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Original scientific paper

INTERNAL COMMUNICATION AND COMMUNICATION CLIMATE IN A TERTIARY HEALTHCARE INSTITUTION: IMPLICATIONS FOR QUALITY OF WORK LIFE

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Abstract: Background: Internal communication constitutes a fundamental organisational element in healthcare institutions, influencing employee satisfaction, teamwork, and the broader communication climate. Given the complexity and hierarchical structure of tertiary healthcare centres, robust communication mechanisms are vital for coordination, patient safety, and organisational stability. This study evaluated employee satisfaction with internal communication at the University Clinical Centre of the Republic of Srpska, with particular attention to vertical and horizontal communication, electronic communication usage, information availability, and the communication climate. **Methods:** A cross-sectional quantitative study was implemented using a structured questionnaire based on a five-point Likert scale. The sample comprised 300 employees representing diverse departments and hierarchical levels. Composite mean scores were computed for each communication dimension. The Agreement Index, employing the top-two box method, was used to determine the proportion of respondents with positive evaluations. **Results:** The overall composite score for internal communication was $M = 3.88$, indicating generally positive perceptions among employees. Satisfaction was highest for communication with immediate supervisors ($M = 4.12$; 82% agreement) and horizontal communication ($M = 4.06$; 75% agreement). Moderate levels of agreement were observed for information availability ($M = 3.81$; 55% agreement) and electronic communication usage ($M = 3.42$; 52% agreement). Communication satisfaction varied between immediate supervisors and higher-level management, demonstrating differences across hierarchical levels. **Conclusion:** Internal communication within the institution is generally perceived positively; however, variation across specific dimensions suggests opportunities for improvement, particularly regarding information flow and electronic communication management. Targeted organisational interventions may further strengthen the communication climate and institutional cohesion.

Keywords: internal communication, healthcare organisations, communication climate, employee satisfaction, vertical communication, horizontal communication, electronic communication

INTRODUCTION

Healthcare organisations operate within complex systems characterised by specialised professional roles, hierarchical structures, and interdisciplinary teamwork. In such environments, effective internal communication represents a foundational element that supports high-quality patient care and reduces medical errors. Beyond facilitating information exchange, internal communication shapes institutional culture, professional trust, employee engagement, well-being, and overall organisational performance. A supportive interdisciplinary communication environment can facilitate collaborative interactions among healthcare professionals, particularly in complex care settings where team coordination is critical (Gans et al., 2024). Consequently, the influence of internal communication extends beyond clinical interactions, profoundly shaping the broader organisational climate.

Effective communication and teamwork are essential for healthcare delivery, as deficiencies in these domains are associated with challenges in team coordination and organisational efficiency. Studies on

multidisciplinary team functioning underscore the complexity of communication processes within clinical environments (Horlait et al., 2021), while other research demonstrates that improved communication correlates with enhanced teamwork and healthcare efficiency (Meneses-La-Riva et al., 2025). In complex clinical contexts, inadequate communication patterns can hinder coordinated care and contribute to organisational bottlenecks. Fragmented or inefficient communication channels have been identified as significant barriers to effective teamwork and collaboration in healthcare settings. Qualitative investigations into interdisciplinary and multidisciplinary communication reveal that communication challenges may lead to coordination difficulties and interprofessional tensions (Gans et al., 2024; Razzaq et al., 2025). In contrast, qualitative and organisational research indicates that effective communication practices facilitate collaborative processes and foster shared understanding among healthcare professionals (Rivera et al., 2023; Ellen et al., 2020).

Internal communication within healthcare institutions can be broadly classified into three interconnected forms: vertical communication between management and staff, horizontal communication among peers at the same hierarchical level, and interdisciplinary communication across different healthcare professions.

Vertical communication enables the transmission of strategic goals, policy updates, and performance expectations, as well as upward feedback from employees (Yukl, 2013). Effective vertical communication is associated with leadership credibility and perceptions of organisational justice. Communication between middle management and frontline staff has also been linked to improved coordination and collaborative practice within clinical teams (Pettersen, 2024).

Horizontal communication involves interactions among healthcare professionals at similar organisational levels, including nurses, physicians, and allied health professionals. This form of communication strengthens teamwork, enhances coordination, and reduces the risk of clinical errors. By fostering collaboration and mutual support, horizontal communication directly contributes to service quality and organisational resilience.

