# Assessment of the Intrinsic determinants of Nurses' Job Satisfaction in Borno State, Nigeria

## Hadiza Yahaya*, Abdullahi Sabo, Abigail Uchenna Emeloye

Department of Nursing Sciences, Maryam Abacha American University of Niger, Maradi, Republic of Nigeria

**\*Corresponding author:**
Hadiza Yahaya

eedreesan@gmail.com

Department of Nursing Sciences, Maryam Abacha American University of Niger, Maradi, Republic of Nigeria

## Abstract

**Background:** Job satisfaction is an essential driver of workforce productivity, especially in the nursing profession. As such, unfavourable work conditions could result in a shortage and poor work output of employees.

**Objectives:** This study sought to investigate the influence of intrinsic factors on job satisfaction among nurses working in selected government hospitals in Borno State, Nigeria.

**Materials and methods:** This quantitative descriptive cross-sectional design randomly (stratified) selected 399 participants (nurses) from a population of 695 nurses. A revised Nursing Work Index (NWI- R) questionnaire was adopted to collate data related to the job satisfaction of nurses. Data were analysed using Statistical Package for Social Science Version 23.0

**Results:** Of all the participants, 214 (61.8%) were females, the age range of 21 -25 years 191 (47.9%) and those unmarried (single), 265 (66.4%) were the most frequent categories of nurses. The overall satisfaction for motivation (mean±standard deviation) was 74.66±10.53. The levels of employees' job satisfaction (lowest-highest total agreement [%]) in relation to work itself (68.9- 94.7%), achievement (80.5-86.7%), recognition (67.2-83.5%), possibility (75.7-79.2%) and advancement (87.7-91.5%) were moderate-high and high, respectively. Also, their productivity was evaluated as high. Sex, working experience, working hours and qualification of nurses were all significantly associated with high motivation for the job ($p < 0.05$).

**Conclusion:** Findings from this survey infer that the nurses were relatively good job satisfaction in General Hospitals in Borno state. There was a positive relationship between job satisfaction and the productivity of the nurses.

**Keywords:** Job Satisfaction; Healthcare Services; Nursing Services; Productivity; Nurses Workforces; Nigeria

## Introduction

Health workers' performance is critically dependent on workers' motivation, service quality, efficiency, and equity; all mediated by workers' willingness to apply themselves to their tasks, the effectiveness and efficiency of the nursing workforce are threatened globally due to turnover and shortage of nurses. These scenarios are invariably subjecting the remaining and actively practising nurses to untold work-related stresses due to excessive workload culminating in a severe decline in job satisfaction in the nursing workforce [1].

Job satisfaction is one of the major causes of shortage in the nursing workforce globally. In the United States, Australia and Canada, a shortage in the nursing workforce is anticipated

within the next decade and will continue to negatively impact the quality of healthcare systems across the globe. Reasons advanced for the anticipated shortage are that the profession is currently dominated by baby boomers, amounting to 40% of nurses nearing their retirement age, budgetary constraints and excessive workload resulting in poor job satisfaction among the actively practising nurses [2]. There is a projection of about 500,000 shortages of nurses by the year 2025 in the United State of America while that of Canada is anticipated to rise to 60,000 by 2022 [3]. Similarly, nurses from Germany, France, Poland, Italy, Netherlands, Belgium, Slovakia and China reported having poor job satisfaction and frustration with the nursing profession due to excessive workload coupled with poor recognition and remuneration [4].

The healthcare system in Nigeria is faced with many challenges including unfair distribution of the nursing workforce, and an increasing "brain drain" culminating in a shortage of skilled and competent nursing workforce. Furthermore, poor human resources planning, mismanagement practices and structures, unsatisfactory working conditions, political crises, and terrorism among others are also challenges affecting the Nigerian healthcare system [5]. Ogbolu et al. [6], described the nursing workforce as being deficient both in material and human resources which contributes to the inability of the nurse leaders to achieve a healthy, adequate and stable nursing workforce.

The current Nursing shortage and high turnover are of great concern in many countries because of their impact on the efficiency and effectiveness of any healthcare delivery system. Recruitment and retention of nurses are persistent problems associated with job satisfaction. Thus, job satisfaction is the affective orientation that an employee has towards his or her work [7]. It can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job. The global approach is used when the overall attitude is of interest while the facet approach is used to explore which parts of the job produce satisfaction or dissatisfaction [8].

To address the current crises facing the Nursing workforce, strategies must be delineated to reposition the Public Health sector to work in close collaboration with the private sector, develop a partnership with adequate stakeholders to mobilize resources to develop and retain skilled, component and well-motivated Nursing workforce to effectively harness the material and human resources that will demystify this problem, however, there must be adequate knowledge of various variables discouraging job satisfaction among nurses.

Human Resources are key elements for improving the performance of the health care system. Sufficient numbers of competent and motivated health workers and adequate resources and funding are important factors to achieving the national and international health-related goals The Sustainable Development Goals (SDGs) call for countries to increase the aggregate density of physicians, nurses, and midwives to 4.45 per 1000 population to achieve health-related targets by 2030 [9]. Job satisfaction is indispensable in the daily life of the workforce, and the mechanism that drives job satisfaction requires the attention of the management of corporate organisations.

