Original Article

The Role of Career Development in Shaping Nurse Loyalty and Job Satisfaction: A descriptive Correlational Study

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ABSTRACT

Background: Career development is a vital component of nurse workforce management, affecting both individual and organizational outcomes. In the evolving healthcare landscape, opportunities for professional development not only improve nurses' skills and abilities but also significantly contribute to job satisfaction and loyalty to the organization. **Aim:** To explore career development and its relationship with loyalty and job satisfaction among nurses. **Method:** This study utilized a descriptive correlational design, including stratified 252 nurses allocated proportionally from different units of Mansoura University Children Hospital. Data were collected through a self-reported questionnaire including four sections as follows: personal characteristics, nursing career development scale, loyalty scale, and job satisfaction scale. **Results**: The study revealed that nurses had a high level of career development perception, loyalty, and moderate levels of job satisfaction. Additionally, career development perception correlated positively with loyalty and job satisfaction among nurses. **Conclusion:** When nurses perceive career development chances positively, they are more motivated to demonstrate more loyalty to their organization and attain higher levels of job satisfaction. **Recommendations:** To improve nurse loyalty and job satisfaction, Nursing supervisors/Managers should implement structured career development programs that include frequent training, professional development workshops, and clear career advancement pathways to sustain a high perception of career development.

Keywords: *Career Development, Job Satisfaction, Loyalty, Nurse*

Introduction

Healthcare organizations are often obligated to invest in nurses' development programs to enhance workforce capacities. These programs provide nurses with valuable chances for training, learning, and career progression, which they really appreciate. This is due to organizational change, globalization, and competition. Development outputs must be valued by nurses and bring value that aids organizations in achieving their strategic objectives and progressing the careers of people for there to be reciprocal benefits (King et al., 2020).

Career development is undoubtedly something that every nurse desires as, in general, people's life would be wealthier the higher their position. The absence of a career development program would undoubtedly cause nurses to become less loyal to the organization, which would be negative to the organization as a whole (Susita, Saptono, Susono, & Rahim, 2020). Nurses who are loyal to their jobs will offer their all for the benefit of the organization. Loyal nurses will be more focused on their work. High-loyalty nurses are more likely to be cooperative and ready to assist and be more satisfied. Healthcare organizations and stakeholders should prioritize the job happiness of nurses as they constitute the biggest professional group in healthcare systems (Specchia et al., 2021).

Career development is a means of developing competencies among nurses and all stakeholders of the organization. It is also a formal process by the organization to determine if the nurse is working according to the organization's needs and qualifications (Darmanto & Supriyadi, 2022). Training is typically a form of career development, and many organizations provide their personnel with internal training programs. Some organizations demand that their staff members participate in frequent internal training sessions. Naturally, the process of developing a career varies from person to person. Your route to the top of your career will be simpler if you can effectively manage the challenges and barriers that are always present (Jeffrey & Prasetya, 2019).

The majority of studies on nurses' engagement have used career advancement as a predictor of participation level since it is a predictor of loyalty. Having access to educational opportunities is often beneficial to one's career progression. Not only can it make nurses feel more secure in their jobs, but it might also give them hope for the future and open doors to promotions.

Staff retention rates may be higher if nurses have more opportunities to socialize with coworkers, as this increases their devotion to the company. According to Samat et al. (2020), nurses will be happy and committed if they have the opportunity to develop and grow in their careers.

Loyalty represents one of the traits influencing a person's productivity. A person's performance will be better the more loyal he is to his work and to completing it. It is clear that nurse's loyalty to the organization is a crucial topic for organizational human resource management concerns. Businesses compete by utilizing the abilities and skills of their staff. Nurses' emotional commitment is one way to conceptualize nurse loyalty. Affective commitment refers to a nurse's desire to keep working for the organization out of a sense of loyalty and ownership as well as pleasure with his or her interests. (Rahman, Supriyantoro, & Anindita, 2023).

Job satisfaction is a key factor that may influence nurse loyalty. Nurses who are satisfied will be less likely to complain and be more productive. Nurses that are satisfied with their jobs should be eager to cooperate more effectively with their managers and the organization as a whole. Nurse satisfaction also reduces the likelihood that they will act against the goals of the organization. This should prompt the managers to lend a hand because doing so will hasten the nurses' contributions to the organizational development. It is believed that job satisfaction and staff loyalty are the factors that promote productivity (Farrukh, Kalimuthu, Farrukh, & Khan, 2020).

Significance of the Study

Ongoing career development is a lifelong learning process that enhances a nurse's competency by maintaining and improving skills, performance, and knowledge. It enables healthcare practitioners to stay informed and proficient, so ensuring their fitness for practice (Vázquez-Calatayud, Errasti-Ibarrondo, & Choperena, 2020). Ongoing career development motivates practitioners to stay abreast of practice changes that maintain and enhance public confidence in healthcare services (Mlambo, Silén & McGrath,2021). Career development has been shown to influence nurses' loyalty and work satisfaction. This indicates that work satisfaction, as an intervening variable, significantly enhances the impact of professional growth on nurses' loyalty (Susita et al., 2020). Job satisfaction significantly enhances nurses' loyalty; greater satisfaction correlates with increased organizational allegiance (Christyana, Has & Yunitasari, 2020). The research

seeks to investigate the correlation between nurses' career advancement, loyalty, and work satisfaction among nursing professionals.

Aim of the Study

This research seeks to investigate the correlation between career development, loyalty, and work satisfaction among nurses.

Research Questions

- RQ1. What is the level of nurses' career development, loyalty and job satisfaction?
- RQ2.Does nurses' career development correlate with their loyalty and job satisfaction at Mansoura University Children Hospital?

Method

Study Design A descriptive correlational design. This design was utilized to describe the relationship among variables (Johnson & Turner, 2003).

