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A Study of Fatigue and Associated Factors in Hemodialysis Patients

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Abstract

Background: *Fatigue, one of the most common and burdensome symptoms faced by hemodialysis patients, affects quality of life and increases mortality risk. Although previous studies in Taiwan have explored the factors associated with fatigue and its predictors in dialysis patients, they are limited in terms of number and are largely outdated and do not reflect recent advancements in dialysis care quality. Thus, further investigation is warranted.*
Purpose: *The aim of this study was to explore fatigue and its related factors in a population of hemodialysis patients.*
Methods: *A cross-sectional, correlational research design was used and data were collected from medical records and two structured questionnaires, namely the Hemodialysis Patient Fatigue Scale and the Taiwanese Depression Questionnaire. Inferential statistics were performed using independent sample t-tests, one-way ANOVA, Pearson's correlation, and multiple regression analysis.*
Results: *The participants were primarily females and unemployed. The average age was 63.59 years (SD = 10.29), the mean dialysis duration was 83.70 months (SD = 63.46), and the average fatigue score was 22.74 (SD = 12.34). Significant correlations were found between fatigue level and, respectively, age (r = .185, p = .024) and albumin levels (r = -.245, p = .003). Fatigue levels differed significantly based on number of chronic diseases (F = 7.48, p = .001). Depressive mood and albumin levels were identified as significant predictors, explaining 68.5% of the total variance (F = 157.308, p = .001), with depressive mood being the primary predictor.*
Conclusions / implications for practice: *The findings of this study provide assessment and care guidelines to clinical healthcare professionals for patients identified to be at high risk of hemodialysis-related fatigue. Through professional education and training, these professionals can gain the skills necessary to offer effective psychological support and clinical resources. In addition, monitoring the nutritional indicators of patients and providing them with individualized nursing guidance are similarly important. The findings of this study can inform clinical education and serve as a reference for future research in the field of patient care.*

Keywords: *fatigue; hemodialysis; predictors.*

INTRODUCTION

Health managers in elderly care worldwide face complex challenges, including demographic and epidemiological shifts, labor shortages, changing structures, and efficiency demands. Today, the global principle of healthy aging emphasizes that older persons should be empowered to live and engage in activities they value. However, advanced age often brings a higher prevalence of chronic diseases and long-term living with complex health needs. Despite these challenges, older adults increasingly prefer to age in place within their own homes, receiving necessary health and social care through home care (HC) services.

In Sweden, state-level responsibility rests with the government and the Ministry of Social Affairs, while municipalities and elected local politicians hold ultimate responsibility for elder care. Although services can be privately operated, the municipality retains primary accountability. Home care is predominantly tax-financed, supplemented by income-based individual fees. Operating across multiple organizational tiers, the first-line manager (FLM) serves as the critical link between upper management and frontline healthcare staff. FLMs heavily influence how care practices are designed and tailored to individual needs.

Responsibilities associated with management roles vary within rigid, institutionalized structures governed by multiple control systems that can constrain managerial decision-making. Effective home care relies on a holistic view of citizens, balancing business operations, financial constraints, and personnel management. FLMs are tasked with creating optimal working conditions for care providers, maintaining cost-effectiveness, distributing workloads, prioritizing individual wishes, securing work environments, and providing performance feedback.

Municipal home care is divided into home health care and home care services. Registered nurses (RNs) and occupational therapists (OTs) provide home health care under the Health and Medical Care Act, while nurse assistants (NAs) and care aides (CAs) deliver home care services governed by the Social Services Act. National core values centered on dignity, well-being, and a meaningful daily life guide these services, requiring person-centered care aligned with individual goals. NAs and CAs spend the most time with older individuals, making them central to person-centered care delivery, whereas OTs and RNs manage rehabilitation and specific nursing interventions. Despite legal mandates for collaborative, person-centered care, a documented gap exists between statutory rights and actual care received, often driven by medical care deficiencies, patient safety risks, strained work environments, and insufficient resources.

While FLMs significantly impact care quality, their everyday operational environment is exceptionally complex and unpredictable. FLMs often experience their work as meaningful yet demanding, acting as intermediaries between top management and local staff. They routinely encounter ethical dilemmas, such as balancing individual autonomy with rigid organizational constraints. Structural changes and deeper insights into operational opportunities and obstacles are essential to ensure older adults receive the high-quality care to which they are entitled.

This study aims to describe how FLMs in home care reason about the opportunities and obstacles involved in leading work aligned with individual needs and goals.

