

HEALTH SYSTEMS AND POLICIES RESEARCH CENTER OF
ISTANBUL MEDIPOL UNIVERSITY

JOURNAL OF HEALTH SYSTEMS AND POLICIES

VOLUME: 7
2025
NUMBER: 2



MEDIPOL
UNV-YAYIN
MEDİPOL UNIVERSITY PRESS

Editor
Sabahattin AYDIN
Istanbul Medipol University

Deputy Editor
Hakan TOZAN
American University of the Middle East (AUM)

Senior Executive Editors
Sabahattin AYDIN
Health Policy
Istanbul Medipol University
Yusuf ÇELİK
Health Economics
Acıbadem University
M. Fevzi ESEN
Health IT
University of Health Sciences
Fulya İlçin GÖNENÇ
Health Law
Ankara Medipol University
Osman HAYRAN
Public Health
Istanbul Medipol University
Melis Almula KARADAYI
Health Systems Engineering
Istanbul Medipol University
İlker KÖSE
Health IT
Istanbul Ticaret University
Mahmut TOKAÇ
Ethics
Istanbul Medipol University
Yeter USLU
Healthcare Management
Istanbul Medipol University

Managing Editors
Ömer ATAÇ
Marmara University
Olca ÖZEN
Istanbul Medipol University

Biostatistics Editor
Pakize YİĞİT
Istanbul Medipol University

Language Editor
Murat CULDUZ
Istanbul Medipol University

Advisory Board
Enis BARIŞ
University of Washington
İlknur BUÇAN KIKRBIİR
Karadeniz Technical University
Sarbani CHAKRABORTY
Ludwig Maximilian University
Chi-chang CHANG
Chung Shan Medical University
Alper CİHAN
Kağıthane Kızılay Hospital
Alper ERTÜRK
Australian University - Kuwait
Sergej HLOCH
Institute of Advanced Technologies, Technical
University of Kosice

Jie HUANG
Southern University of Science and Technology
Naim KADIOĞLU
London North West University Healthcare NHS
Mehmet KOÇAK
Istanbul Medipol University
Drazan KOZAK
University of Slavonski Brod
Salih MOLLAHALILOĞLU
Ankara Yıldırım Beyazıt University
Haluk ÖZSARI
Istanbul University - Cerrahpaşa
Cengizhan ÖZTÜRK
Boğaziçi University
Kirstin ÖZTÜRK
The Scientific and Technological
Research Council of Türkiye (TUBİTAK)
Aliye Aslı SONSUZ
Istanbul Medipol University
Haydar SUR
Üsküdar University
İrfan ŞENCAN
Sincan Training and Research Hospital
Dilek TARHAN
-
Mustafa TAŞDEMİR
-
Mustafa YAĞIMLI
Istanbul Gedik University
Hasan Hüseyin YILDIRIM
University of Health Sciences

Copy Editor
Bürin YILDIZTEKİN

Publications Coordinators
Enise TOPAYLI
Ayşe Elif YILDIZ

Prepared for Publication by
Bürin YILDIZTEKİN

Graphic Design
Sertan VURAL

Art Direction
M Pozitif

Address
Istanbul Medipol Üniversitesi
Kavacık Kuzey Yerleşkesi
Kavacık Mah. Ekinciler Cad.
No: 19 34810 Beykoz / İstanbul
Tel: 0216 681 51 00
jhesp@medipol.edu.tr

e-ISSN
2718-0050

Contents

Research Article

Perceptions and Preferences of Succession Planning and Management
Practices in the Sierra Leone Health Sector: A Cross-Sectional Survey **p.77-97**
ALHASSAN FOUARD KANU

Research Article

The Relationship Between Healthcare Workers' Social Well-Being and
Their Turnover Intention **p.99-112**
HİRA NUR KURT, GÜLPEMBE OĞUZHAN

Review Article

Intraoperative Nursing Practices in Laparoscopic Surgery: Challenges
Encountered and Modern Technology Supported Solution Suggestions **p.113-121**
HANİFE ÖZDEMİR, ESRA EREN

Case Report

Possible Emergence of Myroides spp. as a Nosocomial Pathogen: A Case
Report from a State Hospital Intensive Care Unit **p.123-127**
TUĞÇE BAŞARI OMAK, MEHNUR YALÇINKAYA, YEŞİM GÜROL

Kanu, A. F. (2025). Perceptions and preferences of succession planning and management practices in the Sierra Leone health sector: A cross-sectional survey. *Journal of Health Systems and Policies (JHESP)*, VII, 77-97, DOI: 10.52675/jhesp.1758985

Perceptions and Preferences of Succession Planning and Management Practices in the Sierra Leone Health Sector: A Cross-Sectional Survey

Alhassan Fouard KANU^{1*} 

ABSTRACT

Ensuring continuity of both public and private health care organizations requires effective succession planning and management (SPM) systems in place. However, public sector performance in corporate succession planning lags behind the private sector because of several reasons. This study therefore sought to explore perceptions and preferences of SPM practices among civil servants in the Sierra Leone public health sector. The present cross-sectional quantitative study used a semi-structured online questionnaire. The study population was middle and senior management personnel of the Ministry of Health (MoH). A total of 1,264 were surveyed, and the overall response rate was 32% (n=402). Data were analyzed in SPSS v25. The study established that the perceptions of middle and senior management in relation to succession planning practices are universally negative. Across the seven (7) SPM practices considered in this study, participants perceived the current SPM efforts in MoH as lacking or insufficient. Except for the talent management process, which was found to be statistically different with the length of service of participants [$F(5,396)=2.21, p=.053$], all other independent variables showed no statistical relationship with the participants' perceptions on SPM practices. Overall, participant characteristics (gender, cadre, role, grade, and years of service) did not significantly influence their perceptions on the current status of SPM practices in MoH. On the preferred SPM practices in MoH, overall, middle

¹ Institute for Health Professionals Development, Sierra Leone, West Africa

* Corresponding author: Alhassan Fouard KANU, allanzain2009@yahoo.co.uk

and senior management staff consider internal leadership grooming and restructuring of MoH as suitable for effective succession planning in the health sector. Overall, findings indicate that SPM practices in MoH are perceived by middle and senior managers as lacking or inadequately implemented. The study recommends that the Human Resources Management Office (HRMO) and the Health Service Commission (HSC) should develop a policy framework together that will foster efficient SPM practices in the health sector, prioritizing internal talent grooming and organizational restructuring in fostering a culture of effective SPM in MoH.

Keywords: Succession Planning, Succession Management, Public Health, Public Sector, Talent Management

INTRODUCTION

Succession management is widely used by both private and public organizations as a means of ensuring stability and continuity during leadership change (Groves, 2018). Succession planning has a critical role not only in business continuity but also in ensuring the performance of an organization. In the absence of succession planning, organizational performance will be undermined as the wrong people are sometimes placed in positions that they do not deserve (Dodd & Simons, 2005). The lack of succession planning also will affect the overall staff morale and retention when succession is not merit-based (Aladwan et al., 2013; Ali & Mehreen, 2019). Succession management therefore ensures organizations appropriately plan to replace individuals that may leave the organization in the future.

Every organization inherently faces the challenge of staff movements that would require replacement. This is also true with the public health sector, where staff departures are also likely due to several reasons, including career-related movements, infirmity, and retirement. In recent times in Africa, the migration of health workers abroad has also been another attrition factor (Chan et al., 2013; Walton-Roberts et al., 2017). Generally, when leaders leave healthcare organizations, this potentially will result in a loss of institutional knowledge that will affect the overall change management as well as performance in the organization (Committee on Pediatric Workforce et al., 2015; Thompson et al., 2012; Trepanier & Crenshaw, 2013). Mitigating such negative effects on the organization therefore requires strong leadership (Sherman et al., 2013; Streeter, 2015). It is therefore evident that both public and private health care organizations require succession planning as a means of developing a pool of internal candidates that would fill vacant leadership positions when the need

arises. Succession planning is an approach that inherently benefits middle-level staff in every organization because talented staff can be adequately developed to fill vacant leadership roles in the future (Belasen & Belasen, 2016). Effective succession planning and management (SPM) practices are therefore essential in promoting staff satisfaction and retention (Ali & Mehreen, 2019).

Succession planning policies are used to ensure transfer of scarce skills by those preparing to exit the organization, and while they may exist on paper in the public sector, there is very little evidence that they are practiced (Manzini & Malatjie, 2023). In the public sector in low- and middle-income countries (LMIC) like Sierra Leone, succession planning practices are limited. The problem, according to Zepeda et al. (2012), is that leaders in the public sector rarely identify qualified successors for leadership roles, and this has dire consequences for workplace productivity. Evidence has it that lack of succession planning is rife in the healthcare sector, as reported by an estimated 70% of industry leaders (Trepanier & Crenshaw, 2013). In comparison with the private sector, it is widely reported that the public sector lags behind the private sector in the aspect of succession planning (Zepeda et al., 2012). Several factors have been reported to account for this difference, and this includes organizational culture and costs associated with implementing succession strategies (Manzini & Malatjie, 2023; Trepanier & Crenshaw, 2013; Zepeda et al., 2012).

In Sierra Leone, the Ministry of Health (MoH) is the key health service provider in the public sector. Staff of the MoH is recruited into the civil service through the Government of Sierra Leone Human Resources Management Office (HRMO). The Directorate of Human Resources for Health is responsible for the overall planning, coordination, deployment, monitoring, and evaluation of human resources in the health sector. MoH faces health worker shortages due to several reasons, including the numerous pending retirements at age 60 years and also due to staff leaving the MoH for “greener pastures” and private practices, while others work for health-related NGOs. The longstanding assumption is that the perceived low remuneration for health professionals in the public sector is the main factor influencing staff attrition. The response then has largely been the reviewing and increasing of staff remuneration. Another government’s response to staff shortages is the prompt recruitment of additional staff and the establishment of retention schemes aimed at curbing attrition trends. Also, staff at the management level in MoH who have reached retirement age have been retained. The reasons for such retentions are always linked to the limited skills in their specialties and the challenges of experienced individuals to replace these retirees. There are, however, disadvantages to

retaining retired staff in their existing portfolios, and this includes the potential risks of burnout, resistance to change, lack of innovation, poor management, and demotivation of other staff (De Sousa Sabbagha et al., 2018; Jacobs & Piyapromdee, 2016). The current healthcare professional shortages and the high attrition rates inherently threaten the sustainability and efficacy of the Sierra Leone health system.

Organizations such as the Sierra Leone MoH are expected to have policies and manuals that facilitate effective SPM practices, however, little is known on the extent to which these policies are being utilized by the Sierra Leone public health sector in guiding successful SPM practices. Given this background, understanding the situation of SPM practices within MoH is important to provide insightful answers to questions bordering on the availability and implementation of succession planning in the public health sector. This study therefore sought to determine the perceptions and preferences of SPM practices in the Sierra Leone health sector through evaluating seven (7) SPM practices from the literature (Mateso, 2010) as follows: assessment of organizational leadership; talent management process; identification and development of leadership potentials; selection, evaluation, and rewarding of groomed candidates; internal recruitment and replacement of outgoing leaders; top management leadership commitment to SPM; and integration of SPM practices into organizational culture.

Every organization, at one point, must undergo leadership change at different levels of management. Succession planning can be used as a strategic tool to ensure potential leaders are identified and transition management is swift, thereby improving the legacy and efficiency of the institution. Succession planning and management within healthcare organizations would provide a mechanism for the provision of a leader pipeline to appropriately fill leadership positions (Desir, 2014; Hall-Ellis, 2015; Titzer et al., 2013; Trepanier & Crenshaw, 2013) when leader movement occurs through all management levels in organizations. Succession management can also increase job security, enhance employee attitudes, and reduce turnover (Ali & Mehreen, 2019). Professional literature is scanty on leadership development and its link to succession planning and management in the public health sector (Zepeda et al., 2012). Exploration is therefore needed to pursue this contemporary issue to obtain a perspective on the public health sector and provide an opportunity to improve understanding and awareness of the importance of leader pipelines to ensure qualified individuals are available to fill planned leader vacancies. Understanding existing succession processes within the public health sector and identifying areas impacting present practices would provide an ability

for senior leaders to incorporate reliable methods and systems, proactively preparing for leader gaps and leadership continuity.

Research Questions

RQ 1. What are the perceptions of middle and senior managers on succession planning and management (SPM) practices in the Ministry of Health (MoH)?

RQ 2. What are the preferred succession planning practices among middle and senior managers in the Ministry of Health (MoH)?

