

Research Article

Impact of Delayed Desired Job Employment of Trained Nurses on Job Satisfaction in Ghana

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Abstract

The study focused on the impact of delayed desired job employment on job satisfaction among trained nurses. Data were collected from nurses currently in post across the Greater Accra Region, Ashanti Region and Northern Region. A total of 1093 trained nurses from these three regions were sampled. Primary data were collected through structured questionnaire. Principal Component Analysis was employed to group the items into three principal components namely, professional achievement, performance management and job stability. The delayed desired job employment was measured as number of years spent at home after completing nursing training (either at the college or university, following national service) until the time of government posting. The study estimated the impact of job satisfaction on each of the principal job satisfaction components and on the overall job satisfaction, using Ordinary Least Square Regression Model. The results showed that delayed desired job employment significantly reduced all the job satisfaction components and the overall job satisfaction. Educational level did not have significant role in the relationship between delayed desired job employment and job satisfaction. The study recommends that Government of Ghana through Ministry of Health should align the number of nurses trained with its annual recruitment capacity. Moreover, the Ghana of Ghana through Ministry of Health should consider facilitating the export of surplus trained nurses to countries in need of healthcare professionals. This would not only allow Ghana to benefit from her investment in nursing education but also help unemployed trained nurses to secure livelihoods.

Keywords

Delayed Desired Job Employment, Job Satisfaction, Trained Nurses, Educational Level

1. Introduction

Job searching is the process of looking for new work [34]. It involves a variety of communication strategies and skills, including impression formation and management, interpersonal communication, communication competence, uncertainty management, and sending messages through multiple channels [9]. Traditionally, job-search research has centred on unemployed persons of various ages. Furthermore, most job search research focused on the process of finding a job after

losing one, rather than starting a desired career, as applicable to new graduates [30]. This research focused on graduate nurses' job seeking processes and experiences in Ghana. In the job search process, expectations play a significant role [30]. Expectations might be described in this context as the procedures and outcomes that people anticipate, rather than desire, because of their job search activities [30]. In Ghana, all trained nurses for example, are expected to be recruited by

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Government of Ghana, after graduation or national services. Certificate nurses are expected to be recruited after graduation while Diploma and Degree nurses are expected to be recruited after their national services [4]. However, government health facilities to absorb newly graduated nurses are insufficient [9]. Also, aside from the fact that most private facilities pay less, they are also almost full, resulting in their inability to recruit more new graduate nurses [9].

This situation leads to long stay of nurses at homes prior to obtaining their desire jobs (that is, recruitment by Teaching hospitals, Ghana Health Service or Christian Health Association of Ghana). This waiting period of nurses can be linked to frictional unemployment [14]. Frictional unemployment, according to [8] arises when workers are searching for new jobs or are transitioning from one job to another; hence, part of natural unemployment even occurs at full employment. However, the waiting period for these trained nurses is becoming much longer than expected, which has resulted in a series of picketing and demonstration by the unemployed nurses in Ghana. For example, in 2022, Coalition of Unemployed Graduate Nurses Assistants, Clinical and Preventive demonstrated on the streets of Tamale, protesting over what they say is a failure by government to post them since graduating in 2019 [19]. According to group, staying at home for three years without any form of employment is affecting their livelihoods and this is becoming unbearable [19].

This situation that trained nurses found themselves in recent times can be linked to their job satisfaction as posited by Rational Choice Theory and Effort-Reward Imbalance Model. Rational Choice Theory for example postulates that individuals are utility maximizers where they try to realize their preferences in decision-making under constraint. According to Rational Choice Theory, if individuals are to choose, they will always prefer alternatives that give highest utility [18, 20]. However, graduates' nurses seem to have limited alternatives about their employment as they are not fully informed about when they would be recruited after graduation or national services. Moreso, recruitment is at the discretion of government. These result in higher uncertainty about trained nurses' employment. In the view of [29], higher uncertainty leads to higher dissatisfaction. Similar view is expressed by Effort-Rewards Imbalance Model which posits that people become dissatisfied when seeking jobs and, on the efforts, far exceeds the rewards from the jobs. As individuals remain unemployed for many years, their cost of seeking employment increases [28]. Also, they exert undue efforts on the job when employed as the long stay at homes has eroded them of their knowledge and professional experience gained in school [28]. These two situations are expected to increase efforts exerted by nurses who stayed at home for many years before employment compared to those who immediately gained employment.

