

How clinical expertise drives job satisfaction in Danish hospitals

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ABSTRACT

Purpose Hospital physician job satisfaction is critically low, leading to turnover and compromising patient care. This study examines how clinical directors' clinical expertise influences subordinate physicians' job satisfaction and intention to stay, exploring the mechanisms through which expert clinicians become effective managers.

Methods We analysed multisource survey data from 184 clinical directors and 803 subordinate physicians in Danish public hospitals. Clinical expertise was measured through experience, education and peer recognition. We examined how expertise relates to human resource management (HRM) practices, perceived expertise and leader identity, and their effects on subordinates' job satisfaction and retention intentions.

Results Directors with higher clinical expertise implement better HRM practices, which significantly mediate the relationship between expertise and subordinate job satisfaction ($\beta=0.03$, $p<0.05$) and intention to stay ($\beta=0.03$, $p<0.05$). Clinical expertise correlates positively with leader identity ($\beta=0.18$, $p<0.05$), contradicting expectations that expert clinicians make reluctant managers. Perceived expertise showed weaker relationships than actual expertise.

Practical implications The findings challenge assumptions that outstanding clinicians resist leadership roles, suggesting that clinical excellence and leader identity can coexist and are both important. Organisations should focus on developing HRM capabilities alongside leadership identity among expert clinicians to maximise subordinate satisfaction and retention.

INTRODUCTION

How can hospitals attract and retain qualified physicians to address critical staff shortages? This question dominates discussions in healthcare management as physician job satisfaction—defined as a 'pleasurable state resulting from a positive appraisal of one's job'¹—reaches concerning lows. Physicians increasingly suffer from stress and burnout,^{2 3} contributing to high turnover rates that create even greater workload pressures for remaining staff. The importance of addressing physician satisfaction extends beyond staff welfare, given the well-established links between worker job satisfaction and productivity⁴ and, critically in healthcare settings, the quality of patient care.^{1 3 5}

Multiple factors influence job satisfaction and intention to stay, but middle managers play a particularly crucial role in maintaining satisfaction and reducing turnover intention.^{6 7} Research

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Clinical leadership influences physicians' job satisfaction and retention, and leaders with strong clinical expertise are associated with better outcomes.

WHAT THIS STUDY ADDS

⇒ Clinical directors with greater clinical expertise are associated with higher physician job satisfaction and retention through stronger human resource management practices and also report stronger leader identity, challenging the assumption that expert clinicians are reluctant managers.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The findings suggest that hospitals may benefit from appointing clinically experienced physicians to leadership roles while supporting them with formal management training.

demonstrates that replacing a 'bad' boss with a 'good' boss substantially increases worker productivity⁸ and job satisfaction⁹ at minimal organisational cost. This evidence suggests that appointing effective middle managers could significantly contribute to higher job satisfaction and retention among physicians.

Our understanding of effective physician management has advanced considerably in recent years. Previous research demonstrated across hospitals in Denmark, Australia and Switzerland that physicians led by managers with high clinical expertise report significantly higher job satisfaction, lower quit intentions and rate their managers as more effective leaders.¹⁰ That study established a robust empirical relationship between clinical expertise and positive subordinate outcomes but did not examine the mechanisms explaining why expert clinicians might make better managers. The present study builds on these findings by investigating the pathways through which clinical expertise translates into subordinate satisfaction, employing more sophisticated analytical methods and a richer dataset to understand the 'black box' of expert leadership in healthcare settings.

The literature on expert leadership provides valuable insights into what constitutes effective leadership in professional organisations. Expert leaders are domain experts who have 'achieved exceptional proficiency at a task or domain' that aligns with the organisation's core business.^{11 12} In healthcare

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contexts, this translates to distinguished physicians leading clinical departments. Such domain expertise develops through formal education, experiential learning, expert and tacit knowledge acquisition and deliberate practice.^{11 13} Substantial evidence links expert leaders to higher organisational performance^{14–16} and subordinate job satisfaction.^{9 10 17}

However, our understanding of why subordinates report higher job satisfaction under domain expert supervision remains incomplete. The mechanisms could relate to what expert managers *do* (their practices), *who they appear to be* (their credibility) or *who they want to be* (their self-perception). Previous research provides mixed evidence regarding effective practices. While Artz *et al*¹⁸ found that employees are least satisfied with how managers help them accomplish work tasks, suggesting that effective bosses facilitate task completion, other studies show mixed results. Blanco-Oliver *et al*¹⁹ found that manager support, fairness and teamwork encouragement relate to employee satisfaction in hospitals, yet Lin *et al*²⁰ found no evidence that task-oriented practices or employee consultation affect physicians' job satisfaction.