METHODOLOGY

A cross-sectional quantitative study design was used. Data collection was done using an adapted semi-structured online questionnaire (Mateso, 2010). The survey was conducted between April 2024 and May 2024. This study was carried out nationwide across the 16 districts of Sierra Leone, targeting employees of the Ministry of Health (MoH). Participants were drawn from the national level: district health management teams (DHMTs), hospitals, and health training institutions. The target population is middle and senior leaders within the civil service between Grade 9 and Grade 14 in MoH. These officials are targeted because of their roles in managing leadership gaps and development in the ministry. The target population consists of healthcare professionals and administrative staff at national and sub-national levels of the public health sector. To be considered in the study, participants must be full-time pin-coded civil servants between grades 9 and 14 working within the public health sector. Individuals are excluded if they are below grade 9; working in the private sector, including NGOs; or embedded consultants/technical assistants in MoH. The Human Resource for Health (HRH) database served as the sample frame for this study. The HRH database has a population of 1,264 civil servants between grade 9 and grade 14 who are the target and eligible population of the study. The sample size calculation was done using G*Power 3.1.9.7 software, using a statistical power of .80 and an alpha error (α) of .05, yielding a sample of 305 for a two-tailed test. However, 1,264 (100%) of the target study population were later considered in the study to achieve a higher number of respondents. A total of 402 respondents completed the survey. This represented 32% of all 1,264 targeted participants. The survey instrument is a 34-item questionnaire using a 4-point Likert scale, which ranged from “Strongly Agree” to “Strongly Disagree” for research question 1 and from “Very Suitable” to “Not Suitable” for research question 2. Seven (7) succession planning and management (SPM) practices from the literature were

evaluated in this study. The participants are spread across the 16 districts of the country. A Google form was prepared and shared via email and social media, requesting eligible officials to complete the survey. The HRH officers across the 16 districts coordinated the survey, ensuring that eligible participants are guided to complete the survey within a period of one (1) month. A local ethics approval from the Sierra Leone Ethics & Scientific Review Committee (SLESRC) (SLESRC No.008/03/2024) was sought and granted for this study. Furthermore, the researcher obtained permission from participants prior to completion of the survey. All data collected was treated in confidence, and efforts were made to avoid unethical practices in this study. Data from 402 cases were exported from the online Google form, first to Microsoft Excel and then to SPSS. Prior to data analysis, data screening was conducted, but no abnormal data entry that requires rectification was found. Therefore, all 402 cases were considered for further analysis, using SPSS version 25.

RESULTS

The findings of this study are presented as per the research questions.

The HRH database has a population of 1,264 civil servants between grade 9 and grade 14 that meet the criteria for inclusion in this study. Below is a table presenting the distribution of the study population.

Table 1: Distribution of target study population (Grades 9-14)

Professional Cadres	Male	Female	Total
Medical Doctors	416	196	612
Nurses	78	148	226
*Allied Health Professionals	270	145	415
**Administrative Staff	9	2	11
Total	773	491	1264

**Allied Health Professionals applies to CHOs, EHOs, lab technicians, pharmacists, nutritionists, etc.*

***Administrative Staff applies to non-health professionals (e.g., accountants, procurement and HR officers).*

The findings presented below account only for the 402 respondents to the survey.

Participants’ Characteristics

Table 2: Socio-demographic variables of the participants

Variable	Category	N=402	%
Gender	Female	148	36.8
	Male	254	63.2
Age	Below 25 Years	2	0.5
	25-34 Years	20	5.0
	35-44 Years	129	32.1
	45-54 Years	125	31.1
	55 Years and Above	126	31.3
Occupational Roles	Health Professionals	384	95.5
	Administrative Staff	18	4.5
Professional Cadres	Allied Health Professionals	221	55
	Medical Doctors	69	17.2
	Nurses	94	23.4
	Administrative Staff	18	4.5
Grades	Grades 9-10 (Upper Mid-Level)	338	84.1
	Grades 11-12 (Senior Level)	58	14.4
	Grades 13-14 (Top Level)	6	1.5
Years in Service	Less than 10 Years	97	24.1
	10-14 Years	83	20.6
	15-19 Years	82	20.4
	20-24 Years	75	18.7
	25-29 Years	25	6.2
	Over 30 Years	40	10.0

Table 2 shows the distribution of respondents in terms of gender, age, occupational role, professional cadre, grade, and service years. Regarding gender, out of the 402 participants, 63.2% (n=254) and 36.8% are male and female respectively. In terms of age, those between 35 years and 44 years old had the largest group with 129 (32.1%), followed by 55 years and above with 126 (31.3%). The mean age of the participants is 45 years (M=45.08; SD=9.04). With regards to the occupational roles, 384 (95.5%) are health professionals (doctors, nurses, and allied health practitioners) while 18 (4.5%) are administrative staff. It can be observed that there is a difference in the numbers of administrative staff in the HRH database (n=11) and those who participated in the survey (n=18). A possible explanation for this difference could be that individuals have applied for grade upgrades and are waiting for official letters. They supposedly used their new anticipated grade during the survey completion. Also, it is likely that promotions have been made but the HR is yet to update the database.

Of the professional cadres of participants, the majority, 221 (55%), are allied health professionals, followed by nurses, 94 (23.4%). Administrative staff is least represented in the survey, 4.5% (n=18). On the civil service employment grade, the majority of the respondents are upper middle-level personnel (grades 9-10), accounting for 84.1%, followed by senior level personnel (grades 11-12), 14.4% (n=58), and top-level personnel (grades 13-14), 1.5% (n=6). Regarding the number of service years at the Ministry of Health (MoH), the majority, 97 (24.1%), were found to have served MoH less than 10 years. Those who served between 10 and 19 years were the majority, accounting for 41% (n=165). The mean year in service is 20 years (M=20.23; SD=68.47).

RQ1. What are the perceptions of middle and senior managers on succession planning and management (SPM) practices in the Ministry of Health (MoH)?

On the perceptions of SPM practices, participants were asked to indicate the extent to which they agreed to the implementation of each of the seven SPM practices in Ministry of Health (MoH). A Likert scale of 1 to 4 was used whereby 1 depicts “Strongly Disagree”, 2 stands for “Disagree”, 3 represents “Agree”, and 4 stands for “Strongly Agree”. The questionnaire did not include the option of “Neutral” in the multiple-choice items of the Likert scale. This was to ensure that respondents had either to skip the item if they had no answer or select an answer that was close to their opinions.

Table 3: Participants’ perceptions on SPM implementation at MoH

SPM Practices	Mean	SD	95% CI
Assessment of Organizational Leadership Needs	2.29	.854	2.20-2.37
Talent Management Process	2.30	.842	2.21-2.38
Identification and Development of Leadership Potentials	2.14	.773	2.06-2.21
Selection, Evaluation, and Rewarding of Groomed Candidates	2.09	.780	2.01-2.16
Internal Recruitment and Replacement of Outgoing Leaders	2.07	.798	1.99-2.14
Top MoH Leadership Commitment to SPM	2.19	.797	2.12-2.27
Integration of SPM Practices in MoH Culture	2.17	.876	2.09-2.26

Table 3 presents the mean scores and standard deviations for each of the SPM practices. The mean scores for all seven SPM practices range from 2.07 to 2.30, indicating respondents’ perceptions are slightly above a score of 2 that represents “Disagree”. Two practices have higher scores even though they do not reach a score of 3, representing “Agree”. These are talent management processes (M=2.30, SD=.84, n=402) and assessment of organizational leadership needs (M=2.29, SD=.85, n=402). On the other hand, internal recruitment and replacement of outgoing leaders has the lowest score (M=2.07, SD=.80, n=402). Overall, SPM practices in MoH are perceived as inadequate.

Further analysis was conducted to establish any perception differences in five independent variables, namely gender, occupational role, professional cadre, grade, and service years. Determining the distribution of these variables was important for choosing appropriate statistical methods. The distributions for all the variables did not show evidence of non-normality according to Shapiro-Wilk tests ($p>0.05$). Accordingly, a parametric test was considered for analysis, using two methods. The first method uses a t-test of independent samples to examine the perception difference between gender (male and female) and occupational roles (health professionals and administrative staff).

The second method employs one-way ANOVA to examine the perception differences between three groups (professional cadre, grade, and service years).

Perception Differences by Gender

To examine perception differences by gender, a t-test of independent samples was conducted. The mean score for all seven succession planning and management (SPM) practices ranges from 2.03 to 2.39. The mean scores of all the SPM practices and for both groups are close to 2, which represents “Disagree”. Results of the t-tests indicate that there were no statistically significant perception differences between female and male for all seven SPM practices ($p>0.05$).

Table 4: Perception differences in SPM practices by gender

Dependent Variables (SPM Practices)	Gender	N	Mean	SD	t	p
Assessment of Organizational Needs	Female	148	2.38	0.84	1.61	0.11
	Male	254	2.24	0.86		
Talent Management Process	Female	148	2.39	0.92	1.59	0.11
	Male	254	2.25	0.79		
Identification and Development of Leadership Potentials	Female	148	2.23	0.86	1.76	0.08
	Male	254	2.08	0.72		
Selection, Evaluation and Rewarding of Groomed Candidates	Female	148	2.17	0.85	1.55	0.12
	Male	254	2.04	0.73		
Internal Recruitment and Replacement of Outgoing Leaders	Female	148	2.1	0.81	0.66	0.51
	Male	254	2.05	0.79		
Top MoH Leadership Commitment to SPM	Female	148	2.26	0.83	1.21	0.23
	Male	254	2.16	0.78		
Integration of SPM Practices in MoH Culture	Female	148	2.23	0.87	0.97	0.33
	Male	254	2.14	0.88		

Perception Differences by Occupational Role

To examine perception differences by occupational role (health professionals and administrative staff), a t-test of independent samples was conducted. The mean score for all seven succession planning and management (SPM) practices ranges from 1.89 to 2.39. The mean scores of all the SPM practices and for both groups are close to 2, which represents “Disagree”. The t-test analysis shows that there were no significant differences between health professionals and administrative staff on their perceptions of succession planning and management practices in the Ministry of Health (MoH) ($p>0.05$).

Table 5: Perception differences in SPM practices by occupational role

Dependent Variables (SPM Practices)	Occupational Roles	N	Mean	SD	t	p
Assessment of Organizational Leadership Needs	Health Professionals	384	2.29	.84	.055	.96
	Administrative Staff	18	2.28	1.07		
Talent Management Process	Health Professionals	384	2.30	.84	.12	.91
	Administrative Staff	18	2.28	.90		
Identification and Development of Leadership Potentials	Health Professionals	384	2.13	.77	-.48	.63
	Administrative Staff	18	2.22	.94		
Selection, Evaluation, and Rewarding of Groomed Candidates	Health Professionals	384	2.08	.77	-.44	.66
	Administrative Staff	18	2.17	.92		
Internal Recruitment and Replacement of Outgoing Leaders	Health Professionals	384	2.05	.79	-1.76	.08
	Administrative Staff	18	2.39	.85		
Top MoH Leadership Commitment to SPM	Health Professionals	384	2.19	.79	-.46	.65
	Administrative Staff	18	2.28	.90		
Integration of SPM Practices in MoH Culture	Health Professionals	384	2.19	.88	1.42	.16
	Administrative Staff	18	1.89	.76		

One-way ANOVA was utilized to examine the perception difference by professional cadre (between four groups), by service grade (between six groups), and lastly by service years (between six groups).

Perception Difference by Professional Cadres

To examine perception differences by professional cadres, a one-way ANOVA test was conducted. The mean score for all the practices ranges from 2.06 to 2.56. The mean scores of all the succession planning and management (SPM) practices and for almost all the groups are close to 2, which represents “Disagree”. The ANOVA results suggest that there were no significant perception differences among the four cadres in the Ministry of Health (MoH) for each of the seven SPM practices ($p>0.05$).

Table 6: Perception differences in SPM Practices by professional cadres

Dependent Variables (SPM Practices)	Allied Health Professionals		Medical Doctors		Nurses		Administrative Staff		F	p
	M	SD	M	SD	M	SD	M	SD		
Assessment of Organizational Leadership Needs	2.3	0.848	2.23	0.789	2.31	0.88	2.28	1.074	0.13	0.94
Talent Management Process	2.3	0.865	2.3	0.734	2.3	0.865	2.28	0.895	0.01	0.99
Identification and Development of Leadership Potentials	2.13	0.801	2.13	0.592	2.14	0.798	2.22	0.943	0.08	0.97
Selection, Evaluation, and Rewarding of Groomed Candidates	2.07	0.8	2.12	0.676	2.09	0.785	2.17	0.924	0.12	0.949
Internal Recruitment and Replacement of Outgoing Leaders	2.07	0.85	2.06	0.639	2.39	0.85	2.39	0.85	1.21	0.30
Top MoH Leadership Commitment to SPM	2.21	0.795	2.29	0.666	2.06	0.865	2.28	0.895	1.28	0.28
Integration of SPM Practices in MoH Culture	2.33	0.886	2.35	0.783	2.29	0.825	2.56	0.984	0.51	0.68

Perception Differences by Service Grade

On the perception differences by service grade, the mean score for almost all the practices across the various grades are close to 2, representing “Disagree”. However, 5 out of the 7 succession planning and management (SPM) practices have a mean score of 3 representing “Agree” for grade 14. This indicates that senior management (Grade 14) personnel agreed that talent management process; identification and development of leadership potentials; internal recruitment and replacement of outgoing leaders; top management

commitment to SPM; and integrating SPM practices in the Ministry of Health (MoH) culture are taking place. The ANOVA results suggest that there were no significant perception differences between service grades in MoH for each of the seven SPM practices ($p>0.05$).