Thus, delayed desired employment can be linked to job satisfaction. Job satisfaction is a major concern for healthcare workers [10, 11]. Job satisfaction, for example, can be de-

scribed as the degree to which an employee appreciates his or her work [16, 17]. Job satisfaction is the number of psychological, physiological, and environmental circumstances which leads a person to express satisfaction with their job [12]. In the view of [27], job satisfaction is an emotional response defining the degree to which people like their job. Also, [35] gave broader description of job satisfaction to include satisfaction with achievement from work, scope of personal initiative, influence on job, remuneration, job security, job training, nursing profession and decision-making involvement. Thus, based on [35]'s description, an employed nurse is satisfied with his/her job when he/she is satisfied with personal achievement on the job, personal initiative on the job, personal influence on the job, remuneration received, job security and training received, nursing profession and his or her involvement in decision making. According to [15, 25], job satisfaction is inevitable in the delivery care, especially compassion focused care, making job satisfaction an important concept in the healthcare system; hence, its consideration in this study.

Within organizational, job satisfaction management falls within human resource management [21, 22, 33]. However, at the national level, especially in the public health facilities, government seeks its management by ensuring that nurses are satisfied to work. Government of Ghana has over the year, increased the efforts of improving job satisfaction of nurses in some aspects of job satisfaction indicators given by [35]. For example, in 2007, the Government of Ghana introduced new Health Salary Scheme aimed at arresting brain drain (situation where trained nurses leave Ghana to work in other countries for higher salary). Other incentives for nurses who serve in deprived communities between 1 and 3 years include 15% salary top up per month. Nurses who serve in deprived communities between 4 and 6 years are given automatic promotion to next grade; 20% salary top up per month [3, 5].

Though, theoretically, delayed desired job employment is linked to job satisfaction, it has not been validated or subjected to empirical studies in Ghana to determine whether indeed delayed desired job employment impacts job satisfaction of nurses in Ghana. For example, [4] studied, "Job Satisfaction among Nurses in Ghanaian Hospitals: A Case Study of the Kintampo Municipal Hospital" The goal of this study was to find out what causes unhappiness among nurses at the Kintampo Municipal Hospital, as well as how they feel about their jobs. The study revealed that nurses at the Kintampo Municipal Hospital have a poor job satisfaction rating. Working environment, society's lack of respect for nurse, compensation, and scheduling flexibility influenced their job discontent. Similarly, [24] studied "Factors Influencing Job Satisfaction among Nurses in Ahmadu Bello University Teaching Hospital (Abuth), Zaria, Kaduna State, Nigeria". The study employed a quantitative descriptive cross-sectional design where 304 nurses were sampled. Poor pay, working conditions, and staffing were shown to be the leading causes of job discontent among the participants. Also, [1] studied,

“Assessment of Factors Influencing Job Satisfaction among Nurses at the Greater Accra Regional Hospital”. The researcher used a descriptive cross-sectional study with a quantitative technique where 233 nurses were sampled. The nurses at the Greater Accra Regional Hospital had a low job satisfaction score of 2.9. Job satisfaction among nurses was significantly associated with age, married status, years of experience, years of practice at Greater Accra Regional Hospital and position/rank.

Clearly from the above studies, no independent study has investigated the impact of delayed desired job employment on job satisfaction among nurses in Ghana. So, the question is, can the delayed desired job employment (that is, long waiting period of nurses prior to posting to Teaching Hospital, or Ghana Health Services facilities or Christian Health Association of Ghana facilities) in the recent times be a cause of job dissatisfaction among nurses? This study answered this question bring to bear the impact of delayed desired job employment on job satisfaction of nurses in Ghana and whether their educational level have a role to play in this relationship. The study informed Ghana Health Service (GHS) and Ministry of Health (MoH) to come up with effective policy for recruitment and posting of graduate nurses in Ghana. Aside from

policy, this study made critical contributions to research, as this is the first study to consider delayed desired job employment and job satisfaction of nurses in Ghana.

