consider how the outcomes are influenced. First, we look at two important effects on the work level: affective organizational commitment and work effort. These effects were selected given their importance for organizational performance (McAllister 1995; Meyer et al. 2002).

Affective organizational commitment is defined as an “employee’s emotional attachment to, identification with, and involvement in the organization” (Allen and Meyer 1997:11). Employees who experience affective commitment stay with an organization because they genuinely want to, because they can identify with that organization. Following Gerstner and Day (1997), one would expect the level of LMX to be positively related to the degree of organizational commitment. Further, if employees feel that their work is meaningful, this will increase their organizational commitment - and they will stay with their organization because they want to (Pierce and Dunham 1987).

Work effort refers to the extent to which employees exert effort that goes beyond their formal job requirements (Gould-Williams 2004). It seems that, for organizations, it is paramount that employees ‘go the extra mile’. One could expect the level of LMX to be positively related to work effort. Here, Kacmar et al. (2007) showed that LMX significantly influenced the level of self-assessed work effort. Moreover, we also expect meaningfulness to positively influence the effort that workers put into their work. Cummings and Manring (1977) found that meaningfulness was positively related to work effort and performance. Further, Arnold et al. (2007:195) note that “higher purpose [or less meaninglessness] was associated with increased job satisfaction, perceptions of unit cohesion, and work effort”.

In addition to organizational commitment and work effort, an outcome outside of work is considered: work-to-family enrichment. Work-family researchers have examined both negative and positive relationships between work and family life. Initially, the main focus was on the work-family conflict although, more recently, the positive relationships between work and family have been emphasized through work-to-family enrichment (Greenhaus and Powell 2006). Work-to-family enrichment occurs when resources from the former improve performance in or positively affect the latter. This study focuses on the affective dimension of work-to-family enrichment, that is “when involvement in work results in a positive emotional

state or attitude which helps the individual to be a better family member” (Carlson et al. 2006:140). For instance, work-to-family enrichment occurs when you feel valued at work (such as because you can help students with their theses) and, because of this, you are in a good mood at home. We would expect high LMX to increase work-to-family enrichment (see also Bernas and Major 2000). Further, work meaningfulness may create a positive emotional state and consequently increase the likelihood that work-to-family enrichment occurs (Hackman and Oldham 1980).

In the discussion above, a link was established between both LMX and meaningfulness and three outcomes. Further, it was hypothesized that LMX influences meaningfulness. Given its attitudinal foundations, meaningfulness is seen as closer than LMX to the outcome dimensions, and it should therefore serve as a mechanism through which LMX influences the outcomes dimensions (see also Aryee and Chen 2006). However, we do not expect the relationship between LMX and the outcomes to be fully mediated by the level of meaningfulness. Rather we expect the level of LMX experienced by employees to also have a direct effect on the outcomes. For example, if employees experience high levels of LMX they will work harder not only because of the increased meaningfulness, but also because they want to ‘return the favor’ (Graen and Uhl-Bien 1995). Thus, overall, we expect the relationship between LMX and the studied outcomes to have both direct and indirect (through meaningfulness) components. Based on the above, the following hypotheses are formulated:

H1a: LMX has a positive direct effect on organizational commitment.

H1b: LMX has a positive indirect, through the level of meaningfulness, effect on organizational commitment.

H2a: LMX has a positive direct effect on work effort.

H2b: LMX has a positive indirect, through the level of meaningfulness, effect on work effort.

H3a: LMX has a positive direct effect on work-to-family enrichment.

H3b: LMX has a positive indirect, through the level of meaningfulness, effect on work-to-family enrichment.

3 Method

3.1 Testing the proposed model using survey data from three sectors

This section describes the survey procedures used to test the hypotheses. As suggested by Perry (2012), we have analyzed our procedures using the ‘total survey error framework’ of Lee et al. (2012). The total survey error framework assesses the quality of the techniques used in conducting a survey. In using this framework, shown in table 1, researchers aim to increase the quality of their studies. In order to improve the reliability and validity of the findings, we have taken various measures in order to keep the possible errors identified by Lee et al. (2012) to a minimum.