Setting and Participants

This research included a stratified random sample of nurses (252) who were allocated proportionally from the different units of the Mansoura University Children's Hospital (MUCH). Mansoura University Children's Hospital is a health care facility affiliated with Mansoura University Hospitals that provides comprehensive healthcare services for children with a combined capacity of 365 beds. It includes two buildings; the first building, with four floors, houses outpatient services, diagnostic and laboratory facilities, intensive care units, and surgical departments. The second building, spanning nine floors, includes emergency services, administrative offices, specialized departments like gastroenterology, cardiology, neonatology, and nephrology, as well as intensive care units and staff residences.

Sample Size Calculation

The sample size was determined according to research conducted by (Elsherbeny & El-Masry (2018) Considering a precision/absolute error of 5% and a type I error of 5%. The below formula is used for the calculation of sample size:

$$\text{Sample size}(n) = \frac{(z_{1-\alpha/2})^{2*}(p)(q)}{(d)^2}$$

n = Desired sample size; Z 1-α/2 = standard normal variate, which is 1.96 at a 5% type I error (p<0.05); P = expected prevalence based on prior research; q = 1 - p; d = margin of error or precision. Thus, the sample size is calculated as follows: [(1.96)² x 0.618 x (0.382)] / (0.06)² = 251.9. Consequently, the requisite sample size for the research is 252 nurses.

Tools of Data Collection

Data were gathered by using three scales as follows:

ToolI:Nursing Career Development ScaleThis tool includes two parts as follows:

PartI: This part includes personal characteristics such as age, gender, marital status, educational qualifications, and experience years.

Part II: Nursing Career Development Scale was adapted from (Savickas,1984)) to assess career development of nurses. It included 27 items categorized under six dimensions namely crystallize a career preference (5 items), Specify nursing as career preference (5 items), implement nursing as career choice (4 items), Crystallize a specialty preference (4 items), Implement specialty choice (4 items), Stabilize in a practice position (5 items). The nurses' comments were evaluated using a five-point Likert scale, with 1 indicating 'never' and 5 indicating 'always'. The overall score for career development was categorized into three tiers based on cutoff points: low (< 50%), moderate (50%-75%), and high (>75%).

Tool II: Loyalty Scale

This scale was adapted from (Ali & Al‑Kazemi, 2007).to assess loyalty among nurses. It contains seven items . The responses of the nurses were rated on five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The nurses' agreements included strongly agree, agree, whereas disagreements included strongly disagree, disagree. The overall score for loyalty was categorized into three tiers based on cutoff points: low (< 50%), moderate (50%-75%), and high (>75%).

Tool III: Job Satisfaction Scale

This scale was developed by Spector (1985) to assess job satisfaction among staff nurses. It includes 36 items that are categorized into nine dimensions namely, pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, co-workers, nature of work, and communication. Each dimension includes four items. The responses of the nurses were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The nurses' agreements included strongly agree, agree, somewhat agree, whereas disagreements included strongly disagree, disagree, and somewhat disagree. The negative worded items were reversed scored before computing the total score for the scale and subscales of job satisfaction. The overall score for job satisfaction was categorized into three tiers based on cutoff points: low (< 50%), moderate (50%-75%), and high (>75%).

Validity and Reliability

The validity of the content was confirmed by a panel of five professionals from the nursing faculty at Mansoura University, who evaluated the tools for relevance, correctness, comprehensiveness, applicability, and ease of use, with improvements implemented depending on their input. The changes included rephrasing a few words and fixing grammatical errors. Using the Cronbach alpha test, we checked the reliability of the study's instruments measuring loyalty, job satisfaction, and career development. Career development, loyalty, and job satisfaction were all determined to have reliability values of 0.86, 0.83, and 0.76, correspondingly.

Pilot Study

Ten percent of the total research participants 25 nurses participated in the pilot study to ensure the study's viability and the tools' usefulness. In order to ascertain how long data collection would take, identify any issues specific to the tools, and rule out any potential roadblocks, a pilot study was conducted to assess the tools' usefulness. Both the study sample and the pilot study sample were excluded.

Ethical Considerations

An ethical permission was received from the Research Ethics Committee of the Faculty of Nursing at Mansoura University. Informed permission was acquired in writing from the nursing samples after they were provided with comprehensive information about the study's objectives, methods, advantages, and potential dangers. They communicated that participation in the research was optional and that individuals had the ability to withdraw at any moment without any obligation. All participants were guaranteed the confidentiality of the acquired data, and the privacy of the research sample was likewise ensured.

Data Coullectin

Data were gathered by a self-administered questionnaire sent to nurses throughout their work hours and across all shifts to guarantee thorough participation. The researcher clarified the study's goal and the procedure for submitting the questionnaire. Approximately 20 minutes were allocated to complete the questionnaire sheets. The researcher was present while administering the surveys to elucidate any ambiguities and address any enquiries. The researcher verified the completeness of each submitted questionnaire. The daily collection of questionnaire sheets from staff

nurses varied between 9 and 10 sheets. The researcher visited the hospital at various hours and days for data collecting. The data gathering period spanned three months, from early April to late June 2022.

Data Analysis

The collected data was methodically arranged, tabulated, and analyzed statistically using SPSS software v25. The categorical variables were represented as frequency and percentage. Continuous variables were presented as mean and standard deviation. An independent t-test was used to evaluate the disparity between two means of continuous variables. The ANOVA test was used to evaluate the disparities among several means of continuous variables. The Pearson correlation coefficient was used to evaluate the connection among the research variables. Statistical significance was established with a p-value of less than 0.05.

Results

Table 1 shows that less than half percent of the nurses (44.8%) were in age group (31-40) years old, most of them (92.1%) were female, most of them (83.7%) were married and less than half of them (46.0%) had bachelor's degree of education. In concerning years of experience, (63.5%) of nurses had >10 years of experience.

Figure (1) indicates that less than two-thirds of nurses (62.7%) exhibited a high degree of career growth, while (0.4%) had a low level, and 36.9% displayed a moderate level of career development. Over two-thirds (76.2%) of nurses exhibited a high degree of loyalty, while 23.4% had a moderate level, and 0.4% showed a low level of loyalty. Most of the surveyed nurses (89.7%) exhibited moderate levels of satisfaction with their job.