This study sought to establish the relationships that exist between the different variables of job satisfaction among the clinical nurses in Government Hospitals in Maiduguri, Borno State. The resilient nurses practising in Nigeria regardless of unfavourable conditions are exposed to work-related stresses. To our knowledge, no study previously existed that specifically addresses the level of job satisfaction among nurses in Government Hospitals in Maiduguri, Borno State, the study area. Thus, this study aims to investigate the influence of intrinsic factors (work itself, achievement, recognition, possibility and advancement) on job satisfaction among nurses in Borno State, Nigeria.

## Materials and Methods

This was a descriptive cross-sectional survey. In the context of this research, this design is suitable in that it tries to examine factors influencing job satisfaction among Nurses in Government Hospitals in Borno State. A descriptive cross-sectional survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. In the context of this current study: the Nurses in Government Hospitals in Borno State.

### Target Population

The target population was the entire professional Nurses working in Borno State spread across the three geopolitical zones, either working in Government or Private Health care settings. However, the accessible population will be the Nurses working in State Specialist Hospital, Umaru Shehu Ultra-Modern Hospital, General Hospital Molai and Maryam Abacha women and children hospital, Maiduguri, Borno State. Nigeria. The participants were enrolled from the various departments /wards of the Hospitals.

### Inclusion Criteria

The inclusion criteria were all voluntarily consented nurses who were trained and licensed by the nursing and midwifery Council of Nigeria who is working study location and selected hospital in Borno State

### Exclusion Criteria

Professional Nurses who are not working in the selected hospitals and those who do not consent to participate in the research.

### Sample Size

Three hundred and ninety-nine (399) Nurses were selected for the study to obtain precise and systematic information relevant to the research purpose, objectives, and questions. The total number of Nurses from the four hospitals will be stratified according to their speciality and picked randomly for the study. The convenience sampling technic will be utilized taking any nurse that is available from the randomly selected wards of each hospital. The number of Nurses working in State Specialist Hospital is Four Hundred (400) (Source: Borno State Hospitals Management Board, Unpublished data). Therefore, the sample size of one hundred and ninety-six (196) professional Nurses was recruited. the number of Nurses working in Umaru Shehu ultra-modern Hospital is one hundred and eighty (180) therefore the sample size of one hundred and twenty-three (123) Professional nurses were recruited for the study. The number of Nurses working in General Hospital Molai is thirty-five (35). Therefore the sample size of thirty-two (32) was recruited also the number of Nurses working in Maryam Abacha women and children hospital is fifty-five (55) therefore the sample size of forty-eight (48) nurses was recruited respectively, making the total sample size for this study to be three hundred and ninety-nine (399) Nurses.

This sample size estimation was based on Krejcie and Morgan Table (http://www.kenpro.org/sample-size-determination-using-krejcie-and-morgan-table/) that aptly summarized

the results of their computations graphically for easy use by researchers working on the population that is within 1 and 1,000,000 in size.

## Sampling Technique

The stratified random sampling technique was employed to recruit participants for the study to obtain precise and systematic information relevant to the research purpose, objectives and questions. The total number of nurses from the four hospitals was stratified according to their speciality and picked randomly for the study

## Tool for Data Collection

Creswell et al. [10] define data collection as a means by which information is obtained from the selected subjects (Nurses) of an investigation. The primary research data tool used in this study is an adapted questionnaire. The questionnaires were the most common instrument used by researchers to collect research data. Questionnaires can be used to obtain a wealth of data and information from research participants, they can be inexpensive for the researchers to manage, and it is relatively easy to compare and analyse the responses to the questionnaire.

The adapted instrument is called Nursing Work Index (NWI-R) questionnaire [11]. It consisted of original 65 items that were designed to measure the organizational characteristics that aid nurses' job satisfaction, their ability to provide quality care and their perceived productivity in the hospital. This instrument was improved to measure the organizational climate that best contributed to nurses' feelings of satisfaction in the hospital setting. The revised instrument (the NWI-R) consists of 57 items. This instrument is an international questionnaire used by many researchers to study and identify nurses' job satisfaction, hospital environment, organizational climate, and burnout [12]. Thus, this instrument for data collection is divided into sections. Section A elicited the demographic profile of the nurses such as gender, age and marital status. Section B was the motivation (intrinsic factor) made of 24 items classified into five sub-components namely: advancement (2 items), work itself (8 items), possibility for growth (2 items), responsibility (6 items), recognition (4 items) and achievement (2 items). The revised instrument (the NWI-R) was structured on a four (4) point Likert scale rating format of 1=strongly agree, 2=agree, 3=disagree and 4=strongly disagree but reversed in this study.

## Ethical Considerations

Ethical approval was obtained from the Maryam Abacha American University of Niger. Secondly, institutional approval was equally obtained from the Health Research committee State Specialist Hospital, Umaru Shehu Ultra-Modern Hospital, General Hospital Molai, Maryam Abacha women and children hospital and the Ministry of Health of Borno state, Nigeria. Participants were duly informed not to write their names on the questionnaire. In addition, a designated point was unanimously chosen for the submission of the filled questionnaire to ensure the enforcement of anonymity. The data collected were void of the possibility of tracing the participants' identities through personal responses.