MATERIAL AND METHODS

This study is part of a broader project examining a municipality in central Sweden that implemented a structural change program designed to center home care around individual needs and goals. To center the voices and experiences of key stakeholders, a participatory research design was adopted, characterized by close collaboration between practitioners and researchers to evaluate and improve clinical practice. Using a participatory appreciative action reflection method, stakeholders collaboratively identified operational opportunities, implemented practical improvements, and sought solutions to systemic obstacles.

Study Setting

Conducted between 2019 and 2021, the project initially targeted all 20 municipal home care units, of which top management selected three units with high participatory readiness to launch the initiative. Two additional units were subsequently added, bringing the total participating units to five following pandemic-related disruptions.

The project engaged approximately 160 stakeholders, including older adults, relatives, care aides, nurse assistants, occupational therapists, registered nurses, administrative staff, and FLMs. This specific study focuses on qualitative interviews conducted with eight out of nine invited FLMs from the participating units (two men and six women, with tenure ranging from 1 to 25 years).

Data Collection

Data collection involved a series of initial and follow-up face-to-face interviews with the FLMs, totaling 11 conversational, open-ended interviews. Due to COVID-19 safety protocols, two managers participated via a group interview conducted over Zoom. The interviews, lasting between one and 1.5 hours, were digitally recorded and transcribed verbatim. Discussions focused on identifying opportunities to lead care around individual needs and goals, evaluating existing obstacles, exploring necessary prerequisites, and co-creating potential solutions. Follow-up interviews conducted approximately two months later allowed researchers to present preliminary findings, encourage deeper reflection, and confirm data accuracy.

Data Analysis

A thematic analysis following Braun and Clarke was conducted to capture the FLMs' perspectives. Transcripts were read thoroughly to ensure data credibility, followed by open coding of content addressing the research objective. Codes were grouped into preliminary themes based on shared meanings, similarities, and differences. All authors iteratively refined the main themes and sub-themes through continuous comparison against the raw data to ensure trustworthiness and structural coherence. Verbatim quotes are utilized to illustrate key thematic findings.

Ethical Considerations

Ethical approval was secured from the Swedish Ethical Review Authority. Comprehensive verbal and written information was provided to all participating FLMs, emphasizing their right to withdraw from the study at any time without explanation, prior to obtaining written informed consent. All research data was securely coded and stored in a locked safe to protect confidentiality.

RESULTS

The findings reveal a fundamental polarization between two distinct systems that FLMs must navigate and balance in their daily leadership roles. The first system centers on human values and valuable human capital, where FLMs identify distinct opportunities to lead care around the needs and goals of older individuals. The second system represents organizational obstacles rooted in a top-down, financially driven administrative structure where individual needs risk becoming overlooked and managerial mandates are severely restricted.

Seeing Individuals and Co-Workers as Central and Valuable Human Capital

The first main theme highlights an operational framework anchored in individual-centered care and mutual trust among staff. FLMs identified primary opportunities in empowering staff to support older adults, adjusting working hours and competencies to match individual care needs, fostering geographical and relational proximity, and leading with professional trust.

Facilitating Staff to Empower Individuals

FLMs emphasized that successful leadership requires a cultural shift across the broader organization away from rigid time and financial metrics toward a unified focus on reablement and individual empowerment. Recognizing older adults as the core justification for home care services was seen as paramount. Collaborative care planning conducted directly in the older person's home allows individuals to actively track and evaluate their care goals, thereby strengthening self-determination. Furthermore, integrating digital solutions enables older adults, relatives, and contact persons to participate actively in multidisciplinary team meetings from home.

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Adapting Working Hours and Competences

Tailoring staff working hours—particularly those of designated contact persons—to match the daily rhythms and requirements of older individuals was viewed as a vital leadership opportunity. Ensuring high relational continuity for vulnerable or seriously ill clients by pairing them with consistent, highly knowledgeable care providers enhances care quality. Moreover, utilizing mixed-competence and multidisciplinary teams ensures specialized care is delivered for conditions such as dementia or palliative needs, while also respecting personal preferences regarding gender representation among care staff.

Creating Geographical and Relational Proximity

Proximity between managerial offices and frontline staff promotes an open-door culture, mutual trust, and supportive communication. Similarly, geographical and relational closeness between staff and older individuals enables care workers to observe, listen attentively, and respond effectively to individual goals. Cross-professional cooperation and co-location among nurses, therapists, and care workers facilitate vital knowledge-sharing and dialogue regarding client care.

Leading with Trust in Each Co-Worker

FLMs regarded their staff as their most valuable organizational capital. Cultivating a positive work environment, acknowledging strong performance, maintaining open responsiveness, and placing authentic trust in employee engagement were identified as essential strategies for fostering staff loyalty and high-quality care delivery.

