JOSAM
Journal of Surgery and Medicine

Brain drain in Türkiye's nursing workforce: A literature review

Seher Şişik [1], Bilgi Gülseven Karabacak [2]

[1] Marmara University, Health Sciences Institute, Department of Nursing, Istanbul, Turkey
[2] Marmara University, Health Sciences Faculty, Department of Nursing Fundamentals, Istanbul, Turkey

ORCID ⓘD **of the author(s)**

SŞ: https://orcid.org/0009-0000-5091-8969
BGK: https://orcid.org/0000-0003-4570-2631

Abstract

Nurses represent the largest workforce group forming the foundation of global health systems. Despite this central role, a critical worldwide nursing shortage persists, posing significant threats to the sustainability of health systems, particularly in low- and middle-income countries. Although Türkiye's nursing workforce has expanded in recent years, it remains far below OECD (Organization for Economic Co-operation and Development) averages and struggles to meet the growing demand for healthcare services. This review adopts a comprehensive approach to examine the economic, organizational, social, and psychological factors accelerating nurse brain drain from Türkiye, drawing on national and international data. Findings indicate that low wages, heavy workloads, insufficient staffing, workplace violence, limited career opportunities, and burnout serve as major push factors influencing nurses' decision to migrate. Conversely, high-income countries such as Germany, the Netherlands, Canada, and the United Kingdom offer strong pull factors including higher salaries, safer working environments, lower nurse-to-patient ratios, and well-developed professional career pathways. While Türkiye's migration patterns share similarities with nurse-exporting countries such as the Philippines and India, high rates of workplace violence and the emigration of experienced nurses place Türkiye in a distinct position. Nurse brain drain has immediate consequences, including increased workload and negative impacts on patient safety, and long-term effects such as loss of institutional memory and transfer of educational investments to receiving countries. This review underscores the need for policy development addressing the structural drivers of nurse brain drain and provides a critical situational analysis for the future of Türkiye's healthcare system.

Keywords: nurse brain drain, pull factor, push factor

Corresponding Author
Seher Şişik
Marmara University, Health Sciences Institute, Department of Nursing, Istanbul, Türkiye
E-mail: sehersisik@hotmail.com

□
Ethics Committee Approval
Ethics committee approval is not required for this review article.
□
Conflict of Interest
No conflict of interest was declared by the authors.
□
□
Published
2025 December 20

Introduction

Nurses constitute the backbone of health systems and represent the largest professional group ensuring the continuity of healthcare delivery. According to the WHO's global report, nurses make up approximately 59% of the global health workforce, and there is an estimated global shortage of 5.9 million nurses [1]. This shortage became more visible during the COVID-19 pandemic, and competition for qualified nurses among countries has increased markedly [2, 3]. Although the nursing workforce in Türkiye has grown numerically, the country remains far behind in international comparisons. According to OECD (Organization for Economic Co-operation and Development) data, the number of nurses per 1,000 population in Türkiye is 2.9, whereas the OECD average is 9.2 [4]. Based on these figures, it can be estimated that more than 500,000 additional nurses would need to be employed in Türkiye to reach the OECD average. This numerical imbalance increases nurses' workload, fuels burnout, and accelerates workforce attrition [5, 6].

In recent years, nurse brain drain from Türkiye has risen markedly. The increase in equivalency and licensing applications submitted for working abroad further supports this trend. Notably, applications from nurses and healthcare workers to Germany have shown a significant rise [7]. Studies conducted in Türkiye also indicate that the idea of working abroad is widely supported among nurses. In field research conducted by the Turkish Nurses Association (THD), 76.3% of nurses reported that they were considering going abroad, while 21.8% stated that they had already initiated the application process [8, 9]. The aim of this review is to analyze nurse brain drain in Türkiye from economic, professional, organizational, and social perspectives; to evaluate current trends in light of the international literature; and to discuss its short- and long-term implications for the Turkish healthcare system. This analysis specifically examines the push and pull factors driving migration, compares Turkish trends with international patterns, and evaluates the systemic impacts on healthcare delivery.

What are the push factors in Türkiye and the pull factors abroad that increase nurses' brain drain tendencies?

Economy

The insufficiency of nurses' salaries in Türkiye relative to the cost of living constitutes a major economic push factor frequently emphasized in the migration literature [9, 10]. Existing studies show that most nurses believe their wages are not commensurate with their professional responsibilities, workload, and working conditions. Consequently, they describe sustainable economic well-being within the profession as increasingly difficult to maintain [11, 12]. In contrast, higher salaries, more comprehensive social benefits, and greater employment stability in high-income countries transform these destinations into strong pull factors for nurses from Türkiye [13, 14]. The literature particularly highlights expectations of economic improvement, social security provisions, and institutional support mechanisms as central pull factors shaping nurse brain drain from Türkiye [10, 15]. Collectively, these findings demonstrate that economic conditions are among the most critical determinants influencing nurses' willingness to work abroad.