Interdisciplinary communication involves collaborative exchanges among professionals from diverse disciplines to improve patient care. Evidence from interprofessional settings demonstrates that higher-quality communication is associated with greater team participation and more positive perceptions of care among patients and staff (Erjavec et al., 2022). Due to the interdependent nature of healthcare work, effective interdisciplinary communication is essential for integrated decision-making and continuity of care.

Beyond structural forms, healthcare communication can be formal or informal. Formal communication establishes protocols, disseminates critical information, and ensures regulatory compliance. In contrast, informal communication strengthens interpersonal relationships, trust, and team cohesion. A balanced integration of formal and informal communication mechanisms is essential for maintaining patient safety and fostering a supportive organisational culture.

This study investigates employee satisfaction with internal communication at the University Clinical Centre of the Republic of Srpska. It focuses on vertical communication between employees and management, horizontal communication among employees at the same hierarchical level, and the predominant formal and informal communication channels, including electronic media, as well as the communication climate, which reflects organisational belonging. The study assesses the availability and transparency of information, the openness of communication with immediate managers, the level of mutual support and cohesion among employees, and perceptions of the overall communication climate and organisational belonging. The objective is to evaluate internal communication as a significant organisational factor influencing the work environment and professional efficiency within a healthcare organisation.

According to the study objective, the hypothesis is defined as follows:

H1: A positive internal communication climate is reflected in high employee satisfaction with communication processes.

H1.1: The majority of employees indicate that they obtain work-related information primarily through formal communication channels.

H1.2: Employees report satisfaction with the availability and quantity of information at the institutional level.

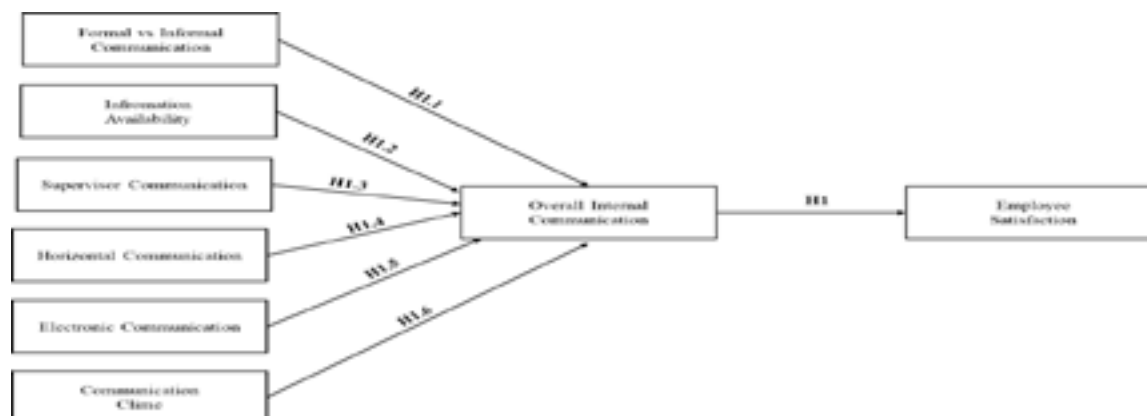


Figure 1. Conceptual framework of study

Source: Authors

H1.3: Employees perceive communication with their immediate supervisor as open and transparent.

H1.4: Employees perceive horizontal communication within the institution as positive, contributing to team cohesion and a culture of mutual support.

H1.5: Electronic communication represents one of the dominant forms of communication within the institution.

H1.6: Employees perceive the communication climate within the institution as positive, which is reflected in a stronger sense of organisational belonging.

METODOLOGY

STUDY DESIGN

A quantitative, cross-sectional research design was employed to assess the quality of internal communication and evaluate communication practices within the University Clinical Centre of the Republic of Srpska. The study examined employees' perceptions of key dimensions of internal communication, including information availability, communication with supervisors, horizontal communication among colleagues, use of communication media, feedback practices, and the overall communication climate.

INSTRUMENT DEVELOPMENT

A questionnaire was developed specifically for this study and organised into thematic sections addressing key dimensions of internal communication. The instrument was constructed to assess the following aspects (Table 1).

Table 1. Instrument design and structure

Section	Number of items
Socio-demographic characteristics	7
Communication channels (formal vs informal)	3
Information availability	7
Supervisor communication (including feedback)	16
Horizontal communication	7
Electronic communication usage	7
Communication climate	5

Source: Authors

SAMPLE DESCRIPTIONS

The questionnaire was administered to employees from various departments and hierarchical levels. In total, 300 valid responses were obtained, establishing a strong empirical basis for evaluating internal communication practices. Most respondents (76.7%) worked in organisational units with more than 40 members. Table 2 presents the detailed socio-demographic characteristics of the sample.

