

# **Personality, core self-evaluation and communication skills seem to be more important than demographic variables in the development of LMX**

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## **About the authors**

Emerita Professor Soili Keskinen originally began researching LMX for several reasons. First, as leadership has conventionally been overplayed in comparison with employee roles; it provides a counterbalance for the leader-focused outlook. Second, Professor Keskinen has recognised the importance of stimulating, activating and maintaining employee responsibility; so that working together with managers organizational goals can be achieved. Third, it is important to emphasise employee roles as a matter of ascertaining the occupational well-being of managers and preventing stress associated with excessive workloads. These observations are of interest to occupational health psychologists Kariluoma, Rehnbäck, Wikman-Heinonen and Vene and the group wishes to study the theme and contribute to further knowledge of these major issues related to occupational well-being.

## **Abstract**

In this study, we were interested in studying Leader-Member-Exchange (LMX) theory. Specifically, we wanted to investigate the quality of LMX relationships with a group of experts; based on the evaluations of their subordinates. We looked at demographic variables like gender, level of education and age and how these were connected to the LMX relationship. We explored these questions with a questionnaire study with 278 employees and supervisors in an expert-organization of state administration. We found only few connections between demographic variables and LMX. Gender and education had some connections with LMX; with men reporting more perceived opportunities to participate in decision-making. There was also a connection between years of employment and approachability of supervisors. Theoretically our findings suggest that personality, core self-evaluation and communication skills may be more important than demographic variables in the development of LMX. Practically we suggest that LMX (and its parts: functional interaction, opportunities of participation and influence, approachability and value of expertise) should be developed at all levels in organizations.

## Introduction

During the last years, the Leader–Member Exchange (LMX) theory has developed into a central leadership theory (Graen & Uhl-Bien, 1995). LMX-theory depicts leadership as an interactive relationship with one's subordinates. It examines leadership as an upwards communication process, contrasting with transformational leadership theory, where the direction of communication is downwards. Leadership is seen to develop from an interactive relationship with one's subordinates and a sense of community. Traditional leadership theories highlight the skills and personality of the supervisor, while LMX-theory underlines the importance of an interrelationship; with both supervisors and subordinates being responsible in the leadership process. LMX is seen as interactive, with both parties having their own role in the creation and development of the relationship.

Traditional leadership theories often classify and characterise the behaviour, style and personality of supervisors in relation to different types of situations. In these situations, leadership is either seen as efficient and productive or inefficient and unproductive. LMX-theory emphasises relationship forming as the basis for leadership between supervisors and their subordinates (Graen, 2003). The supervisor creates an interrelationship with each subordinate and the successfulness or unsuccessfulness of these relationships as a whole creates the leadership of the entire work community. These multiple leader-member relationships create the quality of leadership in that work group. Supervisors have to interact with their subordinates each day developing working relationships with them individually.

The LMX relationship has four dimensions: affect, loyalty, perceived contribution and professional respect (Graen & Uhl-Bien, 1995). *Affect* means that the subordinate thinks their supervisor is the kind of person one would like to have as a friend. *Loyalty* implies that the supervisor defends employees' working behaviour even without complete knowledge of the issue at stake. *Contribution* means that the supervisor is willing to apply extra efforts, beyond those normally required. *Professional respect* means the supervisor respects the employee's knowledge of their job and they have mutual respect for each other (Liden & Maslyn, 1998; Schyns & Wolfram, 2008). Based on these dimensions both parties experience a relationship based on equality leading to positive working arrangements. According to Schyns and Wolfram (2008) the LMX-relationship develops in a dyadic role-making process and this process emphasises the exchange taking place between leaders and members.

