

Research Article

Measuring Nurses' Satisfaction in Primary Health Care Centers at Khartoum, Sudan

Yahya Hussein Ahmed Abdalla

College of Nursing, Najran University, Najran, Saudi Arabia

ORCID:

Yahya Hussein Ahmed Abdalla: <https://orcid.org/0000-0002-9805-4669>

Abstract

Background: The primary healthcare sector has experienced significant growth globally, and the nursing workforce has also expanded in recent decades in response to health system reforms. This study aims to assess job satisfaction among primary healthcare nurses in Khartoum, Sudan.

Methods: This descriptive cross-sectional study was conducted in 10 primary healthcare centers on 50 nurses who were selected using simple random sampling. Data were collected using an online questionnaire and it was analyzed using SPSS.

Results: The findings of this study indicate that the job satisfaction level among nurses working at primary healthcare centers in Khartoum was high (4.4/5). Most nurses reported high satisfaction with all items including protocols, salary, environment, and relationships. The study also found a significant correlation between nurses' sex and experience with their level of job satisfaction. Female nurses reported significantly higher job satisfaction (4.4/5) compared to male nurses (3.6/5), (p -value = 0.04). Additionally, nurses with fewer years of experience reported significantly higher job satisfaction compared to those with more years of experience (p -value = 0.03).

Conclusion: The study concludes that nurses working at primary healthcare centers in Khartoum have high job satisfaction, particularly regarding the working environment, salary, relationships, and availability of guidelines. Female nurses and those with less experience have significantly higher job satisfaction.

Corresponding Author: Yahya Hussein Ahmed Abdalla; email: yhabdulla@nu.edu.sa, yabdalla286@gmail.com

Received 17 March 2023

Accepted 21 July 2023

Published 27 September 2023

Production and Hosting by
Knowledge E

© Yahya Hussein Ahmed Abdalla. This article is distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use and redistribution provided that the original author and source are credited.

Editor-in-Chief:

Prof. Nazik Elmalaika Obaid
Seid Ahmed Husain, MD, M.Sc,
MHPE, PhD.

Keywords: job satisfaction, nurses, primary healthcare center, Khartoum, Sudan.

1. Introduction

The shift toward a primary healthcare approach in health systems is gaining momentum, with many countries now focusing their healthcare services on primary care (1-3). The success of this approach relies on the effective implementation of primary care elements, and the rebuilding of Al-Mata's role in primary healthcare is crucial for achieving sustainable development goals (4).

The nursing profession has a significant role in providing comprehensive primary healthcare services and its role has been highlighted during and after the pandemic of COVID-19 (1, 5, 6). However, the nursing voice is missing in policy-making and

 OPEN ACCESS

governmental representation, they played a significant role in primary care and faced the risk in the front line (7). Thus, the World Health Organization emphasizes the critical role of nurses in diseases prevention and health promotion and delivering primary healthcare. Additionally, it considers nurses and midwives as a center for primary healthcare, and they are the first and sometimes the only healthcare providers that people meet in healthcare settings and to their vital role in care and treatment (8).

The impact of job satisfaction has been widely studied across several disciplines, including psychology, sociology, management, and the nursing profession (9-11). Low levels of job satisfaction are related to not only employee withdrawal, and intention to leave but also to employee mental health and burnout (12, 13). Employees who are highly satisfied with their jobs have been shown to be more productive, creative, and remain within the working organization for longer periods of time (14, 15).

Furthermore, job satisfaction in the nursing profession has been found to have a significant impact on nurses' and patients' satisfaction (11, 16-19). Despite the importance of nurses' job satisfaction related to nurses and patients and its sequences on productivity, limited attention has been given to the influencing factors and magnitude of the problem (16, 20-25).

Nursing researchers have described various definitions of nurses' job satisfaction in relation to the nursing profession (26-29), including but not limited to 'a function of situation and personality' (26) or 'a feeling or affective response of nurses to the situation about their jobs and work environment' (30). However, there is no clear consensus on the definition of nurses' job satisfaction. This lack of agreement poses a challenge for nursing researchers when conducting studies on this concept. Therefore, the purpose of this study is to measure nurses' job satisfaction in primary healthcare (PHC) settings in Khartoum, Sudan."

