

Effect of Self-Determination Theory (SDT) Elements on the Retention of Nurses at the University of Calabar Teaching Hospital (UCTH), Calabar, Nigeria

Pepple, Grace Jamie; Ene, Okpo Ene-Ita; Dauda, Olayinka Tajudeen; Omosebi, Mayowa Adetunji; and Ogar, Godwin Wonah

Department of Business Management, University of Calabar, Nigeria.

Corresponding author: gpepple123@gmail.com

DOI: <https://doi.org/10.62154/6596z753>

Abstract

This research investigated the effect of self-determination theory (SDT) elements on the retention of nurses at the University of Calabar Teaching Hospital (UCTH) in Calabar, Nigeria. The primary focus was to analyze how SDT components like autonomy, competence, and relatedness influence nurse retention at UCTH. Utilizing a cross-sectional research design, the study collected primary data via structured questionnaires from 206 general nurses at UCTH. Descriptive statistics were used to analyze the data, and multiple regression was employed to test the hypotheses. The results indicated that SDT factors—autonomy, competence, and relatedness—had significant positive effects on nurse retention at UCTH. These results underscore the critical importance of nurturing self-determination motivation elements in public hospitals like UCTH to improve nurse retention. Therefore, the study advised that public hospital managers in Nigeria should establish a supportive work environment that promotes nurses' independence in patient care and evaluation. It is also essential to prioritize continuous training and skill enhancement to elevate technical proficiency and the quality of patient care. Furthermore, fostering a culture of social interaction and professional relationships among staff is key to boosting nurses' sense of belonging and worth in the workplace. The study also highlighted the need for extensive research to gain a deeper understanding of the link between SDT factors and employee retention in Nigerian healthcare. Future research should encompass other healthcare professionals in addition to nurses to offer comprehensive insights for effective retention strategies in the Nigerian public health sector.

Keywords: Employee Motivation, Employee Retention, Intrinsic Motivation, Self-Determination Theory, Nurses.

Introduction

Retention of nurses is fundamental to the growth and stability of public hospital systems around the world. This is especially critical in developing countries like Nigeria, where the healthcare system faces significant challenges due to a rapidly growing population (Edewor & Fatusin, 2018). The strain on public hospitals in Nigeria is immense, and the retention of skilled nursing staff is essential to ensure that these institutions can continue to provide adequate care to the community (Chukwu & Nwafor, 2021). This is because nurses form the backbone of healthcare delivery, and their presence is crucial for patient care, operational

efficiency, and the overall functioning of the healthcare system (Bello & Yusuf, 2018). However, in Nigeria, the high population density exacerbates the demand for healthcare services, leading to overcrowded hospitals and overworked medical staff (Akinwale & George, 2020). As such, retaining nurses in such an environment is vital, as it helps maintain continuity of care, reduces patient wait times, and improves patient outcomes. This is so because when experienced nurses remain in the system, they contribute to a stable and knowledgeable workforce that can mentor new nurses, share critical insights, and uphold high standards of care (Adeyemi & Oladipo, 2019). This continuity is particularly important in a setting where medical resources are often stretched thin and the burden of disease is high.

In the quest to enhance retention of medical personnel such as nurses in Nigeria's healthcare sector, scholars have explored the potential roles of motivation (Abimbola et al., 2020; Adegoke & Adegboye, 2018; Afolabi et al., 2019; Akanbi & Mohammed, 2021). In this context, employee motivation refers to the internal and external factors that stimulate a desire and drive in healthcare professionals, such as nurses, to achieve work-related goals, perform at their best, and remain committed to their roles and the healthcare institution (Nweke & Ugochukwu, 2021). Research has shown that retaining highly-motivated employees can contribute substantially to improving organizational productivity and performance (Widarti & Santoso, 2019; Ogonda & Kipkulei, 2018; Agyapong & Antwi, 2022; Nxumalo & Dlamini, 2017). To that end, administrators of healthcare facilities, especially privately-owned ones are prioritizing efforts to boost the motivation of medical personnel, including nurses, while public hospitals in Nigeria are left behind (Alimi et al., 2020). The adverse impacts of the low employee motivation among nurses in Nigerian public hospitals are multi-faceted. One of the most significant repercussions is the decline in the quality of patient care (Afolabi & Alao, 2019). This is because when nurses are demotivated, they are less likely to perform their duties with the necessary attention to detail and compassion, leading to potential errors, neglect, and a general decline in the standard of care provided. This can result in poorer health outcomes for patients, increased rates of complications, and longer recovery times. In extreme cases, it could even lead to preventable deaths, further eroding public trust in the public healthcare system (Ede et al., 2020). Moreover, low motivation among nurses often leads to higher rates of absenteeism and turnover (Nwosu & Ugwu, 2021). This happens because when nurses feel undervalued and overworked, they are more likely to take frequent leaves or resign from their positions altogether. This exacerbates the existing shortage of healthcare personnel in Nigeria, placing additional strain on the remaining staff. The increased workload on the remaining nurses can create a vicious cycle, further decreasing their motivation and leading to burnout. Also, this turnover incurs significant costs for the healthcare system, as it must continually recruit and train new staff, diverting resources that could be used to improve patient care and hospital infrastructure (Olajide et al., 2022). Against this backdrop, this study sought to determine how self-determination elements (autonomy, competence and relatedness) can address

the challenge of employee turnover and enhance the retention of nurses in the University of Calabar Teaching Hospital (UCTH), Calabar.

Statement of the Problem

The Nigerian public medical sector has one of the highest rates of employee turnover in the country's public service sector as scores of medical professionals, including nurses have either moved to private hospitals, switched to independent private practice or migrated to other countries for better opportunities (Kolo, 2018). According to the National Association of Nigeria Nurses and Midwives, more than 57,000 nurses have relocated from Nigeria to other countries in search of better opportunities between 2017 and 2022 (Adejoro, 2022). This is often as a result of poor remuneration, hostile work conditions, poor funding, lack of adequate facilities and welfare negligence by the government, which has dampened the morale of nurses for years (Olorunfemi *et al.*, 2020). As a consequence, many public healthcare facilities in the country are under-staffed and overcrowded with patients unable to get adequate medical care, leading to prolonged delays for patients and preventable deaths as a result of the inability of patients to access medical care promptly (Okoroafor *et al.*, 2021). Despite the grave consequences of this practical problem for Nigerian consumers of medical services in public hospitals, sufficient research attention has not been committed to unravelling the potential roles of motivation in improving the retention of nurses. From a preliminary review of several extant literature in the Nigerian context, it was observed that the subject *motivation and employee retention in hospitals* especially through the self-determination theoretical framework has not been adequately studied in UCTH or any other hospital in Nigeria. In fact, research on self-determination motivational factors (such as autonomy, competence and relatedness) and nurses' retention in Nigeria is acutely scarce. This is because the vast majority of relevant studies in the Nigerian context are overwhelmingly centered on extrinsic motivational factors (such as remuneration, financial benefits, fringe benefits, work conditions, and career progression) in organizational settings outside of healthcare (Emeka *et al.*, 2015; Alalade & Oguntodu, 2015; Adeola & Adebisi, 2016; Olusadun & Anulika, 2018; Ekundayo, 2018; Alase & Akinbo, 2021; Elomien *et al.*, 2021).

