

Original Article

Turnover Intention Among Primary Healthcare Physicians in Kuwait

Noha A. El Dabbah ¹ , Ibrahim L. AlRashidi ², Basem F. Abdel-Aziz ¹

¹ Department of Health Administration and Behavioral Sciences, High Institute of Public Health, Alexandria, Egypt

² Health Promotion Department, Sabah Health Region, Kuwait

Abstract

Background: Physician retention in primary healthcare centers is essential for ensuring continuity, accessibility, and quality of care.

Objective(s): The aim of present study was to assess the levels of job satisfaction, organizational commitment, and turnover intention among primary healthcare physicians in Kuwait and to identify key sociodemographic and organizational predictors of turnover intention.

Methods: A cross-sectional study was conducted between December 2023 and July 2024 in 90 primary healthcare centers across Kuwait's six health districts. A total of 600 physicians were recruited using multistage cluster random sampling. Data were collected through a self-administered questionnaire incorporating validated instruments: the Warr-Cook-Wall Job Satisfaction Scale, Organizational Commitment Questionnaire, and Turnover Intention Scale. Descriptive statistics and linear regression analysis were performed using SPSS version 26.

Results: Among participants, 55.0% were satisfied with their job, while 66.2% demonstrated low organizational commitment, and 38.7% of participants were likely to leave current employer organization. Turnover intention was significantly higher among older physicians, those with postgraduate qualifications, divorced/widowed individuals, physicians with higher income levels, and those reporting poor or fair health (all $p < 0.05$). Family medicine physicians exhibited higher turnover intention compared to those in emergency care. Organizational commitment showed a moderate negative correlation with turnover intention ($r = -0.354$, $p < 0.001$). Multiple regression analysis identified postgraduate qualifications (MSc: $B = 0.66$, $p = 0.004$; MD/PhD: $B = 1.22$, $p < 0.001$) as predictors of higher turnover intention, while organizational commitment significantly reduced the likelihood of leaving ($B = -0.162$, $p < 0.001$).

Conclusion: Primary healthcare physicians in Kuwait exhibit moderate job satisfaction, low organizational commitment, and notable turnover intention. Strengthening organizational commitment and addressing professional dissatisfaction, especially among highly qualified physicians, should be prioritized in workforce retention strategies.

Keywords: Turnover intention, primary healthcare, healthcare workforce, physician retention, Kuwait

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✉Correspondence:

Email: nohaeldabbah@alexu.edu.eg

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INTRODUCTION

Primary healthcare physicians (PCPs) are the cornerstone of healthcare systems, delivering essential preventive, curative, and rehabilitative services. Their role is particularly critical in ensuring continuity of care, managing chronic diseases, and reducing the burden on secondary and tertiary care services. Despite their importance, PCPs are increasingly facing challenges such as high patient loads, limited autonomy, and administrative pressures that impact their job satisfaction and organizational commitment, ultimately contributing to workforce instability and elevated turnover intention ^(1,2).

The global strategy on human resources for health projected a global shortage of 18 million health

workers by 2030 ⁽³⁾. A major contributing factor to workforce shortages is employee turnover, with turnover intention serving as a reliable predictor of actual turnover ⁽⁴⁾. High turnover intention among physicians compromises health system performance by disrupting care continuity, increasing recruitment and training costs, and placing greater pressure on the remaining workforce ⁽⁵⁾. International literature shows considerable variation in turnover intention levels, influenced by organizational culture, employment conditions, job satisfaction, and professional identity ^(6,7). In many healthcare systems especially those relying on expatriate professionals like Kuwait this issue is even more pressing due to the high mobility of foreign workers and their weaker attachment to employing institutions ⁽⁸⁾.

Job satisfaction is a multidimensional construct encompassing an individual's cognitive and affective evaluation of their work environment, responsibilities, and rewards ⁽⁹⁾. It has consistently been linked to outcomes such as performance, absenteeism, and turnover ⁽¹⁰⁾. A cross-sectional study conducted in Kuwait in 2017 evaluated job satisfaction among 417 primary care physicians working in Ministry of Health primary health care centers reported a median overall job satisfaction score of 71.4% with significant differences observed based on physicians' ranks and the governorate where they worked ⁽¹¹⁾. According to Herzberg's two-factor theory, both intrinsic motivators (e.g., achievement and recognition) and extrinsic hygiene factors (e.g., salary and working conditions) contribute to job satisfaction ⁽¹²⁾.