LMX-theory has developed based on social exchange and role theory (Douglas, Ferris, Buckley, & Gundlach, 2003). Studies have examined social relationships between leader and subordinates (Epitropaki & Martin, 2005; Graen & Uhl-Bien, 1995; Henderson, Liden, Glibkowski, & Chaudry, 2009). It was noted that supervisors develop a variety of relationships with their subordinates and those unique relationships are connected to subordinates' well-being at work (Graen & Uhl-Bien, 1995). Effective development of LMX in diverse leader-member dyads may influence both members of the dyad in terms of the development of respect, trust and mutual obligation (Graen & Uhl-Bien, 1995; Scandura & Lankau, 1996; Schyns & Wolfram, 2008). Interaction between supervisor and subordinate is directly related to job satisfaction, organizational commitment, performance ratings and productivity

(Scandura & Lankau, 1996). According to Graen and Uhl-Bien (1995) subordinates describe their supervisors' approachability and loyalty differently, based on their own relationship with the supervisor. According to Scandura and Lankau (1996) when both subordinate and supervisor described the relationship between them as trustworthy, respectful and committed, the subordinate belongs to the '*in-group*'. Later Graen (2003) described the relationship as high-quality exchange instead of using the concept of '*in-group*'. The '*out-group*' consist of subordinates who meet minimum job standards, but whose subordinate-supervisor interaction does not consist of mutual commitment, trust or respect. Later in the LMX literature this type of relationship was described as a low-quality exchange (Epitropaki & Martin, 2005; Hiller & Day, 2003).

LMX therefore refers to both supervisor and subordinate skills. Subordinate skill is a relatively new term in the Finnish work-related literature; but it has been used by Keskinen (2005) and Keskinen and Rehnbäck (2005; 2009). These authors define subordinate skills as general responsibility or responsible behaviour of an employee (Keskinen, 2005) and the ability to influence one's supervisor and their mutual relationship (Rehnbäck & Keskinen 2008). The definition is based on Organizational Citizenship Behaviour (OCB) (Deluga, 1994) as well as LMX-theory. OCB refers to the employee's conscientiousness, altruism, sportsmanship, courtesy and civic virtue (Deluga, 1994).

OCB suggests that the personal qualities of subordinates help the work community and organization to succeed (Podsakoff, Whiting, Podsakoff, & Blume, 2009), and LMX suggests that subordinate skills are also related to the development of the LMX relationship (Rehnbäck, Keskinen, & Keskinen, 2010). The higher the subordinate skills are the greater the probability of high-quality exchange.

LMX is important for individual work-related satisfaction and organizational commitment (Laschinger, Purdy, & Almost, 2007; Schyns & Wolfram, 2008). While there is a great deal of research on LMX relationships (Avolio, Weber, & Walumbwa, 2009) most of this work is based on subordinate evaluations; for example connecting LMX with subordinate work related well-being, commitment to work and their ability to endure stress at work (Schyns & Wolfram, 2008). When examining LMX from the supervisor's point of view, LMX is connected with empowering subordinates, organizational commitment and achieving goals (Cogliser, Schriesheim, Scandura, & Gardner, 2009; Gerstner & Day, 1997; Schyns & Wolfram, 2008). Gerstner and Day's (1997) meta-analysis of high-quality LMX found these relationships were related to work-satisfaction, clear distribution of roles, commitment and reduced intention to quit current employment for both supervisors and subordinates. Both supervisors and subordinates who reported high-quality exchange also reported increased satisfaction at work, efficiency, open and confidential communication and greater opportunities to influence their work.

High quality of LMX is usually associated with employees' efficiency, work satisfaction and commitment to the organization (Graen & Uhl-Bien, 1995), and connected with career advancement (Wakabayashi & Graen, 1984; Schriesheim, Neder, Scandura, & Tepper, 1992). Therefore, it is possible that work related stress

problems may be prevented by high quality of LMX between subordinates and supervisors (Graen & Uhl-Bien, 1995).