Table 1 Description of Total Error Framework used to assess Public Administration articles (see Lee et al., 2012), and the test for each potential error in the data used

Type of error	Description of error	Possible ways to avoid error	Testing for potential errors in the data used
Coverage errors	A form of non-sampling error occurring when the target population and the sample frame(s) are mismatched in terms of coverage.	Show construction of sampling frame and how it overlaps with the intended population	Target populations are specified (healthcare, especially midwives, local government employees, employees in education). Sampling frames have been specified. Given the size of target populations, some coverage error was unavoidable (survey of midwives, two municipalities, two education institutions). However, for each group, we have specified the similarity of the respondents, in terms of gender and age, with the overall target population, with satisfying results.
Sampling errors	"Sampling error arises when the entire target population, or universe, is not selected and decreases as the sample size increases."	<ul style="list-style-type: none"> • High sampling size and report sample size • Use of probability sampling 	For the surveys in local government and for education, parts of the organizations have been approached (given the size of the organizations). All sample sizes have been reported, and are quite high (1,278 healthcare, 473 local government, 881 education).
Non-response error	Non-response errors occur when there are systematic differences in responses between respondents and the total sample	<ul style="list-style-type: none"> • Enhancing response rates & report response rate • Conduct non-response survey 	<ul style="list-style-type: none"> • Follow up mail sent to increase response rate • Response rates shown (61% healthcare, 48% local government, 29% education) • Non-response surveys were conducted and these did not suggest a bias in our results (common reasons given were, for instance, lack of time)
Measurement error	Many sources of measurement error exist, such as difficulty in interpreting questions and social desirability	High quality of questionnaire (use validated scales or discuss questionnaire with target population)	<ul style="list-style-type: none"> • All used scales have been validated in earlier research • Social desirability is unlikely to be a major issue given the nature of the questions (see also Lee et al., 2011:92)
Processing error	Processing errors occur after data collection, such as in data coding, editing, weighting, and estimation procedures	<ul style="list-style-type: none"> • Analytical techniques should match variable measurement structures • Model assumptions should be checked 	<ul style="list-style-type: none"> • Checked for common method variance, showed that it was not a major concern in our sample. • Treating Likert-scales as ordinal data given that they are essentially ordinal (rather than interval) • Use of advanced and approved techniques to test quality of scales (CFA) and test hypotheses (SEM).

Survey data from three sectors were collected: education, healthcare (midwives), and local government (municipalities). These sectors were chosen as they potentially differ in their degree of meaningfulness: whereas work in education and healthcare is often perceived as meaningful, it is sometimes harder to see working for local government as contributing to society. This difference could influence the mediating mechanisms.

We initially established contact with organizations and asked whether they would agree to participate in the research project. We then contacted respondents via email, including a link to the questionnaire, which also described the research project and its objectives, and stressed anonymity. Two follow-up mails were also sent to increase the response rate.

In the healthcare sector, our sample consisted of 1,278 midwives. We chose to focus particularly on midwives given that they were expected to perceive their work as very meaningful.¹ We received 790 completed questionnaires, a response of 61%. Of the valid responses, 97.2% were from women and their average age was 40. This is consistent with national figures for midwives, which is a traditionally female occupation (97% female), with a mean age of 37 (Hingstman and Kenens 2011). For the local government group, we surveyed employees from the two largest Dutch municipalities (Amsterdam and Rotterdam). We invited 473 employees to participate and received 229 completed questionnaires. Again, the responding sample (54.1% female and average age 43) was somewhat similar to the Dutch municipal averages: 46% female (Ministry of the Interior 2010), average age 43 (CBS 2010). In the education sector, we invited 881 employees from a school for intermediate vocational education and 200 university employees. The overall response rate was 29% (313 employees).