Organizational commitment, on the other hand, reflects an employee's psychological attachment and loyalty to the organization. The Three-Component Model of Commitment (affective, continuance, and normative) explains how emotional connection, perceived costs of leaving, and moral obligations influence commitment levels ⁽¹³⁾. A recent systematic review and other studies concluded that physicians generally have lower levels of organizational commitment than other healthcare workers, and that certain variables particularly age, professional experience, and job satisfaction and organizational structure shape physicians' commitment ^(14,15). Numerous studies confirm that higher organizational commitment is also associated with lower turnover intention where for example a considerably large percentage of physicians (72.8%) working in the public hospitals and healthcare centres of Cyprus reported their intention to leave their job with negative correlation between both organisational commitment and job satisfaction and the intention to leave in 2017 ⁽¹⁶⁾. A previous study that was done at the training and research hospitals in the Beyoğlu region of İstanbul, Turkey in 2018 also showed that job satisfaction and emotional commitment had a significant effect on turnover intention ($P < 0.05$) ⁽¹⁷⁾. Despite global recognition of these relationships, there remains a dearth of research in the Gulf region exploring the combined influence of job satisfaction and organizational commitment on turnover intention. In Kuwait, most of the primary healthcare physicians work within a highly centralized public health system that faces challenges such as limited career progression, bureaucratic rigidity, and dependence on expatriate professionals. These structural realities may uniquely shape physicians' workplace experiences and decision-making processes regarding retention ⁽⁸⁾.

The aim of present study was to assess the levels of job satisfaction, organizational commitment, and turnover intention among primary healthcare physicians in Kuwait and to identify key

sociodemographic and organizational predictors of turnover intention. To our knowledge, this is the first study in Kuwait to simultaneously examine these constructs among primary healthcare physicians and to explore the interrelationships between them.

METHODS

Study design and setting

This study employed a cross-sectional analytical design to examine job satisfaction, organizational commitment, and turnover intention among primary healthcare physicians in Kuwait. The study was conducted between December 2023 and July 2024 and covered all six health districts of Kuwait. A total of 90 primary healthcare centers (PHCCs) were randomly selected to ensure geographical and institutional representativeness.

Study population and sampling

The target population comprised all licensed physicians working in PHCCs affiliated with the Kuwaiti Ministry of Health. Inclusion criteria were physicians with at least one year of experience at their current facility to ensure adequate exposure to organizational dynamics. Exclusion criteria included physicians on leave or administrative roles without clinical duties. According to the most recent labor force statistics report in Kuwait, the total number of primary healthcare physicians was 1,643. The sample size was calculated using Epi Info™ (version 7.2), assuming a 50% prevalence of turnover intention, 95% confidence level, and 5% margin of error, resulting in a minimum required sample of 576. The final sample included 600 respondents, accounting for possible non-response and incomplete data. A sampling frame including all 116 primary healthcare centres across the six districts in Kuwait was constructed. A multistage cluster random sampling technique was employed to select 90 primary healthcare clinics from the sampling frame covering the six districts according to the proportional distribution of clinics. For the 85 large clinics included, seven physicians were consecutively selected from each. Additionally, five clinics with only one primary care physician were also approached and included in the study.

Data collection

Data were collected using a structured, self-administered questionnaire comprising four sections: sociodemographic information, job satisfaction, organizational commitment, and turnover intention.