DATA COLLECTION PROCEDURE

Data were collected using a structured survey consisting of closed-ended questions measured on a five-point Likert scale (e.g., from “Strongly disagree” to “Strongly agree,” “Very dissatisfied” to “Extremely satisfied,” “Always” to “Never,” and “Very good” to “Bad”). This format enabled respondents to indicate the intensity of their perceptions.

The survey method facilitated standardized data collection and quantitative analysis of employees’ perceptions across multiple dimensions of internal communication.

Anonymity of respondents was maintained to promote openness and minimize response bias, thereby strengthening the validity of the collected data.

The survey was administered between July and August 2024. Approval for the research was obtained from the Director of the University Clinical Centre of the Republic of Srpska prior to data collection.

Participation was voluntary. Respondents were informed about the purpose of the research and assured of the confidentiality of their responses.

CALCULATION COMPOSITE SCORE

Composite scores for each communication dimension were determined by calculating the arithmetic mean of all items within the corresponding section of the questionnaire. As all items were measured on a five-point Likert scale (1–5), higher scores reflected more favourable perceptions of internal communication.

The overall mean score for each dimension was computed as follows:

$$M = \frac{\sum_{i=1}^N C_i}{N} \quad (1)$$

where:

C_i represents the composite score for respondent i ,

N denotes the total number of respondents ($N = 300$).

Standard deviation (SD) was calculated to assess variability within each communication dimension. It was computed using the following formula:

$$SD = \frac{\sqrt{\sum_{i=1}^N (C_i - M)^2}}{N-1} \quad (2)$$

where:

C_i represents the composite score of respondent i ,

M denotes the mean value of the dimension,

N is the total number of respondents.

The standard deviation was calculated to assess the dispersion of respondents' composite scores around the overall mean. Lower standard deviation values indicate greater agreement among respondents, whereas higher values reflect increased variability in perceptions.

CALCULATION OF AGREEMENT INDEX

In addition to mean scores and standard deviations, an Agreement Index (AI) was calculated to facilitate a more intuitive interpretation of respondents' attitudes. The Agreement Index represents the proportion of respondents who selected the two most positive response categories on a five-point Likert scale, such as "strongly agree" and "agree," "very good" and "good," or "extremely satisfied" and "satisfied or „always and often."

The Agreement Index was computed using the following formula:

$$AI = \frac{n_{positive}}{N} \times 100 \quad (3)$$

where $n_{positive}$ denotes the number of respondents selecting positive response categories, and NN represents the total number of valid responses.

This approach, commonly known as the "top-two box" method, facilitates a clear and policy-relevant presentation of positive response rates. It complements mean-based analyses and maintains the ordinal structure of Likert-scale data.

STATISTICAL ANALYSIS

Data were analysed using IBM SPSS Statistics (Version 26.0; IBM Corp., 2019) and Microsoft Excel. Descriptive statistical methods summarised the data, including frequencies, percentages, means (M), and standard deviations (SD).

Composite scores for each communication dimension were calculated as the arithmetic mean of the relevant items. These aggregated indices provided an overall assessment of internal communication components. Due to the descriptive nature of the study, results are primarily presented as composite mean scores and percentage distributions to offer an empirical overview of communication patterns within the institution.