Table 7: Perception differences in SEVEN SPM practices by grade

Dependent Variables	Grade 9		Grade 10		Grade 11		Grade 12		Grade 13		Grade 14		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Assessment of Organizational Leadership Needs	2.33	0.85	2.22	0.89	2.26	0.83	2.15	0.75	2.4	1.14	2.0	.	0.42	0.83
Talent Management Process	2.33	0.86	2.17	0.81	2.42	0.86	2.3	0.80	2.6	0.89	3.0	.	0.97	0.43
Identification and Development of Leadership Potentials	2.18	0.78	2.08	0.81	2.0	0.62	2.15	0.67	2.2	1.1	3.0	.	0.77	0.57
Selection, Evaluation, and Rewarding of Groomed Candidates	2.1	0.80	2.0	0.77	2.08	0.71	2.3	0.73	2.6	0.89	2.0	.	1.01	0.41
Internal Recruitment and Replacement of Outgoing Leaders	2.12	0.84	1.9	0.73	2.05	0.70	2.3	0.73	2.4	0.89	3.0	.	1.96	0.08
Top MoH Leadership Commitment to SPM	2.24	0.83	2.04	0.76	2.26	0.69	2.2	0.70	2.6	0.89	3.0	.	1.49	0.19
Integration of SPM Practices in MoH Culture	2.37	0.87	2.18	0.86	2.39	0.79	2.4	0.82	2.6	0.89	3.0	.	1.05	0.39

Perception Differences by Years in Service

On the perception differences by years in service, ANOVA results below suggest that there were no significant perception differences between the four cadres in the Ministry of Health (MoH) for six out seven succession planning and management (SPM) practices ($p>0.05$). However, ANOVA results indicate that there was significant perception difference between service years and the talent management process, $F(5,396)=2.21$, $p=.053$ in relation to succession planning and management practices.

Table 8: Perception differences in seven SPM practices by years in service

Dependent Variables	<10 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		≥30 Years		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Assessment of Organizational Leadership Needs	2.28	0.8	2.14	0.95	2.23	0.74	2.43	0.95	2.4	0.96	2.4	0.709	1.12	0.33
Talent Management Process	2.32	0.785	2.19	0.89	2.12	0.84	2.47	0.91	2.32	0.85	2.53	0.679	2.21	.053*
Identification and Development of Leadership Potentials	2.15	0.667	2.1	0.82	2.04	0.79	2.09	0.81	2.4	0.82	2.4	0.816	1.32	0.25
Selection, Evaluation, and Rewarding of Groomed Candidates	2.03	0.728	2.08	0.78	2	0.79	2.13	0.81	2.36	0.81	2.15	0.802	1.02	0.40
Internal Recruitment and Replacement of Outgoing Leaders	2.08	0.717	2.08	0.87	2.02	0.83	2.07	0.83	2.16	0.75	2.03	0.768	0.05	0.98
Top MoH Leadership Commitment to SPM	2.25	0.693	2.18	0.9	2.16	0.75	2.17	0.81	2.2	0.91	2.2	0.853	0.13	0.99
Integration of SPM Practices in MoH Culture	2.32	0.785	2.34	0.95	2.28	0.85	2.29	0.90	2.48	0.77	2.42	0.844	0.33	0.89

In the analysis of perception differences in five independent variables, namely gender, occupational role, professional cadre, grade, and service year, it was found that there is no statistical relationship among the 5 independent variables and SPM practices. However, ANOVA results indicate that there was significant perception difference between service years and the talent management process, $F(5,396)=2.21$, $p=.053$ in relation to succession planning and management practices.

Overall, participants’ differences in terms of gender, professional cadre, occupational role, grade, and length of service do not significantly influence their perceptions on the status of SPM practices in MoH.

RQ 2. What are the preferred succession planning practices among middle and senior managers in the Ministry of Health (MoH)?

This research question sought to explore the preferred succession planning and management (SPM) practice(s) currently taking place in the Ministry of

Health (MoH). Participants were requested to indicate the degree of suitability for 5 SPM approaches in MoH, i.e., (i) Internal leadership grooming and retention program, (ii) Searching for talents abroad, (iii) Rehiring retired officials, (iv) Restructuring the MoH, and (v) Doing nothing (continue business as usual).

A 4-item Likert scale was used, ranging from 1=Not Suitable; 2=Fairly Suitable; 3=Suitable; and to 4=Very Suitable. The questionnaire did not include the option of “Neutral” in the multiple-choice items of the Likert scale. This was to ensure that respondents had either to skip the item if they had no answer or select an answer that was close to their opinions.

Table 9: SMP preferred approaches

SPM Approach	Preference	n	%
Internal Leadership Grooming and Retention Program	Not Suitable	27	6.7
	Fairly Suitable	57	14.2
	Suitable	186	46.3
	Very Suitable	132	32.8
Searching for Talents Abroad	Not Suitable	142	35.3
	Fairly Suitable	171	42.5
	Suitable	77	19.2
	Very Suitable	12	3
Rehiring Retired Officials	Not Suitable	122	30.3
	Fairly Suitable	151	37.6
	Suitable	107	26.6
	Very Suitable	22	5.5
Restructuring the MoH	Not Suitable	50	12.4
	Fairly Suitable	124	30.8
	Suitable	155	38.6
	Very Suitable	73	18.2
Doing Nothing (Continue Business as Usual)	Not Suitable	320	79.6
	Fairly Suitable	43	10.7
	Suitable	31	7.7
	Very Suitable	8	2

Out of the 5 approaches, only 2 were considered “Suitable” and “Very Suitable”, and these are internal leadership grooming (n=318; 79.1%) and restructuring MoH (n=228; 56.8%). Two approaches were considered “Fairly Suitable”, and these are searching for talents from abroad, 171 (42.5%) and rehiring the retired officials, 151 (37.6%). Doing nothing about SPM is considered “Not Suitable” by the majority of the respondents, 320 (79.6%).

Overall, middle and senior management consider internal leadership grooming and restructuring of MoH as suitable for effective SPM in the health sector. Maintaining the status quo in relation to SPM practices is overwhelmingly perceived as “Not Suitable”.

DISCUSSION

This study was set out to examine the perceptions and preferences of middle and senior management on succession planning and management (SPM) practices in the Sierra Leone Ministry of Health (MoH). The study revealed a negative perception of SPM practices in MoH. Participants widely “disagreed” that the seven SPM practices considered in this study, i.e., assessment of organizational leadership; talent management process; identification and development of leadership potentials; selection, evaluation, and rewarding of groomed candidates; internal recruitment and replacement of outgoing leaders; top management leadership commitment to SPM; and integration of SPM practices into MoH, are sufficiently being practiced in MoH. The findings demonstrate that MoH’s effort in fostering effective succession management is unsatisfactory. The study further sought to understand the relationship between the perception of SPM practices in MoH and the participants’ gender, occupational role, professional care, grade, and years in service. The study found that there is no statistical relationship between gender, occupation role, professional cadre, grade, and six (6) out of seven (7) SPM practices (assessment of organizational leadership; identification and development of leadership potentials; selection, evaluation, and rewarding of groomed candidates; internal recruitment and replacement of outgoing leaders; top management leadership commitment to SPM; and integration of SPM practices into MoH). However, there was a perception difference between service years and the talent management process, $F(5,396)=2.21, p=.053$.

These study findings are consistent with Mehrtak et al. (2014) on the Iranian health sector, where succession planning was found to be lacking. In a similar study in South Africa, Mhlongo & Harunavamwe (2017) found a negative perception of succession planning. The studied population perceived

efforts of the company as inadequate in implementing programs related to succession planning. Further, the study finding corroborates with those of Ngcamu's (2019) study within a higher institution of learning, where succession planning is found to be non-existent. Furthermore, the study noted that the staff are insufficiently prepared and incompetent in their current roles and responsibilities. This is the implication of poorly managed succession planning when the wrong and inadequately prepared individuals uncontrolledly fill vacant leadership positions. The absence of succession planning has been reported to undermine performance and affect staff morale, satisfaction, and retention (Ali & Mehreen, 2019; Mehrtak et al., 2014; Zepeda et al., 2012). Capacity development needs of employees through job training, coaching, and mentoring, for example, should therefore be given serious consideration in any succession planning program with a view to preserve and retain talented staff (Mehrabani & Mohamad, 2011; Garg & Van Weele, 2012).

On the preferred SPM practices in MoH, overall, middle and senior management staff consider internal leadership grooming and restructuring of MoH as suitable for effective SPM in the sector. Maintaining the status quo by doing nothing in relation to SPM practices is overwhelmingly perceived as "Not Suitable". Approaches such as searching for talents abroad and rehiring the retired officials were considered "Fairly Suitable". The preference for internal leadership grooming as found in this study re-echoes Pita et al.'s (2016) work in South Africa to examine the intention to leave public service organizations. The findings showed that corporate succession planning practices and internal succession barriers are negatively related to intentions to leave in the public service. In their exploratory study on the recruitment and selection practices in public sector institutions in Sierra Leone, Konateh et al. (2023) found that critical skill shortages in some MDAs as well as the deep politicization of human resources are major challenges to the recruitment and selection procedures in the public sector. Inherently, their findings have implications on SPM practices across government institutions, and their findings may not be unconnected from the negative perceptions on SPM practices in MoH, as revealed in this study. On the preferred SPM practices, Gothard and Austin (2013) noted that no single practice of corporate succession planning can fit all organizations. Notwithstanding, the practice of grooming successors is considered very important in any organization. In the public sector, for example, successor grooming serves as the appropriate mechanism through which improved public service delivery can be fulfilled (Goodman et al., 2015; Sonnino, 2013). Succession planning is a valuable strategy that organizations like the Sierra Leone MoH should consider minimizing the impact of continual turnover, and if implemented, it has an impact on professionalizing the public

service (Manzini & Malatjie, 2023). It can be used as a strategy to manage talent and continuous change brought about by high staff turnover that affects the performance of the public sector overall.

CONCLUSION

Leadership is an essential health sector practice that can have a direct impact on clinical and organizational outcomes and an indirect effect on all other elements of the operational environment. The need to develop high-performing leaders through effective succession planning and management practices is important if the vision for transforming the Sierra Leone public health sector is to be realized. Generally, it can be concluded in this study that the perceptions of middle and senior managers in relation to succession in the health sector are universally negative, indicating that succession planning and management (SPM) practices are lacking or inadequate. Overall, participants' differences in terms of gender, professional cadre, occupational role, grade, and length of service do not significantly influence their perceptions on the current status of SPM practices in the Ministry of Health (MoH). The lack of effective SPM practices in the health sector inherently affects the effectiveness, efficiency, and impact of health services provision and outcomes. The optimal utilization of human resources for health could be enhanced by efficacious SPM practices, leading to a motivated staff, improved performance, and ultimately reduced staff attrition. The issue of succession planning in the MoH should be prioritized by the government and development partners involved in health system strengthening efforts for sustainable transformation of the health sector. In the absence of an effective SPM system, wrong individuals with little experience will likely occupy leadership roles that they do not deserve. This will result in an increase in both the level of dissatisfaction among deserving staff and staff attrition rates. It is obvious that when experienced and passionate leaders leave the healthcare organizations, this often results in a loss of institutional knowledge and affects organizational performance. On the preferred SPM practices in MoH, overall, middle and senior management staff consider internal leadership grooming and restructuring of MoH as suitable for effective SPM practices in the sector. This study is significant to policy and practice for providing awareness on the use of effective succession planning strategies for achieving sustainability by retaining talented staff and developing future leaders to benefit the continuity of healthcare services for all Sierra Leoneans. It is expected that this study will generate discussion within MoH and its partners on the importance of succession planning as part of health system strengthening efforts.

It is no gainsaying that succession planning has become one of the most significant human resource management responsibilities within today's public and private organizations. Organizations, including the public health sector, cannot afford to attract, invest in, and then lose their high-potential employees. Retaining and developing potential employees is critical for the growth and performance of the Sierra Leone public health sector through effective succession planning and management practices. Based on the findings, the study recommends that the Human Resources Management Office (HRMO) and the Health Service Commission (HSC) put in place a policy framework that will foster effective SPM practices in the health sector. Internal talent grooming and organizational restructuring in order to create a culture of effective succession planning and management in MoH should be prioritized.

Ethical Approval: Sierra Leone Ethics & Scientific review Committee (SLESRC No.008/03/2024).

Authors' Contributions: AK is the only author of the article.

Funding and Acknowledgment: This piece of work is part of the thesis titled "Health Systems Leadership & Governance: Succession Planning & Management Practices" in Sierra Leone—a requirement for the award of PhD degree in Health Planning Policy and Management. The author would like to thank the study participants, without whom, this study would not have been possible.

Conflict of Interest Statement: The author declares that there are no competing interests.