- **Job satisfaction**, to evaluate both intrinsic and extrinsic aspects of job satisfaction. It was measured using the validated Warr-Cook-Wall (WCW) job satisfaction scale, developed by Warr

et al. ⁽¹⁸⁾. The 16-item WCW instrument addressed overall job satisfaction and satisfaction across nine key aspects of work: work environment, job security, workload, relationships with colleagues, career development opportunities, salary and benefits, supervision quality, autonomy at work, and recognition. Each item was rated on a 7-point Likert scale ranging from 1 (extremely dissatisfied) to 7 (extremely satisfied). Participants with mean job satisfaction scores ≤ 4.00 were categorized as not satisfied, while those with scores > 4.00 were categorized as satisfied

- **Organizational commitment** was assessed using the validated Organizational Commitment Questionnaire (OCQ). This 15-item scale evaluated employees' emotional attachment to the organization, their belief in the organization's goals and values, and their willingness to remain with the organization. The OCQ covered three main dimensions of commitment: affective commitment (emotional attachment), continuance commitment (perceived costs of leaving), and normative commitment (obligation to stay). Each item was rated on a 7-point Likert scale from "strongly agree" to "strongly disagree," with higher scores reflecting a stronger organizational commitment. For Participants with an overall positive commitment above neutral (Mean OCQ score > 4.00 , includes responses from "Agree" to "Strongly Agree") were classified as having a high level of commitment, while those who were neutral or negative in their responses were categorized as having a low level of commitment (Mean OCQ score ≤ 4.00 , includes responses from "Strongly Disagree" to "Neutral") ⁽¹⁹⁾.
- **Turnover intention** was measured using the shortened version of the Turnover Intention Scale (TIS-6). This scale consisted of six items aimed at assessing the likelihood of the participants leaving their current job. Topics covered included thoughts of quitting, active job searching, and consideration of alternative employment opportunities. Each item was rated on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." Higher scores indicated a greater intention to leave the organization, allowing for an assessment of job retention risks. Participants with mean turnover intention scores ≤ 3.00 were categorized as unlikely to leave (staying) at the organization, while those with scores > 3.00 are categorized as likely to leave the organization ⁽⁶⁾.

The questionnaire was self-administered distributed in

English to a pilot sample of 60 physicians (to evaluate clarity and internal consistency). Based on the feedback, minor revisions were made to wording for clarity and contextual relevance. Cronbach's alpha demonstrated high internal consistency: WCW = 0.83, OCQ = 0.74, and TIS-6 = 0.79.

Statistical analysis

Data were analysed using SPSS software version 22. Descriptive statistics were used to summarize the study variables: categorical variables were presented as frequencies and percentages, while continuous variables were expressed as median and interquartile range for abnormally distributed data. Associations between categorical variables were assessed using the chi-square test. For non-normally distributed continuous variables, non-parametric tests were employed. Specifically, the Mann-Whitney U test was used for two-group comparisons involving continuous variables such as age, years of work experience, and weekly working hours.

Spearman correlation analysis was conducted to evaluate the relationships between continuous variables. To identify significant predictors of turnover intention, multiple regression analysis was performed, adjusting for all variables that were statistically significant in the bivariate analysis. Continuous variables were also included in the multivariate model. All statistical tests were two-tailed, and a p-value < 0.05 was considered statistically significant.