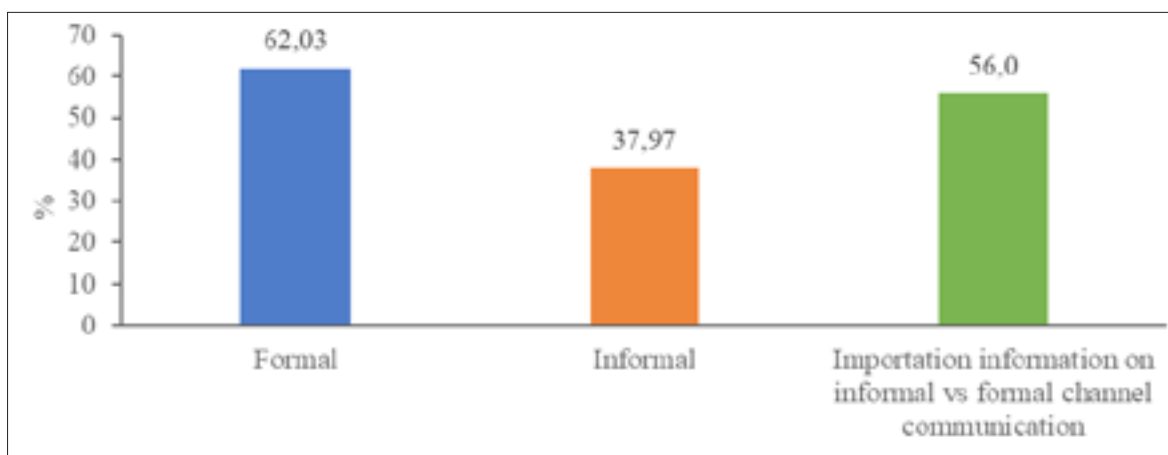
RESULTS

A total of 300 employees participated in the study. The majority of respondents were female (74.3%). The largest age groups were 20–29 years and 40–59 years, each comprising 34.3% of the sample. Nurses constituted the predominant professional group (79.0%). Most participants did not hold management positions (91.0%). Approximately half of the participants reported 2–4 or 5–9 years of professional experience (Table 2).

Table 2 Socio-demographic characteristic respondents

Variable		Sample	
		N	%
Gender	Male	77	25.67
	Female	223	74.33
Age group	Less than 19 years	2	0.67
	20 – 29 years	103	34.33
	30 – 39 years	69	23.00
	40 – 59 years	103	34.33
	60 years and above	23	7.67
Job	Nurse	237	79.0
	Medical doctor	52	17.33
	Others	11	3.67
Manager position	Yes	27	9.0
	No	273	91.0
Years of work experience	Less than 1 year	37	12.33
	2 – 4 years	63	21.0
	5 – 9 years	78	26.0
	10 – 14 years	28	9.33
	15 – 19 years	31	10.33
	20 years and above	63	21.0

Source: Authors

**Figure 2** Formal vs Informal Channel Communication and Importance

Source: Authors

Within the organisation, formal communication channels predominate (62.03%). However, 56% of participants emphasise the significance of informal channels (Figure 2).

Table 3 Composite score of the internal communication dimension

Communication dimension	Mean (M)	Standard deviation (SD)
Information availability	3.51	0.93
Supervisor communication	4.12	1.04
Horizontal communication	4.06	0.98
Electronic communication usage	3.42	1.17

Communication climate	3.76	1.16
Overall internal communication	3.88	1.04

Source: Authors

The overall composite score for satisfaction with internal communication was $M = 3.88$, reflecting generally positive evaluations across assessed dimensions. The lowest composite scores were reported for information availability at the institutional level, electronic communication usage, and communication climate (approximately $M = 3.42$ – 3.76). The highest composite score pertained to communication with immediate supervisors ($M = 4.12$), followed by horizontal communication and communication climate ($M = 4.06$). Notably, a difference emerged between vertical communication with immediate supervisors ($M = 4.12$) and communication with higher-level management ($M = 3.51$) (Table 3).

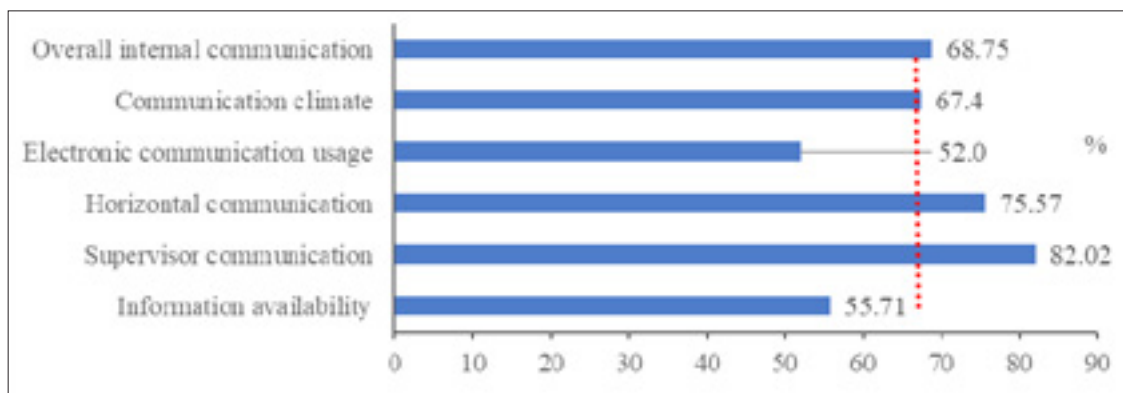


Figure 3. Approved index of the internal communication dimension

Source: Authors

Across all analysed dimensions of internal communication, over 60% of respondents reported positive evaluations. The communication climate dimension demonstrated a comparable level of agreement.