Table 2 illustrates that there were statistically significance differences in career development related to their marital status ($p= 0.04$). There were statistically significance differences of loyalty related to their marital status ($p=0.000$) and experience ($p= 0.000$). There were not statistically significance differences in nurses' job satisfaction related to their characteristics.

Figure 2 shows that there was a highly statistically significant positive correlation between career development and loyalty as perceived by nurses ($p= 0.000$).

Figure 3 illustrates a very statistically significant positive link between career development and job satisfaction as evaluated by nurses ($p= 0.000$).

Figure 4 shows a highly statistically significant positive correlation between job satisfaction and loyalty as perceived by nurses ($p= 0.006$).

Table 1: Personal Characteristics of the Studied Nurses (n=252)

Characteristics	nO.	%
Age years		
▪ 20-30	95	37.7
▪ 31-40	113	44.8
▪ >40	44	17.5
Mean± SD	33.57±6.84	
Gender		
▪ Male	20	7.9
▪ Female	232	92.1
Marital status		
▪ Single	33	13.1
▪ Married	211	83.7
▪ Divorced	5	2.0
▪ Widowed	3	1.2
Level of education		
Secondary School of Nursing	99	39.3
▪ Technical degree	34	13.5
▪ Bachelor degree	116	46.0
▪ Master degree	3	1.2
Experience years		
▪ 1-5	57	22.6
▪ 6-10	35	13.9
▪ >10	160	63.5
Mean ±SD	13.42±7.59	

Table 2. Mean Scores of Career Development, Loyalty, and Job Satisfaction in Relation to the Personal Characteristics of the Studied Nurses (n=252)

Characteristics	Career Development	Loyalty	Job Satisfaction
Age years	Mean±SD	Mean±SD	Mean±SD
▪ 20-30	105.19±13.33	28.34±3.81	123.72±19.28
▪ 30-40	106.16±15.01	29.40±4.20	128.37±14.42
▪ >40	107.55±12.21	30.27±3.96	127.25±12.61
F value / p-value	0.44 / 0.64	3.88 / 0.02	2.21 / 0.11
Gender			
▪ Male	105.45±15.78	28.75±4.84	123.50±15.03
▪ Female	106.08±13.76	29.18±3.99	126.67±16.35
t value / p-value	0.19 / 0.84	0.46/0.65	0.84/0.40
Marital status			
▪ Single	106.24±10.74	26.76±3.73	120.85±19.01
▪ Married	106.39±14.04	29.73±3.72	127.34±15.69
▪ Divorced	88.60±20.27	21.60±7.06	131.60±12.40
▪ Widowed	109.00±4.24	26.00±2.25	107.50±7.78
F value/p-value	2.76/0.04*	13.08/0.000**	2.65/ 0.06
Level of education			
▪ Secondary School of Nursing	107.44±12.66	29.54±3.74	129.47±14.62
▪ Technical degree	103.82±13.17	29.03±4.16	125.41±15.27
▪ Bachelor degree	105.54±14.86	28.77±4.30	124.37±17.64
▪ Master degree	103.33±25.58	32.33±2.08	115.00±6.08
F value / p-value	0.71/0.55	1.28/0.28	2.36/0.07
Experience years			
▪ 1-5	104.32±12.26	27.14±4.20	124.32±20.11
▪ 6-10	101.85±15.16	29.18±3.42	124.62±19.51
▪ >10	107.53±14.00	29.86±3.92	127.55±13.8
F value / p-value	2.95/0.06	10.11/0.000**	1.07/0.34

- Statistically significant (p ≤0.05) / ** highly statically significant (p ≤0.01)