The implication of this research gap is that without adequate research attention on these intrinsic factors, nurses may feel undervalued, disengaged, and demotivated in their roles, which can lead to decreased job satisfaction, increased turnover intentions, and ultimately, shortages in nursing staff within healthcare organizations like UCTH. Moreover, neglecting intrinsic motivation may hinder efforts to attract and retain highly skilled nurses, thereby compromising the quality of patient care and overall organizational performance (Makki & Abid, 2017). Also, while extrinsic factors such as remuneration and career progression are undoubtedly important, they may not fully capture the complexities of nurses' motivations and job satisfaction within the unique context of healthcare organizations. By considering intrinsic factors, administrators can tailor retention initiatives to better align with the intrinsic values and needs of nursing staff, thereby fostering a supportive work environment

that promotes professional growth, job satisfaction, and ultimately, long-term retention (Raza *et al.*, 2015). Against this backdrop, this study critically examined the effect of Deci and Ryan's (1985) self-determination factors (autonomy, competence and relatedness) on the retention of nurses at UCTH, Calabar, Nigeria. The results of such a study can contribute to the bridging of current research gaps identified in the literature by providing empirical evidence that explains the causality between self-determination variables and retention of nurses in the specific context of healthcare in Nigeria. To that end, the following specific objectives were pursued:

- i. To determine the effect of SDT motivation factors on the retention of nurses at UCTH, Calabar.
- ii. To examine the effect of autonomy on the retention of nurses at UCTH, Calabar.
- iii. To assess the effect of competence on the retention of nurses at UCTH, Calabar.
- iv. To establish the effect of relatedness on the retention of nurses at UCTH, Calabar.

Literature Review

Motivation at work

Motivation at work is an all-encompassing concept that explains the internal and external factors that drive employee dedication, satisfaction, productivity and retention (Kuswati, 2020). It comprises all the internal and external factors that drive an individual's willingness, enthusiasm, and persistence to engage in and achieve their job-related goals and objectives (Marewo *et al.*, 2020). Generally, motivation at work encompasses a complex interplay of psychological, social, and environmental factors that influence an individual's behaviour, attitudes, and performance within the workplace (Lee & Raschke, 2016). Specifically, motivation at work is often influenced by a combination of intrinsic factors such as personal fulfilment, sense of accomplishment, and enjoyment of the task, as well as extrinsic factors such as monetary rewards, recognition, and career advancement opportunities (Ciobanu *et al.*, 2019). Additionally, the organizational culture, leadership style, job design, and interpersonal relationships within the workplace also play crucial roles in shaping employee motivation. Ultimately, motivation at work is essential for enhancing job satisfaction, productivity, creativity, and overall organizational success (Kuranchie-Mensah & Amponsah-Tawiah, 2016). It serves as the lifeblood fueling the spirits of employees, propelling them towards achieving their professional ambitions. This is because when individuals feel motivated, they are more inclined to derive satisfaction from their roles, fostering a sense of fulfilment that transcends mere task completion (Varma, 2017). This intrinsic fulfilment becomes a catalyst for heightened job satisfaction, elevating morale within the workforce. Moreover, motivation acts as a catalyst for productivity, igniting a fervent drive within individuals to excel in their responsibilities (Abdi *et al.*, 2017). This is because employees who are motivated exhibit a heightened sense of dedication, channeling their energies towards accomplishing tasks with efficacy and diligence. This enhanced productivity not only translates to tangible outcomes but also cultivates an environment conducive to innovation and growth (Chien *et al.*, 2020).

Retention of Nurses

Employee retention refers to an organization's ability to retain its employees and reduce turnover, the rate at which employees leave the organization. It encompasses a range of practices and strategies aimed at creating a positive work environment, fostering employee engagement, and providing opportunities for growth and development (Wulf & Lewthwaite, 2016). High retention rates can lead to increased productivity, morale, and organizational knowledge, while low retention rates can result in high recruitment and training costs, disrupted workflows, and a loss of experienced talent. In the medical context, retention of nurses refers to the ability of healthcare organizations to keep their nursing staff engaged, satisfied, and employed within their facilities for an extended period (Mutsuddi, 2016). It encompasses various strategies aimed at preventing turnover and ensuring that qualified and experienced nurses remain within the workforce. Retention is vital in the healthcare sector due to its direct impact on patient care, staff morale, and organizational effectiveness. Retaining nurses is crucial for maintaining continuity of care and ensuring consistent quality in healthcare delivery (Van de Klundert *et al.*, 2018). Experienced nurses possess valuable clinical skills, expertise, and knowledge gained through years of practice. When nurses leave, it disrupts the continuity of care for patients, leading to potential gaps in treatment, errors, and decreased patient satisfaction (Marufu *et al.*, 2021). By retaining skilled nurses, healthcare organizations can uphold high standards of patient care and safety. Similarly, nurse retention is essential for cost-effectiveness and operational efficiency within healthcare facilities (Mutsuddi, 2016). Turnover incurs substantial financial expenses related to recruitment, hiring, onboarding, and training of new nurses.

Theoretical Framework

This study is rooted in the self-determination theory, an intrinsic motivation theory propounded by Deci and Ryan (1985). It proposes that individuals possess three inherent psychological needs: autonomy, competence, and relatedness. Autonomy denotes the desire to have control over one's decisions and actions (Howard *et al.*, 2016). This sense of autonomy fosters a profound sense of ownership and responsibility, driving individuals to pursue goals that resonate with their authentic selves. Competence involves the aspiration to effectively navigate one's surroundings and achieve proficiency (Ryan & Deci, 2020). It encompasses the quest for growth and learning, wherein individuals seek opportunities to expand their skills and capabilities, thereby enhancing their sense of efficacy and accomplishment (Manganelli *et al.*, 2018). This pursuit of competence is intricately linked to the experience of intrinsic motivation, as individuals derive satisfaction and fulfilment from their continual progress and development. On the other hand, relatedness pertains to the longing for connection with others and a feeling of belonging. This dimension of SDT speaks to the social aspect of human beings, which makes them crave meaningful interactions and relationships with others (Howard *et al.*, 2016). These connections not only provide emotional support but also contribute to a sense of shared identity and purpose. In

essence, relatedness serves as a vital source of motivation, as individuals are motivated to engage in activities that foster interpersonal connections and deepen their sense of belonging within their social circles (Gagné et al., 2018). According to the SDT, these needs form the foundation of intrinsic motivation, which propels individuals to engage in activities for their own fulfilment rather than external incentives or pressures (Deci & Ryan, 2000). This entails that when individuals' needs for autonomy, competence, and relatedness are nurtured and supported, they are more likely to experience a profound sense of motivation and well-being (Rigby & Ryan, 2018). Hence, by facilitating environments that honour individuals' autonomy, provide opportunities for skill development, and foster meaningful social connections, practitioners and policymakers can cultivate intrinsic motivation and promote optimal psychological functioning. This holistic approach not only enhances employees' morale and productivity, but also fosters improved organizational performance and cohesion (Groen et al., 2017). As such, scholars have applied SDT across diverse fields such as education, employment, athletics, and healthcare to comprehend and enhance motivation, well-being, and performance (Trépanier et al., 2015; Kanat-Maymon et al., 2020).