LMX is built over time through interactions between supervisors and subordinates. In a study of nurses (Laschinger et al., 2007) as much as 40% of variance in work-related satisfaction could be explained by the quality of the LMX relationship, the amount of responsibility given and the nurses core self-evaluations. Core self-evaluation represents a stable personality trait which encompasses an individual's subconscious, fundamental evaluations of themselves, their own abilities and their own control. People who have high core self-evaluations think positively of themselves and are confident concerning their own abilities. Laschinger and colleagues' (2007) study suggests that both the quality of the relationship and the personalities of those in the relationship can explain the development of LMX relationships.

#### LMX and demographic variables

Based on Graen's (2003) LMX theory the interaction between supervisor and subordinate is developed through three stages. These stages progress step-by-step. Moving to the next stage requires that each previous stage is successful. Graen (2003) names these stages: *Stranger; Acquaintance and Mature Partnership*. At the Stranger-stage the supervisor and subordinate have a low-quality relationship where the direction of communication is downwards This Stranger relationship is transactional; where the supervisor tells the subordinate what goals they expect the subordinate to achieve and which tasks they require to be completed. There is an emphasis on the supervisor to build the relationship with the subordinate. Differences in demographic variables for example age, educational level and gender between the two parties should be important to relationship building.

When the relationship between the supervisor and the subordinate evolves to the Acquaintance-stage; supervisor and subordinate begin to exchange information both on a personal and professional level. These interactions are not only transactional, that is, when there are slight disagreements these are accepted; or negotiations are held to resolve issues. At this stage, confidential terms are built between supervisor and subordinate and their roles become looser. Confidential terms imply that both parties, leader and member, trust each other and have an honest relationship.

In the final stage of the relationship (Mature Partnership) confidence is built. Downward leadership evolves towards transformational, communicative, trusting, and a mutually supportive and respectful partnership.

The size of the work community and the amount of subordinates has been seen to be significant in the development of leader-member relationships. Studies show that the growth of a relationship may depend on: the amount and quality of meetings; and type of contact experienced between supervisor and subordinate (Kacmar, Witt, Zivnuska, & Gully, 2003); the amount of time parties have worked together and how

much the supervisor is able to influence the subordinate's work, salary and general resources (Schyns & Wolfram, 2008).

Demographic variables affect the development of LMX especially at the beginning of these relationships (Hiller & Day, 2003). If values are to some extent shared, the relationship is likely to progress to the level of high-quality exchanges; or at least to the next level from the current one. If the demographic variables differ a great deal at the beginning of the relationship, the development of that relationship may be slow. However, if the supervisor is able to behave in a way that demographic variable differences have a small consequence the relationship will develop to the deeper level. This can happen by spending time with one's subordinates, allowing similarities in personalities and shared values and attitudes, to emerge and be understood.

LMX stems from the ideal that co-operation develops as a result of mature interactions between two persons (Graen, 2003). If the interaction does not develop and progress positively, the resulting interaction may be harmful. Clearly, understanding the impact of demographic variables on relationships between supervisors and subordinates are important for appreciating how they affect the development of LMX relationships.

#### Research Questions

- What is the quality of LMX relationships in an expert organization based on the evaluations of subordinates in different departments of the organization?
- How are demographic variables like gender, level of education and age connected to LMX?

### Methods

#### Participants

The research was conducted as a case study, and the participants were 400 employees of an expert-organization of State administration. Departments varied in size from four to 60 people.

Two hundred and ninety-three responses were received from a total sample of 400 people (overall response of 73.3%). The majority of respondents were women (70.7%,  $N=205$ ). Many employees had worked in the organization for over ten years (37%); with only one third (31%) working for less than four years. The expert organization had a high level of education with the majority of respondents having a university degree (61%, Masters/Licentiate/Doctorate) and 68% of these were women. A further 21% had university applied science degrees.