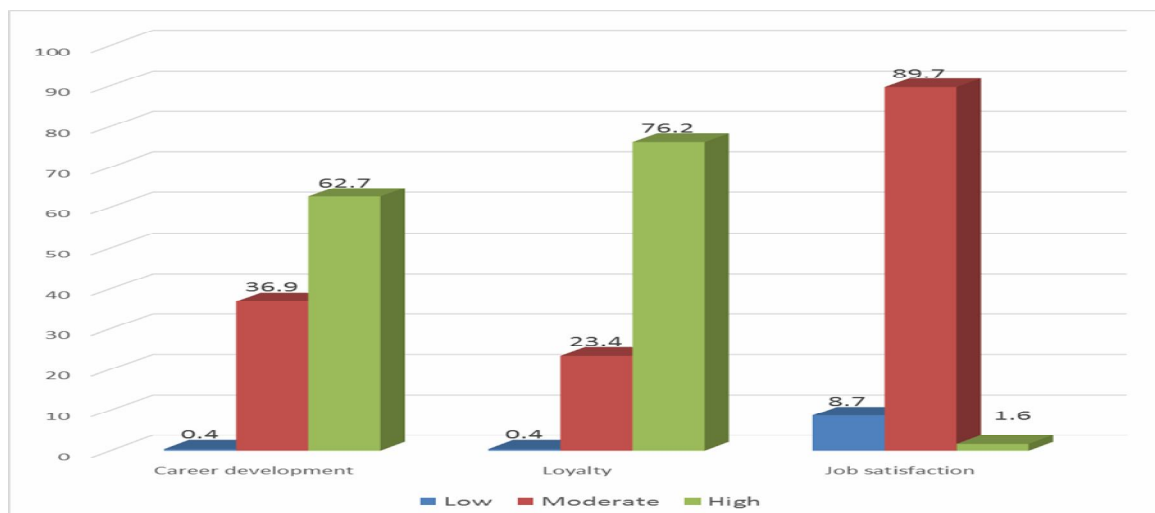

Figure 1. Levels of Career Development, Loyalty, and Job Satisfaction Among the Studied Nurses (n=252
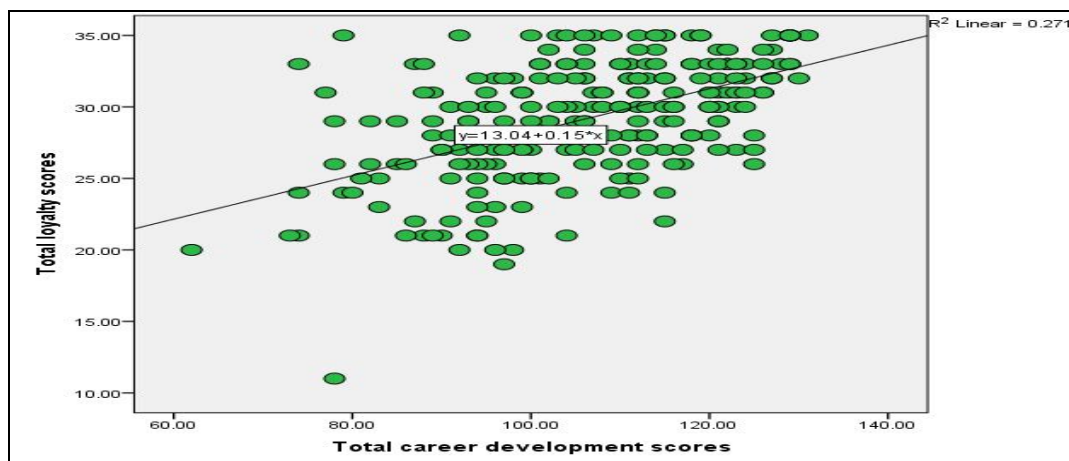
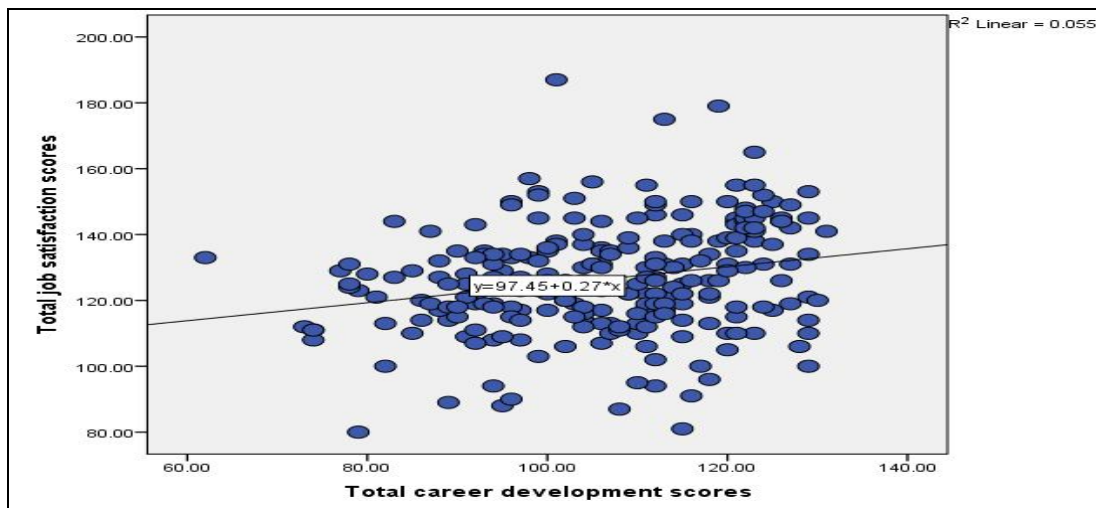Figure 2. Correlation Between Career Development, and Loyalty of the Studied Nurses (n=252)

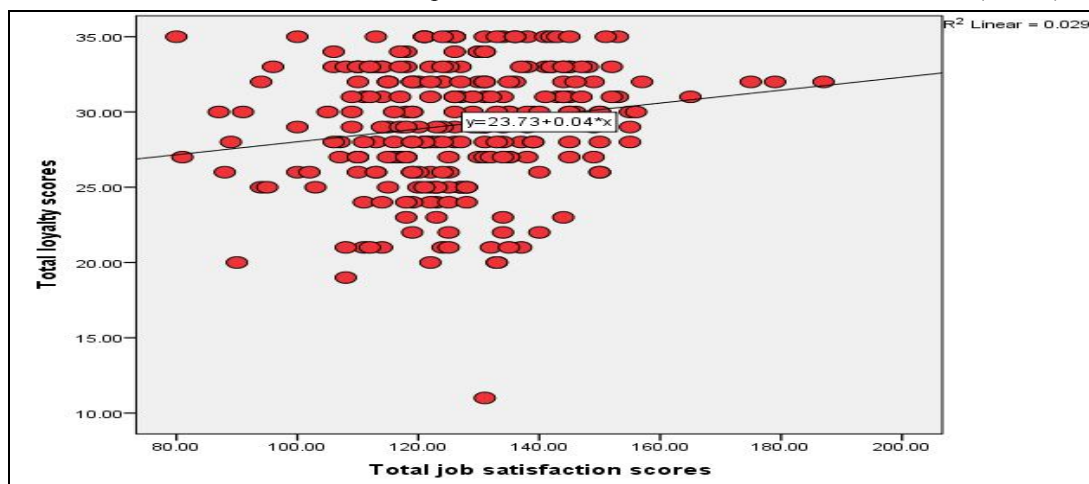Figure 3 Correlation Between Career Development, and Job Satisfaction of the Studied Nurses (n=252)

Figure 4 Correlation Between Job Satisfaction, and Loyalty of the Studied Nurses (n=252)

Discussion

The study aimed to explore career development and its relationship with loyalty and job satisfaction among nurses at Mansoura University Children Hospital. The study findings will be discussed in three main sections as follows:

Assessment career development, Loyalty, and Job satisfaction among the studied nurses:

The study indicated that nurses had high professional development, loyalty, and moderate work satisfaction levels. The elevated view of career development may result from the promotion of training and development opportunities that enable workers to enhance their skills for professional advancement over time via training programs (Burhan Ismael et al., 2021). Training programs provide personnel with essential knowledge, imparting specialized skills and familiarizing them with the responsibilities of various roles within the hospital. Employees who engage with and value the program may develop more loyalty to their organization by recognizing and fostering distinctive qualities from leadership. Employees may possess past job expertise that may be used for new occupations (Nguyen, 2020).