2. Methods

2.1. Study design

This descriptive cross-sectional study aimed to measure nurses' job satisfaction in primary healthcare (PHC) centers in Khartoum, Sudan.

2.2. Study participants

The study included registered nurses working in PHC centers in Khartoum.

2.3. Sampling and sample size

Ten PHC centers were selected using simple random sampling technique, and a specific number of registered nurses were included from each center as follows:"

TABLE 1

| Primary health center | No. of included nurses |
|-----------------------------|------------------------|
| Sameer PHC Center | 8 |
| Tooty PHC Center | 8 |
| Alсахafa PHC Center | 8 |
| Alsalamah PHC Center | 7 |
| Jabal Awlia PHC Center | 8 |
| Abusied PHC Center | 12 |
| Alemtidad PHC Center | 8 |
| Banat PHC Center | 10 |
| Kalakelah Sangat PHC Center | 7 |
| Alwadi Alakhdar PHC Center | 6 |
| Total | 82 |

2.4. Data collection

The nurses working in the selected 10 PHC centers were invited to participate in the study via online link which was shared during their visit to the center. Explanations about the study purpose, data collection, and the tools of collecting data were provided to the nurses prior to their enrollment. All the responses were maintained confidentially.

2.5. Data collection tools

A questionnaire which was adopted from one previous study by Lu H. et al., 2006 which included two sections. The first section was for nurses' demographic characteristics such as gender, PHC center, level of education, nationality, and experiences. The second section was for nurses' job satisfaction using the Likert-type scale with 21 items, and the nurses ranked their satisfaction for each of the 21 listed factors (31). The validity and reliability of the used questionnaire were assessed, and the Cronbach's Alpha scale was recorded (0.82).

2.6. Data analysis

The data was analyzed by the Statistical Package for Social Sciences (SPSS) version 24. The frequencies and percentages of variables were presented in tables and the correlation was calculated between the demographic characteristics and level of nurses' job satisfaction. P-value of <0.05 was considered a statistically significant.

3. Results

Table 1 shows that 71% of participants were females from 10 PHC in Khartoum state (6-15) nurses from each center. They mainly had bachelor's degree in nursing (59%) followed by diploma (39%), and only 2% had master's in nursing sciences. The table also shows that 57% of nurses had experience between 1 and 5 years, 29% had 6-10 years of experience, and 12% had 11-15 years of experience. The age of nurses was 24 ± 3 years in average. The overall satisfaction level of nurses at PHC centers in Khartoum was 4.4 out of 5.

Table 2 shows the detailed responses of nurses at PHC in Khartoum toward the asked questions related to their satisfaction. Most nurses reported high satisfaction by answering most of the questions by either agree or strongly agree.

Table 3 shows the correlation between nurses' demographic variables (sex, education, nationality, experience, and age) at PHC in Khartoum and their level of satisfaction. Also, a significant association was observed between the nurses' gender (male vs female) and satisfaction; the female nurses had significantly higher job satisfaction (4.4/5) compared to male nurses (3.6/5), (p -value = 0.04). Other influencing factors were the nurses years of experience; the nurses with experience between 1-5 years had significantly higher job satisfaction (5/5), followed by those having 6-10 years of experience with job satisfaction of (4.5/5) compared to the nurses who had 11-15 years of experience with job satisfaction of (4.2/5) and (3.9/5) among those having 16-20 years of experience, (p -value = 0.03).