#### The Survey

The study measured the relationship between supervisor and subordinate as experienced by subordinates. The subordinates were asked about their opinions toward their immediate supervisor using 16 items with answers recorded on a five-step Likert response scale (Rehnbäck & Keskinen 2008). The items were derived from the LMX-7 questionnaire (Graen & Uhl-Bien, 1995) translated into Finnish and



two leadership questionnaires commonly used in Finland (Lindström et. al. 2000; Simola, Heikkonen, & Mäkelä, 2000) (see Table 1).

Four of the LMX-7 items were used to form two separate questions, for example: “*I trust my supervisor so much that I would defend their decision even if he was not present*” was divided into two questions “*I trust my supervisor*” and “*If needed I would defend my supervisor’s decisions and views*”. Other questions of LMX-7 were: “*My leader and I are on good terms*”; “*My leader is easy to approach*”; “*I trust my supervisor*”; “*I am aware of how my leader rates my performance*”; “*My leader is aware of problems related to my work*”; “*My leader values my expertise*”; “*My leader helps me overcome problems related to my work*”; and “*My leader provides prerequisites of success for my work*”.

Information about demographic variables of gender, level of education (comprehensive, secondary, BA and MA degree), and years of employment were requested as part of the survey.

### Data Collection

Surveys were administered in a lecture room where almost all the employees and supervisors were present to attend an educational lecture concerning work community functioning and leadership. The questionnaires were completed before the start of the lecture. Employees not present at this event were given the opportunity to answer the survey by email. Participants completing the survey were asked to answer questions in the role of a subordinate using their closest supervisor as the subject of their answers. No names were added to the survey to maintain anonymity. In the survey, we used identity numbers to maintain anonymity.

### Statistical Analysis

Means, standard deviations and cross tabulation were used to describe the data. The questionnaire was analysed using the SPSS 15.0 program.

Scale averages were examined with tests of difference. The average variables were examined closer using the Kruskal-Wallis test and additionally the multiple comparisons were done separately with the Mann-Whitney U-test.

In the Kruskal-Wallis test all of the average variables were used as dependent variables and demographic variables such as gender, years of employment, education and department were used as independent variables.

To examine the connections between the quality of the exchange ratio and the demographic variables we examined the four categories of exchange (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) with Kruskal-Wallis nonparametric tests. The exchange ratio itself was

a dependent variable and demographic variables gender, education years of employment and department were independent variables.

## **Results**

### Quality of interaction

Items describing the interaction and relationships between supervisor and subordinate were examined with exploratory factor analysis. This enabled the definition of four average variables describing: Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise.

Scale averages were examined with nonparametric tests as average variables were not normally distributed (Kolmogorov-Smirnov  $p < .05$ ).

*Table 1: Study variables: items, origin, reliability, mean, standard deviation and range*

| Variable  | Item  | Reference         | Alpha        | Mean        | SD          | range <sup>1</sup> |
|---|---|-------------------|--------------|-------------|-------------|--------------------|
| <b>Dimension of Leader-Member Exchange</b>          |   |                   |              |             |             |                    |
| <b>Functional Interaction</b>                       |   |                   | <b>0.935</b> | <b>3.56</b> | <b>.80</b>  | <b>1-5</b>         |
|   | My leader helps me overcome problems related to my work.  | LMX-7             |              |             |             |                    |
|   | My leader provides prerequisites of success for my work.  | LMX-7             |              |             |             |                    |
|   | I trust my leader.  | LMX-7             |              |             |             |                    |
|   | My leader defends me if needed.   | LMX-7             |              |             |             |                    |
|   | My leader is aware of problems related to my work.  | LMX-7             |              |             |             |                    |
|   | If needed I defend my leader's decisions and views.   | LMX-7             |              |             |             |                    |
|   | I have enough opportunities of discussion with my leader.   | QPS-Nordic        |              |             |             |                    |
|   | My leader treats all employees as equals.   | STM               |              |             |             |                    |
|   | My leader encourages us to voice our opinions when we disagree with something.  | STM, QPS-Nordic   |              |             |             |                    |
| <b>Opportunities of Participation and Influence</b> |   |                   | <b>0.827</b> | <b>3.79</b> | <b>.80</b>  | <b>1-5</b>         |
|   | I have the opportunity to participate in decision making involving myself. (Does your direct leader encourage you to participate in important decisions?) | QPS-Nordic        |              |             |             |                    |
|   | My leader gives me the opportunity to influence work-methods and -approaches. (My leader takes our views and ideas into account in carrying out tasks)    | STM               |              |             |             |                    |
|   | My leader takes my views and ideas into account.  | STM               |              |             |             |                    |
| <b>Easy Approachability</b>                         |   |                   | <b>0.881</b> | <b>4.0</b>  | <b>0.98</b> | <b>1-5</b>         |
|   | My leader and I are on good terms.  | LMX-7             |              |             |             |                    |
|   | My leader is easy to approach.  | LMX-7             |              |             |             |                    |
| <b>Value of Expertise</b>                           |   |                   | <b>0.824</b> | <b>3.65</b> | <b>0.90</b> | <b>1-5</b>         |
|   | My leader values my expertise.  | LMX-7, QPS-Nordic |              |             |             |                    |
|   | I am aware of how my leader rates my performance.   | LMX-7             |              |             |             |                    |