2. Methods

2.1. Population and Sampling Strategy

The study used primary quantitative data, gathered from nurses at post in Greater Accra Region, Ashanti Region and Northern Region. According to Ministry of Health, there are about 63,374 in the Greater Accra Region, Ashanti Region and Northern Region of Ghana and the distribution is shown in [Table 1](#). The study used G-power calculator with 0.02 effect size, 0.05 α error probability, 0.803 power and 9 number of predictors to compute the sample size. The computed sample size was 796 but the study obtained data from 1093 nurses, which far exceeded the computed sample size, to help improve the credibility and reliability of the findings of the study. The distribution is proportional to the population of nurses in each region as also shown in [Table 1](#).

Table 1. Regions/ Districts and Number of Nurses for the Study.

Region	Population of nurses	Number of nurses sampled	District from which the nurses were sampled
Greater Accra	23,625	429	Ablekuma West, Tama Municipality, Accra Metropolis, Ashiaman Municipality, Ga Central, Ga West, Ga South, Ledzokuku Municipality, Ningo-Pranpa
Ashanti	21,375	388	Afigya Kwabre South, Asokore Mampong, Asokwa/Oforikrom, AtwimanNwabiagya North, Bosomtwe, Ejisu, Kumasi Metropolis, Kwabre East, Offinso, Old Tafo and Suame
Northern	15,158	276	Kumbugu, Mion, Sagnarigu, Tamale Central, Tamale South, Tolon
Total	60,158	1093	

Source: Author's Construct (2023)

The study conveniently sampled the nurses from the public healthcare facilities in the districts in [Table 1](#) in the respective region. The study used structured questionnaire for data collection. The questionnaire had two sections. Section I focused on personal data and this included age, gender, marital status, educational level, location of facility, ownership of facility, capacity of facility and rank of respondents and delayed desired job employment. Section II focused on job satisfaction, and the items for measuring job satisfaction were adapted from job satisfaction scale by [\[35\]](#) to ensure that job satisfaction reflects the entirety of its scope. The items for job satisfaction comprised items on achievement, personal initiative, influence on the job, job security, remuneration, decision making, training and nursing profession

and these were measured on five-point Likert scale, from strongly disagree (1) to strongly agree (5). The questionnaire was pre-tested on 30 nurses at post in Mampong Hospital, Aboaso Clinic and Ankaase Methodist Hospital, all in the Kwabre East Municipality. The pre-test data was subjected to reliability test, using Cronbach's Alpha and the overall Cronbach's Alpha score was 0.794 ($\alpha=0.794$).

2.2. Model Specification

The Ordinary Least Square (OLS) Regression Model was used to estimate the impact of delayed desired job employ-

ment on job satisfaction of trained nurses. The study used OLS for estimation because the main independent variable in this study (delay desired job employment) is exogenous. This is because employment of trained nurses of nurses is not in any way influenced by the nurses. Posting of trained nurses is done by the Ministry of Health (HoH) and they are posted to health facilities under Ghana Health Services (GHS) or Christian Health Association of Ghana (GHAG) or Teaching Hospitals where the trained nurses have no role or cannot influence the process. The general form of OLS is shown in Equation (1).

$$y_i = \beta_0 + \beta_1 X_{i,i} + e_i \quad (1)$$

$$JobSat_i = \alpha_0 + \alpha_1 DDEMP_i + \alpha_2 Gender_i + \alpha_3 Age_i + \alpha_4 Edul_i + \alpha_5 MarS_i + \alpha_6 LocFac_i + \alpha_7 FacType_i + \alpha_8 FacCap_i + \alpha_9 Rank_i + \alpha_{10} YWKPP_i + \alpha_{11} YWKEXP_i + \varepsilon_i \quad (2)$$

Where JobSat is job satisfaction, DDEMP is delayed desired employment, Gender is gender, Age is age, Edul is educational level and MarS is marital status of the respondents. Also, LocFac is the location of facility in which the respondent works, FacType is the facility type, FacCap is the facility capacity, Rank is the rank of the respondents as at the time of data collection, YWKPP is the type of worked engaged in by the respondents prior to their positing by GHS or CHAG or Teaching Hospital and YWKEXP is the number of years of working experience.