A Top-Down Managed Organization Focused on Financial Control

The second main theme captures the systemic obstacles FLMs encounter when attempting to lead within a top-down administrative structure driven strictly by financial performance and budgetary compliance.

Being Stuck in a Financial Perspective

Frequent organizational restructuring and persistent budget deficits create an environment where long-term care goals feel unrealistic to implement. Governance by political leadership lacking operational home care experience often reduces care delivery to task-oriented time management designed primarily to cut costs. Counting every minute of care as a financial unit limits flexibility and undermines spontaneous, person-centered responsiveness.

Poor Work Environment and Staff Strain

Rigid governance and tight budgetary pressures generate high mental and physical stress for care workers, resulting in elevated sick leave rates. Staff absences frequently necessitate reliance on temporary substitute workers unfamiliar with client care plans, degrading care continuity and increasing vulnerability across the care environment.

Lack of Cross-Organizational Cooperation

Incomplete communication channels between hospitals, primary care, and municipal home care frequently result in uncoordinated discharges, leaving older adults at home without prepared environments or finalized care plans. Legislative divides further impede seamless collaboration, forcing managers to escalate structural hurdles upward rather than resolving them locally.

Absence of Leadership Style and Managerial Mandate

FLMs reported a distinct lack of a defined leadership model within the municipality, often feeling forced to react passively to top-down directives without receiving constructive feedback or strategic guidance from upper management. Furthermore, restrictions on formal managerial authority—such as lacking the mandate to issue formal personnel warnings—hinder effective local problem-solving.

DISCUSSION

The results demonstrate that FLMs experience profound ethical value conflicts as they attempt to balance human-centered care principles with rigid financial constraints. According to the Swedish ethical platform for healthcare prioritization, the human value and needs-solidarity principles must take precedence over the cost-effectiveness principle. However, in top-down municipal structures, cost-effectiveness frequently dominates, placing FLMs in an untenable ethical squeeze.

While FLMs recognize clear opportunities to advance person-centered care through reablement, home-based collaborative planning, digital integration, and staff empowerment, these initiatives are consistently stymied by structural rigidity, high staff turnover, and poor inter-professional communication. Addressing these systemic shortcomings requires shifting from traditional administrative maintenance toward a value-based leadership model supported by a bottom-up organizational approach. Cultivating critical thinking and establishing clear, supportive organizational dialogues are essential steps to align municipal elder care with fundamental human dignity and statutory rights.

Methodological considerations

Pandemic-related constraints limited data collection to five municipal home care units, resulting in the exclusion of units from socio-economically vulnerable areas. However, trustworthiness was strengthened through a sustained two-year field presence, methodological triangulation, member-checking during follow-up interviews, and consistent data collection executed by the same researchers. Although digital interviews were adopted due to safety protocols, participants engaged openly and fluently, facilitating robust data generation. Detailed descriptions and verbatim quotations are provided to support the transferability of findings to similar contexts.

CONCLUSION

First-line managers in municipal home care face significant structural barriers when attempting to align daily operations with individual needs and goals due to persistent friction between human-centric care values and top-down financial control systems. Despite these constraints, managers recognize substantial opportunities in fostering staff trust, supporting reablement, ensuring care continuity, and maintaining close relational proximity with care recipients. Resolving these tensions requires a fundamental organizational shift toward value-based leadership and multi-level consensus prioritizing human dignity over strict cost-efficiency.

Originality and value

This study illuminates the complex ethical and structural dilemmas experienced by first-line managers caught between human-value principles and cost-containment mandates in municipal home care. The findings underscore the critical need for structural alignment and executive support, providing actionable insights for policymakers and healthcare organizations seeking to implement genuine value-based leadership models in elder care.