The inconsistent evidence on effective practices suggests that manager effectiveness might stem more from *who they appear to be* rather than *what they do*. Research on domain expertise typically considers subordinates' *perceptions* of managers' expertise rather than objective measures.^{9 10 17} Currie *et al*²¹ propose that clinicians in management positions leverage their dual identities as clinician and manager to broker knowledge, arguing that perceived clinical expertise provides legitimacy and enables more effective management. This perspective suggests that subordinates view managers with high perceived domain expertise as exemplary professional group members, granting them social acceptance and legitimacy.^{11 22}

Finally, managers' self-perception—*who they want to be*—might influence their effectiveness and subordinates' job satisfaction. The strength of leader identity captures how strongly individuals perceive themselves as leaders and want to be seen as such.^{23–25} Managers with stronger leader identities engage in more positive behaviours and are perceived as more effective.^{23 24 26} However, physicians sometimes appear reluctant to enter management,²⁷ potentially anticipating 'identity challenges' from reconciling the conflicting logics of being both a professional and a manager.²⁸ Expert clinicians, whose medical success may have reinforced their focus on clinical work,^{29 30} might have particularly weak leader identities.

Building on the theory of expert leadership,¹² we examine how clinical directors' domain expertise relates to their implementation of human resource management (HRM) practices, subordinates' perceptions of clinical directors' expertise and clinical directors' strength of leader identity. We investigate how these three mechanisms relate to physicians' job satisfaction and intention to stay, providing both theoretical insights and practical guidance for hospital leadership development.

METHODS

We conducted two surveys of Danish physicians to examine the relationship between clinical expertise and subordinate outcomes. Dataset 1 contained responses from physician clinical directors, who act as middle managers, collected in June 2019. The survey targeted the complete population of 425 clinical directors at Danish public hospitals, and we received 290 responses, corresponding to a 68% response rate.³¹ The responding clinical directors were representative of the population in terms of observable characteristics.

Dataset 2 contained responses from non-management physicians reporting their job satisfaction, intention to stay and perceptions of their managers' practices. The survey was distributed to all physicians who were members of the Organisation of Danish Medical Societies. Data were collected in December 2018 and January 2019. From approximately 20 000 members, we received 4451 responses (22% response rate).

Because the two surveys were conducted independently, no unique identifier was available to directly link individual physicians to their clinical directors. We therefore matched physicians from Dataset 2 to the clinical directors in Dataset 1 using information on hospital affiliation and medical specialty. For example, physicians indicating Orthopaedic Surgery at hospital X were matched to the clinical director responsible for Orthopaedic Surgery at that hospital.

We restricted the subordinate sample to those working in public hospitals, excluding physicians with their specialty in general practice (n=1034), physicians who were retired or outside the public sector (n=101) and physicians who held positions as clinical directors or chief medical officers themselves (n=137).

To improve matching accuracy, we excluded physicians where reliable matching was not possible. This included cases with missing information on hospital affiliation or specialty (n=644), cases where the relevant clinical director was not included in Dataset 1 (n=588), psychiatric specialties where affiliation did not indicate specific hospital sites (n=232) and cases where subordinate-indicated clinical director gender did not match self-reported gender (n=277).

After excluding incomplete responses, our final sample comprised 184 clinical directors matched to 803 subordinates, with an average of five subordinates per clinical director. All included clinical directors had held their management positions for at least 6 months. The two original survey datasets were broadly representative of the populations surveyed, and the matching procedure primarily reflects data availability and the requirement of reliable identification of the responsible clinical director.

To capture the clinical directors' domain expertise, we applied Rousseau and Stouten's¹¹ definition encompassing 'cognitive capacities, skill and knowledge acquired through education, training, study and/or in-depth practice' and 'professional or social credentials'. Our domain expertise measure incorporated three components reflecting this definition. The *experience* component consisted of the average years since obtaining a medical degree, becoming a consultant and becoming a senior consultant. The *education* measure indicated whether the directors had obtained a medical academic degree ('Dr med'; higher doctoral degree in medicine). The *peer recognition* component comprised five aspects: membership in professional societies, professional bodies, research boards, ethical committees or employment as associate/full professor. We z-standardised each component and calculated their mean to create the domain expertise index.