RESULTS

Participant Characteristics

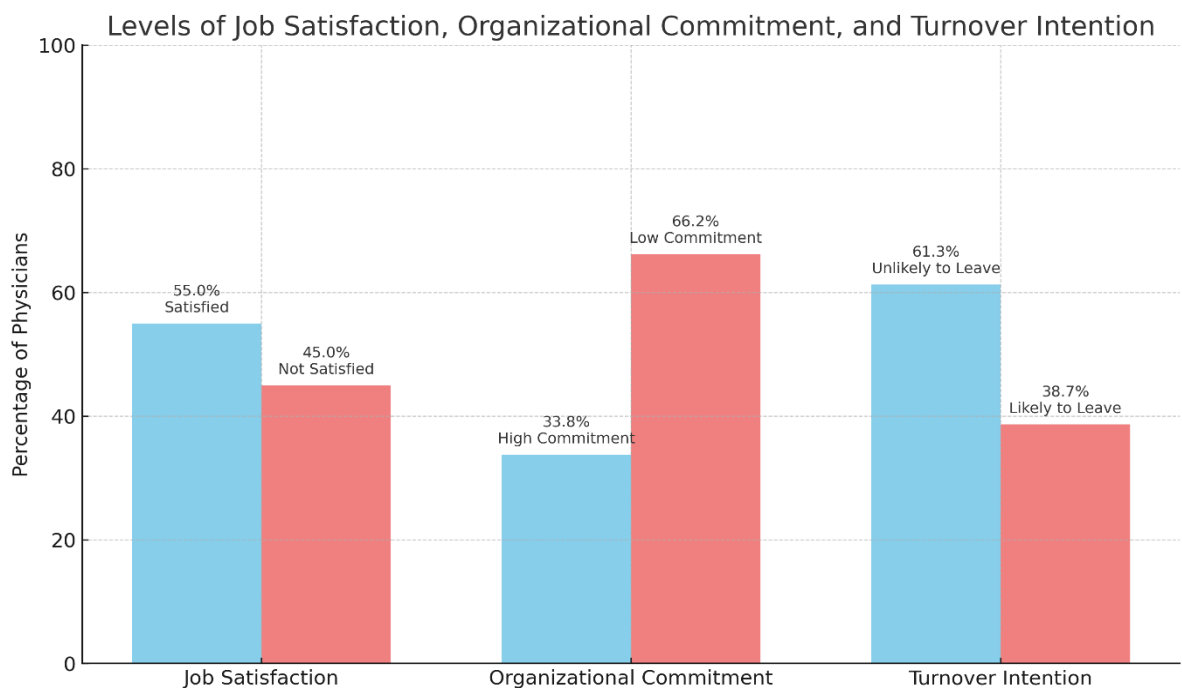
A total of 600 primary healthcare physicians participated in the study, representing a response rate of 100%. Table 1 presents the sociodemographic and professional characteristics of the respondents. The majority were male (60.3%), and 56.8% were Kuwaiti nationals. The mean age of participants was 38.01 years (SD = 10.03), with a mean work experience of 14.9 years (SD = 9.1). Most physicians (78%) held a bachelor's degree, and 59.8% reported monthly income levels between 1,500–3,000 KD. The most reported specialty was Family Medicine (47.5%), followed by Internal Medicine (22.3%).

Levels of job satisfaction, organizational commitment, and turnover intention

Figure 1. illustrates the distribution of job satisfaction, organizational commitment, and turnover intention among participants. Over half of the physicians (55%) reported being satisfied with their job. In contrast, 66.2% exhibited low levels of organizational commitment, and 38.7% indicated a likelihood of leaving their current organization.

Table 1. Sociodemographic and professional characteristics of primary healthcare physicians in Kuwait

Variable	Primary healthcare physicians (n=600)	
	No.	%
Nationality		
Kuwaiti	341	56.8
Non-Kuwaiti	259	43.2
Age		
Median (IQR)		38 (30–45)
Years of Work Experience		
Median (IQR)		15 (8–22)
Working Hours per Week		
Median (IQR)		32 (17–48)
Gender		
Female	238	39.7
Male	362	60.3
Highest Qualifications		
BSc	168	28.0
MSc	189	31.5
MD or PhD	123	20.5
Other	120	20.0
Income		
1500-3000 KD	353	58.8
Less Than 1500 KD	92	15.3
More Than 3000 KD	155	25.8
Marital Status		
Divorced/Widowed	79	13.2
Married	303	50.5
Single	218	36.3
Specialty		
Emergency	107	17.8
Family Medicine	107	17.8
General Pediatrics	23	3.8
General Surgery	117	19.5
Internal Medicine	214	35.7
Obstetrics and Gynecology	32	5.3
Perceived Health Status		
Fair	122	20.3
Good	457	76.2
Poor	21	3.5

**Figure 1. Levels of job satisfaction, organizational commitment, and turnover intention among primary healthcare physicians in Kuwait**

Factors associated with turnover intention

Table 2. summarizes the bivariate associations between participants' characteristics and turnover intention. Age, education level, income, marital status, health status, specialty, and working hours were all

significantly associated with turnover intention ($p < 0.05$). Higher turnover intention was observed among physicians who were older, held postgraduate qualifications, earned higher incomes, had poorer health, and worked in Family Medicine.