## Method of Data Analysis

This study collected and analysed primary data from the copies of the questionnaire distributed. The process involved the identification and correction of errors in the data (data cleaning) and performing some preliminary analysis. In other words, the data gathered was properly cleaned and examined for errors to enhance data entry, and missing values and ensure no violation of statistical assumptions such as normality, linearity etc. This was facilitated with the help of computer software called Statistical Packages for Social Sciences (IBM SPSS, version 23). Descriptive statistics consisting of frequency, percentage, mean and standard deviations were used to analyse both the demographic data and research variables by exploring the current job satisfaction levels of Nurses in Borno state.

## Results

### Gender of the Respondents

**(Figure 1)**

Out of the total 399 respondents sampled in this study, 94 (23.6%) were males while 306 (76.7%) were females

### Distribution of respondents based on their age

**(Figure 2)**

Data contained in Figure 2 shows the age distribution of the nurses. It reveals that 83 (20.8%) of the nurses were between 16-20 years old, 191 (47.9%) were between 21-25 years, 69 (17.3%) were between 26-30 years, 27 (6.7%) were between 31-35 years and 29 (7.3%) were between 36 years and above.
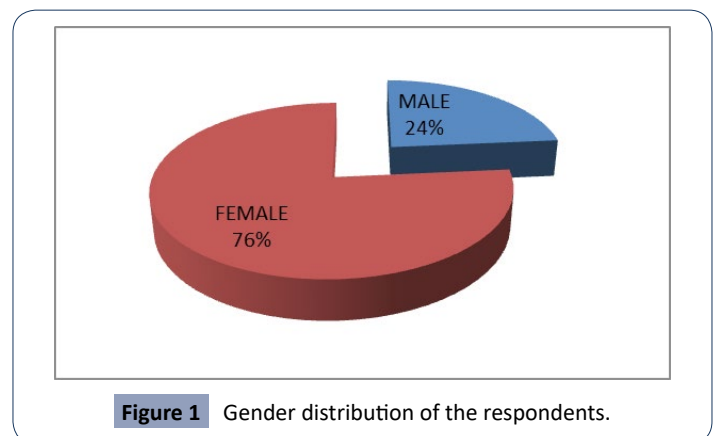
### Marital status distributions

**(Figure 3)**

The marital status distribution of the respondents indicated that 265 (66.4%) of the nurse are single, 130 (32.6%) are married and 4 (1.0%) are separated. The majority of the nurses are single.

### Responses reflecting Level of Job Satisfaction

To facilitate the interpretation, easy understanding, and comparisons of the nurse's responses to the different questionnaire items reflecting their level of job satisfaction based
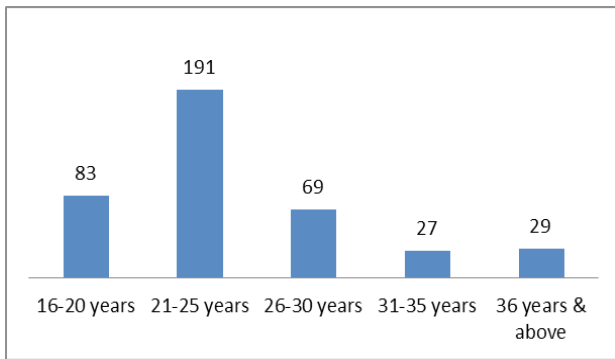


**Figure 1** Gender distribution of the respondents.

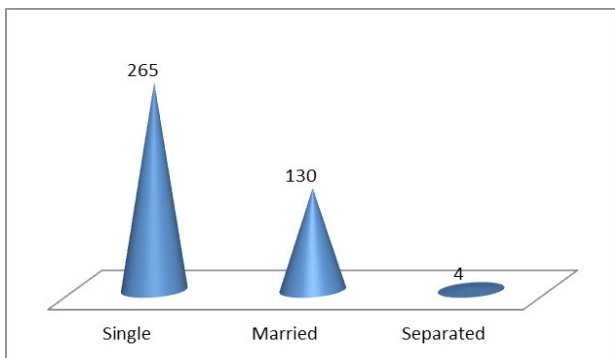**Figure 2**  Age distribution of respondents.



**Figure 3**  Respondents' distribution based on marital status.

on the two variables, motivation, and hygiene factors, scoring that ranged between 4 and 1 was applied. A score of 4 indicated "strongly agreed" and a score of 1 indicated strongly disagreed". Thus, for each item, a decision rule had to be determined by this process = 4+3+2+1/4 = 10/4 = 2.50. Thus, any item that scores from 2.50 and above is regarded as "agreed", while any item that scores less than 2.50 is regarded as "disagreed".