This result is consistent with the research conducted by (Pradiptha, Putra, Wijana, & Gayatri,2024) who found that nurses working at BIMC Kuta Hospital had a high level of career development. Also, Kuka et al. (2021) reported that career development of community health nurses in Gorontalo District was at a high level. This study with also in the same line with Sugiarti (2022) who found that the overall career development questionnaire was obtained at a high level in West Jakarta. Also, the study by Hamouda (2020) found that nurses had a high level of career development. However, the current study disagreed with Mohammed, Abdel Wahab, & El-Sayed (2020). revealed that most of nursing in governmental hospital in Port-Said City had low career development. The investigation revealed that the nurse had a high degree of organizational loyalty. This may result from a supportive workplace, where nurses see their contributions as appreciated and their needs acknowledged.

The results concurred with Etway and Elewa (2020), indicating that staff nurses at Benha University Hospital exhibited elevated levels of organizational loyalty. In contrast, the research results contradicted those of Gabra et al. (2022), indicating that two-thirds of the nurses examined had a low overall degree of organizational loyalty. The research conducted by Al-Dossary (2022) indicated that staff nurses in Saudi Arabia exhibited inadequate organizational loyalty. The research conducted by Bayer and Çankaya (2022) revealed that nurses' opinions of organizational loyalty were at a moderate level.

The study revealed that nurses exhibited a modest degree of work satisfaction. This may result from supportive company policies that promote work-life balance, including flexible scheduling.

Nurses are more inclined to experience job satisfaction and maintain commitment if they perceive that their hospital prioritizes their desire for work-life balance. Our research concurred with the findings of Al-Haroon and Al-Qahtani (2020), which indicated that nurses exhibited moderate work satisfaction at a public hospital in Saudi Arabia. The research conducted by (Akbari, Bagheri, Fathollahi, & Darvish 2020) indicated that the work satisfaction of both male and female nurses in Iran was at a median level. Pradiptha et al. (2024) showed that most nurses at BIMC Kuta Hospital are content with their employment. However, these findings disagreed with the cross-sectional study of (Kiliç Barmanpek, Şahin, Demirel, & Parlar Kiliç, 2022) was conducted on 225 nurses working in a university hospital in Turkey indicating that nurses had low level of job satisfaction. The research conducted by (Atefi, Abdullah, Wong, & Mazlom, 2015) revealed that nurses in Iran had a high degree of job satisfaction.

Relationships between career development, loyalty, and job satisfaction among the studied nurses.

The current research demonstrated a very statistically significant correlation between professional development and loyalty as reported by the participating nurses. This study suggests that opportunities for professional advancement may be crucial in fostering loyalty among nursing personnel to their organization.

The results align with the research of Susita et al. (2020), which shows that career development significantly enhances loyalty among patient care personnel in Indonesia (Kiran, Hussain, Afzal, & Gillani 2019). showed that career advancement significantly enhances organizational commitment among nursing personnel. Weng et al. (2010) showed that career development positively influences the organizational commitment of new nurses. Our results contradicted the quantitative research by Reners et al. (2024), which included 118 healthcare workers at Intan Husada Hospital in Garut, indicating that career advancement did not significantly influence organizational loyalty.

The study demonstrated a strong correlation between career progression and work satisfaction among nurses. This conclusion may be attributed to professional development fostering a sense of growth and progression among nurses, hence enhancing their intrinsic drive toward the organization. These results align with the research by Shaheen et al. (2021), which included 500 nurses caring for adult patients and demonstrated a favorable correlation between work satisfaction and professional growth. The qualitative research by

Price and Reichert (2017), performed across eight Canadian provinces, found that nurses at all career phases appreciate continuing professional development, which is positively correlated with their work satisfaction.

The current study corroborated the findings of Susita et al. (2020), which demonstrated that career development significantly enhances work satisfaction among patient care personnel in Indonesia. Pradiptha et al. (2024) demonstrated a substantial correlation between career progression and work satisfaction among nurses. The findings of Aziz and Batubara (2023) indicated a strong association between career growth and work satisfaction among nurses in Jakarta.

The research by Nathania et al. (2023) showed a substantial correlation between career growth and work satisfaction among healthcare professionals. The research conducted by Martha (2019) revealed that professional development positively influenced the work satisfaction of nurses in Embu County. The empirical research conducted by Yarbrough et al. (2017) showed a favorable correlation between career growth and work satisfaction among nurses at a mid-sized hospital located in a metropolitan region of the Southwestern United States. Weng et al. (2010) showed that career growth positively influences the work satisfaction of novice nurses. Our results contradicted those of Reners et al. (2024), which indicated that career advancement had no significant influence on work satisfaction among healthcare professionals at Intan Husada Hospital in Garut.

The current study demonstrated a highly statistically significant correlation between work satisfaction and loyalty as judged by the participating nurses. This outcome aligns with the findings of Dina et al. (2020), which demonstrated a favorable correlation between work satisfaction and organizational commitment among nurses. Rina et al. (2017) identified a strong correlation between work satisfaction and loyalty among nurses in Padang Pariaman. The research by Riyaz et al. (2013) demonstrates a significant correlation between job happiness and loyalty, indicating that increased job satisfaction fosters enhanced commitment and loyalty among hospital nursing staff. Susita et al. (2020) shown that work satisfaction significantly positively influenced loyalty among patient care personnel in Indonesia*Relationships between nurses' demographic characteristics and their career development, loyalty and job satisfaction*

The results of the current study indicate statistically significant variations in career advancement according to marital status. This finding corresponds with the research conducted by Anam et al. (2024), which included 267 nurses and also noted that career progression differed significantly based on marital status. Anam et al. (2024) discovered no significant correlations between career growth and demographic characteristics like gender, age, education, career level, or work environment.

