

Research



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A cross-sectional assessment of job satisfaction, its contributing factors and impact on turnover intention among radiographers in Namibian state hospitals

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Abstract

Introduction: job satisfaction is an integral component of professional relationships, affecting human resource retention and organisational productivity. The study evaluated the job satisfaction levels and their contributing factors as well as turnover intention among radiographers working at three state hospitals. **Methods:** a quantitative, correlational and cross-sectional design was used to determine job satisfaction and turnover intention as well as their relationship using inferential statistics on a total of 36 out of 40 radiographers working at three public hospitals. A self-administered questionnaire was used to measure job satisfaction and turnover intention. Statistical Package for Social Science (SPSS) (version 25), was used to analyse job satisfaction levels, associated factors and turnover intention. **Results:** eighty percent of radiographers indicated moderate levels of job satisfaction. Job satisfaction was significantly associated with employee rank ($p=0.04$), and age ($p=0.05$). The turnover intention was found to be at 44.4%. Factors significantly associated with turnover intention were tenure in rank ($p=0.04$), the number of years worked as a radiographer ($p=0.05$) and the hospital of employment ($p=0.005$). In this study, there is a moderate, positive, linear relationship between the predictor, job satisfaction, and the outcome, turnover intention ($r=0.44$; $p=0.008$). **Conclusion:** most of the radiographers were satisfied with their jobs, with nearly half of them showing turnover intention. Age and rank, as well as tenure in rank, experience and the hospital of employment, were significantly associated with job satisfaction and turnover intention, respectively. Employee engagement is key to improving job satisfaction and minimising turnover intention.

Introduction

Job satisfaction is an integral component of the personal and professional relationship, one that heavily affects Human Resource (HR) retention and organisational productivity. It is a

multidimensional notion, which involves physical and emotional pleasure or contentment in the work an individual performs. The concept of job satisfaction has various definitions. Thiagaraj and Thangaswamy quoted Locke (1969) and defined job satisfaction as a “pleasurable or positive emotional state resulting from the appraisal of one’s or job experiences” [1]. This definition is focused on a transactional model which states that job experiences influence their emotional wellbeing. Visser, Mackenzie and Marais described job satisfaction as the extent to which one is generally fulfilled by one’s current job or the pleasure derived from it [2]. Multiple studies reported that an employee’s level of job satisfaction may be influenced by the following varying factors: working conditions or lack of radiation protection and job description, remuneration, levels of public sector employment, professional support, career development opportunities, promotions, job security, delivery of services, working environment, emotional exhaustion and professional activities [3-6]. Job satisfaction has been studied globally, among different health professions with a limited focus on radiographers. In a study conducted on radiographer job satisfaction in the United Kingdom, only 36% of respondents were classified as satisfied with their jobs, while 11% were dissatisfied and the remaining 53% were indecisive [6]. Radiographers in Sudan were reportedly satisfied with their jobs (63.3%), while 29.5% were dissatisfied and 7.2% had no comment [7]. In Nigeria, 48.8% of radiographers recorded high levels of job satisfaction, while 31.3% had optimal job satisfaction and only 22.9% were dissatisfied [8]. Another study in southern Nigeria reveals that 56.3% of the radiographers were satisfied with their jobs although they would opt for another job if given a choice [9].

Job satisfaction is said to be a multifaceted concept, being the most important factor that predicts employees’ turnover intention and organisational productivity [10,11]. Additionally, Arshad and Puteh reported that the best predictor