We measured subordinates' perception of clinical directors' HRM practices using 10 items adapted from Gould-Williams,³² with subordinates rating items on a 5-point scale. Sample items included 'The feedback I receive from my immediate manager helps improve my clinical work' and 'My immediate manager strongly encourages teamworking' (coefficient $\alpha=0.86$). To capture subordinates' perceptions of managers' domain expertise, we used the item from Bäker and Goodall¹⁰: 'My immediate clinical manager is (6) a highly distinguished clinician, (5) a distinguished clinician, (4) an averagely able clinician,

Table 1 Descriptive statistics and correlations (director level, n=184)

Variable	Mean	SD	Min	Max	Skewness	Kurtosis	1	2	3	4	5	6	7	8
Clinical expertise index	-0.00	0.72	-1.37	1.88	0.46	2.68	–							
Average years of experience	16.70	7.13	2.67	34.33	-0.15	2.27	0.70***	–						
Education (Dr med)	0.20	0.40	0	1	1.53	3.35	0.72***	0.23***	–					
Peer recognition	0.43	0.25	0	1	0.08	2.44	0.75***	0.30***	0.33***	–				
HRM practices	2.80	0.46	1.33	4.22	-0.32	3.88	0.02	-0.09	0.07	0.06	(0.86)			
Perceived expertise	4.50	0.89	1	6	-1.19	5.59	0.11	0.02	0.10	0.012	0.23***	–		
Strength of leader identity	0.82	0.14	0.3	1	-0.77	3.74	0.18**	0.19***	0.09	0.12	0.05	-0.01	(0.82)	
Age	56.97	7.62	39	71	-0.51	2.43	0.62***	0.93***	0.15**	0.25***	-0.09	-0.02	0.15*	–
Gender (1=female)	0.39	0.49	0	1	0.45	1.20	-0.16**	-0.25***	-0.03	-0.06	0.15**	0.00	-0.10	-0.24***

Coefficient α in parentheses.
 * $p<0.10$, ** $p<0.05$ and *** $p<0.01$.
 HRM, human resource management.

(3) not that interested in clinical work, (2) not a clinician or (1) other'.

We captured clinical directors' strength of leader identity (self-rated) using four items developed by Hiller,³³ rated on an 11-point scale, including 'I am a leader' and 'I see myself as a leader' (coefficient $\alpha=0.82$). For outcome measures, we used single-item measures of job satisfaction ('Overall, how satisfied are you with your job?') scored on a 6-point scale and intention to stay (reverse-coded from 'Have you considered leaving your organisation?') with five response categories from recent consideration to no consideration of leaving. Details of our measures are provided in online supplemental table A1 in the supplementary materials.

For clinical director-level analyses testing relationships between domain expertise and mediating variables, we used ordinary least squares regression with z-standardised dependent variables to facilitate interpretation. We controlled for clinical directors' medical specialty, gender, age, estimated department budget, span of control, management training participation and tenure in the management position. Moreover, we included hospital fixed effects. For subordinate-level mediation analyses, we used regression-based approaches with 5000 bootstrap repetitions, clustering SEs at the director level. We controlled for subordinate characteristics, including medical specialty, age, gender, job position, weekly work hours, tenure in position and life satisfaction, plus director characteristics, including gender, span of control, budget, management training and tenure. Also here, we included indicator variables for the respective hospital.

RESULTS

Table 1 displays descriptive statistics and correlations for clinical directors. The correlation between domain expertise and HRM practices was near zero ($r=0.02$, $p=0.812$), while correlations with perceived expertise ($r=0.11$, $p=0.136$) and leader identity ($r=0.18$, $p=0.012$) were modest but in expected directions.

In table 2, we found that a one SD increase in clinical directors' domain expertise relates to approximately a one-third SD increase in subordinate ratings of HRM practices ($\beta=0.36$, $p=0.048$). This supports our expectation that clinical directors' clinical expertise predicts their implementation of HRM practices.

