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A Self-Determination Perspective in Healthcare: Leader–Member Exchange and Job Satisfaction in an Italian Sample

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A Self-Determination Perspective in Healthcare: Leader–Member Exchange and Job Satisfaction in an Italian Sample

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Abstract

Background/Objectives: Healthcare professionals operate in complex and demanding environments characterized by high workloads, emotional strain, and organizational pressures that can undermine well-being. According to Self-Determination Theory, the fulfillment of core psychological needs (autonomy, competence, and relatedness) leads to increased job satisfaction, a key indicator of occupational well-being. Additionally, leadership plays a central role in shaping needs-fulfilling environments. Drawing on Leader–Member Exchange Theory (LMX), which emphasizes that high-quality leader-follower relationships foster greater discretion, provide learning opportunities, and build constructive team interactions, this study aimed to examine whether supportive leadership is associated with job satisfaction through the mediation of autonomy, team task cohesion, and perceived training opportunities. **Methods**: Data were collected from a local health authority in Northern Italy through an anonymous online survey, completed by 697 healthcare professionals, including 546 non-medical healthcare staff (primarily nurses) and 151 physicians. Structural equation modeling with a robust maximum likelihood estimator was employed to test the mediation model, including professional role as a covariate. **Results**: Higher LMX was positively and directly associated with job satisfaction, through the partial mediation of autonomy, team cohesion, and training opportunities, all positively associated with satisfaction. Team task cohesion showed the strongest associations with both LMX and satisfaction. Physicians reported slightly higher levels of autonomy, training opportunities, and job satisfaction than non-medical professionals. **Conclusions**: The findings suggest that supportive leadership contributes to healthcare professionals' job satisfaction both directly and indirectly by contributing to core needs fulfillment. Interventions that strengthen relational quality, promote team cohesion, and enhance professional development may help sustain well-being and adaptive functioning in high-demand healthcare environments.

Keywords: leader–member exchange; self-determination theory; job satisfaction; hospital workers

1. Introduction

Healthcare contexts have long been characterized by high levels of complexity, work intensity, and continuous demands for professional updating [1,2,3]. In recent years, these enduring characteristics have been compounded by a broader healthcare workforce crisis, marked by declining job satisfaction, widespread fatigue and burnout risk, and elevated turnover intentions among healthcare professionals, causing a widespread personnel shortage [4,5]. Arguably, more than ever, healthcare organizations face the challenge of providing organizational resources and supportive practices that can foster more sustainable and satisfying work environments for healthcare professionals.

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Research consistently shows that healthcare professionals' job satisfaction, and thus their continuity within the profession, is closely linked to working conditions, leadership quality, and access to resources that support professional autonomy, competence, and collaboration [6,7,8,9].

Self-Determination Theory (SDT) [10] provides a robust framework for understanding how organizational factors may influence healthcare professionals' motivation and well-being. According to SDT, the satisfaction of the basic psychological needs for autonomy, competence, and relatedness fosters optimal functioning, well-being, and positive work attitudes. Research has consistently shown the importance of high-quality relationships for healthcare workers, with several studies stressing the relationship between supportive leadership, job satisfaction and well-being [7,11,12]. Among the variety of operationalization of supportive leadership, Leader–Member Exchange (LMX) theory highlights how high-quality leader–follower relationships provide access to resources, support, and opportunities that can fulfil core psychological needs [13,14,15].

Building on SDT and LMX, the present study examines how supportive leadership relates to job satisfaction among nurses and physicians through three key work resources: job autonomy, training opportunities, and team task cohesion. These resources are conceptualized as concrete expressions of the need for autonomy, competence, and relatedness within healthcare work. By integrating motivational and relational perspectives, this study aims to contribute to the understanding of how leadership can foster sustainable well-being and satisfaction in healthcare organizations.

1.1. Self-Determination and Leader-Member Exchange Theories: The Relationship with Job Satisfaction of Healthcare Professionals

Building on SDT and LMX, the present study examines how supportive leadership relates to job satisfaction among nurses and physicians through three key work resources: job autonomy, training opportunities, and team task cohesion. These resources are conceptualized as concrete expressions of the need for autonomy, competence, and relatedness within healthcare work. By integrating motivational and relational perspectives, this study aims to contribute to the understanding of how leadership can foster sustainable well-being and satisfaction in healthcare organizations.