Table 2. Bivariate analysis of factors associated with turnover intention among primary healthcare physicians in Kuwait

Variable	Category	Primary healthcare physicians		Total (n=600) No.	P value
		Turnover intention Leaving No. (%)	Staying No. (%)		
Nationality	Kuwaiti	129 (37.8)	212 (62.2)	341	0.629
	Non-Kuwaiti	103 (39.7)	156 (60.3)	259	
Gender	Female	101 (42.4)	137 (57.6)	238	0.124
	Male	131 (36.2)	231 (63.8)	362	
Age	Median (IQR)	41 (33–48)	36 (29–43)	38 (30–45)	<0.001*
Years of Work Experience	Median (IQR)	15 (8–21)	15 (7–22)	15 (8–22)	0.941
Working Hours per Week	Median (IQR)	35 (20–50)	31 (15–46)	32 (17–48)	0.03*
Qualifications	BSc	44 (26.1)	123 (73.9)	168	<0.001 *
	MD or PhD	69 (56.1)	54 (43.9)	123	
	MSc	92 (48.7)	97 (51.3)	189	
Income	Less Than 1500 KD	23 (25.0)	69 (75.0)	92	<0.001*
	1500-3000 KD	127 (36.0)	226 (64.0)	353	
	More Than 3000 KD	82 (53.0)	73 (47.0)	155	
Marital Status	Divorced/Widowed	48 (60.7)	31 (39.3)	79	<0.001*
	Married	114 (37.7)	189 (62.3)	303	
	Single	70 (32.2)	148 (67.8)	218	
Specialty	Emergency	40 (37.4)	67 (62.6)	107	<0.01*
	Family Medicine	62 (57.9)	45 (42.1)	107	
	General Pediatrics	9 (39.0)	14 (61.0)	23	
	General Surgery	41 (35.0)	76 (65.0)	117	
	Internal Medicine	66 (30.8)	148 (69.2)	214	
	Obstetrics and Gynecology	14 (43.7)	18 (56.3)	32	
Perceived Health Status	Poor	9 (42.8)	12 (57.2)	21	<0.001*
	Fair	68 (55.7)	54 (44.3)	122	
	Good	155 (33.9)	302 (66.1)	457	

The Man-Whitney test (U) was conducted for abnormally distributed data while Chi square test (X^2) for other categorical variables

*P less than 0.05 was considered statistically significant

As shown in Table 3, organizational commitment was significantly negatively correlated with turnover intention ($r = -0.354$, $p < 0.001$). Job satisfaction also showed a significant inverse correlation with turnover intention. Additionally,

organizational commitment was positively correlated with weekly working hours ($r = 0.14$, $p < 0.001$), and negatively correlated with age ($r = -0.08$, $p < 0.05$). Age was positively correlated with turnover intention ($r = 0.25$, $p < 0.001$).

Table 3. Pearson correlation matrix between age, work experience, working hours, job satisfaction, organizational commitment, and turnover intention of primary healthcare physicians in Kuwait

Variable	Age	Years of Work Experience	Working Hours per Week	Job Satisfaction Overall	Organizational Commitment
Age	1.000	-	-	-	-
Years of Work Experience	.398**	1.000	-	-	-
Working Hours per Week	.230**	-.346**	1.000	-	-
Job Satisfaction Overall Score	-.016	.040	-.048	1.000	-
Organizational Commitment	-.087*	-.015	.143**	-.014	1.000
Turnover Intention	.250**	.064	-.008	.077	-.354**

*P less than 0.05 was considered statistically significant

** Significant at P less than 0.01

The results of the multiple regression analysis are presented in Table 4. After adjusting for relevant covariates, organizational commitment and educational qualifications remained significant predictors of turnover intention. Specifically, physicians with MSc ($B = 0.66$, $p = 0.004$) and

MD/PhD degrees ($B = 1.220$, $p < 0.001$) had higher turnover intention scores compared to those with a bachelor's degree. Conversely, higher organizational commitment was associated with a reduction in turnover intention ($B = -0.162$, $p < 0.001$).