<sup>1</sup> All variables are scored; a high score indicating that the respondent felt the phenomenon in question occurred "often" or "a lot".



The quality of interaction between superiors and subordinates was examined using four separate average variables (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) with the maximum response being 5 and the minimum being 1. High and low quality exchange ratios were formed using the mean values and standard deviations of the average variables. The respondents who had evaluated their relationship with their supervisor as lower than .5 standard deviations from the each of the four scale means were described as *low quality exchanges*. The respondents who had evaluated their relationship with their supervisor as higher than .5 standards deviations from the mean were described as *high quality exchanges*. Those evaluations that were within one standard deviation from the specific scale mean were classified as *intermediate exchanges*.

High, intermediate and low quality exchanges were examined by frequencies and mean values across the four separate average variables indicating the quality of the exchange ratio. *High quality exchanges* ranged from 4.4 to 4.9 on the average variables; *intermediate quality exchanges* ranged from 3.5 to 4.0 and *low quality exchanges* ranged from 2.5 to 2.9.

*Table 2. High and low exchange ratio of LMX- relationships by gender, level of education and years of employment*

|   | <b>Gender:</b> |      | <b>Level of education:</b> |      |    |    | <b>Years of employment:</b> |           |              |
|---|----------------|------|----------------------------|------|----|----|-----------------------------|-----------|--------------|
|   | Female         | Male | ud                         | uasd | se | ce | 0-4 yrs.                    | 5-10 yrs. | over 10 yrs. |
| <b>Functional interaction</b>                       |                |      |                            |      |    |    |                             |           |              |
| Low exchange ratio                                  | 22%            | 8%   | 18%                        | 8%   | 2% | 2% | 7%                          | 9%        | 15%          |
| High exchange ratio                                 | 26%            | 13%  | 25%                        | 6%   | 3% | 6% | 14%                         | 10%       | 16%          |
| Intermediate exchange ratio                         | 22%            | 9%   | 18%                        | 8%   | 2% | 2% | 11%                         | 9%        | 9%           |
|   | n=268          |      | n=263                      |      |    |    | n=265                       |           |              |
| <b>Opportunities of participation and influence</b> |                |      |                            |      |    |    |                             |           |              |
| Low exchange ratio                                  | 26%            | 6%   | 15%                        | 11%  | 2% | 3% | 12%                         | 10%       | 11%          |
| High exchange ratio                                 | 21%            | 12%  | 23%                        | 4%   | 2% | 4% | 9%                          | 10%       | 13%          |
| Intermediate exchange ratio                         | 22%            | 13%  | 22%                        | 7%   | 4% | 3% | 11%                         | 8%        | 16%          |
|   | n=276          |      | n=272                      |      |    |    | n=272                       |           |              |
| <b>Easy approachability</b>                         |                |      |                            |      |    |    |                             |           |              |
| Low exchange ratio                                  | 24%            | 8%   | 18%                        | 8%   | 2% | 3% | 8%                          | 8%        | 15%          |
| High exchange ratio                                 | 29%            | 14%  | 27%                        | 7%   | 4% | 2% | 15%                         | 13%       | 15%          |
| Intermediate exchange ratio                         | 16%            | 9%   | 15%                        | 7%   | 2% | 1% | 8%                          | 7%        | 9%           |
|   | n=278          |      | n=273                      |      |    |    | n=274                       |           |              |
| <b>Value of expertise</b>                           |                |      |                            |      |    |    |                             |           |              |
| Low exchange ratio                                  | 23%            | 7%   | 16%                        | 9%   | 3% | 2% | 10%                         | 8%        | 12%          |
| High exchange ratio                                 | 14%            | 7%   | 14%                        | 3%   | 1% | 3% | 8%                          | 5%        | 8%           |
| Intermediate exchange ratio                         | 33%            | 16%  | 31%                        | 9%   | 4% | 4% | 14%                         | 15%       | 19%          |
|   | n=278          |      | n=273                      |      |    |    | n=274                       |           |              |

