

Which doctors make the best leaders? The influence of line managers on employee job satisfaction

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ABSTRACT

Much has been written about how job satisfaction mediates the effect of human resource management (HRM) practices on organizational performance. The role played by line managers is largely absent. We address this by asking, do the characteristics of line managers matter to subordinates' job satisfaction, and if so how? Our sample includes doctors in university hospitals. Our study shows that a line manager's domain or core business expertise, in this case clinical expertise, predicts subordinate doctors' satisfaction with their job and their level of work participation. Parallel mediation analysis reveals job design and human resource (HR) practices – not transformational leadership style – to be the mediator of the relationship between the clinical expertise of line managers and subordinate doctors' job satisfaction. This study has clear practical implication for the promotion of doctors to leadership positions via an easily observable selection criterion, that of clinical expertise.

Key words: expert leaders, line managers, job satisfaction, HRM practices.

We are particularly grateful to Alex Bryson for his helpful comments in developing this paper, and to Zurich University Hospitals for the opportunity to survey their doctors.

INTRODUCTION

Human resource management (HRM) practices and employee job satisfaction are believed to positively influence organizational performance (Böckerman & Ilmakunnas, 2012; Bryson, Forth, & Stokes, 2017; Combs, Liu, Hall, & Ketchen, 2006; Jiang, Lepak, Hu, & Baer, 2012; Oswald, Proto, & Sgroi, 2015; Peccei, Van de Voorde, & Van Valdhoven, 2013, Van de Voorde, Paauwe, & Van Veldhoven, 2012; Wall & Wood, 2005). However, in this literature the role of line managers is largely absent. Line managers significantly influence employee attitudes and behaviours (Hutchinson & Purcell, 2010); they are responsible for converting human resource (HR) policies into practice (Purcell & Hutchinson, 2007) and shaping conditions of employment and the work environment, all of which influence employee job satisfaction (Böckerman, Bryson, & Ilmakunnas, 2012). The quality of line managers is both a key determinant of job satisfaction (Artz, Goodall, & Oswald, 2017) and individual performance (Lazear, Shaw, & Stanton, 2015).

In this study we develop the literature further by asking which characteristics are common among line managers most associated with high employee job satisfaction, and we examine what such line managers do differently. Previous research has addressed the effects of line *management* (e.g. supervisor support as an antecedent of perceived organizational support, see Rhoades and Eisenberger, 2002); however, research on the *characteristics* of successful line managers is rare. A key generic competence is having leadership and management skills. However, these might be difficult to determine ex-ante when promoting employees into line manager positions. One factor that is easily identifiable is an employee's domain, or core business, expertise. In this paper we examine whether having core business expertise as a line manager is associated with subordinate job satisfaction. Our sample consists of doctors in three Zurich university hospitals. Core business expertise is expressed through line managers' performance as clinicians. We build on the theory of expert leadership (TEL) (Goodall & Bäker, 2015) to propose and test, whether, and if so why,

experts in the core business of an organization – in this case doctors who are expert clinicians – may make the best leaders.

We chose to study doctors for several reasons. Doctors' job satisfaction and consequent performance matters to patient outcomes (Halbesleben & Rathert, 2008), and, of relevance to our study, the behavior of line managers is known to have a direct impact on physicians' job satisfaction and burn-out rates (Shanafelt, Gorringer, Menaker, Storz, Reeves, Buskirk, Sloan, & Swensen, 2015). Of further relevance is the extant research into the senior leadership of hospitals (in contrast to our focus on line managers). It reveals that hospitals led by doctors, as compared with non-medically trained managers, have higher US News and World Report quality scores, reduced complication rates, better bed-usage rates, and higher physician-satisfaction scores (Byrnes, 2016; Goodall, 2011; Kuntz & Scholtes, 2013; Tasi, Keswani, & Bozic, 2017; Veronesi, Kirkpatrick, & Vallascas, 2013). Finally, hospital settings are of interest because they are particularly hierarchical work places, where we might expect a line manager to have influence.

Our results show that having a line manager who is an expert clinician is a predictor of subordinate doctors' higher job satisfaction. A more thorough investigation, using parallel mediation analysis, reveals that expert clinicians have this positive influence primarily via their employee participation enhancing HR practices and job design, and not via their more transformational leadership style.