Self-Determination Theory (SDT) [10] provides a well-established theoretical lens for examining well-being in organizational contexts [16,17,18]. The core tenet of SDT is the idea that human functioning and motivation depend on the extent to which three basic psychological needs are satisfied: autonomy, competence, and relatedness. Autonomy refers to the experience of acting with volition and psychological freedom, competence reflects the feeling of effectiveness in mastering tasks and challenges, and relatedness involves establishing and maintaining meaningful, caring connections with others [10]. When these needs are adequately fulfilled, individuals experience autonomous motivation, which supports well-being, engagement, and optimal functioning.

In healthcare contexts, research has demonstrated that needs satisfaction is positively associated with job satisfaction and overall well-being among nurses and physicians [19,20,21]. Healthcare work is inherently relational, interdependent, and emotionally demanding: professionals' experiences of autonomy, competence, and relatedness are closely shaped by the quality of interactions with supervisors, peers, and organizational structures [22,23,24]. In this context, leadership plays a central role: supervisors influence access to support, feedback, resources, and professional development opportunities that satisfy core psychological needs.

Leader–Member Exchange (LMX) theory [14] offers a relational perspective on leadership, highlighting that leaders develop differentiated relationships with each team member. These range from low-quality transactional interactions to high-quality exchanges characterized by trust, mutual respect, and reciprocal influence. High-quality LMX relationships provide employees with access to support, information, autonomy, and developmental opportunities, thereby facilitating needs satisfaction [13,25,26]. In healthcare, high-quality relational leadership, including LMX, has been associated with multiple positive outcomes, such as reduced burnout and enhanced well-being [11,12,27], increased professional fulfilment, greater autonomy support and peer relationships [28], improved teamwork and safety climate [29], higher job satisfaction and reduced turnover intentions [7,9,30,31,32]. Among these variables, job satisfaction plays a central role, being one of the prime

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antecedents of reduced turnover intention and considering its well-known relationship with lower risk of burnout and improved patient care [33,34,35].

Job satisfaction refers to a positive evaluative judgment of one's job, reflecting the extent to which work experiences meet individual needs, values, and expectations. In the healthcare context, job satisfaction plays a pivotal role in retaining healthcare workers, which is particularly critical given the current workforce shortages in this sector [4,36,37]. Job satisfaction among healthcare professionals appears to be shaped more by contextual and temporal factors than by professional role. Small differences have been observed across settings, with physicians reporting slightly higher satisfaction in emergency care and nurses in primary care, though overall evidence remains heterogeneous and inconclusive [38]. From a SDT perspective, job satisfaction can be understood as a distal outcome resulting from work environments that support the basic psychological needs for autonomy, competence, and relatedness [18, 39].

Despite extensive research on leadership and needs satisfaction, comparatively fewer studies have examined the intersection of LMX, needs fulfillment, and job satisfaction in healthcare settings. A recent systematic review showed six main themes of organizational culture connected with job satisfaction in healthcare: communication with colleagues, supportive leadership, team cohesion, involvement in decision- making, employee recognition (including career growth and professional development), and autonomy [40]. Accordingly, we set out to capture these themes and their relationships, framing job satisfaction within SDT and taking stock from the insights of previous research that showed how high-quality leader-member exchange are closely linked to the three core psychological needs by offering and facilitating the access to needs-fulfilling resources: an appropriate degree of autonomy, opportunities for professional development, and positive and constructive relationships [15,26]. In the following section we will focus on these three resources, namely, job autonomy, training opportunities, and team task cohesion, intended as mediators of the relationship between supportive leadership and job satisfaction.

1.2. Three Basic Psychological Needs: Job Autonomy, Team Task Cohesion, and Training Opportunities

Given the highly regulated yet knowledge-intensive nature of nursing and medical work, leadership support becomes particularly salient in shaping how autonomy, professional development, and teamwork are experienced, and how, in turn, they foster job satisfaction.

Starting with job autonomy, it is defined as the degree of freedom workers are granted to plan and organize their work, make decisions, and choose work methods [41,42]. Job autonomy for both nurses and physicians involves the ability to make independent decisions about clinical work and participate in organizational decisions, but the scope and influence of that autonomy differ. Physicians generally have broader clinical autonomy and control over their workload, while nurses exercise autonomy mainly within patient care protocols and collaborative frameworks; both influence organizational decisions, though physicians typically hold greater formal authority [43, 44]. Although healthcare work is necessarily regulated, perceived job autonomy remains a fundamental aspect for nurses and physicians; not only does it allow the necessary flexibility to provide optimal care, but it supports the professional's sense of volition and autonomous motivation [45]. Several studies across different countries reported how job autonomy is linked to increased job satisfaction and quality of care [46,47,48,49,50].