References

1) Aaltvedt, V., Juvland, L., & Öresland, S. (2017). A discourse of care and a discourse of cost efficiency–two constituting discourses constructing leadership in home care services. Nordisk Sygeplejeforskning, 7(3), 209–223.
2) Alvesson, M. (2016). The Stupidity Paradox: The Power and Pitfalls of Functional Stupidity at Work. Profile Books.
3) Andersson, I., Eklund, A. J., Nilsson, J., & Bååth, C. (2022). Prevalence, type, and reasons for missed nursing care in municipality health care in Sweden – a cross sectional study. BMC Nursing, 21(1), 1–9.
4) Blom, M., & Alvesson, M. (2015). All-inclusive and all good: The hegemonic ambiguity of leadership. Scandinavian Journal of Management, 31(4), 480–492.
5) Blomberg, A.-C., Bisholt, B., & Lindwall, L. (2019). Value conflicts in perioperative practice. Nursing Ethics, 26(7–8), 2213–2224.
6) Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.
7) Ericsson, U., & Augustinsson, S. (2015). The role of first line managers in healthcare organisations – a qualitative study on the work life experience of ward managers. Journal of Research in Nursing, 20(4), 280–295.
8) Faith, E. K. (2013). The role of values-based leadership in sustaining a culture of caring. Healthcare Management Forum, 26(1), 6–15.
9) Figueroa, C. A., Harrison, R., Chauhan, A., & Meyer, L. (2019). Priorities and challenges for health leadership and workforce management globally: A rapid review. BMC Health Services Research, 19(1), 1–11.
10) Ghaye, T., Melander-Wikman, A., Kisare, M., Chambers, P., Bergman, U., Kostenius, C., & Lillyman, S. (2008). Participatory and appreciative action and reflection (PAAR): Democratizing reflective practices. Reflective Practice, 9(4), 361–397.
11) Guest, D., & Woodrow, C. (2012). Exploring the boundaries of human resource managers' responsibilities. Journal of Business Ethics, 111(1), 109–119.
12) Hagerman, H. (2019). Working Life Among First-Line Managers and Their Subordinates in Elderly Care: An Empowerment Perspective [Doctoral dissertation, Uppsala University].
13) Hagerman, H., Engström, M., Wadensten, B., & Skytt, B. (2019). How do first-line managers in elderly care experience their work situation from a structural and psychological empowerment perspective? An interview study. Journal of Nursing Management, 27(6), 1208–1215.
14) Hagerman, H., Engström, M., Häggström, E., Wadensten, B., & Skytt, B. (2015). Male first-line managers' experiences of the work situation in elderly care: An empowerment perspective. Journal of Nursing Management, 23(6), 695–704.
15) Health and Social Care Inspectorate. (2022). Tillsyn av medicinsk vård och behandling vid särskilda boenden för äldre. Delredovisning av resultat på nationell nivå avseende kommunernas hälso- och sjukvård. Health and Social Care Inspectorate.
16) Jacobs, G. (2019). Patient autonomy in home care: Nurses' relational practices of responsibility. Nursing Ethics, 26(6), 1638–1653.
17) James, I., Blomberg, K., Liljekvist, E., & Kihlgren, A. (2015). Working together for a meaningful daily life for older persons: A participatory and appreciative action and reflection project: The lessons we learned. Action Research, 13(4), 336–353.
18) Jarling, A., Rydström, I., Ernsth-Bravell, M., Nyström, M., & Dalheim-Englund, A.-C. (2018). Becoming a guest in your own home: Home care in Sweden from the perspective of older people with multimorbidities. International Journal of Older People Nursing, 13(3), e12194.