4. Discussion

The recent systematic review conducted in Sudan, in 2022, on the job satisfaction of PHC workers in Sudan showed that there is a scarcity of evidence on the level of job satisfaction among healthcare providers (32). The same thing was reported by an integrated review on PHC nurses job satisfaction, which indicated gaps in literature

TABLE 2: Demographic characteristics of nurses working in PHC centers at Khartoum ($n = 82$).

| Variable | | Freq. | Percent |
|------------------------------|-----------------------------|-------|---------|
| Sex | Male | 24 | 29% |
| | Female | 58 | 71% |
| PHC center | Sameer PHC Center | 8 | 10% |
| | Tooty PHC Center | 8 | 10% |
| | Alsahafa PHC Center | 8 | 10% |
| | Alsalamah PHC Center | 7 | 9% |
| | Jabal Awlia PHC Center | 8 | 10% |
| | Abusied PHC Center | 12 | 15% |
| | Alemtidad PHC Center | 8 | 10% |
| | Banat PHC Center | 10 | 12% |
| | Kalakelah Sangat PHC Center | 7 | 9% |
| | Alwadi Alakhdar PHC Center | 6 | 7% |
| Level of education | Diploma | 32 | 39% |
| | Bachelor's | 48 | 59% |
| | Master's | 2 | 2% |
| Experiences | 1 to 5 years | 47 | 57% |
| | 6 to 10 years | 24 | 29% |
| | 11 to 15 years | 10 | 12% |
| | 16 to 20 years | 1 | 1% |
| Age | Mean 24 ± 3 | | |
| Satisfaction level of nurses | Mean = 4.4, SD = 0.6 | | |

on PHC nurses job satisfaction (32). The findings of the current study showed that the satisfaction level of nurses working at PHC at Khartoum was high at 4.4 out of 5. Majority of the nurses reported high satisfaction to all scale items by answering all questions by either agree or strongly agree. This high job satisfaction level is justified by the implemented policies and protocol with job description, in addition to the high salary they receive compared to the nurses' salary in other countries, it also could be related to the satisfied working environment. These findings were similar to the findings reported by other previous studies by El-Gilany et al., which indicated that most of the nurses are satisfied with their workplace (33); Alostaz Z, which showed that nurses have moderately high level of satisfaction (34). Another study conducted by Takroni H. et al., among nurses in Qassim Hospital and PHC centers which found that nurses had an average job satisfaction (35). In Ethiopia, a study for investigating job satisfaction of nurses at public health facilities indicated that nurses were satisfied with their job condition (36); in the same line, a study conducted among PHC workers in Nigeria reflected that most of them were satisfied with the general working conditions (37).

TABLE 3: Satisfaction levels of nurses working in PHC centers at Khartoum, (n = 82).

| Variables | Definitely disagree | Disagree | Neutral | Agree | Fully agree |
|--|---------------------|----------|---------|---------|-------------|
| The feeling of fulfillment and satisfaction you get from your job | 2(2%) | 7(9%) | 4(5%) | 48(59%) | 21(26%) |
| Recognition from the supervisor | 1(1%) | 5(6%) | 7(9%) | 53(65%) | 16(20%) |
| Respect from co-workers | 4(5%) | 6(7%) | 2(2%) | 43(52%) | 27(33%) |
| Feedback from the supervisor | 5(6%) | 2(2%) | 1(1%) | 23(28%) | 51(62%) |
| Feedback from patients | 3(4%) | 1(1%) | 0(0%) | 26(32%) | 52(63%) |
| Promotion | 5(6%) | 4(5%) | 3(4%) | 23(28%) | 47(57%) |
| Opportunities for further learning, e.g., professional training | 4(5%) | 2(2%) | 1(1%) | 37(45%) | 38(46%) |
| Develop | 2(2%) | 1(1%) | 3(4%) | 32(39%) | 44(54%) |
| Responsibility allotted to you | 0(0%) | 4(5%) | 2(2%) | 35(43%) | 41(50%) |
| Flexibility and independence | 1(1%) | 2(2%) | 1(1%) | 17(21%) | 61(74%) |
| The feeling of being treated equally | 4(5%) | 1(1%) | 6(7%) | 32(39%) | 39(48%) |
| Salary | 1(1%) | 0(0%) | 1(1%) | 32(39%) | 48(59%) |
| The rules and routines of supervision | 3(4%) | 4(5%) | 1(1%) | 32(39%) | 42(51%) |
| The comprehensive goals and guidelines in your hospital | 2(2%) | 2(2%) | 2(2%) | 34(41%) | 42(51%) |
| The organizational climate | 4(5%) | 2(2%) | 2(2%) | 27(33%) | 47(57%) |
| The quantity of work allotted to you (workload) | 0(0%) | 0(0%) | 1(1%) | 31(38%) | 50(61%) |
| The equipment used in your hospital | 3(4%) | 1(1%) | 0(0%) | 32(39%) | 46(56%) |
| The criticality | 2(2%) | 0(0%) | 1(1%) | 45(55%) | 34(41%) |
| Relationships with doctors | 1(1%) | 1(1%) | 5(6%) | 38(46%) | 37(45%) |
| Relationships with co-workers | 0(0%) | 1(1%) | 1(1%) | 31(38%) | 49(60%) |
| Relationships with patients | 2(2%) | 1(1%) | 1(1%) | 35(43%) | 43(52%) |