¹ Our results are therefore applicable only to the population of midwives, not to healthcare workers in general (matching target population and sampling frame, see Lee et al., 2012).

Here, the average age of the respondents was 47 years, and 63.8% were female. This is again somewhat similar to the Dutch education averages: 62% female and age 43 (CBS 2010).

For all three sectors, we performed a non-response analysis. Results showed that employees did not participate due to: a lack of time, technical difficulties completing the online instrument, and the fact that they already had to fill out a lot of questionnaires. This analysis does not suggest any severe bias in our sample.

3.2 Measures

The variables were all measured using five-point Likert scales, where a 1 indicated very weak support for the item statement, and a 5 very strong support.

Leader-member exchange - The LMX scale of Liden et al. (1993) made up of seven items was used. A sample item was “I feel that my immediate supervisor understands my problems and needs”. Cronbach’s alpha for the scale was .919.

Meaningfulness - The concept of meaningfulness is based on the alienation tradition, which considers its opposite: meaninglessness. We used five items² from Mottaz’ (1981) often-applied scale. We retained all the items but reversed the answers (recoded, R) in the statistical analyzes. A sample item was “I often wonder what the importance of my job really is” (R). Cronbach’s alpha was .815.

Organizational commitment - Allen and Meyer (1990) developed a number of items to measure affective organizational commitment. We used the five best-fitting items from this scale. A sample item was “I feel a strong sense of belonging to my organization”. Cronbach’s alpha was .893.

² The seven items in the original scale were measured in the questionnaire. However, given that CFA test is often more stringent than the Cronbach’s alpha reliability measure (Kline 2010), two items were taken out in order to improve the fit. This method was also applied to the scales for organizational commitment and work effort to improve fit.

Work effort - We used the eight-item work-effort scale developed by Gould-Williams (2004) to measure employee discretionary effort. We used the five best-fitting items. A sample item was “I volunteer for things that are not part of the job”. Cronbach’s alpha was .683.

Work-to-family enrichment - We included the three-item affect dimension of work-to-family enrichment based on Carlson et al. (2006:140). A sample item is “My involvement in my work puts me in a good mood and this helps me be a better family member” (Carlson et al. 2006). Cronbach’s alpha was .926.

Control variables - We also included commonly used control variables: gender, age, supervisory tasks (yes/no), number of working hours, children living at home (yes/no) (possibly relevant given the focus on work-family interference), and level of education (1=primary school, 2=secondary school, 3=intermediate vocational education, 4=higher vocational education, 5=academic education, 6=postgraduate (e.g. specialization or PhD)).

3.3 Measurement Quality and Data Analysis

Confirmatory Factor Analysis (CFA) was used to test the hypotheses followed by Structural Equation Modeling (SEM). The CFA and SEM techniques are often used in psychological research but are relatively new to most public administration scholars (but see for instance Wright, Moynihan, and Pandey 2012; Tummers and Bekkers forthcoming 2014). We therefore discuss a number of the analyses’ characteristics in some detail.

Confirmatory factor analysis is a technique used to test the factor structure of latent constructs based on theory and prior research experience. This is appropriate here given that previous analyses have already explored some of the variables such as LMX. CFA has several advantages over exploratory factor analysis, such as more stringent psychometric criteria for accepting models, and this improves both validity and reliability (Brown 2006).

A CFA results in a *measurement model* being specified. This model specifies the number of factors and shows how the indicators (i.e. items) relate to the various factors. For instance, it shows how the items measuring work-to-family enrichment relate to the latent construct of work-to-family enrichment. The results of the CFA confirm the factor structure described earlier. The standardized coefficients all had adequate values between 0.514 and 0.984 ($p < .001$). This shows evidence of convergent validity: that is, items that tap the same latent construct are related to each other (Kline 2010).