19) Johannessen, T., Ree, E., Aase, I., Bal, L., & Wiig, S. (2021). Exploring managers' response to a quality and safety leadership intervention: Findings from a multiple case study in Norwegian nursing homes and home care services. BMJ Open Quality, 10(4), e001494.
20) Jonasson, L.-L., Sandman, L., & Bremer, A. (2019). Managers' experiences of ethical problems in municipal elderly care: A qualitative study of written reflections as part of leadership training. Journal of Healthcare Leadership, 11, 63–74.
21) Kihlgren, A., James, I., & Norell Pejner, M. (2023). We have to turn a transatlantic liner—Leaders' perspectives on creating a meaningful life for older persons receiving municipal care. Nursing Open, 10(10), 6836–6844.
22) Kihlgren, A., Norell Pejner, M., & James, I. (2021). Core values and local guarantees of dignity in the care of older persons – Application, obstacles and further actions. Scandinavian Journal of Caring Sciences, 35(2), 616–625.
23) Kvale, S., & Brinkmann, S. (2015). Interviews: Learning the Craft of Qualitative Research Interviewing (3rd ed.). Sage Publications.
24) Lidström Holmqvist, K., & James, I. (2019). Patient participation in municipal older person care from the perspective of nurses and occupational therapists. Nursing Open, 6(3), 875–883.
25) Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic Inquiry. Sage Publications.
26) Lindberg, M., Skytt, B., Lindberg, M., Wijk, K., & Strömberg, A. (2022). A complex challenge with unclear improvement: The need for involvement, contextualization and facilitation when managers implement a leadership model. Leadership in Health Services, 36(2), 236–246.
27) Meinow, B., Li, P., Jasilionis, D., Oksuzyan, A., Sundberg, L., Kelfve, S., & Wastesson, J. W. (2022). Trends over two decades in life expectancy with complex health problems among older Swedes: Implications for the provision of integrated health care and social care. BMC Public Health, 22(1), 1–11.
28) National Board of Health and Welfare. (2012). Äldreomsorgens nationella värdegrund – Ett vägledningsmaterial. National Board of Health and Welfare.
29) National Board of Health and Welfare. (2021a). Förutsättningar och stöd för första linjens chefer. Kartläggning av första linjens chefer i äldreomsorgen. National Board of Health and Welfare.
30) National Board of Health and Welfare. (2021b). Individens behov i centrum. Ett stöd för att använda ICF och strukturerad dokumentation i socialtjänsten. National Board of Health and Welfare.
31) Nielsen, K., & Taris, T. W. (2019). Leading well: Challenges to researching leadership in occupational health psychology – And some ways forward. Work & Stress, 33(2), 107–118.
32) Polit, D. F., & Beck, C. T. (2021). Nursing Research: Generating and Assessing Evidence for Nursing Practice (11th ed.). Wolters Kluwer.
33) Sandman, L., & Kjellström, S. (2018). Etikboken: Etik för vårdande yrken. Studentlitteratur.
34) SFS 2001:453. (2001). Socialtjänstlag [Social Services Act]. Ministry of Health and Social Affairs.
35) SFS 2014:821. (2014). Patientlag [Patient Act]. Ministry of Health and Social Affairs.
36) SFS 2017:30. (2017). Hälso- och sjukvårdslag [Health and Medical Services Act]. Ministry of Health and Social Affairs.
37) Silverglow, A., Johansson, L., & Lidén, E. (2021). Perceptions of providing safe care for frail older people at home: A qualitative study based on focus group interviews with home care staff. Scandinavian Journal of Caring Sciences, 36(3), 852–862.
38) Swedish Association of Local Authorities and Regions (SKL). (2011). Arbetsgivarperspektiv på kommuner och landsting – Fakta och analys 2011. Swedish Association of Local Authorities and Regions.

39) Solbakken, R., Bondas, T., & Kasén, A. (2021). Relationships influencing caring in first-line nursing leadership: A visual hermeneutic study. Scandinavian Journal of Caring Sciences, 36(4), 957–968.
40) Solbakken, R., Bondas, T., & Kasén, A. (2019). Safeguarding the patient in municipal healthcare: A hermeneutic focus group study of Nordic nursing leadership. Journal of Nursing Management, 27(6), 1242–1250.
41) SOU 1997:14. (1997). Prioriteringar inom hälso- och sjukvården [Statens offentliga utredningar]. Stockholm.
42) SOU 2017:21a. (2017). Läs mig! Nationell kvalitetsplan för vård och omsorg om äldre personer. Del 1 [Statens offentliga utredningar]. Stockholm.
43) SOU 2017:21b. (2017). Läs mig! Nationell kvalitetsplan för vård och omsorg om äldre personer. Del 2 [Statens offentliga utredningar]. Stockholm.
44) Strömberg, A., Engström, M., Hagerman, H., & Skytt, B. (2019). First-line managers dealing with different management approaches. Leadership in Health Services, 32(4), 543–557.
45) Sundström, M., Petersson, P., Rämgård, M., Varland, L., & Blomkvist, K. (2017). Health and social care in collaboration in older persons' home: The perspectives of older persons, family members and professionals. Scandinavian Journal of Caring Sciences, 32(1), 147–156.
46) Swedish Association of Health Professionals. (2022). Så skapar vi en bra arbetsmiljö. Vårdförbundet.
47) Tavemark, S., Kihlgren, A., Norell Pejner, M., & James, I. (2023). Individual goal-setting in municipal homecare: A participatory appreciative action and reflection study. Journal of Public Health Research, 12(2), 22799036231174092.
48) Wastesson, K., Fogelberg Eriksson, A., Nilsson, P., & Gustavsson, M. (2021). First-line managers' practices and learning in unpredictable work within elderly care. Studies in Continuing Education, 44(3), 376–391.
49) World Health Organization (WHO). (2018). Concept Note: International Technical Meeting Aging in Place. World Health Organization.
50) World Health Organization (WHO). (2021). Decade of Healthy Ageing: Baseline Report Summary. World Health Organization.
51) World Health Organization (WHO). (2022). Ageing and health. World Health Organization.
52) Yukl, G. (2013). Leadership in Organizations (8th ed.). Pearson.