It is also, important to know how depalyed desired job employment affect job satisfaction of nurses. Does does delayed desired job employment have different impact on job satisfaction of nurses based on their educational level or qualification obtained from their training prior to their first posting? Answering this question is very important as

Where y_i is the dependent variable, $X_{i,i}$ is the independent variables. In this study, the dependent variable is job satisfaction, and the independent variable is delayed desired job employment. However, aside from the delayed desired job employment, socio-demographic factors (age, gender, educational level, marital status) [6, 7], job characteristics (location of facility, facility type, capacity of facility and rank) [23] and employment type prior to recruitment affect their job satisfaction. These socio-demographic, job characteristics factors and type of work engaged in by the respondent during their waiting period are controlled for in this study. Therefore, based on equation (1), the OLS regression of impact of delayed desired job employment on job satisfaction of nurses in this study is specified as follows.

certificate nurses, diploma nurses and degree nurses have different but interdependent specific tasks within a facility. For example, degree nurses supervise diploma nurses and certificate nurses, in that order. Thus, immediately a degree nurse is posted to a facility, he/ she assumes supervisory role over diploma and certificate nurses in the facility, if the diploma and certificate nurses have ranks lower than the newly recruited nurses. Supervisory role requires more leadership and professionalism; hence, frustrations and erosion of knowledge and skills associated with delayed desired job employment is likely to have different impact on job satisfaction of the certificate, diploma and degree nurses. To test the above proposition, the study interacted the educational level with delayed desired job employment and estimated its impact on job satisfaction as shown in Equation (3).

$$JobSat_i = \beta_0 + \beta_1 DDEMP_i + \beta_2 Gender_i + \beta_3 Age_i + \beta_4 Edul_i + \beta_5 MarS_i + \beta_6 LocFac_i + \beta_7 FacType_i + \beta_8 FacCap_i + \beta_9 Rank_i + \beta_{10} YWKPP_i + \beta_{11} YWKEXP_i + \beta_{12} DDEMP * Edul_i + \varepsilon_i \quad (3)$$

Where DDEMP*Edul is the interaction between delayed desired job employment and educational level of the respondents. The variables used in this study are explained as follows.

Dependent Variable: Job Satisfaction

The dependent variable was job satisfaction. With regards to job satisfaction, eight items adapted from [35] were used and these comprised nurses' achievement from work, the scope of personal initiative, influence on job, remuneration, job security and training, the nursing profession itself and the extent of nurses' involvement in decision making. The respondents are asked: "How satisfied are you with each of the job satisfaction items? with seven-point likert scale, ranging from very strongly dissatisfied (1) to very strongly satisfied (7).

Independent Variable: Delayed desired job employment

The main independent variable was delayed desired job employment, and this was measured as the number of years a

trained nurse spent at home after national service/graduation prior to first posting to Ghana Health Service or Teaching Hospital or Christian Health Association of Ghana facilities.

Control Variables

Control variables are variables that can directly affect the dependent variable; however, they are not the main variables of interest and are therefore controlled for. The control variables are discussed below.

- 1) *Age*: This variable represents the age of a nurse in completed years during the survey period.
- 2) *Gender*: This variable represents the biological construct of a nurse. The variable was categorized into two; that is either a nurse is male or female.
- 3) *Educational Level*: This variable shows the level of education of nurses. The educational level of the nurses is categorized into three, representing Certificate, Diploma, and First-Degree.

- 4) *Marital Status*: This variable represents marital status of a nurse. The variable was categorized into three; including single/never married, married, divorced/ separated.
- 5) *Location of facility*: This is the location of facility in which the nurses worked. They are categorized into urban and rural facility.
- 6) *Type of facility*: This is whether the facility is GHS facility or CHAG facility or a Teaching Hospital.
- 7) *Capacity of facility*: this is the capacity of facility in which the nurses worked: This is categorized into hospital and health centre.
- 8) *Rank*: This is current rank of nurses at the time of data collection. They are categorized as Staff Nurse, Senior Staff Nurse, Nursing Officer, and Senior Nursing Officer.
- 9) *Type of work during the waiting period*. This is the type of work the respondents engaged in during their waiting period. This was treated as dummy variables where temporal engagement in work in private health facility was coded as 1 and others coded as 0.
- 10) *Years of working experience*. This is the number of years the respondents had worked as at the time of data collection. This was numerical data.