Electronic communication use and information flow from management exhibited similar levels of agreement, with approximately 50% of respondents expressing positive views. This moderate agreement may result from differences in familiarity, role expectations, or organisational context. Given that most respondents were under 50 years of age, generational factors may also influence these findings. Further analysis is required to confirm this interpretation.

In contrast, higher agreement rates were reported for communication with immediate supervisors (approximately 82%) and for horizontal communication within organisational units (approximately 75%). These results indicate greater satisfaction with communication at closer hierarchical and peer levels.

DISCUSSION

Healthcare organisations exhibit inherent hierarchical structures, with roles delineated by authority, expertise, and professional responsibility. University clinical centres function at the intersection of clinical care, medical education, and translational research, necessitating coordination across diverse domains.

Descriptive findings support sub-hypothesis 1.1, as the majority of participants indicated that work-related information is primarily obtained through formal communication channels, while also recognizing the importance of informal exchanges. This pattern demonstrates a dual communication structure: formal systems provide clarity and procedural stability, whereas informal interactions promote flexibility and responsiveness (Welch & Jackson, 2007). While formal communication ensures accountability and trace-

ability, it can also create structural barriers, particularly for upward communication (Sutcliffe et al., 2004; Creese et al., 2024). In contrast, informal communication enables rapid coordination and teamwork in dynamic clinical environments (O'Daniel & Rosenstein, 2008; Manser, 2009; Glenton et al., 2024), although the absence of formal documentation may introduce risks related to inconsistent messaging and patient safety (Wilson et al., 2024; Suh & Wyer, 2023). Thus, effective healthcare communication relies on the balanced integration of formal and informal mechanisms (Schneider et al., 2013).

Communication with immediate supervisors was evaluated more positively than communication with higher-level management (sub-hypothesis 1.2 vs sub-hypothesis 1.3). This pattern may reflect proximity effects commonly described in organisational literature, whereby communication is perceived more favourably at lower hierarchical levels. While hierarchical structures clarify roles and responsibilities, they may also limit the flow of bottom-up feedback (Essex et al., 2023). Organisational learning and internal communication practices have been linked to stronger organisational commitment in hospital settings (Tsai, 2014). Leadership development initiatives have also been associated with improved workforce engagement and satisfaction (Chang & Wang, 2023; Raj, 2020). Recent analyses of hospital leadership models further highlight the role of leadership competencies in supporting organisational performance (Zhao et al., 2024; Basterrechea et al., 2024).

Descriptive findings support sub-hypothesis 1.4, indicating that positive horizontal communication contributes to team cohesion and mutual support. Research on interprofessional teamwork demonstrates that team cohesion, shared goals, trust, and open communication are associated with a stronger safety culture and improved patient outcomes. Studies examining human factors and team interventions show that effective collaborative practices enhance both organisational and clinical performance in hospital settings (Aaberg, 2022; Aaberg et al., 2020; Epstein, 2014; Shirley et al., 2024). Positive peer-level communication appears to facilitate effective handovers and collaborative problem-solving within healthcare teams, as communication strategies emphasising information exchange and reflective debriefing have been linked to improved team coordination and collaborative practice (Kim et al., 2021; Stafford et al., 2021).

Sub-hypothesis 1.5 receives partial support, as approximately half of the respondents indicate frequent use of electronic communication as a primary internal channel. Email continues to serve as a foundational asynchronous communication tool within formal health information infrastructures (Car & Sheikh, 2004). Instant messaging platforms, including WhatsApp, are increasingly adopted for rapid clinical coordination. Nevertheless, issues related to privacy, governance, and data protection necessitate the establishment of clear institutional regulations and policy frameworks (Brunasso & Massone, 2020; Benedictis et al., 2021).

Electronic communication constitutes one element within a broader communication ecosystem, rather than serving as the sole determinant of effectiveness. Variations in system adoption and usability across organisational contexts and user groups underscore the necessity for structured implementation strategies and user-centred system design (Vest & Kash, 2016; Maloney et al., 2014; Fleurant et al., 2011; Carrington & Effken, 2011).