We make three contributions to the literature: (1) we turn the lens on to the role of line managers in the job satisfaction literature; (2) we uncover a characteristic that is associated with employee job satisfaction, namely clinical expertise; (3) we expose the mechanisms through which expert clinicians as line managers enhance subordinate job satisfaction; namely HR practices and job design that foster employee participation.

This research has simple and applicable practical implications: it can inform the selection criteria used to promote doctors to line manager positions in hospitals, and point to the training needs of leaders' HR practices enhancing employee participation.

CONCEPTUAL BACKGROUND

The term *expert leader* is used to describe someone who has a deep knowledge of the core-business of the organization. The term 'core business' is interpreted as the primary or underlying activity, namely, that which is considered to be the most important or central endeavor in an organization – its main source of success and profits (Zook & Allen, 2001). A person defined as an expert demonstrates exceptional performance in a specific domain of activity (Johnson, Zualkernan, & Garber, 1978). A deep, or expert knowledge consists of cognitive elements, technical abilities and skills which are domain specific (Alavi & Leidner, 2001; Nonaka, 1994), learning through deliberate practice (Ericsson, Krampe, & Tesch-Römer, 1993), and tacit knowledge which 'exists in the mind and governs the use of explicit knowledge' (Bradley, Paul, & Seeman, 2006, p. 77 citing McGraw & Harbison-Briggs, 1989). Thus, this may include a line manager who has worked their way up through the organization, or could do the job of a subordinate (Artz et al., 2017), or a boss who was able to reach a high standard or spent many years performing the core business or domain activity (Goodall, 2009; Goodall, Kahn, & Oswald, 2011; Goodall & Pogrebna, 2015).

An expert leader is thus trained to a high technical level, demonstrates superiority in the domain specific activity, and has tacit knowledge built up through experience in the field that provides an 'intimate familiarity with the relational structure of domain objects in a problem situation' (Bradley et al., 2006, p. 77 citing, Brehmer, 1980). Finally, and importantly, expert leaders and managers need to have managerial skills developed through training or innate ability

derived from experience (Goodall & Bäker, 2015). There is no presumption here that being an expert in the core business is a proxy for having management or leadership skills.

The idea developed in this paper is quite simple: leaders who are core business experts can draw on their own preferences and requirements to inform their decisions about appropriate job design and management practices that are likely to facilitate employee performance and job satisfaction. In other words, line managers who have ‘walked the walk’ have gained inherent knowledge to draw upon; they are able to use these insights to shape the job conditions of subordinates and their own human resource (HR) practices (Goodall & Bäker, 2015). Thus, we propose that line managers who are experts in the core business are associated with higher subordinate job satisfaction, and that the mechanisms behind this association are job design and a specific set of HR practices.

In our analysis, we focus on the mechanisms through which line managers may have the most discretion (see e.g. Purcell & Hutchinson, 2007): these are job design and HR practices. Discretion is important. It will allow for variance in the perceived practices and job conditions stemming from actual differences in these aspects between line managers – instead of differences in rater characteristics such as optimism or organizational commitment (Rhoades & Eisenberger, 2002; Wall & Wood, 2005).

When determining which job conditions and HR practices to study (there is a plethora of HR practices such as “selection, appraisal, training, teamwork, communication, job design, empowerment, participation” (Wall & Wood, 2005: 435), and no clear unanimous definition of what constitutes HR practices, see Wall & Wood, 2005), we again considered both the discretion open to line managers, and the particular research setting of doctors in hospitals. In the next section we explain why we chose to focus on job design and HR practices that foster employee participation.

Medicine requires high job involvement (Rhoades & Eisenberger, 2002). It is often seen as a ‘calling’; thus, intrinsic motivation is also high.¹ It is generally understood that doctors work in pressurized conditions and for long hours – especially in hospitals – potentially resulting in reduced job satisfaction and performance (Wood, Van Veldhoven, Croon, & de Menezes, 2012 find that high involvement management reduces job satisfaction via increased pressure). The role of line managers may be particularly important in fostering job involvement and intrinsic motivation in healthcare.