Despite the structural constraints illustrated above, job autonomy in healthcare is rarely only determined by formal roles and regulations, but is also shaped by relational processes. In particular, immediate supervisors are first in line in translating organizational culture into discretionary space for clinical judgment, participation, and decision-making. Generally speaking, followers in high-quality relationships, as defined by LMX, are granted a greater degree of trust and, as such, more discretion and participation in decision-making [25, 51]. In the context of healthcare, empirical studies have shown that supportive and relational leadership styles are positively associated with nurses' and physicians' perceived job autonomy [22,32,52,53].

Alongside autonomy, person-centered leadership also strengthens social connectedness and collaborative engagement, which are both central themes for job satisfaction in healthcare. For the purpose of this study, we focused on the latter, specifically team task cohesion, considering that,

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among the different components of cohesion in healthcare, behavioral, task-based cohesion has been argued to be the most critical aspect in ensuring patient safety and optimal functioning and sustaining job satisfaction [5,54].

Task cohesion refers to the extent to which members of a team remain committed to shared goals and work together to successfully complete collective tasks. It reflects how well individuals coordinate their efforts, cooperate, and support each other in pursuit of common objectives, with strong alignment around team purpose and shared responsibility for performance outcomes [55,56]. On a more general note, within SDT, supportive social interactions are the riverbed to fulfill the need for relatedness [10]. In healthcare settings, task cohesion is an important driver of job satisfaction and retention, especially when professionals feel supported by peers during high-stress clinical tasks [54,57,58]. Given the importance of collaborative, multidisciplinary teamwork in healthcare, a relational approach to leadership has been found to be particularly effective in increasing team cohesion or its individual components. High-quality LMX has been linked to increased cooperative communication in healthcare, reduced role ambiguity and enhanced behavioral integration [59]; furthermore, empowering and relational styles of leadership have been linked to better team functioning, role coordination, collaboration, and mutual support [60,61,62]. Taking into account evidence from other sectors, high-quality LMX relationships have been found to boost collaboration and knowledge sharing, with positive outcomes on team cohesion and overall performance [63].

While the delicate balance between autonomy and cohesion is arguably one of the most important factors for healthcare professionals, effectively exercising both independent decision-making and engaging in cooperative effort depends on sufficient competence. Access to training and professional development opportunities enables nurses and physicians to build the skills necessary to provide quality care and perform effectively in diverse teams, linking autonomy and relatedness closely to competence-supporting resources. These opportunities represent more than a means of skill acquisition: they signal organizational support, recognition, and investment in professionals' long-term development [40]. Immediate supervisors often mediate access to learning opportunities, although they need the cultural and structural preconditions to provide spaces for continuous learning [64]. On this note, leaders engaged in high-quality exchange exhibit several behaviors aligned with personnel development: they show interest in staff ideas, facilitate access to information and training, and exchange informational feedback [15]. In healthcare contexts, supportive and person-centered leaders have been shown to enhance professionals' access to learning and development opportunities, including non-technical skills, mentorship, and structured leadership preparation [65,66]. By providing opportunities for development, supportive leadership contributes to the fulfillment of the need for competence and, ultimately, to job satisfaction.

1.3. Study Hypotheses

Based on Self-Determination Theory, healthcare professionals' job satisfaction is influenced by the extent to which their needs for autonomy, relatedness and competence are supported. Autonomy is facilitated through job discretion and decision-making opportunities, competence is strengthened via access to training and professional development, and relatedness is enhanced through cohesive, supportive teams. High-quality leader–member exchanges have been shown to promote access to all three types of resources, thereby fostering needs satisfaction and positive work outcomes. Accordingly, we hypothesize that:

H1: Supportive leadership is positively associated with (a) job autonomy, (b) team task cohesion, and (c) training and professional development opportunities

H2: Supportive leadership is positively associated with job satisfaction.

H3: (a) Job autonomy, (b) team task cohesion and (c) training opportunities are positively associated with job satisfaction and mediate the relationship between supportive leadership and job satisfaction.