Table 4. Multiple regression analysis predicting turnover intention among primary healthcare physicians in Kuwait

Variable	B (Unstandardized Co-efficient)	95% Confidence Interval for B		p-value
		Lower Bound	Upper Bound	
(Constant)	24.320	21.358	27.283	0.0001*
Highest qualification				
BSc	Ref			
MD or PhD	1.220	0.553	1.887	0.0001*
MSc	0.658	0.210	1.106	0.004
Income				
1500–3000 KD	Ref			
Less Than 1500 KD	-0.238	-0.724	0.248	0.336
More Than 3000 KD	-0.077	-0.602	0.448	0.774
Specialty =				
Internal medicine	Ref			
Emergency	-0.211	-0.684	0.262	0.382
Family Medicine	-1.231	-4.989	2.527	0.520
General Pediatrics	0.049	-0.794	0.893	0.908
General Surgery	-0.450	-0.904	0.005	0.053
Obstetrics and Gynecology	-0.150	-0.896	0.595	0.692
Marital status				
Married	Ref			
Divorced/Widowed	0.405	-0.114	0.924	0.126
Single	0.145	-0.224	0.513	0.440
Perceived health status				
Good	Ref			
Fair	0.160	-0.251	0.570	0.445
Poor	-0.157	-1.028	0.714	0.724
Job satisfaction overall score	0.006	-0.020	0.032	0.645
Organizational commitment score	-0.162	-0.186	-0.137	0.0001*

KD: Kuwait Dinar; Ref: reference category

DISCUSSION

This study aimed to examine the levels of job satisfaction, organizational commitment, and turnover intention among primary healthcare physicians in Kuwait and identify the relationships between these constructs. The findings offer significant insights into the current state of the healthcare workforce in Kuwait and provide valuable information for developing evidence-based retention strategies.

Over half (55%) of primary healthcare physicians in Kuwait reported being satisfied with their job. This moderate satisfaction level is consistent with studies conducted in other Gulf countries such as Saudi Arabia in 2016, where 63% of primary care physicians reported satisfaction ⁽²⁰⁾. High satisfaction in Kuwait may be attributed to stable government employment and access to well-equipped facilities. However, administrative burdens, limited career progression, and patient overload remain challenges, aligning with observations in Oman in 2020 and Bahrain in 2020 ^(21,22).

Job satisfaction was not significantly associated with sociodemographic variables such as age, gender, and

years of experience. This uniformity may reflect standardized salaries and centralized employment conditions in the public sector. However, turnover intention was inversely associated with job satisfaction, supporting evidence from prior studies that dissatisfaction increases the likelihood of leaving ⁽²³⁾.

The study also revealed low organizational commitment, with 66.2% of physicians scoring low on the commitment scale. Factors such as limited advancement, bureaucratic work environments, and high numbers of expatriate workers may explain this trend. These findings mirror of a study in Finland in 2006 that reported similarly low commitment due to systemic and workplace limitations ⁽²³⁾. In contrast, studies from Sweden in 2022 reported higher levels of organizational commitment among primary care physicians ⁽²⁴⁾. This is typically attributed to supportive work environments, robust professional development pathways, and policies that prioritize physician well-being and autonomy ⁽²⁵⁾.

Turnover intention was expressed by 38.7% of physicians, highlighting a serious risk to workforce stability. This rate is similar to figures from Saudi

Arabia in 2011 (40%) and Bahrain in 2017 (38%)^(26,27). Turnover intention in the current study was significantly associated with factors such as older age, higher educational qualifications, increased working hours, and poor self-rated health. This pattern is also reflected in a study from China, where turnover intention among primary care providers exceeds 40%, driven by heavy workloads, low recognition, and limited resources⁽²⁸⁾. In contrast, turnover intention rates are typically lower in western countries like Sweden (2019)⁽²⁵⁾ and Germany (2007)⁽²⁹⁾, where comprehensive retention policies and robust career development opportunities contribute to greater workforce stability. This highlights the need for targeted interventions to reduce turnover intention in Kuwait.