The measurement model is a precursor for the SEM analyses where a *structural model* is constructed showing how the various latent factors relate to each other (see Results). In an SEM analysis, a total model can be tested where variables can be both dependent and independent, one of the advantages over regression analyzes. Given that, in our model, the work meaningfulness variable is both dependent, being hypothetically influenced by LMX, and independent, hypothetically influencing outcomes, this was appropriate.

The data analysis was carried out using *Mplus* (Muthén and Muthén 1998-2010). Data are often non-normally distributed when employing surveys, but this reality is frequently ignored by researchers. Here, the non-normal distribution of the data was taken into account by using the Weighted Least Squares with a robust estimator approach available within *Mplus*.

The data for all items were collected from individual respondents and are thus potentially subject to common method bias (CMB) (Podsakoff et al. 2003). Although a recent study showed that “in contrast to conventional wisdom, common method effects do not appear to be so large as to pose a serious threat to organizational research” (Lance et al. 2010:450), we have addressed this potential problem in various ways. In the survey design, we spread the items relating to different variables across various sections of the questionnaire. Further, we conducted two sets of CFAs to check for CMB in the data, comparing the

hypothesized structure with a one-factor model. The analyses provide evidence against there being a bias stemming from common method variance. Hence, CMB does not appear to be a serious concern.

4 Results

4.1 Descriptive statistics

Descriptive statistics and correlations of the variables are presented in table 2. Respondents were fairly positive about the support they receive from their leaders and reported a high level of work meaningfulness. Table 3 shows the descriptive statistics for respondents employed in the various sectors. There are significant differences between the groups. Healthcare employees have the highest scores for all the variables. Employees working in education are generally slightly more positive than municipality employees.

Table 1 Descriptive statistics and correlations for the variables in the study

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender (0=male; 1=female)	82.4%	n.a.	1										
2. Age	42.23	11.66	-.225***	1									
3. Educational level	4.00	0.75	.221***	-.111***	1								
4. Supervisory tasks (0=no;1=yes)	17.4%	n.a.	-.027	.052	.220***	1							
5. No. of working hours	35.84	13.28	-.131***	-.158***	.074*	.219***	1						
6. Children at home (0=no; 1=yes)	56.2%	n.a.	.052	-.044	.072*	.060	-.109**	1					
7. LMX	3.42	0.78	.061	.001	.000	.096*	-.089	.046	1				
8. Meaningfulness	4.17	0.51	.086**	-.073*	.100**	.163***	.119**	.099**	.332***	1			
9. Organizational commitment	3.68	0.82	.219***	-.137**	.146***	.167***	.227***	.080*	.439***	.537***	1		
10. Work effort	4.01	0.53	.159***	-.003	.082*	.221***	.163***	.061	.235***	.448***	.442***	1	
11. Work-to-family enrichment	3.55	0.79	.109**	-.034	.057	.029	-.091**	.085*	.292***	.274***	.302***	.282***	1

Note. * p < .05, ** p < .01, *** p < .001, n.a. = not applicable.

Table 3 Descriptive statistics for the sectors in our study

	LMX		Meaningfulness		Commitment		Work effort		Work-to-Family enrichment	
	mean	SD	mean	SD	mean	SD	mean	SD	Mean	SD
Healthcare	3.50	0.72	4.26	0.43	3.96	0.72	4.08	0.51	3.61	0.72
Municipalities	3.35	0.86	3.95	0.61	3.12	0.74	3.87	0.57	3.36	0.96
Education	3.35	0.82	4.04	0.60	3.25	0.76	3.91	0.56	3.52	0.88
Total	3.42	0.78	4.17	0.51	3.68	0.82	4.01	0.53	3.55	0.79
ANOVA (F)	3.593*		35.150***		155***		16.680***		7.997**	

4.2 SEM results

The results presented in table 4 show that – for the overall model – a good model fit was achieved (CFI=.987, TLI=.985, RMSEA=.045). The results indicate that LMX has a direct effect on all the outcome variables. This thus offers support for hypotheses H1a, H2a, and H3a. LMX is also significantly related to meaningfulness. In turn, meaningfulness has a significant relationship with all the outcome variables. The results indicate that the relationships between meaningfulness and the outcome variables are stronger than those between LMX and the outcome variables. We also tested for indirect effects: of LMX, through meaningfulness, on commitment, on work effort, and on work-to-family enrichment. All these indirect paths are significant, supporting hypotheses H2a, H2b, and H2c.