Workload and staffing levels

Approximately 350,000 nurses currently work in Türkiye; however, OECD standards suggest that the country requires between 400,000 and 450,000 nurses to meet population needs [4, 16]. This deficit results in nurse-to-patient ratios far above OECD norms, leading nurses to work under excessive workload. As a consequence, nurses are often responsible for caring for more patients than recommended by international standards, which contributes substantially to burnout [6]. High workload and chronic understaffing diminish motivation and drive nurses to seek better working conditions elsewhere.

In the study by Nantsupawat et al. [17], emotional exhaustion was identified in 35.7% of nurses, depersonalisation in 29.9%, and reduced personal accomplishment in 48.2%; moreover, 9.14% of nurses reported an intention to leave their current job. Insufficient managerial support further decreases job satisfaction and increases migration intentions [18, 19]. Daşbilek et al. [20] reported that shift-based work heightens work-family conflict and burnout. Heavy workloads, intense shift demands, and inadequate staffing ratios represent some of the strongest predictors of emotional exhaustion [6, 19]. These suboptimal working conditions function as structural push factors reinforcing nurses' decisions to migrate [21, 22].

Among international pull factors, low nurse-to-patient ratios stand out. For example, in countries such as the Netherlands, Switzerland, and Sweden, a nurse typically cares for an average of 5 patients, whereas in Poland, Spain, and Germany the ratio is roughly 10 patients [23, 24]. Compared with Türkiye, these lower ratios translate into reduced stress and higher job satisfaction for nurses [5, 19]. Additionally, the ability to provide higher-quality care under manageable workloads enhances professional fulfilment and clinical efficiency.

Career opportunities

Although advanced nursing roles and career pathways are defined by regulation in Türkiye, these structures have not been effectively implemented across many healthcare institutions [11, 12]. Research among nursing students shows that access to better specialization and academic development opportunities abroad accounts for approximately 50% of the motivation to consider migration [12]. These findings highlight the extent to which structural limitations within Türkiye systematically contribute to nurse brain drain.

Conversely, professional autonomy and robust career advancement prospects serve as strong pull factors abroad. In the United States, for instance, nursing practice is supported by comprehensive regulatory and professional frameworks that grant nurses a higher degree of clinical autonomy. Similarly, the United Kingdom and Canada have expanded educational supports and professional development structures for nurses [25, 26]. The recognition of advanced nursing roles such as nurse practitioners and clinical nurse specialists provides substantial opportunities for career progression [12, 14]. These enhanced career prospects make foreign countries particularly attractive to nurses from Türkiye, many of whom believe they can access superior training and specialization pathways abroad.

Workplace safety

High rates of workplace violence in Türkiye negatively affect the work environment for nurses [11, 27]. In research

conducted by the THD, 25.8% of nurses identified exposure to psychological or physical violence as a factor influencing their intention to migrate. Nurses who experienced violence reported that these incidents strengthened their desire to work abroad [8, 9, 12]. Such experiences undermine nurses' sense of safety, rendering their workplaces insecure and eroding professional commitment. Safety deficiencies therefore operate as a significant push factor directing nurses toward countries that provide safer working environments. Safer physical and psychological working conditions in destination countries serve as a notable pull factor [28]. Countries with more robust workplace safety regulations and lower rates of violence offer particularly attractive environments for nurses from Türkiye [15, 29].

In what ways does nurse brain drain from Türkiye resemble or differ from international patterns of nurse mobility?

Similarities

Türkiye's nurse brain drain pattern shares several characteristics with major nurse-exporting countries such as the Philippines, India, and certain African nations. In these contexts, economic motivations, excessive workload, and limited career opportunities similarly emerge as primary determinants of migration [1, 10, 30, 31].

Differences

However, several critical distinctions set Türkiye apart from other nurse-sending countries. First, the high prevalence of workplace violence in the Turkish healthcare system places Türkiye in a more vulnerable position compared with many other countries [9, 11]. Second, a substantial proportion of nurses emigrating from Türkiye have 6–10 years of professional experience, contrasting with countries such as the Philippines, which predominantly send newly graduated nurses abroad [11, 12]. Third, despite the expansion of nursing education quotas in recent years, migration rates have not decreased [32]. This pattern suggests that increased training capacity alone is insufficient to curb migration unless working conditions are simultaneously improved.