The linear regression analysis has identified postgraduate education and low organizational commitment as significant predictors of turnover intention in the present study. The significant inverse relationship between organizational commitment and turnover intention reinforces the protective role of commitment in staff retention and highlights the critical role of fostering emotional and professional attachment to the organization. Physicians with higher organizational commitment are likely to feel more valued and integrated into their work environments, reducing their desire to leave. This finding aligns with other studies where higher levels of affective and normative commitment were associated with reduced turnover intention among primary care physicians^(18,30,31). Moreover, physicians with MSc or MD/PhD qualifications were more likely to consider leaving, likely due to dissatisfaction with limited growth opportunities. Comparatively, in other countries such as Canada and Germany, turnover intention among postgraduate physicians is mitigated by structured career progression systems and opportunities for research and teaching^(29,32). These systems if adopted, may prevent the dissatisfaction observed in settings like Kuwait, where such pathways are less accessible.

Limitations

This study used a cross-sectional design, which precludes causal inference. The exclusion of physicians with less than one year of service may have introduced selection bias. Self-reported data are subject to social desirability and recall bias. Additionally, the study did not capture qualitative insights or broader contextual factors such as organizational culture or management style.

CONCLUSION AND RECOMMENDATIONS

The findings of this study indicate moderate job satisfaction, low organizational commitment, and notable turnover intention among primary healthcare

physicians in Kuwait. Organizational commitment was the strongest predictor of low turnover intention, highlighting the need for targeted strategies to enhance physician engagement, improve career development pathways, and reduce administrative burden. Interventions tailored to support expatriate physicians, promote professional growth, and recognize contributions may be key to improving retention in Kuwait's public primary healthcare sector.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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REFERENCES

1. Poon YSR, Lin YP, Griffiths P, Yong KK, Seah B, Liaw SY. A global overview of healthcare workers' turnover intention amid COVID-19 pandemic: a systematic review with future directions. *Hum Resour Health*. 2022;20(1):1–18.
2. Hoxha G, Simeli I, Theocharis D, Vasileiou A, Tsekouropoulos G. Sustainable healthcare quality and job satisfaction through organizational culture: Approaches and outcomes. *Sustainability*. 2024;16(9):3603.
3. Boniol M, Kunjumen T, Nair TS, Siyam A, Campbell J, Diallo K. The global health workforce stock and distribution in 2020 and 2030: a threat to equity and 'universal' health coverage? *BMJ Glob Health*. 2022;7(6):e009316.
4. Tett RP, Meyer JP. Job satisfaction, organizational commitment, turnover intention, and turnover: path analyses based on meta-analytic findings. *Pers Psychol*. 1993;46(2):259–93.
5. Waldman JD, Kelly F, Arora S, Smith HL. The shocking cost of turnover in health care. *Health Care Manage Rev*. 2010;35(3):206–11.
6. Bothma CFC, Roodt G. The validation of the turnover intention scale. *SA J Hum Resour Manag*. 2013;11(1):1–12.
7. Gregoriou I, Papastavrou E, Charalambous A, Economidou E, Soteriades ES, Merkouris A. Organisational commitment, job satisfaction and intention to leave among physicians in the public health sector of Cyprus: a cross-sectional survey. *BMJ Open*. 2023;13(5):e067527.
8. Alzayed M, Murshid MA. Factors influencing employees' intention to leave current employment in the Ministry of Information in Kuwait. *Eur J Bus Manag*. 2017;9(12):17–31.
9. Friedberg MW, Chen PG, Van Busum KR, Aunon FM, Pham C, Caloyeras JP, et al. Factors affecting physician professional satisfaction and their implications for patient care, health systems, and health policy. *Rand Health Q*. 2014;3(4):1.
10. Verulava T. Job satisfaction and associated factors among physicians. *Hosp Top*. 2022;100(2):1–9.
11. Al-Wotayan R, Annaka M, Nazar M. Job satisfaction and mental health among physicians in primary health care centers in Kuwait. *Health*. 2019 Jun 3;11(6):692–710.
12. Herzberg F, Mausner B, Snyderman BB. *The motivation to work*. 2nd ed. New York: Wiley; 1959.
13. Meyer JP, Allen NJ. A three-component conceptualization of organizational commitment. *Hum Resour Manag Rev*. 1991;1(1):61–89.
14. Hoff T, Lee DR, Prout K. Organizational commitment among physicians: A systematic literature review. *Health Serv Manage Res*. 2021;34(2):99–112.
15. Yağar F, Dökme S. The relationship between organizational commitment and demographic variables of physicians in public institutions. *Int J Healthc Manag*. 2017;12(1):81–6.
16. Gregoriou I, Papastavrou E, Charalambous A, Economidou E, Soteriades ES, Merkouris A. Organisational commitment, job satisfaction and intention to leave among physicians in the public