Autonomy

Within the context of the self-determination theory (SDT), autonomy refers to the fundamental psychological need for individuals to experience a sense of volition and self-endorsement in their actions (Hu & Zhang, 2017). It involves the ability to act in accordance with one's own interests, values, and authentic desires, rather than being controlled or coerced by external forces. Autonomy is integral to human motivation and well-being, as it fosters a sense of ownership and responsibility over one's actions, leading to greater satisfaction and fulfilment (Ryan et al., 2015). For medical service personnel, autonomy holds key implications within the framework of patient care and professional practice (Salvatore et al., 2018). To begin with, autonomy in this context pertains to the healthcare provider's ability to make decisions and take actions that align with their clinical judgment and ethical principles. Within the context of patient care, autonomous nurses are empowered to advocate for their patients, ensuring their voices are heard and their needs are met (Nibbelink and Brewer, 2018). This may involve advocating for necessary treatments, medications, or resources to optimize patient outcomes. Autonomy also encompasses the ability to collaborate with other healthcare team members while maintaining individual responsibility for patient outcomes (Molina-Mula & Gallo-Estrada, 2020). This involves navigating complex situations, such as end-of-life care or conflicting patient preferences, with integrity and professionalism. Autonomous nurses engage in continuous learning and professional development to stay abreast of advancements in healthcare and refine their clinical skills, enabling them to provide the highest quality care to their patients (Yuk & Yu, 2023).

Competence

Within the context of SDT, competence refers to an individual's perception of their ability to effectively interact with their environment and achieve desired outcomes. It encompasses feelings of efficacy, mastery, and confidence in one's capabilities within a particular domain. For medical service personnel, including nurses, competence extends beyond mere technical proficiency; it encompasses a comprehensive understanding of medical procedures, protocols, and patient care practices, coupled with the ability to apply this knowledge effectively in diverse clinical settings (Good, 2023). Competent nurses demonstrate a mastery of clinical skills such as administering medications, performing assessments, and implementing interventions, all while maintaining a high standard of quality and safety in patient care (Bing-Jonsson et al., 2016). Similarly, competence in nursing involves the capacity to adapt and respond to dynamic and challenging situations promptly. Nurses must possess critical thinking skills to make informed decisions swiftly, often in high-pressure environments. This aspect of competence is particularly crucial in emergency situations where split-second judgments can significantly impact patient outcomes (Ualikhanova et al., 2015). Moreover, competence in nursing extends beyond clinical proficiency to encompass effective communication and interpersonal skills. Nurses must be able to interact empathetically with patients, their families, and interdisciplinary teams to provide holistic and patient-centered care. Competence in communication involves not only conveying information accurately but also actively listening, demonstrating empathy, and fostering therapeutic relationships. Similarly, professionalism is integral to competent nursing practice, because it includes adhering to ethical principles, maintaining confidentiality, and respecting patients' autonomy and dignity (Lee & Eun, 2016). Competent nurses demonstrate accountability for their actions, continuously seek opportunities for professional development, and contribute to a positive work environment through collaboration and teamwork (Bing-Jonsson et al., 2016). This is why competence in nursing is not just about possessing technical skills or knowledge; it is about embodying a holistic approach to patient care that integrates clinical expertise, critical thinking, effective communication, empathy, and professionalism to promote optimal health outcomes and enhance the patient experience.

Relatedness

Relatedness, within the framework of SDT, refers to the psychological need to feel connected, cared for, and understood by others. It encapsulates the intrinsic human desire for meaningful relationships and social interactions. In essence, relatedness involves the sense of belongingness and connection with others, whether it be family, friends, colleagues, or the broader community (Deci et al., 2017). For medical service personnel, particularly nurses, relatedness holds profound significance, because nursing is inherently a relational profession, centred around providing compassionate care and support to patients during times of vulnerability and distress (Lohmann et al., 2018). Nurses often find themselves at the forefront of patient interaction, establishing rapport, fostering trust, and

offering emotional support. Thus, relatedness is intricately woven into the fabric of nursing practice, influencing the quality of patient care and the overall well-being of both patients and nurses alike (Druetz et al., 2015). In the context of medical care, relatedness for nurses entails establishing therapeutic relationships with patients, where empathy, respect, and understanding form the cornerstone of interactions (Tripathy et al., 2016). It involves actively listening to patients' concerns, validating their experiences, and involving them in decision-making processes regarding their health (Lohmann et al., 2016). Moreover, relatedness extends beyond patient interactions to encompass collaborative relationships with multidisciplinary healthcare teams, where effective communication and mutual respect are vital for optimal patient outcomes. As such, relatedness is particularly important for nurses due to its impact on job satisfaction, burnout prevention, and overall job performance (Fillol et al., 2019). Nurses who feel a sense of connection and support within their work environment are more likely to experience greater job satisfaction and lower levels of burnout. This is because meaningful relationships with colleagues provide emotional support, a sense of camaraderie, and opportunities for professional growth and development.

Empirical Review of Self-Determination Factors and Retention of Nurses

To establish the empirical relationship between SDT factors (autonomy, competence, relatedness) and retention of nurses, an in-depth exploration of extant relevant scholarly studies was carried out. To begin with, a study conducted by Hood and Patton (2022) revealed that SDT dimensions – autonomy, competence and relatedness significantly predicted job satisfaction and employee turnover intention in the NHS, United Kingdom. This study suggests that when employees perceive a high degree of autonomy in their work, feel competent in performing their tasks, and have a sense of relatedness with their colleagues and the organization, they are more likely to report higher job satisfaction. This research underscores the significance of fostering an environment that supports employees' autonomy, competence, and sense of belonging to enhance job satisfaction and reduce turnover within the NHS context. In another study by Shah and Asad (2018), it was revealed that intrinsic motivation (autonomy, competence and relatedness) had a significant positive influence on employee retention in Pakistani commercial banks. This suggests that when employees feel a sense of autonomy in their work, perceive themselves as competent in their roles, and have positive relationships within their work environment, they are more likely to stay with the organization. This finding underscores the importance of fostering intrinsic motivation among employees as a strategy for promoting retention, which could have significant implications for organizational effectiveness and stability within the Pakistani banking sector. Also, the study by Hee and Rhung (2019) revealed that intrinsic motivational factors (autonomy, relatedness, competence, and sense of purpose) had significant positive impacts on employee retention among Millennials in Malaysia. This study underscores the importance for organizations to focus on cultivating these intrinsic motivators to effectively retain their Millennial workforce. By understanding and

addressing the specific needs and desires of Millennials regarding autonomy, relatedness, competence development, and alignment with organizational goals, employers can boost retention rates and create a more engaged and committed workforce in Malaysia.