On the other hand, one study investigated the relationship between the quality of work life and turnover intention among PHC nurses which showed that nurses are dissatisfied with work life (38). Furthermore, a recent systematic review conducted in Sudan on PHC workers (nurses and physicians) showed a disturbing job satisfaction prevalence rates among healthcare providers (32).

TABLE 4: Relationship between demographic characteristics and Satisfaction levels of nurses working in PHC centers Khartoum, (n = 82).

| Variable | | (Mean ± SD) of satisfaction level | | P-Value |
|-------------|-----------------------------|-----------------------------------|-----|---------|
| Sex | Male | 3.6 | 0.7 | 0.04* |
| | Female | 4.4 | 0.4 | |
| PHC center | Sameer PHC Center | 3.3 | 0.7 | 0.51 |
| | Tooty PHC Center | 4.7 | 0.6 | |
| | Alsahafa PHC Center | 4.5 | 0.4 | |
| | Alsalamah PHC Center | 4.1 | 1.2 | |
| | Jabal Awlia PHC Center | 4.5 | 0.3 | |
| | Abusied PHC Center | 4.3 | 1.1 | |
| | Alemtidad PHC Center | 4.7 | 0.5 | |
| | Banat PHC Center | 4.6 | 0.7 | |
| | Kalakelah Sangat PHC Center | 4.2 | 1.3 | |
| | Alwadi Alakhdar PHC Center | 4.5 | 0.6 | |
| | Level of education | Diploma | 4.3 | |
| Bachelor | | 4.6 | 0.7 | |
| Master | | 4.5 | 0.4 | |
| Experiences | 1 to 5 years | 5.0 | 0.7 | 0.03* |
| | 6 to 10 years | 4.5 | 0.6 | |
| | 11 to 15 years | 4.2 | 0.3 | |
| | 16 to 20 years | 3.9 | 0.8 | |
| Age | 20-30 years old | 4.2 | 0.8 | 0.08 |
| | 31-40 years old | 4.7 | 0.2 | |

The findings of this study showed a significant association between the nurses' gender and nurses' experience with their job satisfaction. The female nurses had significantly higher job satisfaction and nurses with less years of experience had significantly higher job satisfaction. Female nurses having higher job satisfaction could be related to their willingness to work as a nurse or the support from the society, while male may have been affected by the community as they are nurses. For those who have less experience with higher job satisfaction could be explained as they are newly graduated and jobs with good salary may enhance their level of satisfaction compared to senior nurses having more experience. In Ethiopia, a study for investigating job satisfaction of nurses at public health facilities indicated that nurses are satisfied with their job condition and the most satisfied nurses had experience between 1 and 5 years (36), and the same thing was reported from another study in Nigeria which mentioned that work duration is an influencing positive factor on PHC workers satisfaction (37).

However, the current study investigated a very essential part of nurses working condition and it was conducted in Khartoum city as a first study in this region investigating

the PHC nurses job satisfaction. It has several limitations, as it was conducted only in one region of Sudan which lacks its generalizability, another issue is the sample size of 82 nurses, the third limitation is the respondents bias which may be associated with data collection and nurses may be afraid that their responses may affect their employment status.