Khurshid et al. (2022) corroborated these results by noting demographic patterns that highlight the significance of marital status in career paths. This demographic pattern indicates a tendency of delayed marriages, as many women choose work security first to concentrate on professional development prior to marriage. This research underscored the impact of spouses on women's job advancement, asserting that marital relationships significantly shape career trajectories. Wu et al. (2022) also observed a favorable link between married status and career growth among nurses, therefore reinforcing the influence of marital partnerships on professional progress. In contrast to this research, Ni et al. (2022) revealed divergent results, indicating other demographic characteristics such as years of work experience, age, educational background, and gender as major drivers of career advancement.

This outcome corresponds with the results of Aboobaker et al. (2020), whose study of 308 workers in private sector organizations in India shown that employees' perception of workplace spirituality significantly enhances their commitment to the organization. Singh and Rangnekar (2019) discovered that nurses' loyalty in NABH-accredited hospitals in Uttarakhand, India, was significantly correlated with marital status, indicating that marital factors may influence loyalty in healthcare environments. The study by Jumawan et al. (2024) found that job experience positively impacts employee loyalty, supporting the notion that tenure within an organization may enhance loyalty. Wiklund and Jansson (2019) observed that employees with greater work experience were more inclined to perceive loyalty as a vital attribute than their less experienced counterparts.

The results of the current study indicate no statistically significant variations in nurses' work satisfaction concerning personal characteristics. The findings correspond with those of Datuah et al. (2021), who, in research in the Bole District of the Savannah Region, identified no link between job satisfaction and many demographic characteristics,

including gender, age, marital status, education, and work experience. Ashraf (2020) further corroborated these results by demonstrating that demographic parameters had no significant impact on organizational commitment and work satisfaction, suggesting a little effect of personal traits on job satisfaction. Akbari et al. (2020) demonstrated that there was no substantial disparity in work satisfaction between female and male nurses across all parameters, with the exception of their satisfaction about their specialized nursing roles.

The research conducted by Al-Haroon and Al-Qahtani (2020) revealed a statistically significant correlation between nurses' work happiness and their age and monthly wage. The research by Atefi et al. (2015) identified that younger age, female gender, and marital status were substantially correlated with elevated work satisfaction levels.

Zaniboni et al. (2013) posited that work outcomes, including job satisfaction and organizational commitment, may fluctuate based on an employee's age, gender, education, job duration, and salary, indicative of distinct stages in an employee's career. Moreover, research conducted by Lambert et al. (2012) and Wren et al. (2014) highlights the influence of age on job satisfaction, indicating that younger employees with advanced educational credentials may be more inclined to seek new employment opportunities, whereas older employees are more prone to stay within the organization.

Conclusion

Based on the findings of the study, the studied nurses had a high perception of career development perception and loyalty. Regarding their job satisfaction, the studied nurses had a moderate level of job satisfaction. There was a positive relationship between career development and the loyalty of nurses. Also, there was a positive relationship between career development and job satisfaction of nurses.

Recommendations

Based on the findings of this study, the following recommendations are hereby suggested:

1. To enhance and sustain career development among nurses through:

☐ Nursing supervisors/Managers should implement structured career development programs that include frequent training, professional development workshops, and clear career advancement pathways to sustain high perception of career development.

☐ Nursing supervisors/Managers should actively encourage and support nursing staff in their career planning, using available resources, tools, and processes to help employees find the best match between their abilities and the needs of the organization.

☐ Nursing supervisors/ Managers should promote coaching and mentoring programs to help nurses reach their career goals.

2. To improve job satisfaction among nurses through:

☐ Nursing supervisors/Managers should resolve workplace issues by enhancing working conditions, making sure there are enough staff, and offering the tools required to reduce strain and stress.

☐ Nursing supervisors/Managers should encourage a positive work atmosphere by acknowledging and appreciating nurses' accomplishments, offering helpful criticism, and making sure they receive just pay and benefits.

3. To strengthen organizational loyalty among nurses through:

☐ Nursing supervisors/Managers should involve nurses in decision-making processes, especially those that affect their roles and career advancement, to foster an inclusive and trustworthy culture.

☐ Nursing supervisors/Managers should encourage organizational culture that support nurses' career and personal objectives, strengthening their dedication to the organization.

Acknowledgments

Conflict of Interests

The authors have no conflict of interests.

References

Abdullah, R., Karim, N. A., Patah, M. O. R. A., Zahari, H., Nair, G. K. S. & Jusoff, K. (2009). The linkage of employee satisfaction and loyalty in hotel industry in Klang Valley, Malaysia. *International Journal of Business and Management, 4*(10), 152-160.

Aboobaker, N., Edward, M., & KA, Z. (2020). Workplace spirituality and employee loyalty: An empirical investigation among millennials in India. *Journal of Asia Business Studies*, *14*(2), 211-225.

Akbari, M., Bagheri, A., Fathollahi, A., & Darvish, M. (2020). Job satisfaction among nurses in Iran: does gender matter?. *Journal of Multidisciplinary Healthcare*, 71-78.

Al-Dossary, R. N. (2022). The relationship between Nurses' quality of work-life on organizational loyalty and job performance in Saudi Arabian hospitals: a Cross-sectional study. *Frontiers in Public Health*, *10*, 918492.

Al-Haroon, H. I., & Al-Qahtani, M. F. (2020). The demographic predictors of job satisfaction among the nurses of a major public hospital in KSA. *Journal of Taibah University Medical Sciences*, *15*(1), 32-38.

Ali, A. J., & Al‑Kazemi, A. A. (2007). Islamic work ethic in Kuwait. Cross cultural management. *An International Journal, 14*(2), 93-104.

Anam, M. W. S., Albyn, D. F., Mutiara, R., & Hutapea, F. (2024). The Effect of Nurses Work Motivation, Career Development, and Occupational Stress on Organizational Commitment at Hospital. *Blambangan Journal of Nursing and Health Sciences (BJNHS)*, *2*(1), 1-17.