The first part of the survey research related to the motivating factors and consisted of 24 questionnaire items concerning nurses' level of job satisfaction in Borno State. These items classified into six sub-scales reflected the level of satisfaction with advancement in position (items No's 1&2), the nature of work itself (items 3,4,5,6,7,8,9.10), the possibility for growth and development in the nursing career (items No's, 11 & 12), level of responsibility (items No's 13, 14, 15, 16, 17, 18), level of recognition by the hospitals, (items No's, 19,20, 21, 22), and feelings of personal achievement (items No's 23 &24) (**Table 1**).

Table 1 above describes the distribution of the NWI-R items as they relate to Herzberg's motivation-hygiene theory.

## Nurses' responses to the Factors reflecting Motivation

Table 2 provides a summary of the descriptive statistics for motivating factors which include achievement at work, the work itself, the possibility of growth, responsibility, recognition and personal achievement (**Table 2**).

**Table 1.** Distribution of the NWI-R items.

| NWI-R | Sub-scales | Number of Items | NWI-R Q Nos |
|---|---|---|---|
| Herzberg's theory | Motivation | 24 | 1 to 24 |
| | Hygiene | 33 | 1 to 33 |

**Table 2.** Summary of Motivating Factors.

| Motivating factors | M | SD |
|---|---|---|
| 1. Work itself | 25.34 | 3.75 |
| 2. Responsibility | 17.94 | 3.33 |
| 3. Recognition | 12.48 | 2.47 |
| 4. Advancement | 6.62 | 1.27 |
| 5. Achievement | 6.33 | 1.28 |
| 6. Possibility of growth | 5.94 | 1.49 |
| Overall satisfaction for Motivation | 74.66 | 10.53 |

**Table 3**. Responses reflecting Nurses' Opinions on Advancement.

| Advancement items | SD | D | A | SA | TA | M | SD |
|---|---|---|---|---|---|---|---|
| | | | Frequency | | | | |
| 1. Nurses have the opportunity to serve fully in the hospital and nursing committees | 13 | 21 | 142 | 223 | 365 | 3.44 | 0.74 |
| 2. There is opportunities for advancement | 15 | 34 | 213 | 137 | 350 | 3.18 | 0.74 |

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; TA=total agreement; M=mean; SD=standard deviation.

It was found that the overall mean satisfaction for the motivating factors was M=74.66, SD=10.53, with the highest mean score reported for work itself (M=25.34, SD=3.75) and the lowest score was for the possibility of growth (M=5.94, SD=1.49).

## Advancement Subscale

Two questionnaire items reflected advancement, with 365 nurses agreeing that they have the opportunities to serve fully in the hospital and nursing committees and 350 of them also indicated that there are opportunities for advancement in the nursing profession.  This is contained in Table 4.4 (**Table 3**).

## The Work Subscale of Nurses

### (Table 4)

Eight items measured the effect of work itself on the nurses' level of satisfaction. All the items' means are above the cut-off point of 2.50, indicating that the nurses are satisfied with what each item is measuring. However, 378 nurses expressed satisfaction in working with experienced nurses capable of improving work output.  In addition, 359 nurses agreed that total patient care is nurses' responsibility, likewise, they are satisfied that team nursing helps the nursing delivery system. Three-hundred and forty-three nurses (343) agreed and expressed their satisfaction to working with clinically competent nurses. Similarly, 275 nurses agreed that there are enough registered nurses on duty.

## Possibility of Growth Subscale

Two questionnaire items reflected the possibility of growth and development in nurses' careers, with 302 nurses indicating being satisfied with career development/clinical ladder opportunities.

Table 4. Responses reflecting Nurses' Opinions on Work.

| Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. **Work itself Items** | **SD** | **D** | **A** | **SA** | **TA** | **M** | **SD** |
| 2. Working with experienced nurses improve work output | 8 | 13 | 155 | 223 | 378 | 3.49 | 0.66 |
| 3. Total patient care is the nurses' responsibility | 23 | 17 | 182 | 177 | 359 | 3.29 | 0.79 |
| 4. Team nursing aids the nursing delivery system | 13 | 11 | 213 | 162 | 375 | 3.31 | 0.68 |
| 5. Working with clinically competent nurses | 11 | 45 | 186 | 157 | 343 | 3.23 | 0.75 |
| 6. Nurses actively participate in developing their work schedules (i.e., days on duty and says off-duty) | 16 | 35 | 224 | 124 | 348 | 3.14 | 0.74 |
| 7. Are there achievement, recognition, possibility, and advancement? | 22 | 53 | 216 | 108 | 324 | 3.03 | 0.79 |
| 8. Nurses are involved in the internal governance of the hospital | 24 | 64 | 194 | 117 | 311 | 3.01 | 0.83 |
| 9. Enough registered nurses on duty | 47 | 77 | 167 | 108 | 275 | 2.84 | 0.95 |

Table 5. Responses reflecting Nurses' Opinions on Possibility of Growth.

| Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Possibility of growth items** | **SD** | **D** | **A** | **SA** | **TA** | **M** | **SD** |
| 11. Career development/clinical ladder opportunity | 25 | 72 | 210 | 92 | 302 | 2.92 | 0.81 |
| 12. Active in-service /continuing education programmes for nurses | 39 | 44 | 187 | 129 | 316 | 3.02 | 0.91 |

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; TA=total agreement; M=mean; SD =standard deviation.