REFERENCES

- Aladwan, K., Bhanugopan, R., & Fish, A. (2013). Why do employees jump ship? Examining intent to quit employment in a non-western cultural context. *Employee Relations*, 35(4), 408–422. <https://doi.org/10.1108/ER-03-2012-0027>
- Ali, Z., & Mehreen, A. (2019). Understanding succession planning as a combating strategy for turnover intentions. *Journal of Advances in Management Research*, 16(2), 216–233. <https://doi.org/10.1108/JAMR-09-2018-0076>
- Belasen, A., & Belasen, A. R. (2016). Value in the middle: Cultivating middle managers in healthcare organizations. *Journal of Management Development*, 35(9), 1149–1162. <https://doi.org/10.1108/JMD-12-2015-0173>
- Chan, Z. C. Y., Tam, W. S., Lung, M. K. Y., Wong, W. Y., & Chau, C. W. (2013). A systematic literature review of nurse shortage and the intention to leave. *Journal of Nursing Management*, 21(4), 605–613. <https://doi.org/10.1111/j.1365-2834.2012.01437.x>
- Committee on Pediatric Workforce, Rimsza, M. E., Hotaling, A. J., Keown, M. E., Marcin, J. P., Moskowitz, W. B., Sigrest, T. D., & Simon, H. K. (2015). The use of telemedicine to address access and physician workforce shortages. *Pediatrics*, 136(1), 202–209. <https://doi.org/10.1542/peds.2015-1253>

- De Sousa Sabbagha, M., Ledimo, O., & Martins, N. (2018). Predicting staff retention from employee motivation and job satisfaction. *Journal of Psychology in Africa*, 28(2), 136–140. <https://doi.org/10.1080/14330237.2018.1454578>
- Desir, E. (2014). Exploring obstacles to success for early careerists in healthcare leadership. *Journal of Healthcare Management*, 59(4), 250–253. <https://doi.org/10.1097/00115514-201407000-00004>
- Dodd, K., & Simons, C. (2005). Succession planning—securing your organization’s future. *Home Health Care Management & Practice*, 17(5), 401–402. <https://doi.org/10.1177/1084822305275604>
- Garg, A. K., & Van Weele, E. (2012). Succession planning and its impact on the performance of small micro medium enterprises within the manufacturing sector in Johannesburg. *International Journal of Business and Management*, 7(9), 96–107. <https://doi.org/10.5539/ijbm.v7n9p96>
- Goodman, D., French, P. E., & Battaglio Jr., R. P. (2015). Determinants of local government workforce planning. *The American Review of Public Administration*, 45(2), 135–152. <https://doi.org/10.1177/0275074013486179>
- Gothard, S., & Austin, M. J. (2013). Leadership succession planning: Implications for nonprofit human service organizations. *Administration in Social Work*, 37(3), 272–285. <https://doi.org/10.1080/03643107.2012.684741>
- Groves, K. S. (2018). Succession management capabilities: Planning for the inevitable transition of executive talent. *Academy of Management Proceedings*, 2018(1), 15773. <https://doi.org/10.5465/AMBPP.2018.15773abstract>
- Hall-Ellis, S. D. (2015). Succession planning and staff development—a winning combination. *The Bottom Line*, 28(3), 95–98. <https://doi.org/10.1108/BL-05-2015-0007>
- Jacobs, L., & Piyapromdee, S. (2016). Labor force transitions at older ages: Burnout, recovery, and reverse retirement (FEDS Working Paper No. 2016-53). Federal Reserve Board. <http://dx.doi.org/10.17016/FEDS.2016.053>
- Konateh, H., Duramany-Lakkoh, E. K., & Udeh, E. (2023). Cost and administrative effectiveness of recruitment and selection practices on public service delivery in public sector institutions. *European Journal of Business & Management Research*, 8(2), 21–30. <https://doi.org/10.24018/ejbmr.2023.8.2.1814>
- Manzini, G.-R. X., & Malatjie, I. (2023). An analysis of succession planning strategies in professionalising the public sector: A case of the national school of government. *Journal of Public Administration*, 58(4), 1130–1141. <https://doi.org/10.53973/jopa.2023.58.4.a16>
- Mateso, P. E. E. (2010). Understanding succession planning and management efforts at Midwestern University: A mixed methods study [Doctoral dissertation, Bowling Green State University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=bgsu1276203234
- Mehrabani, S. E., & Mohamad, N. A. (2011). Identifying the important factors influencing the implementation of succession planning. *International Conference on Information and Finance*, 21(2), 37–41.
- Mehrtak, M., Vatankhah, S., Delgoshaei, B., & Gholipour, A. (2014). Succession planning in the Iranian health system: A case study of the Ministry of Health and Medical Education. *Global Journal of Health Science*, 6(5), 174–182. <https://doi.org/10.5539/gjhs.v6n5p174>

Mhlongo, S. B. & Harunavamwe, M. (2017). Exploring management's perceptions of succession planning and its impact on staff retention at an agricultural company. *International Journal of Research in Business Studies and Management*, 4(3), 7–26.

Ngcamu, B. S. (2019). Succession planning and leadership development in a faculty of health sciences. *Global Journal of Health Science*, 11(11), 101–108. <https://doi.org/10.5539/gjhs.v11n11p101>

Pita, N. A., Mafini, C., & Dhurup, M. (2016). Corporate succession practices: A public sector perspective. *Corporate Ownership & Control*, 13(4), 441–446. <https://doi.org/10.22495/cocv13i4c3p3>

Sherman, R. O., Chiang-Hanisko, L., & Koszalinski, R. (2013). The ageing nursing workforce: A global challenge. *Journal of Nursing Management*, 21(7), 899–902. <https://doi.org/10.1111/jonm.12188>

Sonnino, R. E. (2013). Professional development and leadership training opportunities for healthcare professionals. *The American Journal of Surgery*, 206(5), 727–731. <https://doi.org/10.1016/j.amjsurg.2013.07.004>

Streeter, N. (2015). Workforce crisis in MCH leadership. *Maternal Child Health Journal*, 19(2), 240–243. <https://doi.org/10.1007/s10995-014-1621-x>

Thompson, R., Wolf, D. M., & Sabatine, J. M. (2012). Mentoring and coaching: A model guiding professional nurses to executive success. *JONA: The Journal of Nursing Administration*, 42(11), 536–541. <https://doi.org/10.1097/NNA.0b013e31827144ea>

Titze, J., Phillips, T., Tooley, S., Hall, N., & Shirey, M. (2013). Nurse manager succession planning: Synthesis of the evidence. *Journal of Nursing Management*, 21(7), 971–979. <https://doi.org/10.1111/jonm.12179>

Trepanier, S., & Crenshaw, J. T. (2013). Succession planning: A call to action for nurse executives. *Journal of Nursing Management*, 21(7), 980–985. <https://doi.org/10.1111/jonm.12177>

Walton-Roberts, M., Runnels, V., Rajan, S. I., Sood, A., Nair, S., Thomas, P., Packer, C., MacKenzie A., Murphy, G. T., Labonté, R., & Bourgeault, I. L. (2017). Causes, consequences, and policy responses to the migration of health workers: Key findings from India. *Human Resources for Health*, 15(1), 28. <https://doi.org/10.1186/s12960-017-0199-y>

Zepeda, S. J., Bengtson, E., & Parylo, O. (2012). Examining the planning and management of principal succession. *Journal of Educational Administration*, 50(2), 136–158. <https://doi.org/10.1108/09578231211210512>

Kurt, H. N., & Oğuzhan, G. (2025). The relationship between healthcare workers' social well-being and their turnover intention. *Journal of Health Systems and Policies (JHESP)*, VII, 99-112, DOI: 10.52675/jhesp.1801159

The Relationship Between Healthcare Workers' Social Well-Being and Their Turnover Intention

Hira Nur KURT¹ 

Gülpembe OĞUZHAN^{2*} 

ABSTRACT

This has aimed to examine whether the social well-being and intention to leave of healthcare workers differed based on descriptive characteristics, and to investigate the relationship between these two variables. The research was conducted with 146 healthcare workers employed at a private hospital. Data were collected by using the Social Well-Being Scale and the Intention to Leave Scale. According to the findings, the overall mean social well-being score of the participants was 3.78, with the highest subscale being “Social Acceptance” (3.84) and the lowest subscale being “Sense of Trust” (3.68). The mean intention to leave the job was 2.55, and it was assessed that, in general, the participants’ tendency to leave their jobs was low. A significant and negative relationship was found between social well-being and intention to leave ($p=0.015$). This finding shows that as social well-being increases, the intention to leave decreases. Therefore, the effect of social well-being in reducing the intention to leave can be considered as a factor in reducing staff turnover in healthcare institutions.

Keywords: Healthcare Workers, Private Hospital, Social Well-Being, Turnover Intention

¹ Tarsus University, Faculty of Applied Sciences, Mersin, Türkiye

² Tarsus University, Faculty of Applied Sciences, Mersin, Türkiye

* Corresponding author: Gülpembe OĞUZHAN, gulpembe@tarsus.edu.tr

INTRODUCTION

The World Health Organization has referred to a state of complete well-being since 1947, including the social aspect in its definition of health (World Health Organization, 2020). Well-being encompasses not only quality of life but also the capacity of individuals and communities to contribute to the world in line with their sense of meaning and purpose (World Health Organization, 2021). Social well-being, as defined in Keyes's (1998) model, is the capacity of individuals to strengthen their social bonds and form meaningful relationships. This model emphasizes the relationship between social well-being and individuals' overall well-being. Social well-being is more related to the qualities of social relationship networks than to social and structural variables such as income, income distribution, and education (İlhan, 2018). The social well-being of healthcare workers is closely related to the processes of building meaningful relationships, strengthening social ties, and contributing to society while fulfilling their professional roles (Vakilabad et al., 2023). In other words, social well-being is a reflection of individuals' perceptions of their overall health and life situations, as well as their satisfaction with social interactions and professional experiences (Law et al., 1998). In their study, Mozaffari et al. (2015) stated that nurses' social well-being is closely related to individual, organizational, social, and media-related factors. The support provided by these factors helps nurses feel satisfaction, motivation, self-confidence, self-esteem, hope, and a sense of accomplishment within the framework of their individual and social interactions. Social acceptance, meaningful professional interactions, and supportive work environments both strengthen employees' social well-being and reduce their tendency to disengage from work (Fujikawa et al., 2024). Resignation is the termination of the service contract between the employee and the institution they work for. The intention to resign is used to express the likelihood of a person leaving their job in the near future and their subjective prediction (Kaymaz, 2020). Today, a large part of the lives of people with certain responsibilities is spent in their work environments. Abraham Maslow's hierarchy of needs theory states that people have a need for love and belonging. Feeling a sense of belonging involves needs such as acceptance, friendship, camaraderie, and love in the workplace and surrounding environment (Silah, 2005). Living in an environment that one dislikes and where one feels unloved can cause distress (Eren, 2014). Therefore, individuals will desire a work environment where they can get along, bond, and communicate.

Maintaining negative feelings about work leads to employee dissatisfaction, reluctance, and frustration. For this reason, the negativity, restrictions, and pressures individuals encounter in their work life will affect their well-being at work. As a result, individuals may be expected to show a tendency to leave their jobs (Öngen-Bilir et al., 2018). Employees' tendency to leave their jobs is determined not only by their feelings towards their work and whether they enjoy doing it, but also by the organizational culture, management's attitude, and the behavior of other coworkers. Therefore, it is possible to evaluate the process of leaving a job as a three-dimensional process consisting of individual, organizational, and environmental factors (Yıldırım et al., 2014).

The intention to leave a job is a negative behavior exhibited by employees when they are dissatisfied with their employment conditions. Despite research into employee turnover, employee behavior, and the factors associated with this behavior, it remains a significant problem for organizations (Seyfullahoğulları, 2018). Employee turnover causes serious resource losses for companies by creating comprehensive costs that include the loss of qualified labor, re-hiring and training processes, opportunity costs, and a decline in the morale of existing employees (Seyrek & İnal, 2017; Sökmen & Sökmen, 2014). Therefore, it is important for organizations to identify the factors that influence employees' intention to leave and develop the necessary preventive strategies. The purpose of this study is to examine the relationship between healthcare workers' social well-being and their intention to leave. The research questions are as follows:

- What is the level of social well-being among healthcare workers? Does social well-being vary according to defining characteristics?
- What are the intentions of healthcare workers to leave their jobs? Do intentions to leave vary according to defining characteristics?
- Is there a relationship between social well-being and intention to leave? If so, in what direction?

METHODOLOGY

The study is descriptive and correlational in nature. It was conducted at a private hospital in the Tarsus district of Mersin province, located in Turkey's Mediterranean Region. Hospital healthcare workers constitute the study population. During discussions with the hospital, it was reported that there was a total of 250 employees. It was determined that there were 230 healthcare workers, excluding those on leave and on sick leave. The following formula, used to determine the number of people to be sampled in cases where the population is known, was used to find the sample size for the study (Öztürk, 2017).

$$n = [N \cdot t^2 \cdot p \cdot q] / [d^2 (N - 1) + t^2 \cdot p \cdot q]$$

In the formula:

n: Number of individuals to be sampled

N: Number of individuals in the population

t: Theoretical value obtained from the t table at a specified degree of freedom and error level

p: Frequency (probability) of the event under study

q: Frequency of non-occurrence of the event (1 – p)

d: Desired margin of error (±) according to the frequency of the event

In the sample calculation, the t-table value for the significance level $\alpha=0.05$ is $t=1.96$, with a 95% confidence interval, an accepted sampling error of $\pm d=0.05$ based on the frequency of occurrence, and a frequency of occurrence (prevalence) of $p=0.5$. According to this formula, the minimum sample size was calculated as 145. Using simple random sampling, the study aimed to reach healthcare workers who met the inclusion criteria. Surveys were administered to healthcare workers who fulfilled the criteria, and the questionnaires of 146 participants were deemed valid and included in the analyses.