High involvement management (Böckerman et al., 2012, Gould-Williams & Davis, 2005; Huo, Han, Chen, & Zhao, 2015; Wall & Wood, 2005) aims to promote job involvement and intrinsic motivation (for the link between autonomy and intrinsic motivation see Bellamy, Morley, & Watty, 2003) via *direct employee participation*² (Wood et al., 2012). According to Wood and colleagues (2012: 420), direct employee participation can be achieved via job design, such as the granting of autonomy, or via organizational involvement methods, such as teamwork (see also Batt, 2002; Huselid, 1995).

Given the relevance of job involvement and intrinsic motivation to doctors, we will focus on job design and involvement methods that foster employee participation and thereby involvement and intrinsic motivation. Specifically, we will examine the *job design aspects* of autonomy, morale in the department, and feeling safe from bullying, which should contribute to employees’ openness to voicing their opinions and their perception of autonomy in decision making, i.e. employee participation. With respect to employee participation enhancing *HR practices*, we will look at team

¹ Note that whereas doctors may differ in their job involvement from the *average* employee, they are largely representative of knowledge-workers such as scientists and teachers (e.g. Bryson, Stokes, & Wilkinson, 2017) or employees working for public sector or non-profit organizations. Thus, we believe our results may be generalizable to these groups of workers.

² The concept of employee participation is related to fairness of treatment in the perceived organizational support literature (Rhoades & Eisenberger, 2002).

relations, helpfulness of line managers' feedback, and the perceived communication skills of line managers. Again, if doctors believe that their line manager communicates well (and also listens), and values them enough to give helpful feedback, this – as well as teamwork (Wood et al., 2012), may increase their participation.

With regards the high intrinsic motivation of doctors, we propose that apart from fostering employee participation, successful line managers will also apply a transformational, instead of transactional, leadership style. Transactional leadership is based on the idea of an exchange relationship between a line manager, who may reward high performance, and a subordinate who may be motivated by such a reward (Bass, 1985). However, rewards such as pay raises and promotions could crowd-out intrinsic motivation (e.g., Deci, 1971). Therefore, line managers of doctors may need to refrain from emphasizing rewards – i.e. refrain from applying a transactional leadership style (Bass, 1985). Instead, they may utilize a transformational leadership approach, which emphasizes vision and motivation (Bass, 1985; Burns, 1978).

A transformational leadership style is linked to higher follower outcomes such as performance and job satisfaction (Grant, 2012). Given this, we will argue that line managers, who excel in the core business, might construe, from direct personal experience, the importance of doctors' intrinsic motivation, and therefore they may employ a more transformational leadership style. We explore this in our data.

We test two mediators for the relationship between line managers' expertise and subordinates' job satisfaction: these are job design and HR practices fostering *employee participation* and a *transformational leadership style*. Figure 1 depicts our theoretical model – building on the theory of expert leadership. Applying parallel mediation analysis will allow us to test whether it is the leadership style of experts or the implemented HR practices and job design that matter for subordinate job satisfaction.

Insert Figure 1 about here

METHODS

Study Sample

Our data were collected using an online survey of doctors working in three university hospitals in Zurich, Switzerland. Ethics approval was obtained from the University of Zurich. The survey was available in German, the official language, and English. A link to the questionnaire was sent in an email from the Medical Director of each university hospital to all doctors employed in the institutions. Two reminders were sent with approximately one-week's lag each time. We received 286 complete questionnaires (i.e. 15 percent response rate).

Variables

Job satisfaction. The first question in our survey measured doctors' job satisfaction. It asked, "Overall, how satisfied are you with your job?" Respondents could answer the question on a six-point Likert scale with 1 being "Very Dissatisfied" and 6 being "Very Satisfied".

Core business expertise of the line manager. Line managers' clinical expertise was elicited by asking respondents to, "Please mark the appropriate answer: My immediate senior is"...1 "a highly distinguished clinician", 2 "a distinguished clinician", 3 "an averagely able clinician", 4 "not that interested in clinical work", 5 "not a clinician" and 6 "Other (please specify)". When responses are marked in the first or second category, the line manager (immediate senior) is classified as an expert clinician. An explanatory footnote is included, which read: "The term

"IMMEDIATE SENIOR" refers to e.g. registrar, consultant, head of the unit/department, clinical/medical director, or CEO/executive director."