What are the short- and long-term effects of nurse brain drain on the Turkish healthcare system?

Short-term effects

Short-term consequences of nurse brain drain include a worsening nursing shortage, increased workload, compromised care quality, and deterioration in patient safety indicators [23, 33]. The already substantial nursing deficit in Türkiye has been associated with longer waiting times in health facilities and declining safety metrics, largely driven by excessive nurse workload [5, 9]. As remaining nurses face even heavier burdens, burnout levels rise further, perpetuating a self-reinforcing cycle of workforce loss [6, 19].

Long-term effects

In the long term, nurse brain drain contributes to the erosion of institutional memory, a decline in experienced clinical personnel, and more challenging working environments for newly graduated nurses. Additionally, the public investment made in nursing education is effectively transferred to receiving countries when trained professionals migrate [10, 34]. The substantial financial cost required to educate a nursing student in Türkiye thus represents a significant economic loss when that nurse ultimately joins a foreign workforce.

Conclusion

This review demonstrates that nurse brain drain from Türkiye is increasing rapidly at the intersection of economic, organizational, and psychosocial factors, representing a critical threat to the sustainability of the healthcare system. Low salaries, heavy workload, widespread workplace violence, limited career advancement opportunities, and insufficient managerial support represent the primary push factors driving migration [9, 12, 17]. Conversely, high income, safer work environments, lower nurse-to-patient ratios, and well-developed career ladders in destination countries serve as strong pull factors, particularly for young and mid-career nurses [5, 10, 15].

If current trends persist, Türkiye is expected to face serious challenges in maintaining both the capacity of its nursing workforce and the quality of healthcare delivery. Improving salary policies, enhancing working conditions, strengthening legal and administrative mechanisms to prevent workplace violence, implementing advanced nursing roles, and aligning nurse-to-patient ratios with scientific standards emerge as essential strategies [18, 22, 35]. Ultimately, the retention of the nursing workforce must be prioritized as a matter of national health security rather than a mere administrative challenge. A genuine transformation in the professional status of nurses, supported by both legislative protection and institutional respect, is the only sustainable way to prevent the collapse of the domestic healthcare foundation and ensure high-quality patient care for future generations.

References

1. World Health Organization. State of the World's Nursing: Investing in education, jobs and leadership. Geneva: World Health Organization; 2020.
2. International Council of Nurses. The global nursing shortage and nurse retention. Geneva: International Council of Nurses; 2021.
3. Buchan J, Catton H. COVID-19 and the international supply of nurses. Geneva: International Council of Nurses (ICN); 2020.
4. OECD. Health at a Glance 2025: OECD Indicators. Paris: OECD Publishing; 2025.
5. Aiken LH, Sermeus W, Van den Heede K, Sloane DM, Busse R, McKee M, et al. Nurses' perception of hospital care quality and patient safety in 7 countries. Int J Qual Health Care. 2014;26(6):632-8.
6. Başar U. Burnout Syndrome in Nurses: Causes, Consequences, and Preventive Strategies. J Health Nurs Manag. 2020;7(2):303-9.
7. Bredtmann J, Kolodziej I, Pilny A. How can the demand for skilled labour in the care sector be met? Measures to close the skills gap. Gesundheitsökonomie und Qualitätsmanagement. 2025;30(04):189-97. doi: 10.1055/a-2580-0343.
8. Duran I, Altuntaş S. The Status Related to Migration and Working Conditions of Nurses Who Migrated from Türkiye. Ordu University J Nurs Stud. 2025;8(1):97-106.
9. Türk Hemşireler Derneği. Hemşire göç eğilim çalışması raporu. Mart 2023. Available from: https://www.thder.org.tr/hemsire-goc-egitim-calismasi-raporu.
10. Docquier F, Rapoport H. Globalization, brain drain, and development. J Econ Lit. 2012;50(3):681-730. doi: 10.1257/jel.50.3.681.
11. Arslan Yürümezoğlu S, Çamveren N. Why are Turkish nurses migrating? A mixed-methods study. Int Nurs Rev. 2024;72(1):e13019. doi: 10.1111/inr.13019.
12. Öncü E, Vayısoğlu SK, Karadağ G, Alaçam B, Göv P, Selçuk Tosun A. Intention to migrate among the next generation of Turkish nurses and drivers of migration. J Nurs Manag. 2021;29(3):487-96. doi: 10.1111/jonm.13187.
13. OECD. Health at a Glance 2022: OECD Indicators. Paris: OECD Publishing; 2022.
14. World Health Organization. Health workforce mobility in a changing world: Global policy recommendations. Geneva: World Health Organization; 2021.
15. de Vries N, Boone A, Godderis L, Bouman J, Szemik S, Matranga D, et al. The Race to Retain Healthcare Workers: A Systematic Review on Factors that Impact Retention of Nurses and Physicians in Hospitals. Inquiry. 2023;60:469580231159318. doi: 10.1177/00469580231159318.
16. Türkiye Büyük Millet Meclisi. Tutanaklar: Tutanak Goster/5303 [Internet]. Ankara: TBMM; [cited 2025 Dec 10]. Available from: https://www.tbmm.gov.tr/Tutanaklar/TutanakGoster/5303.
17. Nantsupawat A, Kutney-Lee A, Abhicharttibutra K, Wichaikhum OA, Poghosyan L. Exploring the relationships between resilience, burnout, work engagement, and intention