Contrary to expectations, directors' domain expertise showed no significant relationship with subordinates' perceptions of managers' expertise ($\beta=0.05$, $p=0.839$). However, when we followed Goodall and Baker¹² in transforming the perceived expertise measure into a binary indicator of having a distinguished versus average clinician as manager, we found a positive

correlation with the domain expertise index ($r=0.19$, $p=0.011$, not shown in table 1). This suggests that objective expertise influences broad perceptions of distinction but cannot predict nuanced expertise ratings.

Perhaps most surprisingly, we found a positive rather than negative relationship between directors' domain expertise and their strength of leader identity ($\beta=0.26$, $p=0.079$). This contradicts expectations that expert clinicians would have weak leader identities due to competing professional identities. For this sample of clinical directors, high clinical expertise appears to coexist with strong leader identity rather than creating identity conflicts.

Table 3 provides results on the relationship between directors' clinical expertise and subordinates' job satisfaction and intention to stay. The direct relationship between domain expertise and job satisfaction was marginally significant ($\beta=0.10$, $p=0.066$), while the relationship with intention to stay did not reach significance ($\beta=0.06$, $p=0.133$). Regarding the mechanisms through which domain expertise influences subordinate outcomes, table 3 shows that HRM practices significantly mediate the relationship between domain expertise and job satisfaction ($\beta=0.03$, 95% CI (0.061 to 0.056)) and intention to stay ($\beta=0.03$, 95% CI (0.006 to 0.064)). Neither perceived expertise nor leader identity acted as significant mediators, indicating that subordinate satisfaction primarily reflects what expert leaders *do* rather than who they *appear to be* or how they *see themselves*.

DISCUSSION

Our findings provide compelling evidence for the practical value of appointing clinical experts to clinical directors' positions in hospitals. The primary mechanism appears to be expert clinicians' superior implementation of HRM practices—they provide better feedback, communicate more effectively, consult

Table 2 Clinical directors' clinical expertise predicting mediating variables (manager level, n=181)

Predicted variable	Effect of expertise (β)	SE	P value	R ²
HRM practices	0.36**	0.18	0.048	0.42
Perceived expertise	0.05	0.23	0.839	0.43
Strength of leader identity	0.26*	0.15	0.079	0.43

* $p<0.10$ and ** $p<0.05$.

All models control for manager demographics, department characteristics, medical specialty indicators and hospital indicators. See the full models in online supplemental table A2.

HRM, human resource management.

Table 3 Directors' clinical expertise predicting outcomes—also via mediating variables (subordinate level, n=803, 184 clinical directors)

Outcome	Direct effect			Indirect effect			
	Of expertise (β)	Via HRM	95% CI	Via perceived expertise	95% CI	Via leader identity	95% CI
Job satisfaction	0.10*	0.03***	0.061 to 0.056	0.00	−0.025 to 0.034	0.01	−0.003 to 0.023
Intention to stay	0.09	0.03**	0.003 to 0.049	−0.00	−0.027 to 0.029	0.01	−0.004 to 0.037

*p<0.10, **p<0.05 and ***p<0.01.

SEs clustered on clinical director level. Bootstrap CIs based on 5000 repetitions.

All models control for subordinate demographics and medical specialty indicators, hospital indicators, clinical director demographics and department characteristics.

HRM, human resource management.

subordinates more frequently and create more supportive and collaborative work environments. This finding aligns with the theory of expert leadership,¹² which proposes that domain experts create work environments better suited to core business workers' needs and set more appropriate goals based on their deep understanding of the work.

The positive correlation between clinical expertise and strength of leader identity challenges common assumptions about reluctant physician managers. Previous literature describes how professionals promoted to management struggle with reconciling dual identities,^{28 34} often becoming reluctant leaders.²⁷ However, our results suggest that rather than viewing management as a departure from clinical work, experienced physicians may see leadership as a natural extension of medical practice. Medicine inherently requires decision-making, team coordination and patient advocacy—skills that translate well to management contexts.

These findings enhance understanding of leader identity determinants. Previous research emphasised management training³⁵ and time in leadership positions³⁶ as identity developers, though Walker *et al*²⁵ found no longitudinal effect of previous leadership roles. Our study extends this literature by showing that domain expertise relates positively to leader identity even when controlling for training and experience ($\beta=0.26$, $p=0.079$). This suggests that professional practice itself may develop leadership capabilities and strengthen one's leader identity.