The theoretical model is presented in Figure 1.

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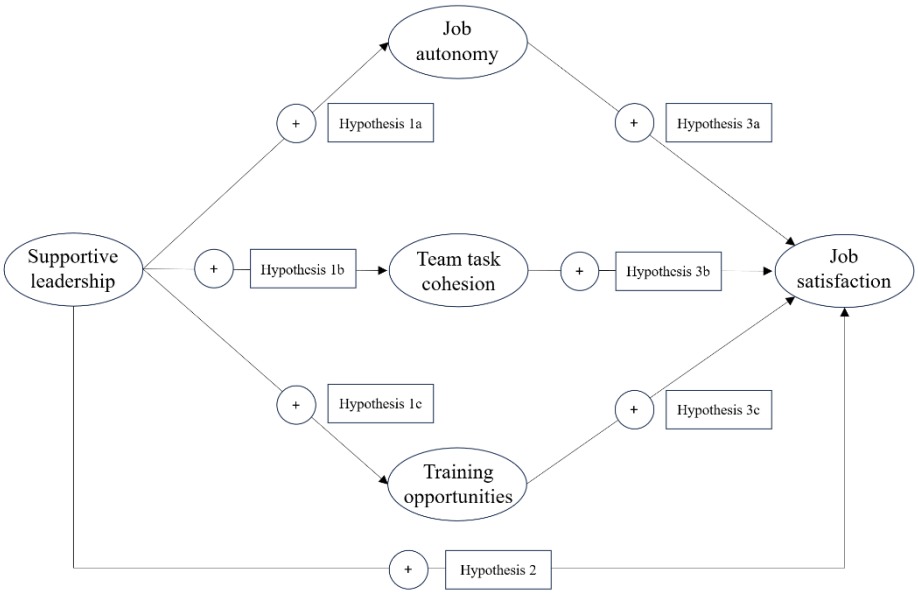

Figure 1. Theoretical model and study hypotheses.

2. Materials and Methods

2.1. Procedure

The study was conducted in a public health company in Northern Italy, with the data collection spanning from October 2023 to January 2024. The intervention was embedded in a tailored well-being assessment process, developed in close collaboration with organizational stakeholders to ensure alignment with the specific cultural and operational characteristics of the healthcare organization, and implemented with particular attention to participant involvement and the overall intervention process. For the quantitative phase of the project, which constitutes the focus of the present study, participants were sent a link to an online questionnaire hosted on Limesurvey, accompanied by a cover letter that outlined the objective of the research, compilation instructions, the voluntary and anonymous nature of the participation, the right to opt out of the study and finally the data treatment. Only participants who gave informed consent to the collection, analysis, and publication of data were included in the analyses. Participation was voluntary and anonymous. The research did not include procedures that could harm participants' psychological or social well-being, in compliance with the Declaration of Helsinki [67], and was conducted in compliance of the Italian data protection and privacy regulations (Law 196/2003) and the GDPR.

2.2. Participants

The final sample consisted of 697 healthcare professionals, including 546 non-medical staff members (primarily nurses and other allied health professionals) and 151 physicians, corresponding to an overall response rate of 48.1%. Compared to the reference population (1,070 non-medical staff and 379 physicians), the sample composition was broadly consistent with the workforce distribution, although response rates were higher among non-medical staff (51.0%) than among physicians (39.8%). Most participants were females (73%). Due to privacy constraints, demographic information was collected using broad categorical ranges. Specifically, age and job seniority were assessed in aggregated classes, and no detailed information regarding contract type or specific job position was obtained. The largest proportion of participants fell within the 51–60 age group (32%), followed by those aged 41–50 years (28%), then the 31-40 range (24%), with workers younger than 30 years (9%) or older than 60 years (6%) representing the lowest share. With respect to job seniority, the most

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frequently reported categories were more than 20 years (46%), followed by 11–20 and 3-10 years of service, both endorsed by 22% of the sample.

2.3. Measures

Supportive Leadership was assessed with five items from the Leader-Member Exchange Scale [14]. Participants indicated how frequently each statement applied to their relationship with their supervisor on a 5-point scale ranging from 1 (Never) to 5 (Always). An example item was "My supervisor uses his or her influence to help me solve my problems at work" (McDonald's $\omega = 0.94$).