ud= university degree (MA), uasd= university of applied sciences degree (BA), se= secondary education (general/vocational), ce= comprehensive education

Over one third of the respondents (39%) described the interaction with their supervisor as “good” and evaluated the quality of the relationship as high ( $M = 4.4$ ,  $SD = 0.32$ ) (Table 2). Just under half of the respondents (43%) felt their supervisor was Approachable ( $M = 4.9$ ,  $SD = 0.22$ ) and 32% of the respondents felt that their supervisor was not Approachable ( $M = 2.8$ ,  $SD = 0.69$ ). A third (35.4%) of the respondents evaluated their own Opportunities of Participation and Influence as intermediate ( $M = 3.9$ ,  $SD = 0.39$ ), a third (32%) evaluated them as not good ( $M = 2.9$ ,  $SD = 0.53$ ) and a third (32.5%) evaluated them as good ( $M = 4.6$ ,  $SD = 0.30$ ). A fifth (20.8%) of respondents estimated their supervisor’s Value of their Expertise was high ( $M = 4.8$ ,  $SD = 0.25$ ) and almost half (48.7) felt Value of their Expertise was intermediate ( $M = 3.8$ ,  $SD = 0.23$ ). A final 30.5% felt their supervisor’s Value of their Expertise was only slight ( $M = 2.5$ ,  $SD = 0.56$ ).

#### Connection of Demographic Variables to LMX

We examined the connections between quality of the exchange and the demographic variables for four categories of exchange (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) (see Table 3 below).

*Table 3: Connection between leader-member exchange and gender, education and years of employment; Kruskal-Wallis tests*