Overall, the levels of explained variance are quite high. First, regarding commitment, the model explained 40.4% of the variance. This is attributed to the direct and mediated effects of LMX and to the significant control variables (gender and number of working hours). Women and those who work long hours report higher levels of commitment. The level of work-effort variance explained is 23.8%. Gender, supervisory tasks, number of working hours, and the direct and mediated effect of LMX contributed to explaining this variance.³ Women, supervisors, and those who work the most hours report higher levels of work effort. The model explained 11.6% of the variance in work-to-family enrichment. The direct and mediated effects of LMX were significant as well as the gender and number of working hours control variables. Women report higher levels of work-to-family enrichment than men, as did those working fewer hours.

³ The scores for the control variables are not shown in table 4 due to space restrictions. Where the control variables were significant, this is noted in the body text.

Additional SEM analyses were conducted to test the model in the various sectors. Fit indices indicate a strong fit in all three sectors: healthcare (CFI=.983; TLI=.980; RMSEA=.045), municipalities (CFI=.979; TLI=.976; RMSEA=.047), and education (CFI=.983; TLI=0.980; RMSEA=0.043), showing the robustness of the model. The results indicate that, in healthcare, all the paths outlined above are significant. In local government, meaningfulness is only a significant mediator in the case of work effort. The indirect paths are not significant for commitment and work-to-family enrichment. In the education sector, the direct paths from LMX to work effort and to work-to-family enrichment are not significant, meaning that the relationships between LMX and these two outcomes variables are fully mediated by meaningfulness.

Table 4 Results of the SEM analyses

	Total	H	M	E
LMX → Commitment	.234*** (.028)	.233*** (.041)	.253*** (.048)	.135** (.048)
LMX → Work effort	.077* (.038)	.195*** (.050)	.069 (.059)	-.013 (.057)
LMX → Work-to-family enrichment	.182*** (.040)	.154** (.055)	.394*** (.074)	.036 (.074)
LMX → Meaningfulness	.212*** (.028)	.225*** (.042)	.231*** (.055)	.179*** (.040)
Meaningfulness → Commitment	.350*** (.042)	.415*** (.054)	.062 (.046)	.383*** (.109)
Meaningfulness → Work effort	.393*** (.053)	.336*** (.066)	.378*** (.076)	.374* (.152)
Meaningfulness → Work-to-family enrichment	.257*** (.056)	.317*** (.078)	.024 (.096)	.555*** (.184)
LMX → Meaningfulness → Commitment	.074*** (.012)	.093*** (.019)	.014 (.011)	.068** (.022)
LMX → Meaningfulness → Work effort	.083*** (.015)	.076*** (.019)	.087** (.026)	.067* (.027)
LMX → Meaningfulness → Work-to-family enrichment	.055*** (.013)	.071*** (.021)	.006 (.022)	.099** (.036)
R ² Meaningfulness	.141	.152	.165	.213
R ² Commitment	.404	.437	.322	.310
R ² Work effort	.238	.302	.364	.097
R ² Work-to-family enrichment	.116	.143	.216	.102
CFI	.987	.983	.979	.983
TLI	.985	.980	.976	.980
RMSEA	.045	.045	.047	.043

Note: * p < .05, ** p < .01, *** p < .001. Unstandardized coefficients are presented (standard errors in parentheses). The control variables are not reported due to space limitations but can be provided by the authors.