5. Conclusion

The study findings suggest that nurses working at PHC centers in Khartoum have high levels of job satisfaction, with complete satisfaction reported in regards to the working environment, salary, relationships, and availability of guidelines. This indicates that the healthcare system in Khartoum is creating a supportive and positive environment for nursing professionals. Interestingly, the study also found that female nurses reported significantly higher job satisfaction levels compared to male nurses. Moreover, nurses with less years of experience also reported significantly higher job satisfaction levels, suggesting that the healthcare system in Khartoum is providing a conducive environment for nursing professionals to work and grow. The study's results highlights the importance of prioritizing job satisfaction in the nursing profession, as it can have a significant impact on the quality of patient care and overall healthcare system performance.

Acknowledgments

The researcher would like to extend his sincere thanks and gratitude to the Scientific Council of the faculty of Nursing - International University of Africa- Sudan for their kind approval to conduct this study.

Ethical Approval

The study was approved from the ethical board at the International University of Africa, Sudan. The official letter was issued on 15/03/2022 with approval no. of IUA/NF/15/03/22-44. Informed consent was obtained from the PHC nurses and their agreement to fill online questionnaire was considered as an informed consent to enroll in the study.

Competing Interests

There are no competent of interest related to this study.

Availability of Data and Materials

The data are available upon request from corresponding author

Funding

There is no funding received for this study

Author Contributions

This is a single author manuscript who conducted all tasks

References

- [1] Halcomb, E., Smyth, E., & McInnes, S. (2018). Job satisfaction and career intentions of registered nurses in primary health care: An integrative review. *BMC Family Practice*, *19*(1), 136. <https://doi.org/10.1186/s12875-018-0819-1>
- [2] Tao, W., Zeng, Z., Dang, H., Lu, B., Chuong, L., Yue, D., Wen, J., Zhao, R., Li, W., & Kominski, G. F. (2020). Towards universal health coverage: Lessons from 10 years of healthcare reform in China. *BMJ Global Health*, *5*(3), e002086. <https://doi.org/10.1136/bmjgh-2019-002086>
- [3] Kapologwe, N. A., Meara, J. G., Kengia, J. T., Sonda, Y., Gwajima, D., Alidina, S., & Kalolo, A. (2020). Development and upgrading of public primary healthcare facilities with essential surgical services infrastructure: A strategy towards achieving universal health coverage in Tanzania. *BMC Health Services Research*, *20*(1), 218. <https://doi.org/10.1186/s12913-020-5057-2>
- [4] Hone, T., Macinko, J., & Millett, C. (2018). Revisiting Alma-Ata: What is the role of primary health care in achieving the Sustainable Development Goals? *Lancet*, *392*(10156), 1461–1472. [https://doi.org/10.1016/S0140-6736\(18\)31829-4](https://doi.org/10.1016/S0140-6736(18)31829-4)
- [5] Li, X., Krumholz, H. M., Yip, W., Cheng, K. K., De Maeseneer, J., Meng, Q., Mossialos, E., Li, C., Lu, J., Su, M., Zhang, Q., Xu, D. R., Li, L., Normand, S. T., Peto, R., Li, J., Wang, Z., Yan, H., Gao, R., Chunharas, S.... Hu, S. (2020). Quality of primary