|                             | Functional Interaction |              |       | Opportunities of Participation and Influence |              |          | Easy Approachability |              |       | Value of Expertise |              |      |
|-----------------------------|------------------------|--------------|-------|--|--------------|----------|----------------------|--------------|-------|--------------------|--------------|------|
|                             | m (SD)                 | $\chi^2$ (2) | p     | m (SD)                                       | $\chi^2$ (2) | p        | m (SD)               | $\chi^2$ (2) | p     | m (SD)             | $\chi^2$ (2) | p    |
| Gender                      |                        |              |       |  |              |          |                      |              |       |                    |              |      |
| a. female                   | 3.5 (0.85)             | .901         | 0.342 | 3.8 (0.08)                                   | 4.75         | 0.029*   | 4.0 (0.97)           | 0.609        | .435  | 3.6 (0.90)         | 1.272        | .259 |
| b. male                     | 3.6 (0.84)             |              |       | 4.0 (0.13)                                   |              |          | 4.0 (1.01)           |              |       | 3.7 (0.90)         |              |      |
| Education                   |                        |              |       |  |              |          |                      |              |       |                    |              |      |
| a. University degree        | 3.6 (0.84)             | 4.789        | .188  | 3.9 (0.78)                                   | 18.030       | 0.000*** | 4.0 (0.95)           | 4.257        | .235  | 3.7 (0.90)         | 4.059        | .255 |
| b. University App. Science. | 3.5 (0.86)             |              |       | 3.4 (0.79)                                   |              |          | 3.8 (1.03)           |              |       | 3.5 (0.88)         |              |      |
| c. secondary education      | 3.6 (0.81)             |              |       | 3.8 (0.73)                                   |              |          | 4.2 (0.86)           |              |       | 3.4 (0.84)         |              |      |
| d. comprehensive education  | 3.9 (0.87)             |              |       | 3.9 (0.79)                                   |              |          | 4.1 (1.11)           |              |       | 3.9 (0.97)         |              |      |
| Years of employment         |                        |              |       |  |              |          |                      |              |       |                    |              |      |
| a. 0-4 yrs.                 | 3.7 (.77)              | 3.988        | .136  | 3.8 (0.77)                                   | .057         | 0.752    | 4.2 (0.92)           | 5.901        | .052* | 3.7 (0.91)         | .919         | .632 |
| b. 5-10 yrs.                | 3.5 (.91)              |              |       | 3.8 (0.78)                                   |              |          | 4.0 (0.93)           |              |       | 3.7 (0.85)         |              |      |
| c. over 10 yrs.             | 3.5 (.85)              |              |       | 3.8 (0.84)                                   |              |          | 3.8 (1.03)           |              |       | 3.6 (0.94)         |              |      |

Note: \* refers to  $p < 0.05$ ; \*\* refers to  $p < 0.01$ ; and \*\*\* refers to  $p < 0.001$

There were only few connections between demographic values and leader-member exchange variables. Gender was connected to Opportunities of Participation and Influence ( $\chi^2 (2) = 4.75, p = 0.029$ ). Men estimated themselves to have more Opportunities of Participation and Influence than women. Further, Education level was connected to having Opportunities of Participation and Influence ( $\chi^2 (2) = 18.030, p = .000$ ). Those who had a BA degree felt that they had less Opportunities of Participation and Influence than those of a higher level of education ( $U = 3016.5, p = .000$ ) or than those who had comprehensive education ( $U = 460.5, p = .05$ ).

### Summary of findings

- Most respondents evaluated relationships with their supervisor as good.
- Approachability was evaluated the highest among the four dimensions of LMX.
- Only few connections were seen between demographic variables and leader-member variables.
- The quality of the exchange differed by gender in Opportunities of Participation and Influence with men reporting more perceived opportunities to participate in decision-making than women. Those with a university-level (MA) degree and comprehensive education level felt that their opportunities of influence were greater than those with BA degree or secondary education.
- There was a connection between years of employment and Approachability of supervisors. Those with the least job experience felt that their supervisors were more approachable than those with longer work experience.

## Discussion

Relationships between supervisor and subordinates (LMX) are seen as evolving on a continuum. Decisive attributes of the interrelationships are surface level attributes, such as gender, age, level of education, and years of employment (Hiller & Day, 2003; Scandura & Lankau, 1996). If the LMX relationship between supervisor and subordinate is to develop well, it is important for the supervisor to be aware of the factors that may influence that relationship. Further, efficient development and deepening of LMX relationships may lessen the negative effect of demographic variables on career development (Scandura & Lankau, 1996).

### Demographic variables and LMX

Gender, level of education and years of employment were found to influence the quality of supervisor – subordinate relationships in this study in an expert organization but only slightly. However, in earlier studies, age (Waldman & Avolio, 1986) race (e.g., Moch, 1980), education (Tsui & O'Reilly, 1989), and gender similarity of dyad members (Duffy & Ferrier, 2003; Goertzen & Fritz, 2004) were connected to LMX. We did not evaluate the leader's race and gender.