Inclusion criteria for the study:

- To be a healthcare worker
- To agree to participate in the study
- To be able to understand and speak Turkish

The exclusion criterion for the study was participants' self-report of having any mental or physical disability.

As a data collection tool, a questionnaire form consisting of a voluntary consent form, a personal information form, the Social Well-Being Scale, and the Turnover Intention Scale were used.

Personal Information Form: Developed based on the relevant literature, this form consisted of six questions aimed at determining participants' descriptive characteristics, including age, gender, educational status, marital status, length of employment at the institution, and total years of professional experience.

Social Well-Being Scale: Developed by Turğut (2017) to describe the social well-being of healthcare workers. The scale consists of thirty-two items and a single sub-dimension, and is a five-point Likert scale (1=Strongly Disagree – 5=Strongly Agree). The Cronbach's alpha value of the scale is 0.962. A higher score on the scale indicates a higher level of social well-being. The scale consists of a total of 32 items and covers "Social Acceptance" (characteristics such as not seeing differences among group members and accepting people as they

are), “Trust” (characteristics such as feeling a sense of belonging to the group, belief, and attachment), “Social Influence” (items related to the similarity of behaviors in the context of interpersonal interactions and social norms), and “Social Respect” (items related to the situation where group members feel that they have characteristics such as being respected and gaining prestige as a result of the roles assigned to them).

Intention to Leave Scale: Developed by Gürbüz and Bekmezci (2012) to measure employees’ commitment to the organization. The scale consists of three items and a single sub-dimension, and is a five-point Likert scale (1=Strongly Disagree – 5=Strongly Agree). A higher score on the scale indicates a higher intention to leave. Individuals with an intention to leave must score 3 points or higher. Both scales have previously been used independently in studies focusing on healthcare workers.

Research data was collected through face-to-face interviews between October 5th and December 10th, 2024. Before data collection tools were applied, an information text was notified to the employees, and verbal and/or written informed consent was obtained. Individuals had the right to withdraw from the study at any stage without stating a reason. It took an average of 15 minutes to complete the survey.

The data obtained from the surveys was entered into a statistical software program for analysis. First, frequency analyzes were performed for demographic characteristics, and frequency (n) and percentage (%) values were calculated for each group. Subsequently, frequency analyzes were conducted for the scale scores, and the mean (M), standard deviation (SD), minimum (min), and maximum (max) values were calculated for each group.

The normality of the variables was assessed using the coefficients of skewness and kurtosis. According to Tabachnick and Fidell (2013), variables with skewness and kurtosis values between -1.50 and +1.50 are considered normally distributed; otherwise, it is assumed that the variables deviate from normality. Homogeneity of variances was assessed using Levene’s test. The internal consistency coefficient (Cronbach’s Alpha) was calculated for reliability analysis. Reliability coefficients have been interpreted as follows (Kalaycı, 2008):

- $\leq \alpha < 0.40$: unreliable
- $0.40 \leq \alpha < 0.60$: low reliability
- $0.60 \leq \alpha < 0.80$: moderately reliable
- $0.80 \leq \alpha < 1.00$: highly reliable

The presence of differences in scale levels based on descriptive characteristics was examined using the t-test for independent groups, one-way analysis of variance (ANOVA), and post hoc (LSD) tests. Pearson correlation analysis was performed to measure the correlations between the determinants of participants' scale levels. When interpreting the results, a significance level of 0.05 was used; a $p < 0.05$ indicates a significant difference, while a $p > 0.05$ indicates no significant difference.

The fact that the research data was obtained from a single private hospital significantly limits the scope of the findings. Therefore, it is methodologically inappropriate to generalize the study results to all private hospitals. The findings should only be evaluated within the context of the characteristics and employee profile of the institution where the research was conducted. The Ethics Committee for Social and Human Sciences Research at Tarsus University accepted the study on March 28, 2024 (28.03.2024/30).

RESULTS

Information on the descriptive characteristics of the 146 participants included in the study is presented in Table 1. Participants consisted of healthcare personnel such as physicians, nurses, midwives, laboratory and radiology technicians, etc. Since the group was quite heterogeneous, separate statistical analyses were not performed based on professions. Among the participants, women, those aged 20-29, married individuals, those with postgraduate education, and those with 0 to 3 years of work experience in the institution and profession constituted the majority compared to other categories.

Table 1: Descriptive statistics of the sample group

Descriptive Characteristics	Category	n	%
Gender	Male	51	34.9
	Female	95	65.1
Age	20-29	69	47.3
	30-39	38	26
	40-49	25	17.1
	50-85	14	9.6
Marital Status	Married	70	47.9
	Single	76	52.1
Educational Level	Postgraduate	1	0.7
	High School	19	13
	Bachelor's Degree	47	32.2
	Primary Education	79	54.2
Years of Professional Experience	0-3	100	68.5
	4-7	25	17.1
	8-11	14	9.6
	12-55	7	4.8
Years of Employment at the Institution	0-3	56	38.4
	4-7	28	19.2
	8-11	20	13.7
	12-55	42	28.8

The results of the analyses examining whether the scale scores meet the assumptions of normality are presented in Table 2.

Table 2: Normality and reliability analysis results

Scale	Mean (M)	Standard Deviation (SD)	Skewness	Kurtosis	Cronbach Alpha
Social Well-Being Scale	3.78	.90	-1.027	.823	.975
Turnover Intention Scale	2.56	1.15	.569	-.438	.907

As shown in Table 2, the skewness and kurtosis values were within the range of -1.5 to +1.5, indicating that the data meet the assumptions of normality. Therefore, ANOVA and t-tests were deemed appropriate for examining relationships between groups. For the Social Well-Being Scale, Turğut (2017) reported a Cronbach's alpha of 0.96, while in the present study, the Cronbach's alpha was found to be 0.975, indicating a high level of reliability. For the Turnover Intention Scale, Gürbüz and Bekmezci (2012) reported a Cronbach's alpha of 0.90, while in this study, the Cronbach's alpha was 0.907, also indicating a high level of reliability.

Table 3: Participants' social well-being and turnover intention

	n	M	SD
Social Well-Being Scale	146	3.78	.90
Social Acceptance	146	3.84	.93
Trust	146	3.68	.99
Social Influence	146	3.79	1.03
Social Respect	146	3.71	.96
Turnover Intention Scale	146	2.56	1.15

As shown in Table 3, the sub-dimension with the highest score among the participants was "Social Acceptance" (3.84), while the sub-dimension with the lowest score was "Trust" (3.68). The "Social Acceptance" sub-dimension includes elements such as recognizing the differences of group members and accepting individuals as they are, while the "Trust" sub-dimension is related to feelings of belonging, belief, and commitment to the group. According to the overall scale average presented in Table 3, the participants' responses generally indicate that they do not intend to leave their jobs.

The variation of social well-being and turnover intention according to participants' descriptive characteristics were analyzed. For comparisons between two groups, the independent samples t-test was used, while for comparisons among more than two groups, one-way ANOVA was employed. In all tests, a $p < 0.05$ was considered statistically significant (Table 4).

Table 4: Findings on the differences in social well-being and turnover intention according to participants' descriptive characteristics

		Social Well-Being															Turnover Intention Scale			
Descriptive Characteristics	Category	Social Acceptance			Trust			Social Influence			Social Respect			Scale Total Score			Sig.	M	SD	Sig.
		M	SD	Sig.*	M	SD	Sig.	M	SD	Sig.	M	SD	Sig.	M	SD	Sig.				
Gender	Male	3.7	0.9	0.3	3.55	0.98	0.24	3.62	1.1	0.17	3.67	0.86	0.7	3.67	0.9	0.00	2.55	1.13	0.53	
	Female	3.9	0.9		3.75	0.99		3.88	0.98		3.73	1		3.84	0.9		2.56	1.17		
Age	20-29	3.8	0.9	0.56	3.66	0.96	0.3	3.71	0.97	0.64	3.68	0.86	0.75	3.74	0.84	0.58	2.58	1.26	0.99	
	30-39	3.8	1		3.67	1.04		3.91	1.06		3.63	1.14		3.76	1					
	40-49	3.8	0.9		3.52	1.03		3.7	1.1		3.83	0.9		3.74	0.95					
	50-85	4.2	0.9		4.14	0.85		4	1.12		3.9	1		4.1	0.9					
Marital Status	Married	3.8	1	0.9	3.7	1.05	0.8	3.83	1.08	0.62	3.71	1	0.99	3.79	0.99	0.39	2.47	1.11	0.48	
	Single	3.9	0.9		3.66	0.94		3.75	0.98		3.71	0.91		3.77	0.82		2.64	1.2		
Educational Level	Postgraduate	4.6	-	0.87	3.33	-	0.95	3.83	-	0.96	4.2	-	0.94	4.16	-	0.98	3.67	-	0.79	
	High School	3.9	0.9		3.7	0.98		3.89	0.94		3.72	1		3.81	0.89		2.58	1.4		
	Bachelor's Degree	3.9	0.8		3.63	0.95		3.75	0.96		3.74	0.94		3.78	0.81		2.5	1.18		
	Primary Education	3.8	1		3.71	1.03		3.79	1.1		3.69	0.96		3.77	0.97		2.57	1.09		
Years of Professional Experience	0-3	3.9	0.9	0.36	3.71	0.99	0.78	3.78	1.03	0.31	3.71	0.91	0.19	4.01	0.92	0.33	2.68	0.31	0.32	
	4-7	3.6	1		3.53	1.03		3.6	1.07		3.53	1.07		3.68	0.85		2.37	0.32		
	8-11	3.8	1.1		3.61	1.09		3.84	1.05		3.74	1.12		3.96	0.71		2.78	0.42		
	12-55	4.1	0.7		3.9	0.75		4.45	0.59		4.42	0.37		4.34	0.8		2.13	0.59		
Years of Employment at the Institution	0-3	3.9	0.8	0.26	3.74	0.96	0.62	3.77	0.99	0.69	3.68	0.89	0.59	4	0.95	0.28	2.69	0.35	0.68	
	4-7	3.7	0.9		3.5	0.94		3.65	0.95		3.62	0.87		3.74	0.98		2.57	0.36		
	8-11	3.6	1.2		3.58	1.13		3.71	1.25		3.58	1.21		3.83	0.74		2.43	0.27		
	12-55	4	0.9		3.78	0.99		3.94	1.03		3.88	0.96		4.19	0.79		2.56	0.33		

*Sig. has been used as an abbreviation for significance. There is a statistically significant relationship at the 0.05 level.

In the analysis conducted in terms of demographic variables, no statistically significant difference was found between the Social Well-Being and intent to leave averages ($p>0.05$). In the analysis based solely on gender, women ($M=3.84$) scored significantly higher on the Social Well-Being Scale total score than men ($M=3.67$) ($p<0.05$). This finding indicates that women perceive their social well-being to be higher than men.

To examine whether there is a relationship between Social Well-Being and Turnover Intention, a Pearson correlation analysis was conducted (Table 5).

Table 5: Findings on the relationship between Social Well-Being and Turnover Intention

		Social Well-Being			
		Social Acceptance	Trust	Social Influence	Social Respect
Turnover Intention Scale	Pearson Correlation	-.138	-.271**	-.186*	-.212*
	Sig. (2-tailed)	.098	.001	.025	.010
		146	146	146	146

**Correlation is significant at the 0.05 level (2-tailed).*

Table 5 shows that the correlation analysis between the results and the Social Well-Being Scale subscales and the intention to leave the job generally indicates negative relationships. “Trust” ($r=-0.271$, $p=0.001$), “Social Respect” ($r=-0.212$, $p=0.010$), and “Social Influence” ($r=-0.186$, $p=0.025$) dimensions with intention to leave the job. This indicates that high levels of these sub-dimensions may reduce employees’ intention to leave. On the other hand, the relationship between the “Social Acceptance” dimension and intention to leave was not found to be significant ($r=-0.138$, $p=0.098$).

DISCUSSIONS AND CONCLUSIONS

The study was conducted among healthcare workers employed at a private hospital, and the data of 146 participants were analyzed. While the majority of participants were women (65.1%), the 20-29 age groups stood out in the age distribution with a rate of 47.3%. This finding indicates that young and female employees constitute a significant portion of healthcare services in private hospitals, and this demographic group can shape the social and professional experiences of healthcare workers. Additionally, the similar rates of single (52.1%) and married (47.9%) individuals indicate that the sample group is diverse

in terms of social life. The fact that 54.2% of the participants have postgraduate education indicates that the healthcare professionals participating in the study possess a high level of knowledge and professional competence. The findings regarding the length of service within the institution indicate that the majority of participants (68.5%) have between 0-3 years of experience, which suggests limited professional experience. This situation can be considered a factor that may affect the development of organizational culture, social interaction, and a sense of belonging. The fact that the scale averages show significant differences only by gender indicates that female and male employees may have different perceptions of social well-being. Durmuş et al. (2018) found no significant difference between genders in terms of total Social Well-being Scale scores in their study of nurses, but revealed significant differences between genders in the subscales of “Social Acceptance”, “Social Respect”, and “Social Impact”. Similarly, Turğut (2017) examined the relationship between the gender of healthcare workers and the social well-being sub-dimension of “Trust” ($p < 0.05$) and reported that male employees had a higher sense of belonging to the institution compared to female employees and trusted the institution they worked for more in their work life, while women were less confident. These findings reveal that social well-being may differ by gender, but there is insufficient evidence to definitively determine which gender perceives higher social well-being.