- health care in China: Challenges and recommendations. *Lancet*, 395(10239), 1802–1812. [https://doi.org/10.1016/S0140-6736\(20\)30122-7](https://doi.org/10.1016/S0140-6736(20)30122-7)
- [6] Cassiani, S. H. D. B., Silva, F. A. M. d. (2019). Expanding the role of nurses in primary health care: The case of Brazil. *SciELO Brasil*.
- [7] Anders, R. L. (Ed.). (2021). Engaging nurses in health policy in the era of COVID-19. *Nursing forum*. Wiley Online Library.
- [8] World Health Organization. *Nursing and midwifery: Key facts*. Geneva 2022.
- [9] Ravari, A., Mirzaei, T., Kazemi, M., & Jamalizadeh, A. (2012). Job satisfaction as a multidimensional concept: A systematic review study. *Journal of Occupational Health and Epidemiology*, 1(2), 95–102. <https://doi.org/10.18869/acadpub.johe.1.2.95>
- [10] Mohammed, B., & Ahmed, W. (2020). Evaluation of nurse interns' satisfaction and hospital as an educational environment in nursing internship training program, Saudi Arabia. *Evaluation*, 9(1), 22–29.
- [11] Gülerüz, G., Güney, S., Aydin, E. M., & Aşan, O. (2008). The mediating effect of job satisfaction between emotional intelligence and organisational commitment of nurses: A questionnaire survey. *International Journal of Nursing Studies*, 45(11), 1625–1635. <https://doi.org/10.1016/j.ijnurstu.2008.02.004>
- [12] Madigan, D. J., & Kim, L. E. (2021). Towards an understanding of teacher attrition: A meta-analysis of burnout, job satisfaction, and teachers' intentions to quit. *Teaching and Teacher Education*, 105, 103425. <https://doi.org/10.1016/j.tate.2021.103425>
- [13] Liu, H. -L., & Lo, V. (2018). An integrated model of workload, autonomy, burnout, job satisfaction, and turnover intention among Taiwanese reporters. *Asian Journal of Communication*, 28(2), 153–169. <https://doi.org/10.1080/01292986.2017.1382544>
- [14] Davidescu, A. A., Apostu, S. -A., Paul, A., & Casuneanu, I. (2020). Work flexibility, job satisfaction, and job performance among Romanian employees—Implications for sustainable human resource management. *Sustainability (Basel)*, 12(15), 6086. <https://doi.org/10.3390/su12156086>
- [15] Faeq, D. K. (2022). The importance of employee involvement in work activities to overall productivity. [IJHED]. *International Journal of Humanities and Education Development*, 4(5), 15–26. <https://doi.org/10.22161/jhed.4.5.4>
- [16] Samad, A., Memon, S. B., & Kumar, M. (2020). Job satisfaction among nurses in Pakistan: The impact of incivility and informal climate. *Global Business and Organizational Excellence*, 39(4), 53–59. <https://doi.org/10.1002/joe.22004>
- [17] Topbaş, E., Bay, H., Turan, B. B., Çıtlak, U., Emir, A. H., Erdoğan, T. K., & Akkaya, L. (2019). The effect of perceived organisational justice on job satisfaction

- and burnout levels of haemodialysis nurses. *Journal of Renal Care*, 45(2), 120–128. <https://doi.org/10.1111/jorc.12271>
- [18] Head, B., Middleton, A., & Zeigler, C. (2019). Work satisfaction among hospice and palliative nurses. *Journal of Hospice and Palliative Nursing : JHPN : the Official Journal of the Hospice and Palliative Nurses Association*, 21(5), E1–E11. <https://doi.org/10.1097/NJH.0000000000000562>
- [19] Danaci, E., & Koç, Z. (2020). The association of job satisfaction and burnout with individualized care perceptions in nurses. *Nursing Ethics*, 27(1), 301–315. <https://doi.org/10.1177/0969733019836151>
- [20] Udo, I. E. (2020). The relationship of involvement, commitment and productivity to job satisfaction of nurses. Grand Canyon University.
- [21] Zahednezhad, H., Hoseini, M. A., Ebadi, A., Farokhnezhad Afshar, P., & Ghanei Gheshlagh, R. (2021). Investigating the relationship between organizational justice, job satisfaction, and intention to leave the nursing profession: A cross-sectional study. *Journal of Advanced Nursing*, 77(4), 1741–1750. <https://doi.org/10.1111/jan.14717>
- [22] Hu, H., Wang, C., Lan, Y., & Wu, X. (2022). Nurses' turnover intention, hope and career identity: The mediating role of job satisfaction. *BMC Nursing*, 21(1), 43. <https://doi.org/10.1186/s12912-022-00821-5>
- [23] Hellín Gil, M. F., Ruiz Hernández, J. A., Ibáñez-López, F. J., Seva Llor, A. M., Roldán Valcárcel, M. D., Mikla, M., & López Montesinos, M. J. (2022). Relationship between job satisfaction and workload of nurses in adult inpatient units. *International Journal of Environmental Research and Public Health*, 19(18), 11701. <https://doi.org/10.3390/ijerph191811701>
- [24] Alharbi, J., Wilson, R., Woods, C., & Usher, K. (2016). The factors influencing burnout and job satisfaction among critical care nurses: A study of Saudi critical care nurses. *Journal of Nursing Management*, 24(6), 708–717. <https://doi.org/10.1111/jonm.12386>
- [25] Kieft, R. A., de Brouwer, B. B., Francke, A. L., & Delnoij, D. M. (2014). How nurses and their work environment affect patient experiences of the quality of care: A qualitative study. *BMC Health Services Research*, 14(1), 249. <https://doi.org/10.1186/1472-6963-14-249>
- [26] Liu, Y., Aunguroch, Y., & Yunibhand, J. (2016). Job satisfaction in nursing: A concept analysis study. *International Nursing Review*, 63(1), 84–91. <https://doi.org/10.1111/inr.12215>
- [27] Holmberg, C., Caro, J., & Sobis, I. (2018). Job satisfaction among Swedish mental health nursing personnel: Revisiting the two-factor theory. *International Journal of*