In this study, it was found that demographic variables on their own did not explain the quality of leader-member relationships. Nishii & Mayer (2009) noted that demographic diversity in a group affects the variation of LMX relationships only when the average LMX in the group is high. Their study examined relationships with

supermarket workers making a difference in context to this study exploring workers in an expert organization. Consequently, it does matter how high the overall LMX exchange ratio is perceived to be in the work community. If the overall LMX is at a low level, the demographic variables between subordinates and supervisors do not become significant.

In our study the LMX relationship level in different LMX variables were not especially high. Our result was that there were few connections between demographic variables and LMX and we follow the conclusion of Nishii & Mayer (2009). However, in an expert organization there may be other more important variables that help to build the LMX relationship than demographic variables. Being an expert represents status in itself. Being an expert may influence how people communicate, the way they work together and is likely to influence individuals' core self-value. In the development of interrelationships between supervisors and subordinates deep level factors such as personality, values and beliefs become decisive in the relationship as it develops over time. Thus, committing to the work community; having steady and long employment relationships are a key part in the internal cohesion of the workplace and the formation of strong relationships.

Men and those with a higher level degree felt their opportunities of participation and influence to be greater than women and participants who had upper secondary education (BA). Opportunity to participate may be a more important aspect for men in this study. In a study (Herranen-Somero, 2014), stress and minor opportunities for participation were highly connected with men but not with women.

Because the LMX-theory's roots lie in the theory of social exchange (Erdogan & Enders, 2007), it must also be noted that the support a supervisor receives from the organization will affect the interaction between supervisor and subordinates. In this study, there was no opportunity to examine the connection between the support a supervisor receives from the organization and the quality of leader-member relationships. The better a supervisor feels about their own supervisory relationship and the more support they receive from the organization; the more they are able to give to subordinates (Laschinger et al., 2007). A nursing study noted that the higher the supervisor evaluated their own supervisor relationship, the more open their communication was perceived by the work group; and the more ideas were shared and empowerment experienced from the supervisor (Laschinger et al., 2007). This means that in the whole organization, on all levels, the LMX should be high. Trying to develop LMX only on the lowest levels of organizational hierarchy will not be successful if the higher levels will stay untouched.

Further research and evaluation of this study

For further research, it would be important to examine the factors affecting the LMX relationship from both the subordinate and supervisor's points of view. Too often, as also in this study, LMX is evaluated only from the subordinates' point of view even though the whole concept is interactive in its nature. An interesting subject for further research would also be to examine the effect of LMX to well-being at work and what kind of variables mediate the well-being and LMX connection.



Concerning the validity and reliability of the measurement method in this study we found that all four dimensions of the LMX (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) received support. These dimensions were examined as average variables in the study with high Cronbach alfa coefficients and coincide with the dimensions of the original theory (Liden & Maslyn, 1998; Schyns & Wolfram, 2008). However, this study was a cross sectional one limiting the possibilities to draw conclusions concerning the nature of the connections. It is clear that gender, education and years of employment affect LMX variables and not vice versa. However, interconnections between the four LMX variables are just correlational ones.

### Application of results

In this study, it was found that there were only few connections between demographic variables and LMX. The parts of LMX, functional interaction, opportunities of participation and influence, approachability and value of expertise, are mainly depending from other factors than demographic variables. One strong candidate for such a variable is the organizational culture. As supervisors interact with their own higher level supervisors this interaction creates their LMX with their own supervisors. This LMX of supervisors affects lower level supervisors' behaviour towards their own subordinates. This means that when trying to develop subordinates' and their supervisors LMX the development should be directed to the whole organization, on all levels, and not only lower level subordinates' and their supervisors. Further research into such interventions is required to explore this proposition.

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