Table 6. Responses of the Nurses to items on Responsibilities.

| Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Responsibilities Items** | **SD** | **D** | **A** | **SA** | **TA** | **M** | **SD** |
| 13. Working conditions, salary, supervision, interpersonal relations, policy and administration. | 35 | 37 | 187 | 140 | 327 | 3.08 | 0.89 |
| 14. Provide quality patient care | 27 | 30 | 204 | 138 | 342 | 3.14 | 0.82 |
| 15. Freedom to make decisions. | 25 | 41 | 180 | 153 | 333 | 3.16 | 0.85 |
| 16. A nurse manager is a good manager and leader | 39 | 63 | 175 | 122 | 297 | 2.95 | 0.92 |
| 17. Physicians give high-quality care than nurses | 60 | 71 | 179 | 89 | 268 | 2.74 | 0.97 |
| 18. Not being placed in a position of having to do things that are against nursing judgments. | 36 | 70 | 200 | 93 | 293 | 2.88 | 0.97 |

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; TA=total agreement; M=mean; SD=standard deviation

In addition, 316 nurses affirmed their level of satisfaction as it relates to active in-service continuing education programmes for nurses in General Hospitals in Borno State (**Table 5**).

## Responsibilities Subscale

Six questionnaire items measured nurses' responsibilities; and about 327 nurses are satisfied with their working conditions, salary, supervision, interpersonal al relations, policy and administration, 333 respondents agreed and were satisfied on issues of freedom to make decisions in the hospitals, as well as 268 nurses indicated that physicians give high-quality care than nurses. In addition, 333 nurses agreed to enjoy freedom in making decisions, while 297 affirmed that a nurse manager is a good manager and leader. Furthermore, 297 nurses agreed that their nursing manager is a good manager and leader in the hospitals they work (**Table 6**).

## Recognition Subscale

Four items evaluated the recognition subscale. It was evident that 343 nurses agreed with the contribution that nurses make to patient care which is publicly acknowledged. In addition, 332 respondents agreed that nursing staff are supported in pursuing

further studies, which tend to influence interest in the nursing job. It could further be deduced that 333 nurses are satisfied with praises and recognition for a job well done by them and this indeed influences interest in the nursing job (**Table 7**).

## Achievement Subscale

Two questionnaire items reflected the achievement subscale, with 321 nurses indicating that they have enough time and opportunity to discuss patient care problems with other nurses. Similarly, 346 nurses believe that a relationship exists between job satisfaction and patient care in their respective hospitals in Borno State. (See Table 4.9) (**Table 8**).

## Motivating Factors

As shown in Table 9, statistical significance was obtained between sex and motivation factors, indicating that the mean motivation index for males was significantly higher (M=76.50, SD=8.05) compared to the female nurses in terms of job satisfaction (M=74.09, SD=11.14), t(397), p = 0.023)

Furthermore, the results related to age groups of the nurses did not produce any significance F (4,394) = 1.28, p =0.28, (eta squared was very small=0.012), due to slight differences in the means. Similarly, marital status did not produce any statistical

**Table 7.** Responses of the Nurses to items on Recognition.

| Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|
| Recognition Items | SD | D | A | SA | TA | M | SD |
| 19. The contributions that nurses make to patient care are publicly acknowledged | 26 | 30 | 192 | 151 | 343 | 3.17 | 0.83 |
| 20. Support for new and innovative ideas about patient care influences interest in the nursing job. | 31 | 35 | 192 | 141 | 333 | 3.11 | 0.86 |
| 21. Praise and recognition for a job well did influence interest in the nursing job. | 19 | 51 | 180 | 149 | 329 | 3.15 | 0.82 |
| 22. Nursing staff supported in pursuing further studies influence interest in the nursing job. | 32 | 45 | 195 | 127 | 332 | 3.05 | 0.87 |

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; TA=total agreement; M=mean; SD=standard deviation.

**Table 8**. Responses of the Nurses to items on Achievement.

| Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|
| Achievement Items | SD | D | A | SA | TA | M | SD |
| 23. Enough time and opportunity to discuss patient care problems with other nurses | 16 | 52 | 198 | 133 | 321 | 3.12 | 0.78 |
| 24. Demographic characteristics, marital status, gender, age and educational status interfere with job satisfaction. There exist a relationship between job satisfaction and patient care | 23 | 30 | 186 | 160 | 346 | 3.21 | 0.82 |

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; TA=total agreement; M=mean; SD=standard deviation