of actual employee turnover is turnover intention [12]. Employee turnover is defined as “a measure of the extent to which the old employees leave, and new employees enter the organization in a given period” [13]. When employees are satisfied or unsatisfied with their work conditions or other matters, it easily fuels their intention to leave or stay at their organisations. Employee turnover is concerning to any healthcare system and organisation, as it poses a potential threat to compromised healthcare delivery. It results in loss of financial resources and time due to human resource selection and recruitment, as well as orientation and training [14]. The relationship between job satisfaction and turnover intention is significant, and negative [15,16]. When there are high levels of job satisfaction, employee turnover intention is expected to be low and vice versa. Despite this, Roslan *et al.* concluded that job satisfaction is not necessarily the main cause of employee turnover, as a negative relationship was disputed when healthcare workers in their study who had high levels of job satisfaction also had high levels of turnover intention [14]. They clarified further and reported that the high turnover intention was due to the aggressive expansion of private healthcare facilities. Diagnostic radiographers' job satisfaction levels and their turnover intentions in Namibia have not been established yet. Radiographer retention at the three main state hospitals in Namibia has been low with several radiographers resigning to join private practices which negatively affects radiographer to patient ratio. The inability to control turnover leads to diminished morale, as well as low productivity levels [17]. It becomes important to determine the job satisfaction level and turnover intention of radiographers at these hospitals to mitigate further loss. This study evaluated the job satisfaction levels and their contributing factors, as well as their relationship to turnover intention among radiographers working at these hospitals.

Methods

Research design and population: a quantitative, correlational cross-sectional design was used. The relationship between job satisfaction and turnover intention was analysed using inferential statistics on a total of 36 radiographers at these three hospitals. All radiographers (totalling 40) who were available during the data collection period were recruited for the study. This reduced possibility of sampling bias, as the entire population was considered.

Study setting: data were collected from radiographers working at a tertiary and a secondary hospital in the city of Windhoek and another secondary hospital in the town of Oshakati, Namibia. These three hospitals receive the majority of patient referrals from the 14 different regions in Namibia and are accredited for teaching health sciences students, including radiography. Furthermore, they house the biggest public radiology departments with a variety of imaging modalities and procedures, with a total staff complement of 40 radiographers.

Data collection instrument: a self-administered questionnaire partial adopted from Khoza *et al.* and Bee, Mak, Jak & Ching was used to measure job satisfaction and turnover intention respectively [4,18]. The questionnaire comprised of three sections: section A measuring demographic characteristics, section B measuring job satisfaction using 34 indicators phrased on a 4-point Likert scale, while section C measured turnover intentions using 25 indicators again on a 4-point Likert scale. For both sections B and C, the Likert scale was coded as 1=strongly disagree, 2-disagree, 3-agree and 4-strongly agree. A pilot study was conducted on ten percent of the population at the three hospitals before data collection. The analysis from the pilot study was excluded from the main study's analysis.

Data collection procedure: the radiographers were contacted through the heads of departments

at the three hospitals between February and April 2021. Afterwards, each radiographer was contacted face-face and invited to participate in the study. Those who agreed were given information sheets and signed a consent form before the questionnaire was administered. Once administered, the radiographers were given a week to complete the questionnaire and drop it in a collection box set up at the reception of the respective departments.

Data analysis: statistical Package for Social Science (SPSS) (version 25), was used to analyse job satisfaction levels, associated factors and turnover intention. For job satisfaction, the statements were categorised into the following thematic areas: stress, organisational culture, equipment, physical environment, management, human resources and career opportunities. Turnover statements were categorised into the following thematic areas: resignation, remuneration, employee relations and personal training views. Job satisfaction statement scores were totalled and classified into 3 categories as follows: 34 - 68 lowly satisfied, 69 - 102 moderately satisfied and 103 - 136 highly satisfied, while turnover intention statement scores were totalled and categorised as follows: 25 - 63 high and 64 - 100 low. The association between job satisfaction and turnover intention was determined using contingency tables and the strength of association was assessed using Fisher's exact test with an alpha level set at $p \leq 0.05$.

Research ethical aspects: ethical approval to conduct the research was obtained from the Ministry of Health and Social Services Ethics Committee (Ref: 17/3/3AK) while access permission was granted by the institutional heads. Participation in the study was voluntary, and participants were allowed to withdraw from the study at any time. Informed consent was obtained from all participants before recruitment into the study. No personal identifying information was collected.