Employee participation fostering job design and HR practices. In this paper we posit that expert clinicians create favorable job conditions, HR practices and leadership style. To measure employee participation fostering *job design* we used three items assessing ‘autonomy’, ‘morale in the department’, and ‘feeling safe from bullying’. We believe each of these contribute to employees’ perceived options of participating in decision making. With respect to employee involvement fostering *HR practices*, we follow Wood et al. (2012) and focus on team relations, communication quality, and the quality of line managers’ feedback (also Gould-Williams & Davis, 2005). Again, we apply three items; thus, overall, we have six items on employee participation which are scored on five-point Likert scales and respondents are asked to state their level of agreement, or not, with each statement (see Table 1).³ Importantly, an exploratory factor analysis reveals these six items to belong to the same factor with an eigenvalue of 2.72. Cronbach’s alpha of the six items is 0.83, and thus well within an acceptable range for belonging to a single construct.

 Insert Table 1 about here

Leadership style. To measure transformational leadership style vs. transactional leadership style, we use the global transformational leadership scale by Carless, Waring, & Mann (2000),

³ In addition, we elicited respondents’ happiness with recognition of their work, the degree to which they are consulted by their line manager and the amount of involvement in decision making at the workplace. Results are robust to including these items when calculating the mediator “employee participation”. However, as these items were phrased as “happiness with” instead of “agreement with”, we felt this might create an artificial relationship with job satisfaction. Given our inclusion of “agreement with”-items only, we avoid this caveat.

which consists of seven items. Higher values correspond to a more transformational leadership style.

We assume that variation in the answers to these items results from having different line managers. However, due to anonymity and confidentiality concerns, we were unable to elicit identifiers for the line managers and check for interrater correlations. Thus, we cannot apply team or line-manager fixed effects.

Demographic variables. The typical positions in a Swiss doctor's career are "Assistenzärztin / Assistenzarzt" (approximates to "resident" in the US), "Oberärztin / Oberarzt" (approximates to "fellow" in the US), "Chefärztin / Chefarzt" or "leitende Ärztin / leitender Arzt" (approximates to "attending"), and "Klinikdirektorin / Klinikdirektor" (approximates to "head of department"). As control variables in the following multivariate analysis, we include the position of the respondent – "*Fellow*", "*Attending*", and "*Head of Department*" – with "Resident" as the reference category, number of years in this position (*tenure in position*), number of *hours worked* in an average week, *age* and *gender*.

RESULTS

Table 2 displays the descriptive statistics. In the sample, mean job satisfaction on a six-point scale is 3.59. Sixty-nine percent of respondents had a line manager who they judged as a clinical expert (in other words, they rated their manager as being a very capable clinician). The items on employee participation were asked on a five-point Likert scale, with minimal and maximal values of 1 and 5 always being realized in the sample. Forty-one percent of respondents worked at the lowest hierarchy level of "resident", which is the reference category in the following analysis. Forty-two percent worked at the next higher level of "fellow", 15 percent at the level of "attending" and slightly less than one percent were a "head of department". This corresponds with the typical

hierarchical structure in hospitals. Respondents' tenure in their position ranges between zero and 25 years, with an average of four and a half years. Respondents worked an average of 58 hours per week. Average age in the sample is 39 years with a minimum of 26 years and a maximum of 65 years. Forty-six percent of respondents were female.

 Insert Table 2 about here

Table 3 shows the significant correlations among our dependent and explanatory variables as well as correlations with the control variables, providing first evidence on the relationship between core business expertise of the line manager, and respondents' job satisfaction. In this bivariate analysis, clinical expertise is weakly correlated with job satisfaction. Job satisfaction and clinical expertise correlate moderately with the measures for employee participation and leadership. The measures correlated more closely with each other. For the mediation analysis we generate one factor for employee participation by adding up the six corresponding items and z-standardizing.

 Insert Table 3 about here

Table 4 shows the results of a Hierarchical Regression Analysis to test the two proposed mediators regarding the link between line managers' clinical expertise and subordinates' job satisfaction (see Figure 1).