H=Healthcare; M=Municipalities; E=Education

5 Conclusions and discussion

This study contributes to understanding leadership in public sector organizations in two ways. First, as encouraged by Van Wart (2013), by developing an explicit theoretical model and then testing this with data from various public sector settings. Secondly, by focusing on the dynamics/mechanisms of leadership: analyzing the mechanisms at play to explain how a better relationship between employees and their leaders boosts outcomes. More specifically, the role of work meaningfulness was analyzed as a potential mediator between LMX and outcomes, both inside and beyond the work context.

The results indicate that the meaningfulness of work is an important mediator between leadership and outcomes, in line with theoretical expectations. When employees and managers have a good relationship (i.e. high LMX), this positively affects employees' perceptions of making a difference in their work and in seeing the relationship of their work to the larger organization. This is possibly because, in such situations, leaders provide employees with greater insight into how the organization works and give them more responsibility. In return, this results in higher organizational commitment, greater work effort, and enriches work-to-family crossover. This emphasizes the importance of meaningful work. This is significant as many organizational behavior and leadership scholars play down the importance of meaningfulness (but see May, Gilson, and Harter 2004). Organizational behavior scholars tend to focus on autonomy or job control (see for instance Deci and Ryan 2004). While the role of participative management is well researched in leadership theory (for instance Kim 2002), there is much less research on meaningful work. The current research suggests that the role of meaningfulness is significant and an important study topic regarding leadership issues in the public management discipline. An interesting avenue here could be to combine the leadership literature concerning meaningfulness with insights from Public Service Motivation (PSM) (Vandenabeele 2008).

The findings show that the mechanisms that connect LMX and outcomes vary between sectors. In healthcare, LMX has both a direct effect on outcomes and an indirect one through meaningful work. In education, meaningfulness is an even more important mechanism: it fully mediates the relationships between LMX and both work effort and work-to-family enrichment. In other words, if teachers have a good relationship with their supervisor, this will increase the meaningfulness of their work, and this will have positive effects for the organization and for the employee. When it comes to local government, LMX has a direct relationship only with commitment and work-to-family enrichment, and meaningfulness does not play a significant role as a mediator. It would seem, particularly in education and also in healthcare, that the level of meaningfulness is an important predictor of outcomes whereas, in local government, employees seem to be committed and experience work-to-family enrichment regardless of the meaningfulness they perceive in their jobs. It could be that employees in healthcare and education chose to work in these sectors because they want to perform meaningful work whereas, in local government, employees have other motives, such as job security and regular pay increases, reducing the role of meaningful work (Jurkiewicz and Massey 1996). This argument would fit the descriptive statistics that show that perceived meaningfulness is lower in the local government sector than in the other two investigated. A further possibility is that it could also be caused by the nature of supervisory-employee relationships differing among sectors; managing a healthcare professional is obviously quite a different task to managing a local government employee (see also Mintzberg 1998).

We end this article by discussing some of its limitations. First, some of the variables in the dataset demonstrated limited variability. This is particularly the case for the variable meaningfulness. Although all possible scores are represented in the dataset, attenuated ranges could result in either over or under estimates of effect sizes. It could be that the high mean

score for meaningfulness is a consequence of conducting the study in the public sector. That is, employees typically opt to work in the public sector because they want to contribute to society, i.e. to do meaningful work. It would be interesting to compare public and private sector employees in future studies. Another methodological limitation is the use of cross-sectional data. As such, assumptions based on theoretical arguments are made about the likely direction of causality, moving from leadership, through meaningfulness, to outcomes. Future studies could employ longitudinal or experimental designs that could test the causality of these relationships.

Concluding, our empirical results emphasize the importance of leadership in the public sector. In line with Wright and Pandey (2010:86), we note that “management matters” (Rainey and Steinbauer 1999; Pandey, Coursey, and Moynihan 2007; see also Hennessey Jr 1998; Knies 2012). Our research findings highlight the importance of studying and improving leadership in the public sector, and especially the need to relate leadership with *meaningful work*. Further, by testing explicit theoretical models in various parts of the public sector, this study has highlighted important differences between various parts of the public sector.

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