Results

A total of 36 radiographers participated in this study, among which 25 worked at Windhoek Central Hospital/Katutura Intermediate Hospital and 11 worked at Intermediate Hospital Oshakati. All questionnaires were fully completed, without any missing data recorded. The radiographers' demographic characteristics related to the hospital of employment, age group, sex and rank are summarized in Table 1. The majority of the respondents were aged between 20-30 years (66.7%), followed by those aged between 31-40 years (13.9%), and above the age of 40 (11.1%). Of all 35 participants, 22.2%, 22.2%, 52.8% and 2.8% were in possession of either a certificate, diploma, degree or postgraduate degree in radiography, respectively. Of the total participants, 63.9%, 33.3% and 2.8% were classified as either single, married or other. Eleven participants have worked more than seven years (44%) as radiographers, while seven have less than seven years (56%) of work experience as radiographers. Results from the job satisfaction and turnover intention survey were grouped into general themes as follows.

Job satisfaction

Stress: the majority of the participants (66.7%) rated their job as not stressful. Only 33.3% were stressed at work.

Organizational culture: respect was rated positively in this study, with 80.6% of respondents agreeing that they were treated respectfully. All participants agreed that they share positive relationships with their colleagues, however, only 58.3% of the participants are satisfied with the level of team spirit among their colleagues. Overall organizational culture was positively rated, with 55.6% of the respondents agreeing that they were satisfied.

Equipment: thirty-three percent of the participants are dissatisfied with the technological infrastructure they work with, while 52.8% showed satisfaction with the equipment they use

in the daily execution of duties. Regarding the fixing of equipment and availability of consumables, 91.7% and 58.3% showed dissatisfaction, respectively.

Physical environment: ninety-one percent of the participants reported that they were satisfied with their physical work environment. Some of the respondents indicated that they are dissatisfied with their personal safety (47.2%) and 38.9% agreed to have had exposure to workplace violence.

Management: half of all the participants (50%) indicated satisfaction with the distribution of workload and their monthly schedule, respectively. Eighty-nine percent of the respondents indicated they had a positive relationship with their supervisor. Some participants indicated that they are involved in workplace decision-making and their work is recognized and appreciated by their supervisors, 44.4% and 52.8%, respectively. Fifty-six percent of the participants are satisfied with the time it takes to attend to the concerns they raise.

Human resource: eighty-three percent of the participants agree that their job description was clearly defined. Interestingly, there was dissatisfaction with the performance appraisal and performance systems, and reward systems at 69.4% and 75%, respectively. With regard to the duration for processing requests and human resources, 13.6% and 50% were dissatisfied, respectively. Half (50%) of the participants indicate dissatisfaction with their monthly remuneration; however, 66.7% show satisfaction with the benefits that come with their salary package.

Career opportunities: an overwhelming percentage of respondents indicated that they were dissatisfied with the lack of structures for career development, poor access to industry opportunities and poor career development opportunities, at 86.1%, 63.9% and 63.9%, respectively. Moreover, nearly half of the respondents (43%) were dissatisfied with the lack

of supportive systems to build their capacities. Sixty-two percent of the participants were dissatisfied with the lack of recognition after completion of training; while 91.7% of the participants were satisfied with their involvement in student supervision. Of all the radiographers who partook in this study, only 30.1% and 44.4% had feelings of job insecurities and were satisfied with regulations governing their profession, respectively.

Turnover intentions

Resignation: eighty-three percent and 70% do not consider resigning in the next six and twelve months, respectively. Of the surveyed participants, 25% and 14% either want to start job-hunting the following year or are actively job-hunting, respectively. Contrastingly, 61.1% of the participants dream about another job better suited to their personal needs. The possibility of accepting another job at similar compensation was split equally, as 50% agreed that they would.

Remuneration: seventy-five percent of the surveyed participants indicated that they were dissatisfied with their remuneration for the duties done, and 77.8% indicated that their salaries were demotivating.

Employee relations: it was found that 77.8% of the participants put in a great deal of effort to help their organization succeed. Of the total number surveyed, 13.9% speak negatively about their employer, while only 8.3% indicated their disloyalty to their employer. Forty-four percent indicated that their employer and their own values were not aligned. More than half of the participants (55.6%) indicated that their organization does not inspire their job performance, while only 22.2% did not care about their organisation's performance. Additionally, 72.2% indicated that their employer does not meet all their expectations, and 11.1% indicated that their skills and education aren't compatible with the employer's needs.