 Insert Table 4 about here

The first two columns reveal that the clinical expertise of the boss is strongly related to both proposed mediators -- employee participation fostering job design and HR practices, as well as

transformational leadership style. Hospital doctors who have an expert clinician as a line manager assessed the possibility for participation and the transformational leadership style of their line manager as more than eighty percent of a standard deviation higher (both employee participation and transformational leadership are z-standardized, enabling easy calculation of effect sizes). Specifically, the indirect effect “A1” is 0.93, the indirect effect “A2” is 0.88 (see Figure 1). Thus, we find that the clinical expertise of line managers relates positively to perceived employee participation options. Moreover, clinical experts employ a more transformational leadership style.

The third column shows the direct effect (C) of a line manager’s clinical expertise on subordinates’ job satisfaction. Doctors who have an expert clinician as their boss have on average a 0.39 higher job satisfaction score, measured on a six-point scale. This equals an effect size of about 0.29.

Finally, the fourth column reveals whether the two proposed mediators work. We see that employee participation, but not transformational leadership or clinical expertise, are significantly related to job satisfaction. According to the mediation analysis, the total effect of clinical expertise on job satisfaction is 0.39**, the direct effect (C) is 0.01, the indirect effect via employee participation (A1 x B1) is 0.34***, and the indirect effect via transformational leadership (A2 x B2) is 0.04. It is important to note that as sole mediator, transformational leadership mediates the relationship between clinical expertise and job satisfaction, but when including as parallel mediator the line manager’s employee participation practices, this mediator conducts the influence of line managers’ clinical expertise.

With respect to control variables, we see that more hours worked per week relate to lower job satisfaction, as we might expect. Moreover, doctors in more senior positions are often more satisfied with their job.

Our finding that a line manager's clinical expertise is positively associated with subordinate's job satisfaction is in line with the finding by Artz et al. (2017), which shows, across a range of industries, that a boss with core business knowledge (worked their way up or started the company or could do a subordinate's job) is the strongest predictor of subordinate job satisfaction. In the medical field, Goodall (2011) shows that CEOs who are doctors, as opposed to professional managers, are associated with the highest performing hospitals in quality rankings (see also Kuntz & Scholtes, 2013; Tasi et al., 2017; Veronesi et al., 2013). Also, line managers have been shown to have a direct influence on doctors' job satisfaction and burn-out rates (Shanafelt et al., 2015).

DISCUSSION

Many studies have shown that human resource management (HRM) practices influence organizational performance and that this is mediated through employee job satisfaction (Böckerman & Ilmakunnas, 2012; Bryson et al., 2017; Combs et al., 2006; Jiang et al., 2012; Oswald et al., 2015; Peccei et al., 2013, Van de Voorde et al., 2012; Wall & Wood, 2005). However, of noticeable absence in this research is any focus on the role that line managers perform. Our paper fills this gap. We identify the *characteristics* of line managers most associated with employee job satisfaction. In our study of three Zurich university hospitals, we find that doctors whose line managers are highly rated as clinicians are happier with their job overall, their job conditions, and the human resource (HR) practices of their line manager. Line managers who are expert clinicians are also more likely to employ a more transformational leadership style.

These findings support part of the theory of expert leadership (TEL) (Goodall & Bäker, 2015), which proposes that expert leaders (those who are core business or domain experts) positively influence employee performance through the channels of work environment, goal setting and evaluation. Our mediation analysis reveals that line managers, who are clinical experts, influence

job satisfaction through employee participation practices and job design, and not through transformational leadership style.

Our study offers the first evidence suggesting that the level of clinical expertise is a reliable *characteristic* that predicts subordinate doctors' satisfaction with their job overall. The mechanisms, through which good line managers influence job satisfaction, are also examined. Clinical experts' HR practices and job design foster employee participation.

There are limitations. First, we use single-source ratings of line managers' expertise, HR practices and leadership style. This is not an uncommon approach (see Wall & Wood, 2005 for an overview), however, we might capture common method variance from more optimistic respondents who rate both their line manager and the HR practices higher, as well as in our case the dependent variable of job satisfaction (Wall & Wood, 2005). In all likelihood we will have doctors who report on the same line manager, so we would have multiple ratings. However, privacy concerns prevented us from collecting identifying information on the line manager.