Autonomy was assessed using three items [68] measuring the degree of discretion and independence experienced at work. Responses were provided on a 5-point frequency scale ranging from 1 (Never) to 5 (Always). An example item was "I have freedom to decide how I do my work" (McDonald's $\omega = 0.75$).

Team task cohesion was measured using three items adapted from the Group Environment Questionnaire [55]. Participants rated the extent to which their team was united in accomplishing work tasks on a 5-point Likert scale. A representative item was "Our team is united in trying to reach its goals for performance" (McDonald's $\omega = 0.95$).

Training opportunities were assessed with three items drawn from the six-item instrument employed in the study of Molino et al. [69], which covers information and training opportunities. Participants responded on a 5-point Likert scale indicating the adequacy of training and growth opportunities in their job. An example item was "I can learn new things and grow professionally" (McDonald's $\omega = 0.95$).

Job Satisfaction was measured using nine items adapted from the COPSOQ II [70]. Participants were asked to consider their job overall and rate their satisfaction with various aspects of their work on a 5-point scale ranging from 1 (Very unsatisfied) to 5 (Very satisfied). An example item was "The way my skills are employed." (McDonald's $\omega = 0.90$).

2.4. Data Analysis

We employed the Jamovi statistical software (version 2.3) [71] to conduct descriptive analyses, calculate Pearson's correlation coefficients, and McDonald's Omega.

The hypothesized mediation model was tested using a structural equation model (SEM) in Mplus8, employing a Robust Maximum Likelihood estimator (MLR) to account for potential deviations from multivariate normality. Missing data was handled with a Full Information Maximum Likelihood approach. Supportive leadership, autonomy, team task cohesion, perceived training opportunities, and job satisfaction were specified as latent variables, each indicated by their respective observed items. Professional role (physician vs. non-medical healthcare professional) was included as an observed covariate predicting autonomy, team task cohesion, perceived training opportunities, and job satisfaction. Indirect effects were tested within the SEM framework using standardized estimates. The significance of total, total indirect, and specific indirect effects was evaluated using bias-corrected confidence intervals derived from the robust estimator. The proportion of explained variance (R^2) was examined for each endogenous latent variable to assess the explanatory power of the model.

Model fit was evaluated based on multiple indices and criteria: the $\chi 2$ index, root mean square approximation error of approximation (RMSEA), comparative fit index (CFI) and residual standardized mean square deviation (SRMR). We considered the following cutoff values for acceptable model fit: >.90 for CFI and TLI (Byrne, 1999), <.08 for both RMSEA [72] and SRMR [73] with associated confidence intervals. To assess the potential impact of common method variance, a Harman single-factor test was conducted by loading all observed items onto a single latent factor [74]. The one-factor model demonstrated poor fit to the data [$\chi 2(253) = 5039.925$, $p < .001$, RMSEA = .17, CFI = .49, SRMR = .12], indicating that a single factor could not adequately account for the covariance among the measures. 3. Results

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation, as well as the experimental conclusions that can be drawn.

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3. Results

3.1. Descriptive Statistics and Correlations

Table 1 presents the means, standard deviations, and correlations between the investigated variables. Supportive leadership was positively and moderately correlated with autonomy, team task cohesion, and perceived training opportunities. These associations are consistent with the hypothesized role of supportive leadership in fostering need-related and work-related resources.

Autonomy was positively associated with team task cohesion and training opportunities, while team task cohesion and training opportunities were also positively related. Overall, the pattern of correlations suggested related but distinct constructs, supporting their inclusion as separate latent variables in subsequent structural analyses, accounting for their correlation.

Professional role showed small but statistically significant correlations with autonomy and training opportunities, indicating that physicians tended to report slightly higher levels of these variables than non-medical healthcare professionals. Correlations between role and supportive leadership and between role and team task cohesion were non-significant.

Across participants, the perception of supportive leadership and team task cohesion was moderate, slightly below the middle point of the scale, while autonomy scores were comparatively higher.

Table 1. Means (M), Standard Deviations (SD), and Pearson correlations of the study variables.