In another study by Anwar et al. (2018), it was revealed that intrinsic motivation (job security, competence, autonomy, promotion and relatedness) had a significant positive impact on employee's retention among telecommunication companies in Pakistan. This study suggests that when employees feel secure in their roles, perceive themselves as competent, are granted autonomy in their tasks, envision opportunities for career advancement, and experience a sense of belonging within the organizational culture, they are more likely to stay committed to their positions. This sheds light on the significance of cultivating an environment that nurtures intrinsic motivation to enhance employee retention rates, thereby potentially contributing to the overall success and stability of telecommunication firms operating in Pakistan. Similarly, the findings of the study by Hassan and Govindhasamy (2020) revealed that intrinsic rewards (autonomy, orientation of workplace, competence and relatedness) significantly enhanced employee retention in Malaysian manufacturing companies. This study underscores the importance of intrinsic motivational factors in retaining employees, suggesting that when employees feel empowered, valued, and connected within their workplace, they are more likely to remain committed to their organization.

On the basis of these scholarly studies reviewed, this research postulates that self-determination factors (autonomy, competence and relatedness) might substantially influence the retention of nurses at UCTH, Calabar. As such, the following hypotheses were developed for testing in the course of the study:

H₁: Self-determination theory (SDT) elements have a significant effect on the retention of nurses at UCTH, Calabar.

H₂: Autonomy has a significant effect on the retention of nurses at UCTH, Calabar.

H₃: Competence has a significant effect on the retention of nurses at UCTH, Calabar.

H₄: Relatedness has a significant effect on the retention of nurses at UCTH, Calabar.

Furthermore, the hypothesized relationship between these SDT variables and retention of nurses has been portrayed in the theoretical model in FIG. 1. The model shows that Self-determination theory (SDT) elements (the independent variable) comprised three sub-variables: autonomy, competence and relatedness. The parameters used to properly understand and measure these variables were adapted from existing relevant studies (Baljoon et al., 2018; Yuk & Yu, 2023; Lee & Eun, 2016; Lohmann et al., 2018; Druetz et al., 2015). Similarly, retention of nurses (the dependent variable) was measured through the following parameters adapted from Shah and Asad (2018): job satisfaction, sense of personal fulfilment, job commitment, and job loyalty. The theoretical model in FIG. 1 provides a tentative visual representation of the relationship between these SDT dimensions and retention of nurses in the specific context of this study.

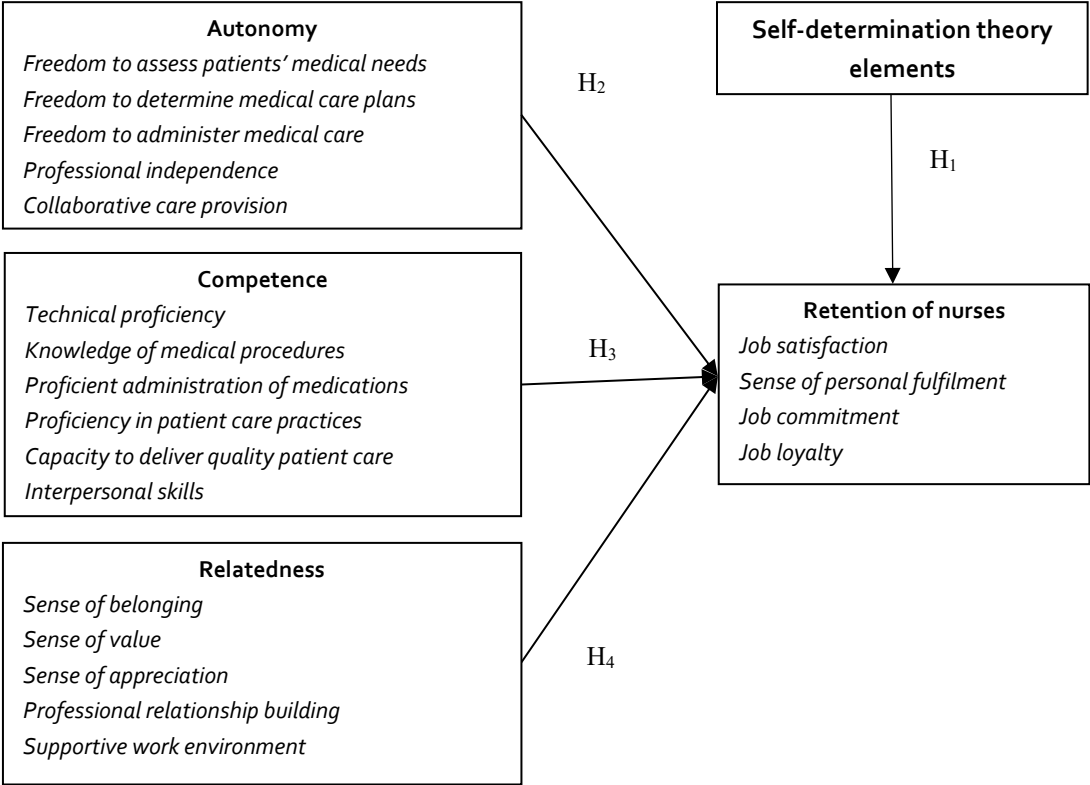


FIG. 1: Theoretical model of the study
Source: Adapted from extant relevant studies

Methodology

This study adopted cross-sectional survey research design, which involved systematically collecting data from general nurses at the UCTH using a questionnaire on a single basis within a short period of time. The population of this study comprised 228 active general nurses at UCTH, Calabar. The same number was adopted as sample size given its small size; hence a census of 228 general nurses was conducted to obtain data for the study. The total population sampling technique was applied, which led to the administration of 228 copies of the questionnaire to respondents to obtain primary data for the study. The questionnaire was a structured questionnaire using a 5-point Likert scale for measurement. Prior to field administration, the research questionnaire was content validated, while its reliability state was confirmed through the Cronbach’s alpha reliability method (see Table 1) using data from a pilot survey of 30 pharmacists at UCTH. Subsequent upon data collection, the data obtained from respondents were subjected to analysis and interpretation using descriptive statistics, while the hypotheses of the study were tested using multiple regression. In the context of this study, multiple regression was chosen for hypotheses testing because the study sought to establish the effects of three (3) independent variables (autonomy, competence and relatedness) on one (1) dependent variable (retention of nurses). Hence, a

multiple regression analysis was suitable to explain the contributions of each of these independent variables to the dependent variable, if other variables remain unchanged.

Table 1: Instrument reliability results

SN	Research variables	No. of items	Cronbach's alpha coefficients
1	Autonomy	5	.719
2	Competence	6	.740
3	Relatedness	5	.801
4	Retention of nurses	5	.784
		21	

Source: Researchers' analysis via SPSS, 2024

Analysis and Discussion

During the questionnaire survey, a structured questionnaire was administered to 228 general nurses at the UCTH, Calabar, Nigeria. However, the survey was finally done by 206 general nurses, while 22 nurses were unavailable to participate in the survey. As such, the analysis presented in this chapter is based on the responses of 206 general nurses of UCTH, representing 90.4 percent of the total sample of the study.

Descriptive statistics of research variables

Table 2 presents descriptive statistics for autonomy, competence, relatedness, and nurse retention, measured on a 5-point Likert scale. Nurses reported a moderate to high level of autonomy (mean = 3.6155, SD = 0.76135), indicating significant independence with some individual variability, likely influenced by organizational or personal factors. Competence was perceived as moderately high (mean = 3.7613, SD = 0.65089), suggesting nurses generally feel capable, though some variability exists in these perceptions. Relatedness scored similarly high (mean = 3.7379, SD = 0.68661), reflecting a strong sense of connection and support among colleagues, with minimal variability, indicative of a stable and supportive work environment. Lastly, nurse retention had a mean of 3.8058 and a standard deviation of 0.65724, showing a consensus among nurses that self-determination motivational factors are effective in retaining staff, with consistent perceptions across the group.