**Table 9.** Job Satisfaction with Motivating factors according to the demographic characteristics of the nurses.

| Characteristics | N | M | SD | Sig |
|---|---|---|---|---|
| Gender: | | | | |
| Male | 94 | 76.5 | 8.05 | t (397) = 2.29, p=0.023 |
| Female | 305 | 74.09 | 11.18 | |
| Age Groups | | | | |
| 16-20 years | 83 | 74.29 | 10.36 | F (4,394) = 1.28, p =0.28 |
| 21-25 years | 191 | 75.63 | 11.57 | |
| 26-30 years | 69 | 74 | 9.49 | |
| 31-35 years | 27 | 74.29 | 7.23 | |
| 36 years & above | 29 | 71.24 | 8.18 | |
| Marital Status | | | | |
| Single | 265 | 75.28 | 11.3 | F (2,396) = 1.34, p=0.26 |
| Married | 130 | 73.45 | 8.86 | |
| separated | 4 | 73.5 | 1.73 | |
| Working Experience | | | | |
| 1-9 years | 256 | 74.72 | 9.52 | F (3,395) = 8.59, p <.001 |
| 10-19 years | 84 | 77.39 | 8.97 | |
| 20-30 years | 46 | 68.26 | 15.49 | |
| 31 years & above | 13 | 78.54 | 8.49 | |
| Nursing Qualifications | | | | |
| Registered nurse | 235 | 75.3 | 9.97 | F (4,394) = 6.54, p <0.001 |
| Sen. Nurs. Officer | 74 | 75.18 | 9.49 | |
| Prin. Nurs. Officer | 8 | 77 | 1.85 | |
| Chief Nurs. Officer | 54 | 68.52 | 14.49 | |
| Others | 28 | 79.11 | 3.75 | |
| Department/Ward | | | | |
| Surgical ward | 92 | 74.11 | 8.26 | F (5,393) = 4.68, p <0.001 |
| Gynae ward | 79 | 74.1 | 11.83 | |
| Medical Ward | 56 | 69.8 | 10.92 | |
| Orthopaedic ward | 21 | 79.57 | 6.19 | |
| Paediatric ward | 19 | 74 | 6.82 | |
| Nursing ward | 132 | 76.74 | 11.19 | |
| Hospital | | | | |

| Characteristics | N | M | SD | Sig |
|---|---|---|---|---|
| Umar Shehu hospital | 122 | 75.26 | 8.09 | F (3,395) = 6.89, p <0.001 |
| State Specialist hospital | 194 | 72.58 | 12.47 | |
| Maryam Abacha Hospital | 49 | 78.61 | 7.72 | |
| General Hospital | 34 | 78.67 | 5.95 | |
| Working hours per week | | | | |
| 10-29 hours | 72 | 71.4 | 13.61 | F (2,396) = 8.82, p <0.001 |
| 30-40 hours | 214 | 74.14 | 9.59 | |
| 40 years & above | 113 | 77.73 | 9.23 | |

significance, due to the closeness in the means F (2,396) = 1.34, p=0.26, (eta squared was very small =0.006). However, working experiences produced significance among the nurses in terms of satisfaction, F (3,395) =8.59, P <.001, (eta squared was very large = .06). Follow-up tests using LSD posthoc analysis indicated that nurses with greater experiences (≥31 years) in service are more satisfied with motivating factors, followed by those with 10-19 years in service, then 1-9 years and those with least job satisfaction were of the age 20-30 years.

Concerning the highest nursing qualifications, the results also demonstrated statistical significance among the nurses in terms of motivating job satisfaction, F (4,394)=6.54, p < .001, (eta squared was very large =0.06). Proving further using LSD posthoc analysis, based on the means reveals that nurses in other groups are more satisfied with motivating factor, followed by the principal nursing offer, then registered and senior nursing officers and the least satisfied are chief nursing officers. Concerning departments/unit wards that the nurses work in, the ANOVA revealed a statistically significant difference among the wards, F (5,393) = 4.68, (eta squared was large =.06). Finding out the difference using pairwise comparisons of LSD test, reveals that nurses working in orthopaedic wards are highly satisfied, followed by those in nursing wards, then those in gynaecological, surgical and paediatric wards and the less satisfied are those working in the medical ward.

Concerning the four hospitals used in this study, the ANOVA test also revealed statistically significant differences in terms of job satisfaction with motivating factors, $F_{(3, 395)} = 6.89$, $p < .001$, (eta squared was very large $= 0.5$). Proving further using LSD post=hoc for pairwise comparisons indicated that, nursing working in State Specialist Hospital are less satisfied, followed by those in Umar Shehu Ultra-Modern hospital, then those in Maryam Abacha Maternal and Child hospital and General Hospital are better satisfied. Finally, in connection with the hours nurses work per week, the ANOVA also revealed a significant overall effect, $F_{(2, 396)} = 8.82$, $p < 0.001$), (eta squared was very small $= 0.04$) Follow-up tests using LSD posthoc procedure indicated that nurses who put in 40 hours and above per week are more satisfied with motivating factors, followed by those with 30-40 hrs. per week and the less satisfied are those with 10-29 hrs. per week. This then implies that the more hours nurses put in providing nursing services, the better satisfied they were with their job related to their motivating factors (**Table 9**).

## Discussions

The first finding of this study reveals that there is a high level of job satisfaction among the nurses in the study area. This finding is not surprising in that nurses are enjoying delivering their services. This finding is in support of Ugwa et al. [13] who argued that satisfying employees on the job are a determinant of individual well-being, as it enables employees to make an informed decision regarding leaving or glueing to a particular firm. In the Nigerian healthcare industry, job satisfaction has been a contentious issue among healthcare workers, especially in government hospitals and clinics. In addition, the finding of this study is in concordance with the reports of Coker et al [14] who stated that the moment people like and enjoy their work, they are observed to be fulfilled, and productive and, such employees tend to have a high level of job satisfaction while those employees who are dissatisfied with their work will have low satisfaction with such job and may experience stress at work, burnout as well as psychological health disorders.