- Mental Health Nursing*, 27(2), 581–592. <https://doi.org/10.1111/inm.12339>
- [28] Koy, V., Yunibhand, J., Angsuroch, Y., & Fisher, M. L. (2015). Relationship between nursing care quality, nurse staffing, nurse job satisfaction, nurse practice environment, and burnout: Literature review. *International Journal of Research in Medical Sciences*, 3(8), 1825–1831. <https://doi.org/10.18203/2320-6012.ijrms20150288>
- [29] Castaneda, G. A., & Scanlan, J. M. (Eds.). (2014). Job satisfaction in nursing: A concept analysis. Nursing forum. Wiley Online Library.
- [30] Cook, J. K. (2020). An investigation into nurse managers' blended leadership preferences and nurse job satisfaction. Grand Canyon University.
- [31] Lu, H., While, A. E., & Barriball, K. L. (2007, May). Job satisfaction and its related factors: A questionnaire survey of hospital nurses in Mainland China. *International Journal of Nursing Studies*, 44(4), 574–588. <https://doi.org/10.1016/j.ijnurstu.2006.07.007>
- [32] Alotaibi, A., Alotaibi, A., Alwahbi, E., & Alkathlan, M. (2022). Job satisfaction among primary healthcare workers in Saudi Arabia and associated factors: A systematic review. *Journal of Family Medicine and Primary Care Open Access*, 6, 185.
- [33] El Gilany, A., Al Wehady, A. (2001). Job satisfaction of female Saudi nurses. *EMHJ- Eastern Mediterranean Health Journal*, 7(1-2), 31-37. <https://doi.org/10.26719/2001.7.1-2.31>
- [34] Alostaz, Z. (2016). Job satisfaction among critical care nurses in Al Baha, Saudi Arabia: A cross-sectional study. *Gulf Medical Journal*, 5(1), 64–68.
- [35] Al-Takroni, H., Al-Hindi, A., Joshva, K., & Al-Harbi, A. (2018). Job satisfaction among nurses in Al-Qassim hospitals and primary health care centers, Saudi Arabia, 2016. *International Journal of Advanced Nursing Studies*, 7(1), 34. <https://doi.org/10.14419/ijans.v7i1.8864>
- [36] Ayalew, F., Kibwana, S., Shawula, S., Misganaw, E., Abosse, Z., van Roosmalen, J., Stekelenburg, J., Kim, Y. M., Teshome, M., & Mariam, D. W. (2019). Understanding job satisfaction and motivation among nurses in public health facilities of Ethiopia: A cross-sectional study. *BMC Nursing*, 18(1), 46. <https://doi.org/10.1186/s12912-019-0373-8>
- [37] Kadiri-Eneh, N., Azuike, E., Tobin-West, C., & Uzochukwu, B. (2018). An assessment of the potentials for retention of primary health care workers in Rivers State, Nigeria. *Afrimedical Journal*, 6(1), 35–51.
- [38] Elshahat, E. M., Shazly, M. M., & Abd-Elazeem, H. (2019). Relationship between quality of work life and turnover intention among staff nurses. *Egyptian Journal of Health Care*, 10(1), 178–193. <https://doi.org/10.21608/ejhc.2019.28793>