Arguably, given our research framework which targets mediators of the relationship between line manager's clinical expertise and subordinates' job satisfaction, common method variance might be less of an issue. Even though optimism of respondent could influence all our variables, it is not obvious to us why that would invalidate our finding -- that the relation between clinical expertise and job satisfaction is mediated, or that employee participation rather than transformational leadership style, mediates the relationship between line managers' clinical expertise and respondents' job satisfaction.

Further, our sample is rather small with 286 observations. The generalizability might thus be limited. However, we concentrated on the university hospitals in Zurich because all three have a very high reputation and as they offer different medical specialties, our analysis should be devoid of any self-selection of doctors within the three hospitals. That is, doctors might select into

hospitals with a high standing, which are also able to attract very good line managers, and where the high reputation might increase job satisfaction. Thus, our selection of surveyed hospitals avoids the caveat of having hospital reputation as an omitted variable. We also test for common methods bias as one kind of omitted variable using Harman's single-factor test. Based on these findings we are confident that common method is not a relevant issue with our data.

CONCLUSION

Our study shows that the clinical expertise of line managers in hospitals matters greatly to how they are rated as a boss by subordinate doctors. The finding has a common-sense logic. It might be expected that if a subordinate clinician greatly respects the clinical ability of their boss, this may enhance the credibility and subsequent authority of the line manager.

We also find that clinical experts are more likely to employ a transformational leadership style instead of a transactional approach. Understanding how to appropriately manage doctors is important; clinicians' job satisfaction and consequent performance has a direct impact on patient outcomes (Halbesleben & Rathert, 2008).

Our findings suggest that highly rated clinicians should be appointed into line manager positions in hospitals – to increase subordinate doctors' job satisfaction and patient outcomes. Knowing that it is employee participation and not transformational leadership that is the mediator of this relationship, we can also derive implications for the training needs of line managers in hospitals. Further research may be required if we are to understand how best to motivate expert clinicians into considering taking on leadership roles.

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Figure 1: Job design and HR practices fostering employee participation, and transformational leadership style as mediators of core business expertise.

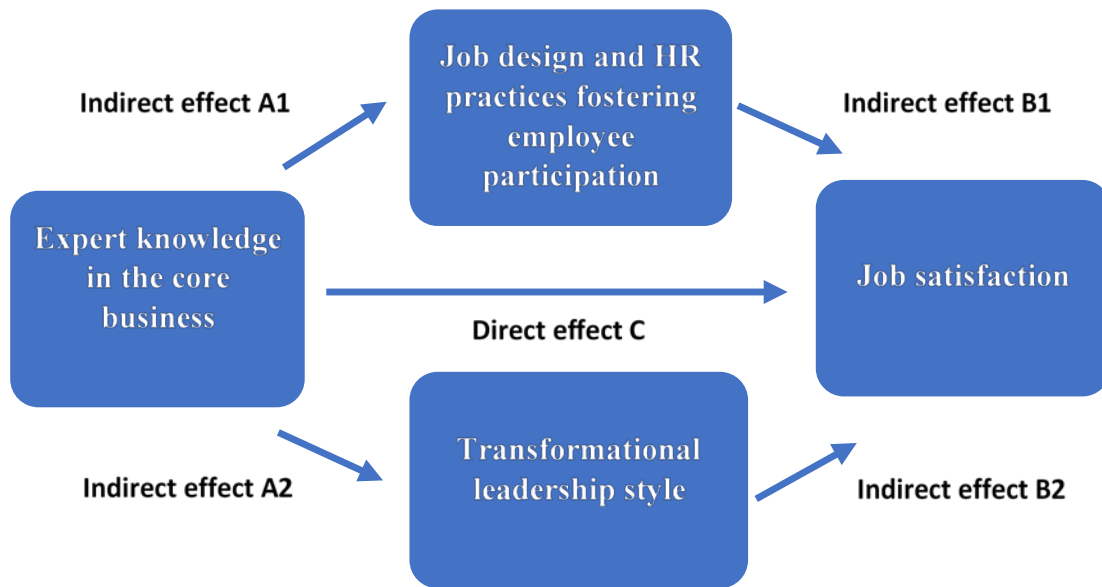


Table 1: Items for employee participation

Job design fostering employee participation	
Autonomy	Agreement with: “I am allowed to care for patients in my own way”
Morale in department	Agreement with: “Morale/work climate within my department is excellent”
Safe from bullying	Agreement with: “I feel safe from bullying, discrimination and harassment”