Also, the study by Unutmaz [15] revealed that factors affecting job satisfaction of employees in a public institution and that an individual's personality factors are closely related to job satisfaction. And job satisfaction is dependent on the nature of the job itself, which is integrated with job challenges, autonomy, skill variety and job scope. Many public organizations have become aware of the importance of job satisfaction but there are still too few examples of addressing this issue systematically. To increase job satisfaction in public institutions, goals should be periodically measured and monitored [16]. Highly motivated people experience much satisfaction [17].

The second findings reveal that there is no significant relationship between motivation factors and job satisfaction among nurses in the study area however this does not agree with the study of de Francisco et al [9] who revealed that Health workers' performance is critically dependent on workers' motivation, service quality, efficiency, and equity; all mediated by workers' willingness to apply themselves to their tasks. Consequently, Nursing Practice is more challenging in Nigeria, especially in the rural areas and the Northern part of Nigeria plagued with terrorism [18].

The findings of Adegoke et al [18] is also contrary to the finding of this current study, as according to the former, nurses practising in challenging areas are often by situation and empathy to go beyond their professional jurisdiction in patient care, especially in the outbreak of epidemics, such as Ebola, Lassa fever and meningitis as well as bomb blast thereby exposing them to uncountable occupational – related stresses ranging from excessive workload, dealing with death and dying patients [19, 20]. Arguably, most studies carried out on job satisfaction among Nigerian nurses reported a decline in their job satisfaction due to poor salary, inadequate and sub-standard medical equipment and drugs, lack of opportunity for advancement and low self-esteem arising from being under-valued by their employers [13, 21, 22]. Despite all these findings, anecdotal evidence shows a decline in job satisfaction among Nigerian nurses. This is more so when the frequent industrial strikes, emigration and high nursing staff turnover are considered. Job satisfaction has been a recurring problem amongst nurses in Nigeria. As such, unfavourable working conditions are compounding problems of shortage and anticipated turnover among the Nigerian nursing workforce. Competent and skilled nurses are migrating in search of better remunerations, better standards of living, gaining experiences, and upgrading qualifications. The resilient nurses practising in Nigeria regardless of unfavourable conditions are exposed to work-related stresses.

Yalew et al [23] argued that job satisfaction is dependent on the nature of the job itself, which is integrated with job challenges, autonomy, skill variety and job scope. Thus, the nature of the job itself is at the top place for researchers to understand what makes people satisfied with their jobs [24]. Singh and Slack [25] reports agree with the findings of this study that stated that Job satisfaction is a big factor in employee engagement and the level of discretionary effort team members are likely to make. Most likely, people's work performance suffers when they don't feel satisfied with their job, not to mention their quality of life. Job depends on several different factors such as satisfaction with pay, promotion opportunities, fringe benefits, job security, relationship with co-workers, supervision etc. work is an important aspect of people's lives and most people spend a large part of their working lives at work and understanding the factors involved in job satisfaction is crucial to improving employees performance and productivity and de Francisco et al [9] opined that Health workers' performance is critically dependent on workers' motivation, service quality, efficiency, and equity; all mediated by workers' willingness to apply themselves to their tasks, the effectiveness and efficiency of the nursing workforce is threatened globally due to turnover and shortage of nurses. These scenarios are invariably subjecting the remaining and actively practising nurses to untold work-related stresses due to excessive workload culminating in a severe decline in job satisfaction in the nursing workforce.

Job satisfaction is the product of an employee's attitude to his/her job and job processes. Employee job satisfaction entails the achievement of one's desired outcome resulting from the work. It is "a pleasurable or positive emotional state resulting from the

appraisal of one's job or job experiences" [26]. It is a consequence of people's opinions and feeling about their job arising from intricately interwoven factors regarding the work itself and the work process. It is a function of the extent to which one values certain facets of work, such as the degree of autonomy, company policy, management style, promotions, pay, and recognition, the relationship among co-workers, work itself and working conditions. These were broadly grouped into extrinsic/hygiene and intrinsic/motivation factors by Herzberg [27, 28, 29].

If the findings of this current are compared with other similar studies in developed countries, there are clear indications that Nigerian nurses relatively differ from their counterparts of the world in terms of salary and reward system, which are considered central to them than any other factors in the workplace. This could be because of the differences in the socio-economic nature of Nigeria from those of other climes.

## Conclusion

Based on these findings, it could be inferred that nurses are relatively good job satisfaction in General Hospitals in Borno state. There are significant and positive relationships between job satisfaction and the productivity of the nurses. This implies that an increase in the application of both the motivating and hygiene factors leads to a corresponding increase in job satisfaction. This has practical implications for policymakers and implementers.

### Conflict of interest

None declared

## References

1. Dagget T, Molla A, Belachew T (2016) Job-related stress among nurses working in Jimma Zone public hospitals, South West Ethiopia: a cross-sectional study. BMC Nurs 16:39.