Table 2: Descriptive statistics of the study's variables

	N	Mean	Std. Deviation
Autonomy	206	3.6155	.76135
Competence	206	3.7613	.65089
Relatedness	206	3.7379	.68661
Retention of nurses	206	3.8058	.65724
Valid N (listwise)	206		

Source: Researchers' analysis via SPSS, 2024

Test of Hypotheses

Under this unit, the null hypotheses developed for the study are statistically tested to arrive at findings for the study thus:

H₁: Self-determination theory (SDT) elements have no significant effect on the retention of nurses at UCTH, Calabar.

H₂: Autonomy has no significant effect on the retention of nurses at UCTH, Calabar.

H₃: Competence has no significant effect on the retention of nurses at UCTH, Calabar.

H₄: Relatedness has no significant effect on the retention of nurses at UCTH, Calabar.

Predictors: Autonomy, competence and relatedness

Outcome variable: Retention of nurses

Decision rule: We will accept the null hypothesis if P-value is greater than 0.05. Conversely, the null hypothesis will be rejected if the P-value is less than 0.05.

Table 3: Model summary of the effect of self-determination theory (SDT) elements on the retention of nurses at UCTH, Calabar, Nigeria

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.697 ^a	.486	.479	.47450

a. Predictors: (Constant), Relatedness, autonomy, competence

Source: Researchers' analysis via SPSS, 2024

Table 4: Analysis of variance of the effect of self-determination theory (SDT) elements on the retention of nurses at UCTH, Calabar, Nigeria

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.072	3	14.357	63.767	.000 ^b
	Residual	45.481	202	.225		
	Total	88.553	205			

a. Dependent Variable: Retention of nurses

b. Predictors: (Constant), Relatedness, autonomy, competence

Source: Researchers' analysis via SPSS, 2024

Table 5: Regression coefficients of the effect of self-determination theory (SDT) elements on the retention of nurses at UCTH, Calabar, Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.939	.211		4.441	.000		
	Autonomy	.191	.054	.221	3.517	.001	.643	1.556
	Competence	.256	.072	.253	3.553	.000	.499	2.002
	Relatedness	.325	.068	.339	4.810	.000	.511	1.957

a. Dependent Variable: Retention of nurses

Source: Researchers' analysis via SPSS, 2024

The regression analysis results presented in Tables 3, 4, and 5 illustrate the significant impact of self-determination theory elements on nurse retention at UCTH, Calabar. Table 3 shows a strong correlation ($R = 0.697$) and a coefficient of determination ($R^2 = 0.486$), indicating that these factors account for 48.6% of the variance in nurse retention. Table 4 confirms the statistical significance of this relationship ($F = 63.767$, $p = 0.000$). Table 5 reveals that relatedness has the most substantial effect on retention (beta = 0.339), followed by competence (beta = 0.253) and autonomy (beta = 0.221), with no multicollinearity issues (tolerance > 0.1, VIF < 5). Additionally, all factors have p-values below 0.05 and positive t-values, emphasizing their significant positive effects on retention. Consequently, the null hypotheses are rejected, affirming the significant positive influence of autonomy, competence, and relatedness on nurse retention at UCTH, Calabar, Nigeria.

Discussion of Findings

The test of hypothesis one demonstrated that self-determination theory (SDT) elements significantly enhanced nurse retention at UCTH, Calabar, a finding corroborated by multiple studies: Hood and Patton (2022) in the NHS, UK; Shah and Asad (2018) in Pakistani commercial banks; Hee and Rhung (2019) among Malaysian Millennials; and Hassan and Govindhasamy (2020) in Malaysian manufacturing. These studies consistently highlight the importance of self-determination theory (SDT) dimensions—autonomy, competence, and relatedness—in improving job satisfaction and reducing turnover. This underscores the critical need for public hospital administrators, particularly at UCTH, to prioritize and cultivate these motivational factors, fostering an environment where nurses feel valued and empowered. Such efforts are essential for mitigating nurse turnover, ensuring high-quality patient care, and maintaining a committed nursing workforce, thereby emphasizing the value of strategies that support intrinsic motivation, professional development, job satisfaction, and a positive work culture.

Also, the test of hypothesis two revealed that autonomy significantly enhances nurse retention at UCTH, Calabar, corroborating similar findings from studies in various industries

and countries, including Malaysian manufacturing (Hassan & Govindhasamy, 2020), Pakistani telecommunications (Anwar et al., 2018), Malaysian Millennials (Hee & Rhung, 2019), and Pakistani commercial banks (Shah & Asad, 2018). This underscores the importance of empowering nurses with decision-making autonomy, fostering a sense of control and independence that leads to higher job satisfaction, reduced turnover, and a more innovative and efficient work environment. Thus, hospital administrators should implement policies that enhance nurse autonomy, aligning with organizational goals to attract and retain skilled nurses, ultimately improving patient care and hospital performance.

Similarly, the test of hypothesis three revealed that competence has a significant positive effect on the retention of nurses at UCTH, Calabar. This finding aligns with several studies, including Hood and Patton (2022), which linked competence to job satisfaction and reduced turnover intention in the NHS; Shah and Asad (2018), which highlighted its influence on retention in Pakistani commercial banks; Hee and Rhung (2019), which observed a similar impact among Millennials in Malaysia; and Anwar et al. (2018), which found competence crucial for retention in Pakistani telecommunication companies. For UCTH, this underscores the need for hospital administrators to prioritize competence development through training, continuing education, and professional development. Enhancing nurses' skills not only improves patient care quality but also fosters a supportive work environment that promotes commitment. Administrators should adopt holistic strategies that encourage continuous learning, skill enhancement, and professional growth, recognizing the interconnected factors influencing nurse retention to benefit both the workforce and patient care.

Finally, the test of hypothesis four revealed that relatedness significantly enhances nurse retention at UCTH, Calabar, echoing findings from studies by Hee and Rhung (2019) in Malaysia, Hassan and Govindhasamy (2020) in Malaysian manufacturing, and Anwar et al. (2018) in Pakistani telecommunications, all of which demonstrated that relatedness positively impacts employee retention. This underscores the importance of fostering interpersonal connections and a sense of belonging within the workplace. For public hospital administrators, this means recognizing that a supportive, cohesive work environment is crucial for nurse retention. By nurturing a culture of connection to colleagues and the organization's mission, administrators can improve job satisfaction, reduce turnover, and ensure continuity of care. This emphasizes the need for strategies that promote teamwork, collaboration, and mutual support, thereby enhancing employee engagement and commitment over the long term.