Personal and training views: the majority of respondents felt that they were valued and respected by their colleagues (77.2%) and supervisors (72.2%). When surveyed whether the supervisor had a favorable influence on their performance and if the conflict is resolved amicably among staff members, 52.8% and 72.2% agreed, respectively. The proportion of the respondents who look forward to another day at work and are frustrated with opportunities to achieve personal work-related goals were 61.1% and 66.7%, respectively. When surveyed about there being fair access to training, 58.3% of the radiographers responded stating that there was not.

The overall level of job satisfaction and turnover intention: the majority (80%) of radiographers indicated moderate levels of job satisfaction, while nearly half of the staff compliments (44.4%) were shown to have an intention to leave the organization. Job satisfaction was significantly associated with employee rank ($p=0.04$), and age ($p=0.05$) while the turnover intention was significantly associated with tenure in rank (0.04), the number of years worked as a radiographer (0.05) and the hospital of employment (0.005). In this study, there is a moderate, positive, linear relationship between the predictor, job satisfaction, and the outcome, turnover intention ($r=0.44$; $p=0.008$).

Discussion

Job satisfaction is an important element of the functionality and overall success of any organization. This study surveyed and underlined the factors associated with job satisfaction and the intent to resign among radiographers working at the two biggest state hospital complexes in the country. The findings from the study indicated that 80% of radiographers were generally moderately satisfied with their jobs. These findings were consistent with those in several other studies [19-21]. It is believed that if employees are not satisfied with their job, attrition rates may

increase. This is because employees will choose alternative employment to seek what they lack from their current employer. Furthermore, organisational performance will be poor when employees are not satisfied. Most of the participants who indicated moderate job satisfaction were in the youngest cohort (20-25 years), decreasing in numbers as the age groups progressed. It is generally believed that the relationship between job satisfaction and age is linear [22]. This is in contrast with the findings from this study. Younger radiographers seem to be more satisfied with the supervisor's management style and believed that they had a positive relationship to their colleagues and supervisors. This is in line with a study conducted in Lithuania [21]. This could be because younger radiographers have less supervisory responsibilities, which could lead to lessened possibilities of clashing with their supervisors. Moreover, this relationship has an impact on job satisfaction. Employees who do not have cordial relations with their supervisors make their work more difficult.

Salaries and fringe benefits can affect levels of job satisfaction. Not being satisfied with remuneration and other benefits is a precursor for turnover intention as well. In the present study, it is the majority of the younger population that were not satisfied with their salaries and fringe benefits. This seems to be partially explained by the younger radiographers earning lower salaries when compared to the older radiographers who had similar roles. A similar finding holds for results in an Ethiopian study that recorded low satisfaction scores on the respondents' salaries and fringe benefits [23]. Globalization has seen a flow of information and developments in radiography. To remain relevant to the world's demands and maximize on productivity and job performance within the profession, radiographic employers need to empower their employees with the latest skills and knowledge through continuous professional development. Provisions for training and development are vital components for career

choices. Access to career development opportunities and recognition of training also affect overall job satisfaction [24]. High job satisfaction rates were noted among the majority of the respondents, indicating that there was a lack of provisions for career development opportunities and recognition of training in this study.

Remuneration can be simply defined as money paid for a service rendered [25]. In healthcare service, this may include one's salary, overtime, and on-call allowances. Most employees are usually not satisfied with their remuneration, and this is a common issue in the health sector that leads to increased turnover [26,27]. In this study, most radiographers were dissatisfied and demotivated with their remuneration. Remuneration is one of the common drivers of employment especially in developing countries and when employees are not satisfied, they always look for better opportunities. There is usually a big difference in remuneration between state and private healthcare facilities, resulting in state healthcare workers being constantly tempted to join the private sector. In addition, workers in these private health facilities seem to be more satisfied than those in state facilities [28]. Furthermore, when employees consider their remuneration to be demotivating, they are bound to express this in the quality of the work they perform. In the healthcare settings and among radiographers, poor quality of care may result in limited diagnostic efficiency of imaging modalities, thus compromising patient outcomes. Remuneration has been reported to affect the motivation of healthcare workers in the past [29]. A poorly remunerated employee will thus be demotivated and is likely to resign from their post for a better-remunerated post [30].