This study provides descriptive evidence supporting the association between communication climate and organisational belonging (sub-hypothesis 6 supported). Previous research on organisational climate indicates that employees' engagement with institutional initiatives may influence their alignment with organisational priorities (Rangel et al., 2024). Additionally, professional cultures that emphasize belonging and inclusiveness have been linked to equity-related outcomes in healthcare settings (Ridling et al., 2023). Therefore, communication climate constitutes a significant contextual factor influencing organisational identification and engagement.

Employees at the University Clinical Centre of the Republic of Srpska reported general satisfaction with internal communication, which provides descriptive support for Hypothesis 1. However, observed variation across communication dimensions indicates areas for further improvement, especially in upward communication, feedback mechanisms, and the formal governance of electronic communication tools.

STRENGTHS AND LIMITATIONS

This study provides empirical evidence based on a substantial sample ($N = 300$) across multiple organisational units and hierarchical levels within a tertiary healthcare institution. The multidimensional operationalisation of internal communication enabled structured assessment of vertical, horizontal, electronic, and climate-related dimensions. The use of composite scores and the Agreement Index enhanced analytical clarity and managerial applicability.

However, the cross-sectional and descriptive design limits causal interpretation. The single-centre setting reduces generalisability, and reliance on self-reported data introduces potential response bias. Further psychometric validation, including internal consistency testing, would strengthen measurement robustness. Future research should incorporate inferential analyses and multi-institutional samples to enhance theoretical and empirical contributions.

CONCLUSION

This study provides a descriptive assessment of internal communication within a large tertiary healthcare institution. Findings indicate generally positive employee perceptions, particularly regarding communication with immediate supervisors and peers, which supports team cohesion and a favourable communication climate.

Lower evaluations of information availability at the institutional level and electronic communication usage suggest areas for organisational improvement. Differences observed across hierarchical levels point to the need for strengthening upward and cross-level communication mechanisms.

Overall, internal communication appears functionally established but would benefit from targeted managerial interventions aimed at improving transparency, feedback processes, and digital communication governance. Future research should incorporate multi-institutional designs and inferential analyses to further explore the relationship between communication practices and organisational outcomes.

REFERENCE

- Aaberg, O., Hall-Lord, M., Husebø, S., & Ballangrud, R. (2020). A Human Factors Intervention in a Hospital - Evaluating the Outcome of a TeamSTEPPS Program in a Surgical Ward. <https://doi.org/10.21203/rs.3.rs-19991/v2>
- Aaberg, O. (2022). Interprofessional Teamwork in Hospital Units: A human factors approach to patient safety. <https://doi.org/10.31265/usps.219>
- Basterrechea, S., Frich, J., & Garman, A. (2024). Future-ready healthcare leadership: the revised International Hospital Federation competency model. *BMJ Leader*, 9(1), 80-82. <https://doi.org/10.1136/leader-2023-000925>
- Benedictis, A., Lettieri, E., Piredda, M., Gualandi, R., Maria, M., & Tartaglini, D. (2021). Development and psychometric testing of a new measure of the determinants that influence the adoption of WhatsApp in hospitals. *Plos One*, 16(12), e0262003. <https://doi.org/10.1371/journal.pone.0262003>
- Brunasso, A. & Massone, C. (2020). Controversies on WhatsApp for teledermatologic services. *Dermatologic Therapy*, 33(6). <https://doi.org/10.1111/dth.14005>
- Car, J. and Sheikh, A. (2004). Email consultations in health care: 1—scope and effectiveness. *BMJ*, 329(7463), 435-438. <https://doi.org/10.1136/bmj.329.7463.435>
- Carrington, J. & Effken, J. (2011). Strengths and Limitations of the Electronic Health Record for Documenting Clinical Events. *Cin Computers Informatics Nursing*, 29(6), 360–367. <https://doi.org/10.1097/ncn.0b013e3181fc4139>
- Chang, W. & Wang, C. (2023). Factors Related to Nurse Satisfaction with Supervisor Leadership. *International Journal of Environmental Research and Public Health*, 20(5), 3933. <https://doi.org/10.3390/ijerph20053933>
- Creese, J., Byrne, J., Conway, E., O'Connor, G., & Humphries, N. (2024). "They say they listen. But do they really listen?": A qualitative study