2. Rostami F, Babaei-Pouya A, Teimori-Boghsani G, Jahangirimehr A, Mehri Z et al. (2021) Mental Workload and Job Satisfaction in Healthcare Workers: The Moderating Role of Job Control. Front Public Health 9:683388.

3. Buchan J, O'May F, Dussault G (2013) Nursing workforce policy and the economic crisis: A global overview. J Nur Scholarship 45: 298-307.

4. Li B, Bruyneel L, Sermeus W, Van den Heede K, Matawie K (2013) Group-level impact of work environment mansions on burnout experiences among nurses: A multivariate multilevel probit model. Int J Nur Stud 50: 281-291.

5. Obansa S A J, Orimisan A (2013) Health care financing in Nigeria: prospects and challenges Mediterr J Soc Sci 4: 221-361.

6. Ogbolu Y, Johantgen ME, Zhu S, Johnson JV (2015) Nurse reported patient safety in lowresource settings: A cross-sectional study of MNCH nurses in Nigeria. Appl Nur Res 28:341-346.

7. Hoboubi N, Choobineh A, Kamari Ghanavati F, Keshavarzi S, Akbar Hosseini A (2017) The Impact of Job Stress and Job Satisfaction on Workforce Productivity in an Iranian Petrochemical Industry. Saf Health Work 8:67-71.

8. Spector PE (1997) Job satisfaction: Application, assessment, causes, and consequences. Sage, London, UK, 1st edition.

9. De Francisco SN, Meguid T, Campbell J (2015) Health-care workers as agents of sustainable development. The Lancet Global Health 3:e249-e250.

10. Creswell J W, Plano Clark V L, Gutmann M, Hanson W (2003) Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.) Handbook of mixed methods in social and behavioural Res 209-240.

11. Aiken LH, Patrician PA (2000) Measuring organizational traits of hospitals: The revised nursing work index. Nur Res 49: 146-153.

12. Mitchell J A, Esnard T (2014) Socio-Economic Factors and Job Satisfaction among Public Health Care Registered Nurses in Trinidad and Tobago. Int J Bus Social Res 4: 27-37.

13. Ugwa E, Ugwa C (2014) A survey of job satisfaction among nurses and its correlate in a tertiary healthcare in Northern Nigeria. J National Accreditation Board for Hospitals & Healthcare Providers 1:29.

14. Coker OO, Coker AO, Onuoha B (2011) a study on job satisfaction among clinical and non-clinical hospital staff in a teaching hospital in Lagos Nigeria. East Africa J Pub Health 8: 299-302.

15. Unutmaz S (2020) Factors Affecting Job Satisfaction Of Employees In A Public Institution.

16. Ibrahim M, Ahmed S F, Khan N, Khan Y, Awan Z M (2012) Influencing Factors of Job Satisfaction in Technical Organization. J Economics and Behavioural Stud 4:172-179.

17. Chughati F D, Perveen U (2013) A Study of Teachers Workload and Job Satisfaction in Public And Private Schools At Secondary Level in Lahore City Pakistan 2:202-214.

18. Adegoke AA, Atiyaye FB, Abubakar AS, Auta A, Aboda A (2015) Job satisfaction and retention of midwives in rural Nigeria. Midwifery 31: 946-956.

19. Green A (2016) Will Nigeria's new government fix the health system? The Lancet 387: 111-112.

20. Mosadeghrad A M (2013) Occupational stress and turnover intention: implications for nursing management. Int J health policy and manag 1:169.

21. Nwafor C E, Immanel EU, Obi-Nwosu H (2015) Does nurses' self-concept mediate the relationship between job satisfaction and burnout among Nigerian nurses. Int J Africa Nur Sci 3:71-75.

22. Edoho SAP, Bamidele E, Neji O I, Frank AE (2015) Job Satisfaction among Nurses in Public Hospitals in Calabar Cross River State Nigeria. Ame J Nur 4: 231-237.

23. Ayalew F, Kibwana S, Shawula S (2019) Understanding job satisfaction and motivation among nurses in public health facilities of Ethiopia: a cross-sectional study. BMC Nurs 18: 46.

24. Sedem A K (2012) The Effect of Motivation on Retention of Workers in the Private Sector: A Case Study of Zoom lion Company Ghana Ltd. Kwame Nkrumah University.

25. Singh G, Slack N (2016) Job Satisfaction of Employees Undergoing Public Sector Reform in Fiji. Theoretical Economics Letters 6: 313-323.

26. Locke E A (1976) what is job satisfaction? Organizational behavior and human performance 4: 309-336.

27 Chaudhury S (2015) Job satisfaction of hospital staff: An emerging challenge. Medical Journal of Dr. DY Patil University 8: 129.

28 Ulrich B T, Lavandero R, Woods D, Early S (2014) Critical care nurse work environments 2013: a status report. Critical care nurse, 34: 64-79.

29 Asegid A, Belachew T, Yimam (2014) Factors influencing job satisfaction and anticipated turnover among nurses in Sidama Zone public health facilities, south Ethiopia. Nursing research and practice.