When examining the subscale scores, it is observed that participants received the highest score from the “Social Acceptance” subscale ($M=3.84$) and the lowest score from the “Trust” subscale ($M=3.68$). The “Social Acceptance” sub-dimension reflects social skills such as being able to recognize differences among group members and accepting individuals as they are. In contrast, the “Trust” sub-dimension measures feelings of belonging, commitment, and belief in the group, and participants scoring below average on this dimension indicates difficulties with group belonging and social cohesion. This finding underscores the particular importance of social integration and trust-building processes for new and less experienced employees.

Studies in the literature on the social well-being of nurses and healthcare workers show that social well-being levels are related to professional role and quality of life. Demirel and Sarıkoç (2022) and Turğut (2017) found that nurses’ levels of social well-being were above average. Yıldırım and Hachasanoğlu (2011) found that healthcare workers generally have a moderate quality of life, with the highest average score in the social domain and the lowest average score in the physical domain, supporting the view that healthcare workers’ social well-being is above average.

Mozaffari et al. (2015), in their study of nurses in Iran, found that social acceptance and social connections strengthened the nurses' overall well-being. Similarly, Vakılabad et al. (2023) reported that nurses' social well-being is directly related to the processes of building meaningful relationships and social participation. Additionally, Gui et al. (2025) emphasized that social support plays a significant role in helping healthcare workers cope with psychological stress, and increasing the level of social support can positively impact their well-being. Frangieh et al. (2024) stated that reducing loneliness and social isolation among nurses is critically important for strengthening social well-being.

A notable finding in the study is that healthcare workers have a low intention to leave their jobs. However, a significant negative relationship was found between social welfare and intention to leave. The lower intention to leave among socially compatible employees suggests that social well-being can play a protective role in job commitment and organizational attitudes. Job satisfaction, job stress, psychological well-being, and organizational support are prominent factors among the determinants of turnover intention in the literature; however, studies directly examining the relationship between social well-being and turnover intention are limited. This study contributes to the existing evidence that social well-being affects work life. For example, Tath and Yiğit (2021) found in their study of hospital employees that social well-being has a positive and significant effect on job and life satisfaction. The reducing effect of social well-being on turnover intention can be considered an important tool for decreasing staff turnover in healthcare institutions. In private hospitals, candidates' social well-being could also be taken into account during recruitment processes.

The fact that this research data was obtained from only one private hospital constitutes a significant methodological limitation that restricts the generalizability of the study findings. Indeed, conducting research in private hospitals and obtaining institutional permission is quite difficult; this situation narrowed the data collection process and prevented the research from reaching a broader sample. Therefore, collecting data from multiple hospitals, expanding the sample, and making inter-institutional comparisons in future research will significantly increase the validity of the findings and their contribution to the literature.

Ethical Approval: Tarsus University Social and Human Sciences Research Ethics Committee, 28.03.2024, 2024/30.

Authors' Contributions: These authors contributed equally.

Funding and Acknowledgment: The study was supported by the TÜBİTAK 2209-A Undergraduate Students Research Projects Funding Program (Project No. 1919B0112307504, 2023/1 term).

Conflict of Interest Statement: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

REFERENCES

- Demirel, B. R., & Sarıkoç, G. (2022). Hemşirelerde nomofobi ile sosyal iyilik hâli arasındaki ilişki: Tanımlayıcı araştırma. *Türkiye Klinikleri Hemşirelik Bilimleri Dergisi*, 14(4), 1205–1220. <https://doi.org/10.5336/nurses.2022-89121>
- Durmuş, M., Çiftçi, N., Gerçek, A., & Taşçı, Ö. (2018). Variables affecting nurses' social well-being. In *International Multidisciplinary Studies Congress* (pp. 71–81). Akademisyen Kitabevi.
- Eren, E. (2014). *Örgütsel davranış ve yönetim psikolojisi*. Beta Publishing.
- Frangieh, J., Hughes, V., Edwards-Capello, A., Humphrey, K. G., Lammey, C., & Lucas, L. (2024). Fostering belonging and social connectedness in nursing: Evidence-based strategies: A discussion paper for nurse students, faculty, leaders, and clinical nurses. *Nursing outlook*, 72(4), 102174. <https://doi.org/10.1016/j.outlook.2024.102174>
- Fujikawa, H., Aoki, T., & Eto, M. (2024). Associations between workplace social capital, well-being, and work engagement in medical residents: A multicenter cross-sectional study. *BMC Medical Education*, 24(1), 1063. <https://doi.org/10.1186/s12909-024-06055-0>
- Gui, J., Liang, K., Yang, Y., & Du, L. (2025). Protective and risk factors of social support for healthcare workers in high-pressure occupational settings. *Frontiers in Psychology*, 16, 1547777. <https://doi.org/10.3389/fpsyg.2025.1547777>
- Gürbüz, S., & Bekmezci, M. (2012). İnsan kaynakları yönetimi uygulamalarının bilgi işçilerinin işten ayrılma niyetine etkisinde duygusal bağlılığın aracılık ve düzenleyicilik rolü. *İstanbul Üniversitesi İşletme Fakültesi Dergisi*, 41(2), 189–213.
- İlhan, İ. Ö. (2018). Sosyal iyilik hali. *Türkiye Klinikleri Psychiatry-Special Topics*, 11(4), 11–17.
- Kalaycı, Ş. (2008). *Multivariable statistical methods with SPSS applications* (3rd Edition). Asil Publishing.
- Kaymaz, K. (2020). Teknostresin çalışanların işten ayrılma niyeti üzerindeki etkileri. In N. Rüzgâr (Ed.), *İşletme yönetimi* (pp. 239–264). Nobel Publishing.
- Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 61(2), 121–140. <https://doi.org/10.2307/2787065>
- Law, M., Steinwender, S., & Leclair, L. (1998). Occupation, health, and well-being. *Canadian Journal of Occupational Therapy*, 65(2), 81–91. <https://doi.org/10.1177/000841749806500204>
- Mozaffari, N., Peyrovi, H., & Nayeri, N. D. (2015). The social well-being of nurses shows a thirst for a holistic support: A qualitative study. *International Journal of Qualitative Studies on Health and Well-Being*, 10(1), 27749. <https://doi.org/10.3402/qhw.v10.27749>

- Öngen-Bilir, B., Yaman Tüfekçi, U., & Aytaç, S. (2018). İşe ilişkin duyguların işten ayrılma niyetine etkisinin yapısal eşitlik modeli ile incelenmesi. *ISGUC The Journal of Industrial Relations and Human Resources*, 20(3), 49–66. <https://doi.org/10.4026/iscuc.466681>
- Öztürk, Y. (2017). PAP smear testi yaptırmamış kadınların bu teste yönelik farkındalıklarının ve testi yaptırmama nedenlerinin değerlendirilmesi (Publication No. 460358) [Master's thesis, Eskişehir Osmangazi University]. Ulusal Tez Merkezi.
- Seyfullahoğulları, Ç. A. (2018). İşten ayrılma niyeti. Türkmen Publishing.
- Seyrek, İ., & İnal, O. (2017). İşten ayrılma niyeti ile ilişkili faktörler: Bilgi teknolojisi çalışanları üzerine bir araştırma. *Journal of Eastern Anatolia Social Sciences Trends*, 1(1), 43–62.
- Silah, M. (2005). Endüstride çalışma psikolojisi. Seçkin Publishing.
- Sökmen, A., & Sökmen, A. (2014). The effect of participative leadership on turnover intention. *Gazi University Journal of Economics and Administrative Sciences*, 16(1), 21–26.
- Tabachnick, B. G., & Fidell, L. S. (2013). Using multivariate statistics. Pearson.
- Tatlı, E., & Yiğit, A. (2021). Hastane çalışanlarının sosyal iyi olma halinin iş ve yaşam doyumu üzerindeki etkisi. *Academic Review of Economics and Administrative Sciences*, 14(4), 1202–1221. <https://doi.org/10.25287/ohuibf.845589>
- Turğut, N. (2017). Hastanede çalışan hemşire ve sağlık personeli örnekleminde “sosyal iyi olma hali ölçeği” ve “toplulukçu yeterlilik ölçeği” geçerlilik ve güvenilirlik çalışması (Publication No. 473732) [Master's thesis, Ankara University]. Ulusal Tez Merkezi.
- Vakilabad, R. N., Kheiri, R., Islamzadeh, N., Afshar, P. F., & Ajri-Khameslou, M. (2023). A survey of social well-being among employees, retirees, and nursing students: A descriptive-analytical study. *BMC Nursing*, 22(1), 199. <https://doi.org/10.1186/s12912-023-01321-w>
- World Health Organization (WHO). (2020). Constitution of the World Health Organization. https://apps.who.int/gb/bd/pdf_files/BD_49th-en.pdf#page=6
- World Health Organization (WHO). (2021). Health promotion glossary of terms 2021. <https://www.who.int/publications/i/item/9789240038349>
- Yıldırım, A., & Hacıhasanoğlu, R. (2011). Sağlık çalışanlarında yaşam kalitesi ve etkileyen değişkenler. *Journal of Psychiatric Nursing*, 2(2), 61–68.
- Yıldırım, M. H., Erul, E. E., & Kelebek, P. (2014). Tükenmişlik ile işten ayrılma niyeti arasındaki ilişki banka çalışanları üzerine bir araştırma. *Organizasyon ve Yönetim Bilimleri Dergisi*, 6(1), 34–44.

Özdemir, H., & Eren, E. (2025). Intraoperative nursing practices in laparoscopic surgery: Challenges encountered and modern technology supported solution suggestions. *Journal of Health Systems and Policies (JHESP)*, VII, 113-121, DOI: 10.52675/jhesp.1724575

Intraoperative Nursing Practices in Laparoscopic Surgery: Challenges Encountered and Modern Technology Supported Solution Suggestions

Hanife ÖZDEMİR¹ 
Esra EREN^{2*} 

ABSTRACT

Technological developments, which have gained great momentum in recent years, have profoundly affected the field of health services and paved the way for the widespread use of minimally invasive techniques such as laparoscopic interventions, especially in the surgical field. Laparoscopic surgery has gained an important place among modern surgical applications with the development of minimally invasive methods. However, this technological transformation in healthcare has not only brought innovations but also some structural and operational challenges. Laparoscopic surgery creates significant physical strain and cognitive stress on operating room nurses due to limited intraoperative field of view, limited motor range of motion, high level of equipment density and ergonomic limitations due to static working positions. The cables and connection systems used in laparoscopic interventions increase the risks of frequent falls, entrapment, and contamination of the sterile field; they also complicate the coordination of the surgical team. In addition to these situations, the rapid technological advances in the field of surgery and the integration of advanced devices bring about the need for continuous professional development and technological adaptation of operating room nurses. In this review study, the main challenges faced by operating room nurses during laparoscopic

1 University of Health Sciences, İstanbul Kartal Dr. Lütfi Kırdar Health Research Center, İstanbul, Türkiye

2 İstanbul Medipol University, Faculty of Health Sciences, İstanbul, Türkiye

* Corresponding author: Esra EREN, ealver@medipol.edu.tr

surgery are discussed in the light of the literature; modern technology-based solutions such as simulation-based trainings, ergonomic arrangements, artificial intelligence-based planning systems and cable management solutions are included. Therefore, in order to make laparoscopic surgery processes safer, more efficient and sustainable, innovative and holistic approaches need to be developed to manage the difficulties experienced by operating room nurses.

Keywords: Laparoscopic Surgery, Nursing Workforce, Operating Room Organization, Process Management

INTRODUCTION

Laparoscopic surgery has been one of the most important developments in medicine in recent years, popularizing the use of minimally invasive surgical techniques. This method allows patients to recover faster, feel less pain and have shorter hospital stays thanks to operations performed through smaller incisions (Siddaiah-Subramanya et al., 2017). These advances in the application of laparoscopic surgery have enabled surgeons to perform more precise and effective operations, while also introducing innovative approaches to operational processes (Choi, 2012).

However, this technological transformation has not only brought several advantages in healthcare, but also new challenges and complications. The advanced equipment, innovative technology integrations and operational processes required by laparoscopic surgery significantly affect the way operating room teams work (Gerbrands et al., 2004). Especially operating room nurses are the main professional group directly affected by this change. The high density of surgical equipment, ergonomic constraints and static working positions increase the physical and cognitive burden of nurses, while also posing risks to patient safety (Schouten et al., 2025).

In this review study, the main challenges faced by operating room nurses during laparoscopic surgery will be discussed and the proposed solutions to overcome these challenges will be discussed. In the light of the literature, solutions based on modern technologies such as simulation-based training, ergonomic adjustments, artificial intelligence-based planning systems and cable management solutions play an important role in overcoming the challenges faced by nurses. In this context, it is critical to develop innovative approaches to perform laparoscopic surgery in a safer, more efficient, and sustainable manner.