Variable	1	2	3	4	5
1. Supportive leadership	—				
2. Autonomy	.32***	—			
3. Team task cohesion	.39***	.24***	—		
4. Training opportunities	.39***	.28***	.29***	—	
5. Professional role (1=Physicians)	.03	.11**	−.02	.09*	—
M	2.85	3.6	2.94	2.54	
SD	1.21	0.82	1.18	1.03	

3.2. Hypothesis Testing

The hypothesized mediation model was tested using a SEM with MLR estimator. Model fit indices indicated acceptable fit: $\chi^2(242) = 1069.86$, $p < .001$, RMSEA = .070 [.066, .074], CFI = .912, TLI = .900, and SRMR = .075. Supportive leadership indicators loaded strongly on the latent factor (λ = .74 – .94), autonomy items showed moderate to strong loadings (λ = .67 – .75), while team task cohesion exhibited very high loadings (λ = .90 – .95). Perceived training opportunities showed strong loadings in two out of three items (λ = .64–.93). Finally, job satisfaction indicators loaded moderately to strongly on the latent construct (λ = .49–.81).

The diagram for the SEM is reported in Figure 2. Supportive leadership was positively and strongly associated with all three mediators; specifically, team task cohesion showed the strongest association, followed by training opportunities and finally by job autonomy. In turn, each mediator was positively related to job satisfaction, with similar coefficient sizes. Supportive leadership was also directly and positively related to job satisfaction, indicating partial mediation. Physicians reported higher levels of autonomy, perceived training opportunities and job satisfaction compared to non-medical healthcare professionals. No significant differences were found for team task cohesion. Standardized path coefficients with standard errors, p-values, and confidence intervals are reported in Table 2.

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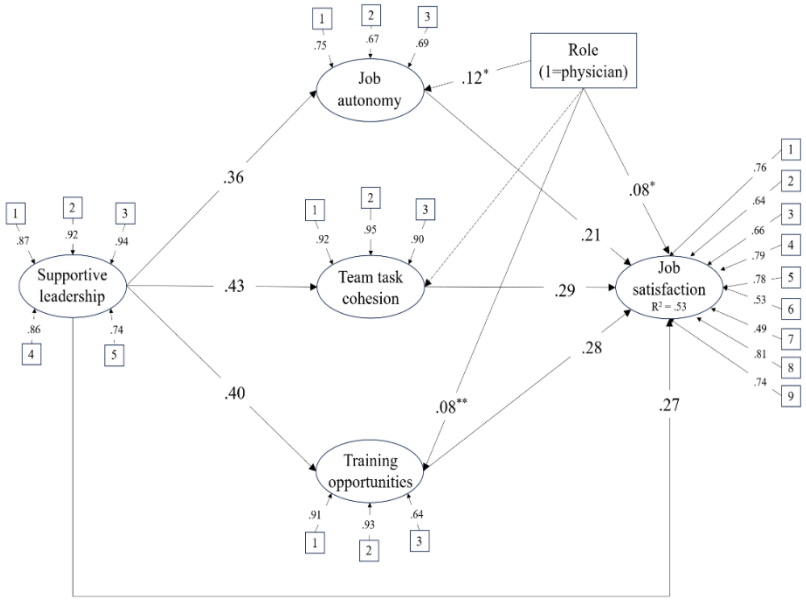

Figure 2. Results of the structural equation model (standardized path coefficients). Note: p < .001; *p < .01; **p < .05, ns = not significant.

Table 2. Standardized path coefficients, standard errors, and 95% confidence intervals.

Dependent Variable	Predictor	β	S.E.	*p*	95% CI
Autonomy	Supportive leadership	.36	.056	< .001	[.25, .47]
	Role	.12	.043	.005	[.04, .20]
Team task cohesion	Supportive leadership	.43	.037	< .001	[.35, .50]
	Role	−.03	.037	.354	[−.11, .04]
Training opportunities	Supportive leadership	.40	.037	< .001	[.32, .47]
	Role	.08	.036	.025	[.01, .15]
Job satisfaction	Supportive leadership	.27	.041	< .001	[.19, .35]
	Autonomy	.21	.045	< .001	[.13, .30]
	Team task cohesion	.29	.039	< .001	[.21, .36]
	Training opportunities	.28	.041	< .001	[.20, .36]
	Role	.08	.03	.005	[.03, .14]

The total standardized effect of LMX on job satisfaction was large (β = .58), with the total indirect effect (β = .31), accounting for a meaningful proportion of the overall association. Examination of specific indirect effects revealed that all three mediators contributed significantly to the relationship. Confidence intervals for all indirect effects did not include zero, confirming their statistical significance (Table 3).

Table 3. Standardized indirect effects with 95% confidence intervals.