Co-worker relationship is an element of organizational culture and in healthcare, it can define the effectiveness of teamwork. The complexity of managing individual pathologies in radiography requires a teamwork approach for successful service delivery. Without good

co-worker relationships, this is impossible to achieve. In this study, the majority indicated that they are valued, respected and work well with their colleagues and supervisors. This makes their daily work manageable and less stressful, as they can derive satisfaction from helping others in a conducive environment. Similarly, Gudeta reported the same in their study among healthcare workers in Ethiopia [26]. This may be because the teamwork concept is inculcated during the training of healthcare workers, thus it is not a new concept in clinical practice. Co-worker relationships and workplace support systems were some predictors of turnover intention identified in previous studies [31,32]. High turnover intention was noted where there was unsupportive management, poor communication and poor teamwork, whilst low turnover was associated with increased management support and teamwork [33-36]. In the current study, a significantly higher proportion of radiographers were not satisfied with the influence of supervisors on their performance, the handling of conflicts at work as well as how training opportunities were awarded. These are indicators of lagging organisational support that may influence employee performance. Poor organisational support may increase turnover intent due to employee frustration and disappointment [37].

Most radiographers seem to be committed to their organisation as only a few showed intentions to resign or start job hunting within 12 months of this study. Interestingly, the proportion of radiographers intending to resign almost doubled when the period was extended from six to twelve months, which may indicate uncertainty among the radiographers and a lack of long-term commitment. It is expected that if the period was further extended to the age of retirement, the proportion of radiographers indicating an intention to resign would have significantly increased as those who reported dreaming about a better job were significantly higher at 61.1%. When compared to findings by Roslanetal. Where

only 17% of radiographers showed intention to resign before the age of retirement, the results of this study became very high [14]. This may be explained by several factors, including job satisfaction and private health sector expansion. Private health sector expansion has been reported to have a pull factor, resulting in the movement of health professionals from state to private health facilities [38].

Staff turnover results in a disruption of services, reduce motivation for the remaining workers and have associated financial implications. High staff turnover in healthcare may result in the total cancellation of services due to the scarcity of health professionals. The current study results showed a high turnover intent among radiographers, which poses a serious threat to service delivery. Nearly half of the staff compliments (44.4%) were shown to have an intention to leave the organisation. This was similar to a previous study by Zaheer *et al.* where the turnover intention was reported as high among nurses and allied health workers [39]. Thus, employee engagement (how an employee thinks and feels about, and acts toward his or her job, the work experience, and the company) must be improved and prioritized to minimise employee turnover. When employees are more engaged, they are more likely to think positive about the organisation, go the extra mile and offer quality services to their clients.

Limitation: this study made use of a questionnaire, which is prone to self-reporting bias. Moreover, due to the small population size, generalisability of the findings is limited.

Conclusion

The majority of the radiographers demonstrated high job satisfaction. However, nearly half of them demonstrated turnover intention. This may indicate uncertainty among the radiographers and a lack of long-term commitment.

Recommendations: supervisors should regularly engage employees to improve job satisfaction and minimize turnover intention. Engaged employees think positively about their organization, are dedicated, and provide better services to their clients.

What is known about this topic

- *Job satisfaction affects turnover intention;*
- *Job satisfaction and turnover intention are affected by a combination of numerous factors.*

What this study adds

- *Despite radiographers having been satisfied with their jobs, nearly half of them had turnover intention;*
- *Employers should engage radiographers on how to improve retention strategies.*

Competing interests

The authors declare no competing interests.

Authors' contributions

MA and AK conceptualised the study, did the literature review, collected and analysed the data. MA, AK and LK prepared the manuscript. MA, AK and LK finalised the manuscript and guarantee the integrity of the study. All the authors have read and agreed to the final manuscript.

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Table

Table 1: radiographer descriptive statistics

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Table 1: radiographer descriptive statistics

Hospital	Total	Male	Female	Rank		
				Assistant Radiographer	Radiographer	Senior Radiographer
WCH/KIH	25	24%	76%	24%	68%	8%
IHK	11	45.5%	54.5%	18.2%	81.8%	0