Basic Features of Laparoscopic Surgery and Its Effects on Operating Room Dynamics

The Industrial Revolution, which started in England in the second half of the eighteenth century, led to great developments in the field of mechanization and technology; one of the areas most affected by this transformation was the health sector (Dursun & Yılmaz, 2021). Technological developments that gained momentum with the Industrial Revolution caused significant changes in the provision of health services; especially in the surgical field, efforts to minimize surgical trauma and facilitate a faster recovery process led to the emergence of minimally invasive surgery (Barutcu et al., 2020). All over the world, especially since the mid-1990s, there has been a significant trend from open surgery to laparoscopic surgery (Gürbüz et al., 2011). Especially after laparoscopic procedures became well established in the mid-2000s, surgery gained momentum in the field of robotic and image guidance (Siddaiah-Subramanya et al., 2017).

Laparoscopy is performed with specially developed devices and surgical instruments. The endoscopy procedure, which is included in the laparoscopy intervention, is the examination of organs and cavities in the body with an endoscope for diagnostic and therapeutic purposes. The endoscope is long and thin, with a light source and a camera at its tip, enabling high-resolution visualization of the operation area. For laparoscopic surgery to be performed smoothly, not only is the endoscopy system sufficient, but also many specialized equipment must work in synchronization (Fanson et al., 2011).

This system, which forms the basis of laparoscopic surgery, includes trocars, laparoscopic camera systems, cold light sources, insufflator devices, electrocautery, monitors and various hand tools (graspers, scissors, clinch, etc.). The instruments used in laparoscopic surgery are identical to those used in open surgery in terms of basic function mechanisms. In laparoscopic surgery, instruments with an average size of 30–35 cm have 2–3 mm miniature tips at the end. Compared to open surgery, the number, diversity and importance of instruments and materials are higher (Gürpınar & Haliloğlu, 2010). The smooth operation of this equipment is critical for the safety of the patient, the safety of the operation and the success of the operation.

During the operation, the abdominal cavity is inflated with carbon dioxide gas using an insufflator (pneumoperitoneum), allowing easier visualization of internal organs and free movement of surgical instruments. The surgeon monitors all operations performed in this area on a monitor and performs interventions with hand manipulations performed with long special instruments

developed for laparoscopic surgery. In this process, both the technical capacity of the equipment and the surgeon's compatibility with technology play a decisive role (Basunbul et al., 2022). However, these technological advantages of laparoscopic surgery bring some difficulties due to the complex equipment density. This need for advanced equipment requires restructuring the operating room organization, training staff to use these systems effectively, and being prepared for technical failures. Furthermore, the installation, sterilization and preoperative control of this equipment are among the factors that directly affect the operation time and preparation stages. Therefore, laparoscopic surgery should be considered not only as a surgical technique but also as a high-tech teamwork. The success of the operation depends on the quality of the equipment used, the technological infrastructure and the coordination of the operating room team, as well as the experience of the surgeon (Berquer et al., 2002).

Challenges Encountered by Operating Room Nurses

The technical nature of laparoscopic surgery brings various challenges for healthcare professionals in the operating room environment with features such as limited field of vision, limited range of motion, use of advanced technology and intensive equipment requirements. As a result of this technical structure, operating room nurses assume multifaceted responsibilities such as ensuring sterility, managing surgical instruments and devices, establishing effective coordination with the surgical team, and adapting to advanced technologies (Pazouki et al., 2017).

However, ergonomic difficulties encountered by nurses in laparoscopic surgeries—factors such as physical loading, cognitive stress and device-related safety risks—directly affect professional practices and may negatively affect patient safety and team collaboration (Gürbüz et al., 2011). Technological and methodological developments in laparoscopic surgery have significant effects not only on patients but also on the job descriptions and work processes of healthcare professionals (Schouten et al., 2025).

Unlike open surgery, in laparoscopic surgery the nurse is not only limited to instrumentation but also actively assists the surgeon. This makes the nurse's role in the intraoperative process more critical and significantly increases the workload. Inadequate knowledge and experience of the nurse may lead to prolonged operation time and increased risk of complications (Mitchell, 2007). Therefore, it is of great importance for laparoscopy nurses to feel that they are an indispensable part of the team and to act with the awareness of this responsibility to manage surgical processes safely and effectively.

Personnel involved in laparoscopic surgery (surgeons, nurses, technicians) experience more physical stress and mental tension compared to open surgery (Matern & Koneczny, 2007). Minimally invasive surgery requires the use of more equipment, limited body movements and prolonged static postures (Alexandre et al., 2017). In addition, loss of tactile feedback, decreased hand-eye coordination and limitation of natural dexterity are among the factors that increase ergonomic risks. The height and width of the operating tables used in laparoscopic surgery are mostly adjusted according to the comfort of the surgeon, which leads to ignoring the ergonomic needs of operating room nurses (Van Veelen et al., 2002). Inappropriate table height or physical force applied during patient transfer can cause musculoskeletal disorders in the neck, back, shoulders, arms and wrists (Özşaker, 2018). In addition, forced movements such as bending or leaning on the accessories fixed next to the operating table create pressure on soft tissues, causing tissue damage and pain (Choi, 2012).

Similarly, nurses cannot see the monitor clearly because the monitor placement in the operating room is mostly arranged according to the surgeon's angle of view, which causes challenging positions for the head, neck and trunk (Mitchell, 2007). Frequent posture changes and prolonged standing work to get a better view of the monitor cause discomfort in the lower extremities, especially in the thigh area (Gerbrands et al., 2004). In addition, perioperative nurses are exposed to high levels of mental ergonomic risks in the operating room environment. Rapidly changing shifts, frequent technology updates, unclear job descriptions, and equipment shortages lead to both impairments in perceptual-motor functions and increased mental stress (Haynes et al., 2015; Matern & Koneczny, 2007). Inadequate training, inadequate instrument use, and communication breakdowns between surgeons and nurses are among the main sources of this stress.

Due to the nature of laparoscopic surgery, many cables and connections are involved. Studies have shown that in 83% of operating rooms, equipment cables are placed irregularly; 79% of surgeons step on these cables during surgery and 53% think that this situation negatively affects the surgical process (Matern & Koneczny, 2007). The irregular placement of cables not only brings physical hazards such as falls and bumps, but also operational problems such as sterility deterioration and confusion (Haynes et al., 2015). Poorly designed instruments and equipment and ergonomically inadequate operating room designs can lead to increased fatigue and increased risk of medical errors (Alexandre et al., 2017). In conclusion, the physical and mental ergonomic challenges that operating room nurses working in laparoscopic surgery are

exposed to directly affect not only staff health but also the quality of the surgical process, patient safety and team collaboration. Therefore, systematic assessment of ergonomic risks and improvement of operating room design and working conditions accordingly are of great importance.

Technology Supported Solutions

Posture disorders, inadequate equipment placement and communication deficiencies faced by surgeons in laparoscopic surgery negatively affect surgical efficiency and staff health. In this context, the use of adjustable operating tables offers a significant ergonomic improvement. Electric surgical tables, which can be adjusted in height over a wide range between 29 cm and 122 cm from floor level, reduce the burden on the musculoskeletal system by allowing the surgeon to work at elbow level (Berquer et al., 2002). New generation operating tables are equipped with sensors that can automatically adjust themselves by detecting the surgeon's center of gravity, thus eliminating the need for manual intervention. In addition, foam-backed surfaces placed on the sides of the table prevent tissue damage, especially in positions where nurses need to lean. Imaging monitors also play a critical role in ergonomics. Monitors should be mounted on ceiling boom systems that can be automatically aligned according to the surgeon's height and posture, making them viewable with a neutral posture; in this way, head and neck strains can be minimized (Choi, 2012). Studies show that positioning the monitor 15–45 degrees below eye level significantly reduces fatigue while improving surgical performance (Choi, 2012). On the other hand, breakdowns in communication between surgeons and nurses threaten the correct use of devices and operational continuity. Thanks to voice-controlled systems developed to address this situation, surgeons can manage devices such as light sources, insufflators and electrocautery with direct commands without disturbing sterility (Choi, 2012). In addition, intraoperative training seminars and simulation-based programs should be implemented to ensure more effective participation of operating room nurses and technicians in the process. The literature reveals that in minimally invasive surgical procedures, a fixed team performs faster, and error-free tasks than randomly assigned personnel (Choi, 2012; Fanson et al., 2011; Reddy et al., 2011). In conclusion, restructuring operating room ergonomics with technology-enabled solutions is a sustainable step towards preserving not only surgical efficiency but also the long-term occupational health of the surgical team.

CONCLUSION AND RECOMMENDATIONS

Laparoscopic surgery has gained an important place in modern medicine with the development of minimally invasive surgical techniques and has offered many advantages in patient care. However, this technological transformation has brought with it the use of advanced equipment, complex operational processes and high levels of physical and mental burden.

The findings in the literature clearly demonstrate that nurses involved in laparoscopic surgery are exposed to multidimensional risks both physically and mentally. These difficulties can only be overcome by addressing both individual and system-based approaches together. In this context, it is recommended that the architecturally appropriate design and physical conditions of the operating rooms in the laparoscopic surgery process should be fully provided, the instruments and equipment used in surgery should be designed in accordance with ergonomic principles suitable for the use of the surgical team and qualified studies should be carried out in this field.

Ethical Approval: Ethical approval was not required for this study.

Authors' Contributions: We confirm that all listed authors meet the authorship criteria, and all authors agree with the content of the manuscript. EE and HÖ designed the study and searched the literature. HÖ wrote the first draft of the manuscript. EE and HÖ revised the manuscript. All authors read and approved the final manuscript to be published.

Funding and Acknowledgment: This research did not receive any specific grant from funding agencies in the public, commercial, or non-profit sectors.

Conflict of Interest Statement: The authors declare that there is no conflict of interest/financial disclosure on the subject and during the process of the paper.

Declaration of AI Use: In this research, artificial intelligence was used in the literature search.

REFERENCES

- Alexandre, D., Prieto, M., Beaumont, F., Taiar, R., & Polidori, G. (2017). Wearing lead aprons in surgical operating rooms: Ergonomic injuries evidenced by infrared thermography. *Journal of Surgical Research*, 209, 227–233. <https://doi.org/10.1016/j.jss.2016.10.019>
- Barutcu, A. G., Klein, D., Kilian, M., Biebl, M., Raakow, R., Pratschke, J., & Raakow, J. (2020). Long-term follow-up after single-incision laparoscopic surgery. *Surgical Endoscopy*, 34(1), 126–132. <https://doi.org/10.1007/s00464-019-06739-5>
- Basunbul, L. I., Alhazmi, L. S. S., Almughamisi, S. A., Aljuaid, N. M., Rizk, H., & Moshref, R. (2022). Recent technical developments in the field of laparoscopic surgery: A literature review. *Cureus*, 14(2), e22246. <https://doi.org/10.7759/cureus.22246>
- Berquer, R., Smith, W. D., & Davis, S. (2002). An ergonomic study of the optimum operating table height for laparoscopic surgery. *Surgical Endoscopy and Other Interventional Techniques*, 16(3), 416–421. <https://doi.org/10.1007/s00464-001-8190-y>
- Choi, S. D. (2012). A review of the ergonomic issues in the laparoscopic operating room. *Journal of Healthcare Engineering*, 3(4), 587–603. <https://doi.org/10.1260/2040-2295.3.4.587>
- Dursun, N., & Yılmaz, E. (2021). Cerrahi hemşireliği alanında giyilebilir teknoloji kullanımı. *Istanbul Gelisim University Journal of Health Sciences*, 15, 646–656. <https://doi.org/10.38079/igusabder.948675>
- Fanson, R., Khabbaz, F. H., Kapoor, A., & Patriciu, A. (2011). A system for laparoscopic surgery ergonomics and skills evaluation. *Journal of Endourology*, 25(7), 1111–1114. <https://doi.org/10.1089/end.2010.0741>
- Gerbrands, A., Albayrak, A., & Kazemier, G. (2004). Ergonomic evaluation of the work area of the scrub nurse. *Minimally Invasive Therapy & Allied Technologies*, 13(3), 142–146. <https://doi.org/10.1080/136457004100033184>
- Gürbüz, C., Şıpkın, S., Tuncel, A., Gözen, S., Güven, S., & Özgök, Y. (2011). Uygulamalı ürolojik laparoskopik kursunun ameliyathane hemşirelerinin eğitimine katkısı: Anket çalışması. *Turkish Journal of Urology*, 37(2), 112–117. <https://doi.org/10.5152/tud.2011.023>
- Gürpınar, Ö., & Haliloğlu, A. H. (2010). Ürolojik laparoskopik cerrahide kullanılan ekipmanlar ve operasyon odasının dizaynı. *Turkish Urology Seminars*, 1, 126–133. <https://doi.org/10.5152/tus.2010.16>
- Haynes, J., Bowers, K., Young, R., Sanders, T., & Schultz, K. E. (2015). Managing Spaghetti Syndrome in critical care with a novel device: A nursing perspective. *Critical Care Nurse*, 35(6), 38–45. <https://doi.org/10.4037/ccn2015321>
- Matern, U., & Koneczny, S. (2007). Safety, hazards and ergonomics in the operating room. *Surgical Endoscopy*, 21(11), 1965–1969. <https://doi.org/10.1007/s00464-007-9396-4>
- Mitchell, M. (2007). Nursing intervention for day-case laparoscopic cholecystectomy. *Nursing Standard*, 22(6), 35–42. <https://doi.org/10.7748/ns2007.10.22.6.35.c4641>
- Özşaker, E. (2018). Ergonomic factors and staff safety in the operating room. *Archives of Health Science and Research*, 5(3), 476–484. <https://doi.org/10.17681/hsp.369138>
- Pazouki, A., Sadati, L., Zarei, F., Golchini, E., Fruzesh, R., & Bakhtiari, J. (2017). Ergonomic challenges encountered by laparoscopic surgeons, surgical first assistants, and operating room nurses involved in minimally invasive surgeries by using RULA method. *Journal of Minimally Invasive Surgical Sciences*, 6(4), e60053. <https://doi.org/10.5812/minisurgery.60053>