Ashraf, M. A. (2020). Demographic factors, compensation, job satisfaction and organizational commitment in private university: an analysis using SEM. *Journal of Global Responsibility*, *11*(4), 407-436.

Atefi, N., Abdullah, K., Wong, L., & Mazlom, R. (2015). Factors influencing job satisfaction among registered nurses: a questionnaire survey in Mashhad, Iran. *Journal of Nursing Management*, 23 4, 448-58 . https://doi.org/10.1111/jonm.12151.

Aziz, A., & Batubara, R. (2023). The Correlation between Compensation and Career Development with Job Satisfaction of Inpatient Nurses: A Study in a Hospital in Jakarta. *Jurnal Keperawatan Dan Fisioterapi (JKF)*, *5*(2), 274-280.

Bayer, N., & Çankaya, M. (2022). The Relationship Between Emotional Labor, Organizational Loyalty, and Turnover Intention in Nurses. *Clinical and Experimental Health Sciences, 12*(1), 198-204. https://doi.org/10.33808/clinexphealthsci.927145

Burhan Ismael, N., Jabbar Othman, B., Gardi, B., Abdalla Hamza, P., Sorguli, S., Mahmood Aziz, H.,& Anwar, G. (2021). The role of training and development on organizational effectiveness.

Christyana, D., Has, E., & Yunitasari, E. (2020). The Relationship of Work Satisfaction with Nurse Commitments in the Organization of Hospital. Systematic Reviews in Pharmacy, 11, 934-936.

Darmanto, S., & Supriyadi, Y. (2022). Development of Employee Performance Model Based on Transactional Leadership, Competency, and Job Satisfaction. *Jurnal Aplikasi Manajemen*, *20*(2), 427-437.

Datuah, J. N., Aninanya, G. A., Habib, I., & Aryee, P. A. (2021). Socio-Demographic Correlates of Job Satisfaction Among Nurses and Midwives in Health Facilities in the Bole District of The Savannah Region, Ghana. *UDS International Journal of Development*, *8*(2), 674-687.

Dina, Septi, Christyana., Eka, Mishbahatul, Mar'ah, … & Yunitasari. (2020). The Relationship of Work Satisfaction with Nurse Commitments in the Organization of Hospital. *Systematic Reviews in Pharmacy*, doi: 10.31838/SRP.2020.3.141

Elsherbeny, E. E., & El-Masry, R. (2018). Job satisfaction among nurses working in Mansoura university hospital: Effect of socio-demographic and work characteristics. Egyptian Journal of Occupational Medicine, 42(2),

Etway, E. A. E., & Elewa, A. H. (2020). Nurses' perception regarding nurse managers delegation skills and its relation to their job empowerment and loyalty. *Journal of Nursing and Health Science, 9*(4).

Farrukh, M., Kalimuthu, R., Farrukh, S., & Khan, M. S. (2020). Role of Job satisfaction and organizational commitment in Nurse Loyalty: Empirical Analysis from Saudi Hotel Industry. *Int. J. Bus. Psychol, 2*, 1-20.

Gabra, Shereen, Faiyez, Eman, Aly, Abd-Elhamid., … & Rashed. (2022). Internal Marketing and its relation to Organizational Loyalty among nursing staff. *Assiut Scientific Nursing Journal (Print),* doi: 10.21608/asnj.2022.102039.1250

Hamouda, G. M. (2020). The effect of nurse managers' human resource maintenance awareness on staff nurses' career

development and organizational resilience. *Int. J. Novel. Res. Healthc. Nurs*, *7*, 178-190.

Ismael, N. B., Othman, B. J., Gardi, B., Hamza, P. A., Sorguli, S., Aziz, H. M., … & Anwar, G. (2021). The Role of Training and Development on Organizational effectiveness. *International Journal of Engineering, Business and Management*, *5*(3), 15-24.

Jeffrey, I., & Prasetya, A. B. (2019). The employee performance assessment and employee training, on employee intention. *Jurnal Aplikasi Manajemen*, *17*(1), 56-65.

Jumawan, J., Ali, H., Sawitri, N. N., & Rony, Z. T. (2024). The Influence of Employee Education and Work Experience on Employee Performance and Employee Loyalty. *Siber International Journal of Digital Business (SIJDB)*, *2*(1), 62-73.

Khurshid, N., Naseer, A., Khurshid, J., Khokhar, A. M., & Irfan, M. (2022). Assessing Social and Work Environmental Factors Towards Women Upward Career Development: An Empirical Study from Pakistan. *The Journal of Asian Finance, Economics and Business, 9*(1), 53-61.

Kiliç Barmanpek, N., Şahin, A., Demirel, C., & Parlar Kiliç, S. (2022). The relationship between nurses' job satisfaction levels and quality of life. *Perspectives in Psychiatric Care*, *58*(4), 2310-2320.

King, R., Taylor, B., Talpur, A., Jackson, C., Manley, K., Ashby, N., Tod, A., Ryan, T., Wood, E., Senek, M., & Robertson, S. (2020). Factors that optimise the impact of continuing professional development in nursing: A rapid evidence review. *Nurse Education Today*, 98.

Kiran, M., Hussain, M., Afzal, M., & Gillani, S. A. (2019). Impact of professional stress and career development on organizational commitment among nurses. *J. Heal. Med. Nurs*, *62*, 9-62.

Kuka, Y., Tamsah, H., Mulat, T. C., Kadir, I., Putra, R. S. P., Yusriadi, Y., & Prabowo, D. Y. B. (2021). Career development and motivation for the quality of nursing services. In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 6306-6313.

Lambert, E.G., Cluse-Tolar, T., Pasupuleti, S., Prior, M., & Allen, R.I. (2012). "A test of a turnover intent model". *Administration in Social Work*, *36* (1), pp. 67-84.

Martha, J. (2019). *Relationship between Participation in formal continuous Professional Development, Job satisfaction and attitude towards Patient Care among Nurses in Embu County* (Doctoral dissertation, University of Nairobi).