The mediation results provide new evidence on mechanisms proposed by expert leadership theory. HRM practices emerged as the strongest mediator, aligning with evidence highlighting their relevance for physician job satisfaction¹⁹ while challenging other studies finding no effects.²⁰ We conclude that subordinates' job satisfaction and retention reflect clinical directors' expertise primarily through *what they do* rather than *who they appear to be* or *who they want to be*. However, leader identity's direct relationship with outcomes suggests additional benefits—if clinical directors want to be seen as leaders, subordinates respond positively, creating a self-fulfilling prophecy effect (see online supplemental table A3).

The differential effects on job satisfaction versus intention to stay merit attention. Domain expertise related only indirectly to intention to stay through HRM practices, suggesting that retention is predominantly shaped by management behaviours rather than directors' clinical expertise per se. However, expertise contributed both directly and indirectly to job satisfaction, suggesting the importance of having expert clinician-leaders.

From a practical standpoint, these findings strongly support staffing clinical director positions with domain experts. However, we encourage hospitals to also provide management training, as domain expertise alone cannot substitute for managerial skills.³⁷ Management training additionally strengthens leader identity,³⁵ which our results show positively relates to subordinate satisfaction and retention (see online supplemental table A3).

The positive correlation between domain expertise and leader identity suggests that organisations need not fear that technical experts will resist leadership roles. Rather than creating selection dilemmas between clinical excellence and leadership potential, hospitals can seek candidates who demonstrate both.

Several limitations merit consideration. First, our cross-sectional design prevents causal inference. Although the use of objective measures of clinical expertise and multisource data reduces concerns about common method bias, the relationships identified should be interpreted as associations rather than causal effects. Second, because the two surveys were conducted independently, no unique identifier was available to link physicians directly to their clinical directors. Physicians were therefore matched based on hospital affiliation and medical specialty. This necessarily reduced the sample and may affect representativeness, although we do not believe this to bias the relationships analysed in the study. Comparisons between included and excluded respondents show no significant differences in key observable characteristics among clinical directors (gender, age, tenure and medical specialty) or subordinate physicians (gender, age, tenure, life satisfaction and working hours). Third, our focus on Danish physicians raises generalisability questions, though comparison with international medical leadership research^{9 15 16} suggests broader applicability.

Physicians represent a highly professionalised employee type characterised by exceptional average expertise levels.³⁸ In less professionalised settings, expertise's role might diminish, though greater variation in managers' clinical expertise could also help identify its importance. Future research should extend these findings to other professional contexts and examine optimal combinations of expertise, training and experience for management effectiveness.

The study's implications extend beyond physician management to other knowledge-intensive organisations where technical experts lead professional workers. The mechanisms we identified—superior HRM practices enabled by domain understanding and credibility—likely apply across professional services, including law firms, consulting practices, engineering firms and research institutions. The finding that leader identity can coexist with strong professional identity suggests that professional organisations need not choose between technical excellence and leadership capability when developing their management pipeline.

For healthcare leaders facing ongoing physician retention challenges, our results offer clear strategic direction. The combination of clinical expertise and management capabilities appears to create the most satisfied and committed physician workforce. Hospitals should actively identify and develop their clinical stars for management positions while providing comprehensive management training to enhance their leadership skills. This approach leverages the natural advantages that clinical experts

bring to management while addressing potential skill gaps through targeted development.

The practical implications are particularly relevant given current healthcare workforce challenges. With physician burnout at historic highs and retention difficulties widespread,² the ability to create more satisfied and committed medical staff through improved management represents a valuable competitive advantage. Organisations that successfully develop expert clinicians into effective managers may find themselves better positioned to attract and retain top talent during an era of significant healthcare workforce pressures.

CONCLUSIONS

This study provides robust evidence that clinical experts make effective clinical directors primarily by implementing superior HRM practices. The uplifting finding that clinical expertise and leader identity can coexist rather than compete challenges traditional assumptions about reluctant physician managers and suggests that outstanding clinicians naturally develop leadership capabilities through their medical practice.

For healthcare leaders, the message is clear: invest in developing your expert clinicians into managers while providing them with formal management training. The evidence demonstrates that hospitals need not choose between clinical excellence and leadership potential—the combination of domain expertise and management capabilities creates the most satisfied and committed physician workforce. During an era of unprecedented healthcare workforce challenges, this represents both a strategic opportunity and a practical necessity for organisational success.

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