- Reddy, P. P., Reddy, T. P., Roig-Francoli, J., Cone, L., Sivan, B., DeFoor, W. R., Gaitonde, K. & Noh, P. H. (2011). The impact of the Alexander Technique on improving posture and surgical ergonomics during minimally invasive surgery: Pilot study. *The Journal of Urology*, 186(4S), 1658–1662. <https://doi.org/10.1016/j.juro.2011.04.013>
- Schouten, A. M., Butler, R. M., Vrins, C. E., Flipse, S. M., Jansen, F. W., van der Eijk, A. C., & van den Dobbelaars, J. J. (2025). Impact of operating room technology on intra-operative nurses' workload and job satisfaction: An observational study. *International Journal of Nursing Studies Advances*, 8, 100341. <https://doi.org/10.1016/j.ijnsa.2025.100341>
- Siddaiah-Subramanya, M., Tiang, K. W., & Nyandowe, M. (2017). A new era of minimally invasive surgery: Progress and development of major technical innovations in general surgery over the last decade. *The Surgery Journal*, 3(4), e163–e166. <https://doi.org/10.1055/s-0037-1608651>
- Van Veelen, M. A., Kazemier, G., Koopman, J., Goossens, R. H. M., & Meijer, D. W. (2002). Assessment of the ergonomically optimal operating surface height for laparoscopic surgery. *Journal of Laparoendoscopic & Advanced Surgical Techniques*, 12(1), 47–52. <https://doi.org/10.1089/109264202753486920>

Omak, T. B., Yalçinkaya, M., & Gürol, Y. (2025). Possible emergence of *Myroides* spp. as a nosocomial pathogen: A case report from a state hospital intensive care unit. *Journal of Health Systems and Policies (JHESP)*, VII, 123-127, DOI: 10.52675/jhesp.1797831

Possible Emergence of *Myroides* spp. as a Nosocomial Pathogen: A Case Report from a State Hospital Intensive Care Unit

Tuğçe BAŞARI OMAK¹ 

Mehnur YALÇINKAYA² 

Yeşim GÜROL^{3*} 

ABSTRACT

Myroides spp. represent a growing challenge for clinicians, particularly in immunocompromised patients and those admitted to intensive care units. Infections caused by this genus are uncommon and have been rarely reported in clinical samples. However, *Myroides* spp. are intrinsically resistant to many antimicrobial agents; therefore, they should be considered as potential pathogens in selected clinical contexts. Here, we report a case of *Myroides* spp. isolated from a patient in the intensive care unit. Initially, it was not regarded as a true pathogen, but subsequent similar cases were identified in the same unit. These observations raise concern about the possibility of outbreaks in intensive care settings and lead us to question whether *Myroides* spp. may be an emerging nosocomial pathogen.

Keywords: Emerging Pathogen, Infection Control, Intensive Care Unit, *Myroides* spp., Urinary Tract Infection

INTRODUCTION

The genus *Myroides* currently includes 16 species. Among them, *Myroides odoratimimus*, *Myroides odoratus* (formerly *Flavibacterium odoratum*) and *Myroides injenensis* have been isolated from clinical specimens and are

¹ Sungurlu State Hospital, Department of Infectious Diseases, Çorum, Türkiye

² Beykoz State Hospital, Department of Anesthesiology and Reanimation, Istanbul, Türkiye

³ Beykoz State Hospital, Microbiology Laboratory, Istanbul, Türkiye

* Corresponding author: Yeşim GÜROL, dryesimg@gmail.com

considered clinically relevant (Pfaller et al., 2019). These are aerobic, yellow-pigmented, non-motile, non-fermentative, Gram-negative bacilli, typically producing a fruity odor, and they grow well at 37°C.

Infections caused by *Myroides* spp. are uncommon, although these bacteria are ubiquitous in the environment. *Myroides* spp. have been rarely isolated from various clinical samples, including urine, wound swabs and blood cultures. In the literature, urinary tract infections are reported as the most frequent clinical manifestation associated with *Myroides* spp. Over recent years, however, an increasing number of cases have been described in different clinical settings. These organisms are intrinsically resistant to many antimicrobial agents, making their management particularly challenging.

Here, we report our first *Myroides* case in the intensive care unit (ICU).

CASE

A 77-year-old woman with a history of chronic obstructive pulmonary disease (COPD) was admitted to the emergency department with dyspnea and diagnosed with hypercapnic respiratory failure. Thoracic computed tomography demonstrated traction bronchiectasis in the left lung and near-complete collapse of the affected region. The patient was intubated, and due to purulent sputum, a deep tracheal aspirate was obtained. Empirical meropenem (3 × 1 g/day IV) was initiated.

Sputum culture yielded *Pseudomonas aeruginosa*, and meropenem therapy was continued. On day 12 of treatment, colistin (300 mg loading dose, followed by 2 × 150 mg/day IV) was added because of increased sputum volume and a change in colour to green. *Acinetobacter baumannii* was subsequently isolated from a sputum culture obtained prior to colistin initiation. On day 10 of combined therapy, due to escalating vasopressor requirements suggestive of clinical deterioration, tigecycline (100 mg loading dose, then 2 × 50 mg/day IV) was added. Meropenem was discontinued on day 28, tigecycline on day 14, while colistin therapy was continued.

Later in the ICU course, increased yellowish secretion and cloudiness in the Foley catheter drainage prompted the collection of blood, sputum, and urine cultures. The blood culture grew *Candida parapsilosis*, the sputum culture yielded *A. baumannii*, and the urine culture grew *Candida albicans* together with *Myroides* spp. The *Myroides* spp. isolate was initially interpreted as colonization, and the Foley catheter was replaced.

A repeat urine culture obtained three days after catheter replacement again grew *Myroides* spp. Compared with the initial isolate, the strain had acquired resistance to trimethoprim-sulfamethoxazole, to which it had previously been

susceptible. In the absence of erythrocytes and leukocytes in the complete urinalysis and in the absence of urinary tract symptoms, this finding was evaluated as asymptomatic bacteriuria.

During follow-up, urine cultures were obtained approximately every seven days. Despite repeated catheter changes, a pan-resistant *Myroides* spp. was persistently isolated. The patient ultimately died from respiratory failure and cardiac arrest during the 11th week of ICU hospitalization.

The *Myroides* isolate was initially identified using VITEK® 2 GN ID cards (bioMérieux, Marcy l'Étoile, France). Identification as *Myroides* spp. was confirmed by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS). Antimicrobial susceptibility testing was performed using VITEK 2 and interpreted according to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) criteria.

DISCUSSION

Myroides spp. poses a significant challenge for clinicians, particularly in immunosuppressed patients, those requiring prolonged intensive care unit (ICU) stays, and individuals with indwelling urinary catheters. Distinguishing colonization from true infection is often difficult in this population. *Myroides* spp. can form biofilms and are frequently multidrug resistant, resulting in limited therapeutic options.

In catheterized patients, clinical and microbiological criteria such as fever, purulent urine, suprapubic tenderness, and recurrent positive urine cultures despite catheter replacement should be considered when differentiating infection from colonization. Consistent with previous reports, *Myroides* spp. are most often isolated in patients with long hospital stays and long-term urinary catheterization. In some cases, patients have been managed successfully with urinary catheter replacement alone (Duman et al., 2024).

Başkol et al., 2021 reported successful intravesical colistin administration in a patient with asymptomatic bacteriuria caused by *Myroides* spp., who was scheduled for a urological intervention. In contrast, in our case, *Myroides* spp. persisted in urine cultures despite tigecycline and subsequent colistin therapy and ultimately developed a pan-resistant profile.

Reports of emerging microorganisms, particularly those involved in outbreaks, are crucial to guide infection control measures and antimicrobial stewardship. Yağcı et al. (2000) described a *Myroides* outbreak in a urology ward. Ktari et al. (2012) suggested that extensive carbapenem use in Tunisian hospitals may have contributed to the emergence of pan-resistant *M.*

odoratimimus strains. An outbreak of urinary tract infections caused by *M. odoratimimus* in immunocompromised patients was reported in a Turkish hospital (Kutlu et al., 2020). Gökbulut-Bektaş et al. (2021) also reported a *Myroides* outbreak in an ICU. Collectively, these data support the concept of *Myroides* spp. as a potential emerging nosocomial pathogen, particularly in high-risk units such as ICUs and urology wards. According to a report based on a survey, approximately half of the infectious disease and clinical microbiology specialists have never seen *Myroides* spp. growth in urine culture some of the specialists may have low level of knowledge about *Myroides* spp. (Yılmaz et al., 2023).

CONCLUSION

As *Myroides* infections are not limited to the urinary tract, clinicians should consider *Myroides* spp. as a potential etiologic agent of invasive infection, particularly in cases of unexplained treatment failure. This microorganism is often regarded as non-pathogenic or of low virulence and may be overlooked until it is implicated in an outbreak or a fatal case. In patients with prolonged ICU stays and indwelling catheters, distinguishing colonization from true infection due to *Myroides* spp. can be challenging. Given the limited therapeutic options associated with multidrug resistance, heightened clinical awareness and careful clinical-microbiological correlation are essential. Systematic reporting and documentation of *Myroides* infections and outbreaks will contribute to a better understanding of this emerging pathogen and help guide both antimicrobial stewardship and infection control strategies.

Ethical Approval: Authors declare that this case report entitled “Possible Emergence of *Myroides* spp. as a Nosocomial Pathogen: A Case Report from a State Hospital Intensive Care Unit” does not require ethical approval.

Authors’ Contributions: YG conceptualized the study design. MY and TBO conducted the literature review and wrote the draft. YG contributed to the review and editing processes. MY and TBO participated in the case presentation. All authors read and approved the final version of the manuscript.

Funding and Acknowledgment: This study received no external funding.

Conflict of Interest Statement: The authors declare that they have no conflicts of interest.

REFERENCES

- Başkol, D., Kalemci, M. S., Erdem, H. A., Noyan, A., Pullukçu, H., & Taşbakan, M. I. (2021). İntravezikal kolistin uygulaması ile idrar sterilizasyonu sağlanan bir olgu deneyimi. *ANKEM Dergisi*, 35(3), 85–88. <https://doi.org/10.54962/ankemderg.1048544>
- Duman, Y., Çelik, D., Parmaksız, E. N., Ersoy, Y., & Özer, A. B. (2024). Are Myroides spp. isolated from urinary catheter cultures of patients in intensive care units an infection or colonization? Analysis of 36 cases. *Turkish Journal of Intensive Care*, 22(3), 207–211. <https://doi.org/10.4274/tybd.galenos.2023.64497>
- Gökbulut-Bektaş, Ş., Tümtürk A., Akdağ A. G., & İzdeş S. (2021). An outbreak of urinary tract infections due to Myroides spp. in adult intensive care unit: Risk factors and control procedures. *Journal of Cardio-Vascular-Thoracic Anaesthesia and Intensive Care Society*, 27(3), 210–215. <https://doi.org/10.5222/GKDAD.2021.46704>
- Ktari, S., Mnif, B., Koubaa, M., Mahjoubi, F., Jemaa, M. B., Mhiri, M. N., & Hammami, A. (2012). Nosocomial outbreak of Myroides odoratimimus urinary tract infection in a Tunisian hospital. *Journal of Hospital Infection*, 80(1), 77–81. <https://doi.org/10.1016/j.jhin.2011.09.010>
- Kutlu, H. H., Avcı, M., Dal, T., Arı, O., & Durmaz, R. (2020). A healthcare-associated outbreak of urinary tract infections due to Myroides odoratimimus. *Japanese Journal of Infectious Diseases*, 73(6), 421–426. <https://doi.org/10.7883/yoken.JJID.2019.536>
- Pfaller, M. A., Landry, M. L., & Carroll, K. C. (Eds.). (2019). *Manual of clinical microbiology*. ASM Press.
- Yağcı, A., Cerikçioğlu, N., Kaufmann, M. E., Malnick, H., Söyletir, G., Babacan, F., & Pitt, T. L. (2000). Molecular typing of Myroides odoratimimus (Flavobacterium odoratum) urinary tract infections in a Turkish hospital. *European Journal of Clinical Microbiology and Infectious Diseases*, 19(9), 731–732. <https://doi.org/10.1007/s100960070001>
- Yılmaz, E. M., Bilgin, M., & Günel, Ö. (2023). Evaluation of the approaches adopted by the infectious diseases and clinical microbiology specialists and medical microbiology specialists in the case of myroides spp. growth in urine culture: A survey study. *Black Sea Journal of Health Science*, 6(4), 584–591. <https://doi.org/10.19127/bshealthscience.1316313>