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Indirect Effect (X = Supportive leadership)	β	S.E.	*p*	95% CI
Autonomy → Job satisfaction	.08	0.02	< .001	[.03, .12]
Team task cohesion → Job satisfaction	.12	0.024	< .001	[.08, .16]
Training opportunities → Job satisfaction	.11	0.023	< .001	[.07, .15]
Total indirect	.31	0.035	< .001	[.25, .37]

Overall, team task cohesion was the variable showing the strongest association with both supportive leadership and job satisfaction, although training opportunities were a close second. The model accounted for 14.2% of the variance in autonomy, 18.1% in team task cohesion, and 16.4% in perceived training opportunities. Finally, the model explained 52.6% of the variance in job satisfaction.

4. Discussion

Hypothesis 1, which posited that supportive leadership is positively associated with job autonomy, team task cohesion, and training and professional development opportunities, was supported. Overall, the findings reinforce the well-known role of leadership in promoting the satisfaction of employees' psychological needs, particularly through high-quality leader–member relationships, as conceptualized by LMX theory [13,14,15]. While prior research has extensively examined the link between leadership and the basic psychological needs outlined by SDT, the present study advances the literature by simultaneously addressing resources connected with the satisfaction of the three core psychological needs outlined by SDT within the Italian healthcare sector. Specifically, autonomy was operationalized as job autonomy, competence as opportunities for professional development, and relatedness as team task cohesion. Consistent with previous evidence showing that high-quality LMX relationships grant followers greater access to support, autonomy, and developmental resources [13,25,26], these associations were confirmed in the healthcare context, particularly among nurses and physicians.

Among the three SDT-related variables considered, supportive leadership showed the strongest association with team task cohesion. This finding is consistent with prior evidence highlighting the capacity of high-quality LMX relationships to foster collaboration and strengthen team cohesion. This effect appears particularly salient in healthcare settings, where supportive leader–follower relationships have been shown to enhance cooperative communication, team functioning, role coordination, collaboration, and mutual support [59,60,61,62]. The second strongest relationship, although very close in magnitude to the first, concerned opportunities for training and professional development. Leadership likely plays a critical role in this domain because immediate supervisors often act as gatekeepers to learning and developmental resources [64]. Moreover, leaders engaged in high-quality exchanges tend to enact behaviors conducive to employee development, such as showing interest in staff ideas, facilitating access to information and training, and providing informational feedback [15]. The association between supportive leadership and job autonomy, while positive and comparable in strength to the other relationships, emerged as the weakest of the three. This result should be interpreted in light of the specific characteristics of healthcare work. On the one hand, job autonomy in healthcare is influenced by relational processes [25,51], and supportive leadership has been shown to be positively associated with perceived autonomy among nurses and physicians [22,32,52,53]. On the other hand, the effect of leadership on job autonomy may be partially constrained by structural and role-specific factors, such as formal authority, with physicians generally enjoying broader autonomy than nurses within healthcare organizations [43, 44].

Supportive leadership thus confirmed its role in fostering the satisfaction of the psychological needs postulated by SDT. Moreover, high-quality leader–member exchanges were found to be directly associated with job satisfaction in the healthcare context, thereby supporting Hypothesis 2, which posited a positive relationship between supportive leadership and job satisfaction. Job satisfaction is a key determinant of healthcare professionals' well-being and care quality, as it represents one of the main antecedents of reduced turnover intentions, lower burnout risk, and

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improved patient care [33,34,35]. At the same time, evidence of its association with supportive leadership [30,31] underscores the importance, within healthcare settings, of investing in the development of high-quality leader–member exchanges.

Hypothesis 3 was supported, indicating that job autonomy, team task cohesion, and training and professional development opportunities are positively associated with job satisfaction and mediate the relationship between supportive leadership and job satisfaction. However, the persistence of a direct association between supportive leadership and job satisfaction suggests that this mediation is partial rather than full. In line with SDT [10], the fulfillment of psychological needs, which in this study was facilitated by high-quality leader–member relationships, was found to foster job satisfaction among nurses and physicians. Moreover, the relative strength of these associations mirrors the pattern observed for Hypothesis 2. Indeed, the strongest association with job satisfaction emerged for team task cohesion, which reflects the need for relatedness as conceptualized within Self-Determination Theory. As highlighted by previous research, task cohesion in healthcare settings plays a critical role in enhancing job satisfaction and reducing turnover intentions [54,57,58].