Mlambo, M., Silén, C., & McGrath, C. (2021). Lifelong learning and nurses' continuing professional development, a meta synthesis of the literature. *BMC Nursing*, 20.

Mohammed, R. R., Abdel Wahab, E. A., & El-Sayed, R. I. (2020). Factors Influencing Career Development among Nursing Staff at Port-Said Governmental Hospitals. *Port Said Scientific Journal of Nursing*, *7*(1), 191-211.

Nathania, F., Ramadhan, Y., & Jus'at, I. (2023). The Effect of Compensation, Work Environment, Career Development on Job Satisfaction with Employee Work Motivation as An Intervening Variable in Rs X. *Jurnal Health Sains*, *4*(9), 75-89.

Nguyen, C. (2020). The impact of training and development, job satisfaction and job performance on young employee retention. *Job Satisfaction and Job Performance on Young Employee Retention (May 1, 2020)*.

Ni, Y. X., Wu, D., Bao, Y., Li, J. P., & You, G. Y. (2022). Nurses' perceptions of career growth: A qualitative descriptive study. *Journal of Advanced Nursing*, *78*(11), 3795-3805.

Pradiptha, I. D. A. G. F., Putra, M. M., Wijana, I. K., & Gayatri, G. (2024). The Relationship Between Nurse Career Development and Job Satisfaction at BIMC Kuta Hospital. *Babali Nursing Research*, *5*(1), 196-204.

Price, S., & Reichert, C. (2017). The Importance of Continuing Professional Development to Career Satisfaction and Patient Care: Meeting the Needs of Novice to Mid- to Late-Career Nurses throughout Their Career Span. *Administrative Sciences*, 7, 17. https://doi.org/10.3390/ADMSCI7020017

Rahman, S. A., Supriyantoro, S., & Anindita, R. (2023). The Influence of Emotional Intelligence, Nurse Loyalty, Leadership Style, Intervention of Motivational Variables

in Hospital. *Journal Health Sains*, *4*(3), 85-95.

Reners, R., Harahap, P., & Sugiarti, R. (2024). The Effect of Compensation, Career Development, and Work-Life Balance on Employee Loyalty with Job Satisfaction as An Intervening Variable. *Journal Indonesia Sosial Teknologi*, *5*(3), 860-878.

Samat, M. F., Hamid, M. N., Awang, M. A. S., Juahari, W. M. I. F. W., Ghazali, K. A., & Nawi, F. A. M. (2020). The Relationship Between Career Development, Compensation, Job Security, Work Environment and Employee LOYALTY. *E-Academia Journal*, *9*(1).

Savickas, M. L. (1984). Construction and validation of a physician career development inventory. Journal of Vocational Behavior, 25(1), 106-123.

Shaheen, A. M., Al‑Hniti, M., Bani Salameh, A., Alkaid‑Albqoor, M., & Ahmad, M. (2021). Predictors of job satisfaction of registered nurses providing care for older adults. *Journal of Nursing Management*, *29*(2), 250-257.

Singh, A., & Rangnekar, S. (2019). Employee loyalty in Indian private hospitals: The role of demographic and employment factors. *Journal of Health Management, 21*(1), 128-140.

Specchia, M. L., Cozzolino, M. R., Carini, E., Di Pilla, A., Galletti, C., Ricciardi, W., & Damiani, G. (2021). Leadership styles and nurses' job satisfaction. Results of a systematic review. *International Journal of Environmental Research and Public Health*, *18*(4), 1552.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13*(6), 693

Sugiarti, E. (2022). The influence of training, work environment and career development on work motivation that has an impact on employee performance at PT. Suryamas Elsindo Primatama in West Jakarta. *International Journal of Artificial Intelligence Research*, *6*(1), 1-11.

Susita, D., Saptono, A., Susono, J., & Rahim, A. (2020). The Effect of Career Development and Work Environment on Nurse Loyalty with Work Satisfaction as Intervening Variables. *The International Journal of Social Sciences World (TIJOSSW)*, *2*(2), 20-31

Turner, S. M., Johnson, M. R., Beidel, D. C., Heiser, N. A., & Lydiard, R. B. (2003). The Social Thoughts and Beliefs Scale: a new inventory for assessing cognitions in social phobia. *Psychological assessment*, *15*(3), 384.

Vázquez-Calatayud, M., Errasti-Ibarrondo, B., & Choperena, A. (2020). Nurses' continuing professional development: A systematic literature review. *Nurse education in practice*, 50, 102963 .

Weng, R. H., Huang, C. Y., Tsai, W. C., Chang, L. Y., Lin, S. E., & Lee, M. Y. (2010). Exploring the impact of mentoring functions on job satisfaction and organizational commitment of new staff nurses. *BMC Health Services Research*, *10*, 1-9.

Wiklund, F., & Jansson, S. (2019). Employee Loyalty and the Factors Affecting It: A qualitative study comparing people with different working experience on their view of employee loyalty.

Wren, B., Berkowitz, D. and Grant, E. (2014), "Attitudinal, personal, and job-related predictors of salesperson turnover". *Marketing Intelligence and Planning*, *32* (1), 107-123.

Wu, C., Zhang, L. Y., Zhang, X. Y., Du, Y. L., He, S. Z., Yu, L. R., ... & Lang, H. J. (2022). Factors influencing career success of clinical nurses in northwestern China based on Kaleidoscope Career Model: Structural equation model. *Journal of Nursing Management, 30*(2), 428-438.

Yarbrough, S., Martin, P., Alfred, D., & McNeill, C. (2017). Professional values, job satisfaction, career development, and intent to stay. *Nursing Ethics, 24*(6), 675-685. doi:10.1177/0969733015623098

Zaniboni, S., Truxillo, D. M., & Fraccaroli, F. (2013). "Differential effects of task variety and skill variety on burnout and turnover intentions for older and younger workers". *European Journal of Work and Organizational Psychology, 22* (3), 306-317.