Conclusions and Recommendations

This study sought to determine the effect of self-determination theory (SDT) elements on the retention of nurses at UCTH, Calabar, Nigeria. It was conducted against the backdrop of massive migration of medical personnel away from the Nigerian public health system to foreign countries due to motivational issues. To that end, this study sought to demonstrate

the extent to which intrinsic motivation, using the SDT framework, influences the retention of nurses in public hospitals, with a focus on the UCTH. The study targeted general nurses of this hospitals from whom primary data were obtained for data analysis. After in-depth inferential statistical tests, it was revealed that the effect of Self-determination theory (SDT) elements on the retention of nurses at UCTH is statistically significant and positive. Also, the tests of hypotheses two, three and four revealed that autonomy, competence and relatedness had significant positive roles to play in enhancing the retention of nurses at the UCTH. Considering the positive findings of the study, the following recommendations are suggested to enable administrators of public hospitals reduce nurse turnover and improve retention in a sustainable way:

- i. Administrators of public hospitals in Nigeria should foster a work environment that allows greater autonomy for nurses, granting them the authority to assess patients' medical needs, determine medical care plans, administer medical care and exhibit professional independence as they collaborate with other medical personnel to provide care to patients. By empowering nurses with increased autonomy and authority in patient care decision-making within public hospitals in Nigeria, administrators can significantly boost nurse retention rates. Allowing nurses to assess patients' medical needs, formulate care plans, and administer treatments not only acknowledges their expertise but also fosters a sense of professional fulfilment and value. This autonomy can lead to heightened job satisfaction, morale, and a greater sense of ownership over their roles, thereby reducing burnout and turnover rates among nursing staff. Moreover, as nurses collaborate more effectively with other healthcare professionals, this approach can enhance overall patient care outcomes, further solidifying nurses' commitment to their profession and the public healthcare system in Nigeria.
- ii. Administrators of public hospitals in Nigeria should create a work environment that values, rewards and encourages continuous training and skills development among nurses in order to enable nurses enhance their technical proficiency, knowledge of medical procedures, proficient administration of medications, proficiency in patient care practices, capacity to deliver quality patient care and interpersonal skills to effectively care for patients. Creating a work environment in Nigerian public hospitals that prioritizes and fosters continuous training and skills development among nurses can significantly bolster nurse retention rates. This is because by emphasizing the value of ongoing education and professional growth, administrators can empower nurses to enhance their technical proficiency, deepen their knowledge of medical procedures, administer medications more effectively, improve patient care practices, and refine interpersonal skills crucial for patient interaction. This supportive atmosphere not only equips nurses with the tools to deliver high-quality patient care but also demonstrates organizational commitment to their professional development, thereby fostering greater job

satisfaction and loyalty among nursing staff, ultimately leading to improved retention rates in public hospitals.

- iii. It is critical for nurses to be allowed to operate in a work environment that values and promotes social interactions and useful relationships among personnel so that they can feel a sense of belonging, value and appreciation while building vital professional relationships with colleagues. Creating a work environment in Nigerian public hospitals that prioritizes and fosters social interactions and meaningful relationships among nursing personnel is paramount to enhancing nurse retention. This is because when nurses feel a sense of belonging and value, and are appreciated for their contributions, they are more likely to remain in their positions. By cultivating such an atmosphere, nurses not only experience greater job satisfaction but also build vital professional relationships with colleagues, fostering a supportive network that further reinforces their commitment to their roles and the organization. This, in turn, can contribute to decreased turnover rates and increased retention of nurses within public hospitals in Nigeria.

Study Limitations and Future Research

Considering the limited focus of this research, there is need for further studies with broader scopes to provide more comprehensive empirical evidence regarding the association between Self-determination theory (SDT) elements and employee retention within the Nigerian healthcare system. This study overwhelmingly focused on nurses, thereby failing to account for the potential retention propensities of other essential medical personnel within public hospitals in Nigeria. To that end, it is suggested that future studies incorporate other essential medical personnel into their investigations in order to generate more comprehensive empirical evidence relevant to employee retention in the Nigerian public healthcare system. Also, there is need for future studies to accommodate more public hospitals in their investigations in order to obtain and analyze data from more medical personnel to promote understanding of the correlation between intrinsic motivational factors (such as autonomy, competence and relatedness) and employee retention in the healthcare context in Nigeria.

References

- Abdi, M. S., Ibrahim, A. A., & Hussein, J. M. (2017). The effect of motivation on employee performance: Case study in Hormuud company in Mogadishu Somalia. *International Journal of Development Research*, 9(11), 17009-17016.
- Abimbola, O. S., Adebisi, A. A., Adebisi, S. S., & Bamisaiye, A. (2020). Motivational factors influencing employee performance in Nigerian healthcare organizations. *Journal of Healthcare Management*, 14(2), 45-58.
- Adegoke, O. S., & Adegboye, O. A. (2018). Impact of leadership styles on employee motivation: A study of healthcare workers in Nigeria. *Journal of Health Management*, 6(1), 78-92.
- Adejoro, L. (November 14, 2022) '57,000 nurses left Nigeria in five years – NANNM': Punch News. <https://punchng.com/57000-nurses-left-nigeria-in-five-years-nannm/>

- Adeola, M. M., & Adebisi, S. O. (2016). Employee motivation, recruitment practices and banks performance in Nigeria. *International Journal of Entrepreneurial Knowledge*, 4(2), 45-67. <https://doi.org/10.37335/ijek.v4i2.48>
- Adeyemi, O., & Oladipo, A. (2019). Nurse retention and its impact on healthcare delivery in Nigerian public hospitals. *Journal of Health Management*, 21(3), 284-297.
- Afolabi, O. R., Oyekola, A. A., & Adebayo, A. A. (2019). Employee motivation and its implications for healthcare delivery in Nigeria: A case study of public hospitals in Lagos State. *Nigerian Journal of Healthcare Management*, 7(2), 34-47.
- Afolabi, O. S., & Alao, A. A. (2019). Nurse staffing levels and patient outcomes in Nigerian public hospitals: A review of the literature. *Journal of Nursing Management*, 27(5), 969-978.
- Agyapong, G. K., & Antwi, S. K. (2022). Understanding the relationship between employee motivation and organizational productivity: A study of Ghanaian manufacturing firms. *Journal of African Business Research*, 15(3), 112-125.
- Akanbi, B. A., & Mohammed, A. H. (2021). The role of organizational culture in enhancing employee motivation: Evidence from selected healthcare institutions in Nigeria. *International Journal of Healthcare Management*, 14(3), 112-125.
- Akinwale, O., & George, A. (2020). Addressing nurse turnover in Nigeria: Strategies and solutions. *African Journal of Nursing and Midwifery*, 22(4), 211-225.
- Alalade, S.Y. & Oguntodu, J.A. (2015). Motivation and employees' performance in the Nigerian banking industry. *International Journal of Economics, Commerce, and Management*, 3(4), 78-92.
- Alase, G., & Akinbo, T. (2021). Employee motivation and job performance: Empirical evidence from Nigeria. *Applied Journal of Economics, Management and Social Sciences*, 2(2), 16-23. <https://doi.org/10.53790/ajmss.v2i2.20>
- Al-Emadi, A. A. Q., Schwabenland, C., & Wei, Q. (2015). The vital role of employee retention in human resource management: A literature review. *Journal of Organizational Behavior*, 14(3), 7-26.
- Ali, B. J., & Anwar, G. (2021). An empirical study of employees' motivation and its influence job satisfaction. *International Journal of Engineering, Business and Management*, 5(2), 21-30. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3822723
- Alimi, B. G., Ismaila, U., Isa, R., & Garba, A. (2020). Consequences of motivation on medical staff performance of some selected public hospitals in Maiduguri, Borno State, Nigeria. *African Scholar Journal of Humanities and Social Sciences*, 5(2), 40-53
- Anwar, A., Waqas, A., Shakeel, K., & Hassan, S. S. (2018). Impact of intrinsic and extrinsic motivation on employee's retention: A case from call center. *International Journal of Academic Research in Business and Social Sciences*, 8(6), 652-666. <http://dx.doi.org/10.6007/IJARBS/v8-i6/4262>
- Aruna, M., & Anitha, J. (2015). Employee retention enablers: Generation Y employees. *SCMS Journal of Indian Management*, 12(3), 94-108.
- Azeez, S. (2017). Human resource management practices and employee retention: A review of literature. *Journal of Economics, Management and Trade*, 18(2), 1-10. <https://doi.org/10.9734/JEMT/2017/32997>
- Baljoon, R. A., Banjar, H. E., & Banakhar, M. A. (2018) Nurses' work motivation and the factors affecting it: A scoping review. *International Journal of Nursing & Clinical Practices*, 5(1), 277-296. <https://doi.org/10.15344/2394-4978/2018/275>
- Bello, M., & Yusuf, A. (2018). The effects of nurse workforce stability on patient outcomes in Nigerian hospitals. *International Journal of Nursing Studies*, 85, 44-51.
- Bing-Jonsson, P. C., Hofoss, D., Kirkevold, M., Bjørk, I. T., & Foss, C. (2016). Sufficient competence in community elderly care? Results from a competence measurement of nursing staff'. *BMC Nursing*, 15, 1-11. <https://link.springer.com/article/10.1186/s12912-016-0124-z#citeas>