to leave among nurses in the context of the COVID-19 pandemic: a cross-sectional study. BMC Nurs. 2024;23(1):290. doi: 10.1186/s12912-024-01958-1.

18. Buchan J, Aiken L. Solving nursing shortages: a common priority. J Clin Nurs. 2008;17(24):3262-8. doi: 10.1111/j.1365-2702.2008.02636.x.

19. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. PLoS One. 2016;11(7):e0159015. doi: 10.1371/journal.pone.0159015.

20. Daşbilek F, Doğan Yüksekol Ö, Orhan İ. Investigation of Work-Life Quality and Work-Family Conflict of Nurses Working in Shifts in Terms of Some Variables. J Health Nurs Manag. 2022;9(2):272-84.

21. Aiken LH, Sloane DM, Bruyneel L, Van den Heede K, Griffiths P, Busse R, et al. Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. Lancet. 2014;383(9931):1824-30. doi: 10.1016/S0140-6736(13)62631-8.

22. Dussault G, Franceschini MC. Not enough there, too many here: understanding geographical imbalances in the distribution of the health workforce. Hum Resour Health. 2006;4:12. doi: 10.1186/1478-4491-4-12.

23. Aiken LH, Sloane DM, Bruyneel L, Van den Heede K, Sermeus W, et al. Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. Int J Nurs Stud. 2013;50(2):143-53. doi: 10.1016/j.ijnurstu.2012.11.009.

24. Dall'Ora C, Saville C, Rubbo B, Turner L, Jones J, Griffiths P. Nurse staffing levels and patient outcomes: A systematic review of longitudinal studies. Int J Nurs Stud. 2022;134:104311. doi: 10.1016/j.ijnurstu.2022.104311.

25. Buchan J, Twigg D, Dussault G, Duffield C, Stone PW. Policies to sustain the nursing workforce: An international perspective. Int Nurs Rev. 2015;62(2):162-70.

26. Kingma M. Nurses on the move: A global overview. Health Serv Res. 2007;42(3 Pt 2):1281-98. doi: 10.1111/j.1475-6773.2007.00711.x.

27. Woo T, Ho R, Tang A, Tam W. Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis. J Psychiatr Res. 2020;123:9-20. doi: 10.1016/j.jpsychires.2019.12.015.

28. European Commission. State of Health in the EU: Health system review 2020. Brussels: European Commission; 2020.

29. Humphries N, Brugha R, McGee H. "I won't be staying here for long": a qualitative study on the retention of migrant nurses in Ireland. Hum Resour Health. 2009;7:68. doi: 10.1186/1478-4491-7-68.

30. Dovlo D. Migration of nurses from sub-Saharan Africa: A review of issues and challenges. Health Serv Res. 2007;42(3 Pt 2):1373-88. doi: 10.1111/j.1475-6773.2007.00712.x.

31. Clark PF, Stewart JB, Clark DA. The globalization of the labour market for health-care professionals. International Labour Review. 2006;145(1-2):37-64. doi: 10.1111/j.1564-913X.2006.tb00009.x.

32. Arslan Yürümezoğlu H, Kocaman G. The Situation of Nursing Education in Türkiye: Between 2015-2023. J Nurs Effect. 2024;17(1):148-60. doi: 10.46483/deuhfed.1279205.

33. Li LZ, Yang P, Singer SJ, Pfeffer J, Mathur MB, Shanafelt T, et al. Nurse burnout and patient safety, satisfaction, and quality of care: A systematic review and meta-analysis. JAMA Netw Open. 2024;7(11):e2443059. doi: 10.1001/jamanetworkopen.2024.43059.

34. Uğur N. Great Risk for Education Cost: Brain Drain (Resident Physicians Case). STED. 2022;31(2):115-21.

35. International Council of Nurses. Nurse migration trends report. Geneva: International Council of Nurses; 2022.