HR practices fostering employee participation	
Team relations	Agreement with: “There is a good team relationship among the colleagues in my department”
Good communicator	Agreement with: “My immediate senior is a good communicator / communicates well”
Clinical feedback	Agreement with: “The feedback I receive from my immediate senior helps improve my clinical work”

Table 2: Descriptive Statistics

	N	Mean	SD	Min	Max
Job satisfaction	286	3.59	1.33	1	6
Boss is clinical expert (1=yes)	286	0.69	0.47	0	1
Autonomy	286	3.62	1.16	1	5
Morale in department	286	2.96	1.20	1	5
Safe from bullying	286	3.55	1.16	1	5
Team relations	286	3.66	0.97	1	5
Good communicator	286	3.07	1.25	1	5
Clinical feedback	286	3.26	1.18	1	5
Global transformational leadership	286	17.28	4.55	7	27
Respondent position: Resident	286	0.41	0.49	0	1
Respondent position: Fellow	286	0.42	0.49	0	1
Respondent position: Attending	286	0.15	0.36	0	1
Respondent position: Head of Department	286	0.01	0.08	0	1
Respondent tenure in position (years)	286	4.46	3.97	0	25
Respondent: hours worked per week	286	57.59	11.58	2	90
Respondent age	286	38.72	8.37	26	65
Respondent gender (1=female)	286	0.46	0.50	0	1

Table 3: Correlations

	1	2	3	4	5	6	7	8	9
1 Job satisfaction	-								
2 Boss is clinical expert	0.14**	-							
3 Autonomy	0.18***	0.17***	-						
4 Morale in department	0.29***	0.33***	0.36***	-					
5 Safe from bullying	0.17***	0.25***	0.35***	0.45***	-				
6 Team relations	0.22***	0.26***	0.28***	0.58***	0.39***	-			
7 Good communicator	0.30***	0.41***	0.37***	0.66***	0.45***	0.46***	-		
8 Clinical feedback	0.29***	0.43***	0.23***	0.55***	0.38***	0.40***	0.69***	-	
9 Global transformational leadership	0.26***	0.41***	0.38***	0.61***	0.43***	0.44***	0.76***	0.70***	-
10 Fellow			0.17***						
11 Attending			0.23***						
12 Head of Department									
13 Tenure in position					-0.11*			-0.11*	
14 Hours worked per week	-0.18***		-0.17***			-0.15**	-0.20***	-0.20***	-0.13**
15 Age			0.27***		-0.11*			-0.15***	
16 Gender									

* p<0.1
** p<0.05
*** p<0.01

Table 4: Results of Hierarchical Regression Analysis for Mediation

	(1)	(2)	(3)	(4)
	Employee	Transformational	Job	Job
	Participation	Leadership	satisfaction	satisfaction
Controls				
Fellow	-0.08	0.02	0.20	0.23
Attending	0.18	0.11	0.68*	0.61
Head of Department	0.13	0.60	1.76***	1.69**
Tenure in Position	0.00	-0.01	0.01	-0.01
Hours worked per week	-0.02***	-0.02***	-0.03***	-0.02**
Age	0.03	0.01	0.07	0.06
Age sqrd	-0.00	-0.00	-0.00	-0.00
Gender (1= female)	-0.18	-0.25**	0.19	0.26*
Clinical Expertise	0.93***	0.88***	0.39**	0.01
Mediators				
Employee Participation	-	-	-	0.36***
Transformational Leadership	-	-	-	0.05
F	11.50	10.51	4.23	5.31
R²	0.25	0.20	0.09	0.15
Adjusted R²	0.22	0.18	0.06	0.12
Δ R²				0.06

Notes: n=286

* p<0.1

** p<0.05

*** p<0.01