- of hospital doctors' experiences of organisational deafness, disconnect and denial. *Health Services Management Research*, 38(2), 62-70. <https://doi.org/10.1177/0951484241254929>
- Ellen, M., Perlman, S., & Shach, R. (2020). Too Much Cancer Care?. *Cancer Nursing*, 44(4), E236-E243. <https://doi.org/10.1097/ncc.0000000000000814>
- Epstein, N. (2014). Multidisciplinary in-hospital teams improve patient outcomes: A review. *Surgical Neurology International*, 5(8), 295. <https://doi.org/10.4103/2152-7806.139612>
- Erjavec, K., Knavs, N., & Bedenčič, K. (2022). Communication in interprofessional health care teams from the perspective of patients and staff. *Journal of Health Sciences*, 12(1), 29-37. <https://doi.org/10.17532/jhsci.2022.1591>
- Essex, R., Kennedy, J., Miller, D., & Jameson, J. (2023). A scoping review exploring the impact and negotiation of hierarchy in healthcare organisations. *Nursing Inquiry*, 30(4). <https://doi.org/10.1111/nin.12571>
- Fleurant, M., Kell, R., Love, J., Jenter, C., Volk, L., Zhang, F., & Simon, S. (2011). Massachusetts E-Health Project Increased Physicians' Ability To Use Registries, And Signals Progress Toward Better Care. *Health Affairs*, 30(7), 1256-1264. <https://doi.org/10.1377/hlthaff.2010.1020>
- Gans, E., Ruijter, U., Heide, A., Meijden, S., Bos, F., Munster, B., & Groot, J. (2024). A Grounded Theory of Interdisciplinary Communication and Collaboration in the Outpatient Setting of the Hospital for Patients with Multiple Long-Term Conditions. *Journal of Personalized Medicine*, 14(5), 533. <https://doi.org/10.3390/jpm14050533>
- Glenton C, Paulsen E, Agarwal S, Gopinathan U, Johansen M, Kyaddondo D, Munabi-Babigumira S, Nabukenya J, Nakityo I, Namaganda R, Namitala J, Neumark T, Nsangi A, Pakenham-Walsh NM, Rashidian A, Royston G, Sewankambo N, Tamrat T, Lewin S. Healthcare workers' informal uses of mobile phones and other mobile devices to support their work: a qualitative evidence synthesis. *Cochrane Database of Systematic Reviews* 2024, Issue 8. Art. No.: CD015705. <https://doi.org/10.1002/14651858.CD015705.pub2>
- Horlait, M., Baes, S., Regge, M., & Leys, M. (2021). Understanding the Complexity, Underlying Processes, and Influencing Factors for Optimal Multidisciplinary Teamwork in Hospital-Based Cancer Teams. *Cancer Nursing*, 44(6), E476-E492. <https://doi.org/10.1097/ncc.0000000000000923>
- Kim, Y., Crandall, M., & Byon, H. (2021). Discharge Communications for Older Patients Between Hospital Healthcare Providers and Home Healthcare Providers: An Integrative Review. *Home Health Care Management & Practice*, 34(2), 125-132. <https://doi.org/10.1177/10848223211052031>
- Maloney, N., Heider, A., Rockwood, A., & Singh, R. (2014). Creating a Connected Community: Lessons Learned from the Western New York Beacon Community. *Egms (Generating Evidence & Methods to Improve Patient Outcomes)*, 2(3), 15. <https://doi.org/10.13063/na>
- Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: A review of the literature. *Acta Anaesthesiologica Scandinavica*, 53(2), 143-151. <https://doi.org/10.1111/j.1399-6576.2008.01717.x>
- Meneses-La-Riva, M., Fernández-Bedoya, V., Suyó-Vega, J., Ocupa-Cabrera, H., Grijalva-Salazar, R., & Ocupa-Meneses, G. (2025). Enhancing Healthcare Efficiency: The Relationship Between Effective Communication and Teamwork Among Nurses in Peru. *Nursing Reports*, 15(2), 59. <https://doi.org/10.3390/nursrep15020059>
- O'Daniel, M., & Rosenstein, A. H. (2008). Professional communication and team collaboration. In R. G. Hughes (Ed.), *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Agency for Healthcare Research and Quality (US).
- Pettersen, I. (2024). Caught in the middle: The importance of interprofessional communication between healthcare middle managers in hospitals. *Financial Accountability and Management*, 41(1), 3-18. <https://doi.org/10.1111/faam.12401>
- Raj, A. (2020). Impact of Internal Branding on Employee Engagement: An Empirical Study Conducted among Medical Staff's Brand Supporting Behaviour in Indian Hospitals. *Indian Journal of Public Health Research & Development*, 11(3), 942-947. <https://doi.org/10.37506/ijphrd.v11i3.1493>
- Rangel, T., Johnson, S., Joubert, P., Timmerman, R., Smith, S., Springer, G., & Schenk, E. (2024). Comparisons of healthcare personnel relating to awareness, concern, motivation, and behaviours of climate and health: A cross-sectional study. *Journal of Advanced Nursing*, 81(12), 8191-8199. <https://doi.org/10.1111/jan.16387>
- Razzaq, A., Worth, H., & Alam, A. (2025). Multidisciplinary Teamwork Among Healthcare Workers in the Provision of Prevention of Mother-to-Child Transmission Services in the Three Tertiary Hospitals in Fiji: A Qualitative Perspective. *Nursing & Midwifery Research Journal*, 21(3), 170-182. <https://doi.org/10.1177/0974150x251339013>
- Ridling, D., Finch, C., Moore, J., Ofamen, J., & Price, W. (2023). Nursing's Critical Role in Driving Toward Health Equity. *Jona the Journal of Nursing Administration*, 53(7/8), 399-407. <https://doi.org/10.1097/nnn.0000000000001306>
- Rivera, J., Malone, S., Puerto-Torres, M., Prewitt, K., Counts, L., Wiphatphumiprathes, P., & Agulnik, A. (2023). CritCom: assessment of quality of interdisciplinary communication around deterioration in pediatric oncologic patients. *Frontiers in Oncology*, 13. <https://doi.org/10.3389/fonc.2023.1207578>
- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology*, 64, 361-388. <https://doi.org/10.1146/annurev-psych-113011-143809>
- Shirley, S., Abdullah, B., & Dioso, R. (2024). Enhancing Teamwork Through Effective Handover Practices Among Nurses in Elder Care Setting. *The Malaysian Journal of Nursing*, 15(04), 100-108. <https://doi.org/10.31674/mjn.2024.v15i04.012>
- Stafford, J., León-Castelao, E., Ikkink, A., Qvindesland, S., Garcia-Font, M., Szyld, D., & Diaz-Navarro, C. (2021). Clinical debriefing during the COVID-19 pandemic: hurdles and opportunities for healthcare teams. *Advances in Simulation*, 6(1). <https://doi.org/10.1186/s41077-021-00182-0>