- health sector of Cyprus: A cross-sectional survey. *BMJ Open*. 2023;13(5):3–5.
17. Gun I, Soyuk S, Ozsari SH. Effects of job satisfaction, affective commitment, and organizational support on job performance and turnover intention in healthcare workers. *Arch Health Sci Res*. 2021;8(2):89–96.
 18. Warr P, Cook J, Wall T. Scales for the measurement of some work attitudes and aspects of psychological well-being. *J Occup Psychol*. 1979;52(2):129–48.
 19. Mowday RT, Steers RM, Porter LW. The measurement of organizational commitment. *J Vocat Behav*. 1979;14(2):224–47.
 20. Allebdi AA, Ibrahim MH. Level and determinants of job satisfaction among Saudi physicians working in primary health-care facilities in Western Region, KSA. *J Family Med Prim Care*. 2020; 9(9):4656–61.
 21. Burney IA, Al Sabei SD, Al-Rawajfah O, Labrague LJ, Abualrub R. Determinants of physicians' job satisfaction: A national multi-centre study from the Sultanate of Oman. *Sultan Qaboos Univ Med J*. 2023;23(2):198–205.
 22. Alawi HY, Sankar JP, Ali Akbar M, Natarajan VK. Factors influencing turnover intention among healthcare employees during the COVID-19 pandemic in the private hospitals of Bahrain. *Bottom Line*. 2023;36(2):135–60.
 23. Kuusio H, Heponiemi T, Sinervo T, Elovainio M. Organizational commitment among general practitioners: A cross-sectional study of the role of psychosocial factors. *Scand J Prim Health Care*. 2010;28(2):108–14.
 24. Fernemark H, Karlsson N, Skagerström J, Seing I, Karlsson E, Brulin E, et al. Psychosocial work environment in Swedish primary healthcare: a cross-sectional survey. *Hum Resour Health*. 2024;22(1):70.
 25. Nilsen P, Fernemark H, Seing I, Schildmeijer K, Ericsson C, Skagerström J. Working conditions in primary care: A qualitative interview study in Sweden. *BMC Fam Pract*. 2021;22(1):149.
 26. Almalki M.J., FitzGerald G., Clark, M. The relationship between quality of work life and turnover intention of primary health care nurses in Saudi Arabia. *BMC Health Serv Res*. 2012; 12:314.
 27. Ebrahim Z, Ebrahim A. Factors influencing job satisfaction and turnover intention among coronary care unit nurses in Bahrain. *Int J Nurs Clin Pract*. 2017;4(1).
 28. Sang L, Zheng X, Chen G, Bai Z, Chen R. The effect of incentive factors on turnover intention of PHC workforce in rural China—from the perspective of two-factor theory. *BMC Health Serv Res*. 2024;24(1):1–10.
 29. Ochsmann EB. Thinking about giving up clinical practice? A gender-stratified approach to understanding junior doctors' choices. *Acad Med*. 2012;87(1):91–7.
 30. Li M, Wang W, Zhang J, Zhao R, Loban K, Yang H, et al. Organizational culture and turnover intention among primary care providers: a multilevel study in four large cities in China. *Glob Health Action*. 2024;17(1):2346203.
 31. Paparisabet M, Jalalpour AH, Farahi F, Gholami Z, Shaygani F, Jalili N, et al. Investigating the organizational commitment and its associated factors among the staff of the health sector: a cross-sectional research. *BMC Health Serv Res*. 2024;24(1):1373.
 32. Stobbe EJ, Groenewegen PP, Schäfer W. Job satisfaction of general practitioners: a cross-sectional survey in 34 countries. *Hum Resour Health*. 2021;19(1):1–12.