- Chien, G. C., Mao, I., Nergui, E., & Chang, W. (2020). The effect of work motivation on employee performance: Empirical evidence from 4-star hotels in Mongolia. *Journal of Human Resources in Hospitality & Tourism*, 19(4), 473-495. <https://doi.org/10.1080/15332845.2020.1763766>
- Chukwu, C., & Nwafor, E. (2021). Examining the role of nurse retention in enhancing healthcare quality in Nigeria. *Nursing Administration Quarterly*, 45(2), 174-183.
- Ciobanu, A., Androniceanu, A., & Lazaroiu, G. (2019). An integrated psycho-sociological perspective on public employees' motivation and performance. *Frontiers in Psychology*, 10, 362-401. <https://doi.org/10.3389/fpsyg.2019.00036>
- Deci, E. L., & Ryan, R. M. (1985) Intrinsic motivation and self-determination in human behaviour. *Perspectives in Social Psychology*, 4, 11-40.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01
- Deci, E. L., Olafsen, A. H. & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behaviour*, 4, 19-43. <https://doi.org/10.1146/annurev-orgpsych-032516-113108>
- Druetz, T., Kadio, K., Haddad, S., Kouanda, S., & Ridde, V. (2015). Do community health workers perceive mechanisms associated with the success of community case management of malaria? A qualitative study from Burkina Faso. *Social Science & Medicine*, 124, 232-240. <https://doi.org/10.1016/j.socscimed.2014.11.053>
- Ede, M. O., Okafor, C. J., & Obiweluzor, N. (2020). Factors influencing job satisfaction and turnover intentions among nurses in public hospitals in Nigeria. *International Journal of Nursing Studies*, 107, 103-126.
- Edewor, P. A., & Fatusin, A. F. (2018). Factors influencing nurse retention in Nigeria: A qualitative study. *International Journal of Nursing Practice*, 24(1), 126-139.
- Ekundayo, O. A. (2018). The impact of motivation on employee performance in selected insurance companies in Nigeria. *International Journal of African Development*, 5(1), 5-23.
- Elomien, E., Nchuchuwe, F.F., Idowu, O.A., Onabote, A. & Osabohien, R., (2021). Employee motivation and industrial output in Nigeria. *Humanities and Social Sciences Letters*, 9(1), 24-33.
- Emeka, N., Amaka, O. & Ejim, E.P. (2015). The effect of employee motivation on organizational performance of selected manufacturing firms in Enugu State. *World Journal of Management and Behavioral Studies*, 3(1), 1-8. <https://10.5829/idosi.wjmbbs.2015.3.1.1314>
- Fillo, A., Lohmann, J., Turcotte-Tremblay, A. M., Somé, P. A., & Ridde, V. (2019). The importance of leadership and organizational capacity in shaping health workers' motivational reactions to performance-based financing: A multiple case study in Burkina Faso. *International Journal of Health Policy and Management*, 8(5), 272-291. <https://doi.org/10.15171%2Fijhpm.2018.133>
- Gagné, M., Deci, E. L., & Ryan, R. M. (2018). Self-determination theory applied to work motivation and organizational behaviour. *The SAGE handbook of industrial, work & organizational psychology: Organizational psychology*, 2, 97-121.
- Good, M. J., (2023). *American medicine: The quest for competence*. University of California Press.
- Hassan, Z., & Govindhasamy, C. (2020). An investigation on extrinsic and intrinsic rewards on employee retention among Gen Y: A study in Malaysian manufacturing companies. *Journal of Business and Economic Analysis*, 3(01), 55-69.
- Hee, O. C., & Rhung, L. X. (2019). Motivation and employee retention among Millennials in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 9(2), 876-884.
- Hood, C., & Patton, R. (2022). Exploring the role of psychological need fulfilment on stress, job satisfaction and turnover intention in support staff working in inpatient mental health hospitals in