- Suh, E. & Wyer, P. (2023). Revelation of mindlines in the setting of crisis. *Journal of Evaluation in Clinical Practice*, 30(1), 60–67. <https://doi.org/10.1111/jep.13881>
- Sutcliffe, K. M., Lewton, E., & Rosenthal, M. M. (2004). Communication failures: an insidious contributor to medical mishaps. *Academic medicine: journal of the Association of American Medical Colleges*, 79(2), 186–194. <https://doi.org/10.1097/00001888-200402000-00019>
- Tsai, Y. (2014). Learning organizations, internal marketing, and organizational commitment in hospitals. *BMC Health Services Research*, 14(1). <https://doi.org/10.1186/1472-6963-14-152>
- Vest, J. & Kash, B. (2016). Differing Strategies to Meet Information-Sharing Needs: Publicly Supported Community Health Information Exchanges Versus Health Systems' Enterprise Health Information Exchanges. *Milbank Quarterly*, 94(1), 77-108. <https://doi.org/10.1111/1468-0009.12180>
- Welch, M., & Jackson, P. R. (2007). Rethinking internal communication: A stakeholder approach. *Corporate Communications: An International Journal*, 12(2), 177–198. <https://doi.org/10.1108/13563280710744847>
- Wilson, L., Stuebe, A., Pearsall, M., Mansour, M., Tully, K., Garvin, J., & Patterson, E. (2024). Distinguishing Urgent From Non-Urgent Communications: A Mixed Methods Study of Communication Technology Use in Perinatal Care. *Journal of Cognitive Engineering and Decision Making*, 18(3), 241–262. <https://doi.org/10.1177/15553434241251431>
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Pearson.
- Zhao, J., Wang, B., Qin, X., Liu, Y., & Liu, T. (2024). Core elements of excellent hospital leadership: lessons from the five top-performing hospitals in China. *International Journal for Quality in Health Care*, 36(2). <https://doi.org/10.1093/intqhc/mzae046>.

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