In conclusion, the findings provide support for the hypothesized model, suggesting that SDT represents a useful framework for understanding the dynamics that promote job satisfaction in the healthcare sector. Moreover, the results indicate that LMX theory offers a valuable perspective for explaining how high-quality leader–member relationships contribute to the satisfaction of psychological needs within this context.

Finally, the results also revealed significant differences between physicians and nurses in terms of job autonomy, access to training opportunities, and job satisfaction. These differences can be attributed to the distinct roles of the two groups: although nurses exercise autonomy and participate in organizational decision-making, physicians generally hold greater formal authority and autonomy [43, 44]. These role differences can also affect access to training and professional development opportunities. As previously discussed, the fulfillment of autonomy and competence needs fosters job satisfaction, which accordingly was higher among physicians, although such variations between roles may also reflect contextual and temporal factors rather than intrinsic professional differences [38].

4.1. Limitations and Future Directions

Multiple limitations should be considered when interpreting the results. First, the cross-sectional design does not allow to draw causal inferences regarding the investigated relationships. Although the model was theoretically grounded and widely supported by previous empirical findings, the temporal ordering of variables cannot be established. It is therefore possible that a reciprocal relationship exists, where higher job satisfaction also influences employees' perception of leadership quality and the availability and salience of work-related resources. Longitudinal and, possibly, multi-level studies would provide a more rigorous picture of these processes over time.

Second, all variables were assessed using self-report measure, which may increase the risk of social desirability and common method variance. Although the Harman single-factor test suggested that common method variance was unlikely to account for the observed associations, the procedure is a conservative diagnostic rather than definitive proof. Future research would benefit from adopting multi-source designs, including measures such as supervisor-rated leadership or objective indicators of training and professional development.

Third, the study was conducted within a single public healthcare organization in Northern Italy, which limits the generalizability of the findings. Considering how leadership practices, team dynamics, and access to developmental resources are deeply influenced by organizational, economical, and cultural factors that vary across healthcare systems and national contexts, caution is warranted when extending these results to other healthcare settings. Replication of the model across diverse healthcare settings would help establish its robustness and broader applicability.

Fourth, although the overall response rate was satisfactory and the sample composition broadly reflected the population distribution, physicians showed a considerably lower response rate compared to non-medical healthcare professionals. While the role was included in the analyses,

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differential response rates may still have influenced the observed role-related differences in the study variable.

Finally, due to privacy constraints, several important demographic and occupational variables were either not collected or reported in aggregated categories. This limited the possibility o examining how contextual or employment-related factors might interact with the perception of supportive leadership and job resources.

5. Conclusions

The quality of life of healthcare workers is closely linked to job satisfaction [38,75,76,77], which in turn represents a crucial psychological experience, a juncture of great importance in the work process, in a dynamic that has significant effects on the quality of service and therefore on the care that patients receive [75]. In this complex system of connections, understanding the psychosocial processes that influence satisfaction within a multidimensional framework is particularly relevant. Through this study, we have highlighted that SDT [10] can offer a useful framework in explaining job satisfaction from both a theoretically comprehensive and a highly practical perspective [16,17,18]. The study confirmed the role of supportive leadership in job satisfaction maintenance, a role that seems to pass through the three constructs of job autonomy, team-task cohesion and perceived training opportunities, each of which is linked to one of the three basic needs proposed by SDT.

The practical implications of the study reinforce the importance of ensuring, in this area of work, contexts characterized above all by supportive leadership, through a focus on soft skills in the recruitment and selection phase of those who will fill supervisory roles and through continuous leadership training, both in the classroom and in individualized forms that support reflective work on experience (coaching and counseling) [78,79].

Supportive leadership, in turn, seems capable of responding positively to basic needs for autonomy, relationships and competence, influencing job autonomy, team task cohesion and training opportunities. These three dimensions, which are relevant to job satisfaction, can be further developed through organizational investment: the definition of areas of decision-making and operational autonomy can be a structural dimension of work organization, within the limits allowed by the type of role and activity involved; task team cohesion can be further developed through team training, with interactive classroom activities, forms of team coaching or intensive training experiences such as outdoor activities; in general, training should be designed as a response to real problems, as a reaction to the development needs of people in organizations, positively nurturing effectiveness and employability.

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