- the NHS: A self-determination theory perspective. *Journal of Mental Health*, 31(5), 692-698. <https://doi.org/10.1080/09638237.2021.1979487>
- Howard, J., Gagné, M., Morin, A. J., & Van den Broeck, A. (2016). Motivation profiles at work: A self-determination theory approach. *Journal of Vocational Behaviour*, 95, 74-89.
- Hu, P., & Zhang, J. (2017). A pathway to learner autonomy: A self-determination theory perspective. *Asia Pacific Education Review*, 18, 147-157.
- Kanat-Maymon, Y., Elimelech, M. & Roth, G. (2020). Work motivations as antecedents and outcomes of leadership: Integrating self-determination theory and the full range leadership theory. *European Management Journal*, 38(4), 555-564.
- Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. *International Journal of Academic Medicine*, 4(1), 60-63.
- Keith, T. Z. (2019). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling*. Routledge.
- Kolo, E. S. (2018). Job satisfaction among healthcare workers in a tertiary center in Kano, Northwestern Nigeria. *Nigerian Journal of Basic and Clinical Sciences*, 15(1), 87-91.
- Kuranchie-Mensah, E. B., & Amponsah-Tawiah, K. (2016). Employee motivation and work performance: A comparative study of mining companies in Ghana. *Journal of Industrial Engineering and Management*, 9(2), 255-309.
- Kuswati, Y. (2020). The effect of motivation on employee performance. *Budapest International Research and Critics Institute-Journal*, 3(2), 995-1002.
- Lee, M. T., & Raschke, R. L. (2016). Understanding employee motivation and organizational performance: Arguments for a set-theoretic approach. *Journal of Innovation & Knowledge*, 1(3), 162-169.
- Lee, Y. S., & Eun, Y. (2016). The effect of the flipped learning on self-efficacy, critical thinking disposition, and communication competence of nursing students. *The Journal of Korean Academic Society of Nursing Education*, 22(4), 567-576.
- Lohmann, J., Houliort, N., & De Allegri, M. (2016). Crowding out or no crowding out? A self-determination theory approach to health worker motivation in performance-based financing. *Social Science & Medicine*, 169, 1-8.
- Lohmann, J., Muula, A. S., Houliort, N., & De Allegri, M. (2018). How does performance-based financing affect health workers' intrinsic motivation? A self-determination theory-based mixed-methods study in Malawi. *Social Science & Medicine*, 208, 1-8.
- Makki, A. & Abid, M. (2017). Influence of intrinsic and extrinsic motivation on employee's task performance. *Studies in Asian Social Science*, 4(1), 38-43.
- Manganelli, L., Thibault-Landry, A., Forest, J., & Carpentier, J. (2018). Self-determination theory can help you generate performance and well-being in the workplace: A review of the literature. *Advances in Developing Human Resources*, 20(2), 227-240.
- Marewo, N. T., Mutongi, C., Nyoni, T., & Nyoni, S. P. (2020). The impact of employee motivation on employee performance. *International Journal of Advance Research and Innovative Ideas in Education*, 6(6), 1487-1502.
- Marufu, T.C., Collins, A., Vargas, L., Gillespie, L. & Almghairbi, D. (2021). Factors influencing retention among hospital nurses: Systematic review. *British Journal of Nursing*, 30(5), 302-308.
- Molina-Mula, J., & Gallo-Estrada, J. (2020). Impact of nurse-patient relationship on quality of care and patient autonomy in decision-making. *International Journal of Environmental Research and Public Health*, 17(3), 835-853.
- Mutsuddi, I. (2016). Employee retention and engagement practices in the healthcare sector: A study on medica super-specialty hospital, Kolkata. *Delhi Business Review*, 17(1), 65-78.
- Nibbelink, C. W., & Brewer, B. B. (2018). Decision-making in nursing practice: An integrative literature review. *Journal of Clinical Nursing*, 27(5-6), 917-928.

- Nweke, J., & Ugochukwu, C. (2021). Strategies for enhancing nurse retention in Nigerian public health systems. *Journal of Nursing Management*, 29(3), 467-474.
- Nwosu, C., & Ugwu, C. (2021). Burnout and occupational stress among nurses in Nigerian public hospitals: The moderating role of social support. *Journal of Health Psychology*, 26(11), 1867-1882.
- Nxumalo, B., & Dlamini, N. (2017). The role of employee motivation in enhancing organizational performance: Insights from South African information technology sector. *South African Journal of Business Management*, 48(1), 45-58.
- Ogonda, B., & Kipkulei, J. (2018). Employee motivation and organizational performance: Evidence from Kenyan banking sector. *International Journal of Business and Management*, 13(5), 68-82.
- Okoroafor, S.C., Ongom, M., Salihu, D., Mohammed, B., Ahmat, A., Osubor, M., Nyoni, J., Nwachukwu, C., Bassey, J. & Alemu, W., (2021). Retention and motivation of health workers in remote and rural areas in Cross River State, Nigeria: A discrete choice experiment. *Journal of Public Health*, 43(1), 46-53.
- Olajide, F., Adeyemo, O., & Oyetunde, M. (2022). Impact of work environment on job satisfaction and burnout among nurses in public hospitals in South-West Nigeria. *BMC Nursing*, 21, 110-128.
- Olorunfemi, O., Agbo, D.I., Olorunfemi, O.M. & Okupapat, E.O. (2020). Impact of the emigration of nurses on health care delivery system in selected hospitals, Benin-City, Edo State, Nigeria. *Journal of Integrative Nursing*, 2(3), 110-115.
- Olusadum, N.J. & Anulika, N.J. (2018). Impact of motivation on employee performance: A study of Alvan Ikoku Federal College of Education. *Sigma*, 1(1), 53-65.
- Raza, M. Y., Akhtar, M. W., Husnain, M., & Akhtar, M. S. (2015). The impact of intrinsic motivation on employee's job satisfaction. *Management and Organizational Studies*, 2(3), 80-88.
- Rigby, C. S., & Ryan, R. M. (2018). Self-determination theory in human resource development: New directions and practical considerations. *Advances in Developing Human Resources*, 20(2), 133-147.
- Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (2015). The significance of autonomy and autonomy support in psychological development and psychopathology. *Developmental Psychopathology*, 1, 795-849.
- Salvatore, D., Numerato, D., & Fattore, G. (2018). Physicians' professional autonomy and their organizational identification with their hospital. *BMC Health Services Research*, 18, 1-11.
- Shah, M., & Asad, M. (2018). Effect of motivation on employee retention: Mediating role of perceived organizational support. *European Online Journal of Natural and Social Sciences*, 7(2), 511-528.
- Trépanier, S.G., Forest, J., Fernet, C. & Austin, S. (2015). On the psychological and motivational processes linking job characteristics to employee functioning: Insights from self-determination theory. *Work & Stress*, 29(3), 286-305.
- Tripathy, J. P., Goel, S., & Kumar, A. M. (2016). Measuring and understanding motivation among community health workers in rural health facilities in India-a mixed method study. *BMC Health Services Research*, 16, 1-10.
- Ualikhanova, B. S., Baizak, U. A., Turmambekov, T. A., Kurbanbekov, B. A., Sarybaeva, A. H., & Rumbeshta, E. A. (2015). Formation of medical students' competences in the Republic of Kazakhstan. *Indian Journal of Science and Technology*, 6(1), 89-104
- Van de Klundert, J., van Dongen-van den Broek, J., Yesuf, E.M., Vreugdenhil, J. & Yimer, S.M., (2018). We are planning to leave, all of us—A realist study of mechanisms explaining healthcare employee turnover in rural Ethiopia. *Human Resources for Health*, 16(1), 1-13.
- Varma, C. (2017). Importance of employee motivation and job satisfaction for organizational performance. *International Journal of Social Science & Interdisciplinary Research*, 6(2), 109-128. <https://ssrn.com/abstract=3073813>

- Widarti, K., & Santoso, S. (2019). The impact of employee motivation on organizational productivity: A case study of Indonesian manufacturing industry. *Journal of Management and Sustainability*, 9(2), 25-35.
- Wulf, G., & Lewthwaite, R. (2016). Optimizing performance through intrinsic motivation and attention for learning: The OPTIMAL theory of motor learning. *Psychonomic Bulletin & Review*, 23, pp.1382-1414. <https://doi.org/10.3758/s13423-015-0999-9>
- Yuk, S., & Yu, S. (2023). The effect of professional autonomy and nursing work environment on nurses' patient safety activities: A perspective on magnet hospitals. *Journal of Nursing Management*, 20(2), 67-91. <https://doi.org/10.1155/2023/5587501>