2.3. Data Analysis

The study approached data analysis in two different ways.

The first was descriptive analysis and the second was econometric analysis. The descriptive analysis focused on the description of study variables, where frequency tables, measure central tendency (mean), measure of dispersion (standard deviation) were used. Internal consistency and sampling adequacy analysis were also done using factor loading, Kaiser-Mayer-Olkin (KMO) and Cronbach's Alpha tests. The study used Chi-square to establish the association between delayed desired job employment and job satisfaction. Moreover, Principal Component Analysis (PCA) was used to identify all the components of job satisfaction. After identification of the principal components, the study then used OLS to estimate the impact of delayed desired job employment on each component after which post diagnostic tests, including normality test, multicollinearity test, and model fit tests were performed. STATA version 17.0 was used for the analysis and the acceptable level of significant was set at 5%.

3. Results

3.1. Personal Information of the Respondents

The personal information of the respondents who were nurses is shown in [Table 2](#).

Table 2. Personal Data of Respondents.

Variables	Categories	GHS		CHAG		Teaching Hosp.		Full Sample	
		F	%	F	%	F	%	F	%
Gender	Female	400	68.8	258	71.3	86	89.6	744	71.6
	Male	181	31.2	104	28.7	10	10.4	295	28.4
Marital status	Single	310	53.4	195	53.9	53	55.2	558	53.7
	Married	236	40.6	145	40.1	39	40.6	420	40.4
	Divorced	35	6.0	22	6.1	4	4.2	61	5.9
Educational level	Certificate	133	22.9	88	24.3	17	17.7	238	22.9
	Diploma	300	51.6	184	50.8	43	44.8	527	50.7
	First Degree	148	25.5	90	24.9	36	37.5	274	26.4
Average Age (years)	-	34.9		34.7		34.2		34.8	
Rank	Staff Nurse	200	34.4	124	34.3	24	25.0	348	33.5
	Senior Staff Nurse	125	21.5	84	23.2	20	20.8	229	22.0
	Nursing Officer	186	32.0	98	27.1	38	39.6	322	31.0
	Senior Nursing Officer	70	12.0	56	15.5	14	14.6	140	13.5
Location of facility	Rural	189	32.5	180	49.7	0	0.0	369	35.5
	Urban	392	67.5	182	50.3	96	100.0	670	64.5
Capacity of facility	Hospital	463	79.7	296	81.8	96	100.0	855	82.3

Variables	Categories	GHS		CHAG		Teaching Hosp.		Full Sample	
		F	%	F	%	F	%	F	%
Years of working experience	Health Centre	118	20.3	66	18.2	0	0.0	184	17.7
	Averages years of experience as at the time of data collection	3 years		3 years		3 years		3 years	

Source: Field Data (2023)

From Table 2, Female dominated over the males with 71.6% as females and 28.4% as males. In all the facility types, females dominated over the males. Most (53.7%) of the respondents were single whereas 40.4% and 5.9% were married and divorced respectively. The distribution of the marital status of the respondents across the health facility type reflected the general distribution of the marital status of the study population.

The educational level of the respondents was certificate (22.9%), Diploma (50.7%), and First Degree (26.4%). However, most of the nurses with First Degree were found in the Teaching Hospital, while most nurses with certificate were found in CHAG. Regarding the ranks of the respondents, majority (33.5%) were Staff Nurses, followed by Nursing Staff (31.0%), Senior Staff Nurses (22.0%), and Senior Nursing Officers (13.5%). However, in the Teaching Hospitals, Nursing Staff (39.6%) dominated over Staff Nurse (25.0), Senior Staff Nurse (20.8%) and Senior Nursing Staff (14.6%). Most of the respondents (64.5%) worked in facilities located in urban communities of the regions sampled for study while 35.5% worked in facilities located in rural communities in the regions. Also, 55.9%, 34.8% and 9.3% of the respondents worked in GHS facilities, CHAG facilities and Teaching Hospitals respectively. Averagely, the respondents had worked for about 3 years as the time of data collection in their respective facilities (GHS, CHAG or Teaching Hospital).

The study analyzed type or nature of employment of the respondents prior to their recruitment or posting to health facility of GHS, CHAG or Teaching Hospital as shown in Figure 1.

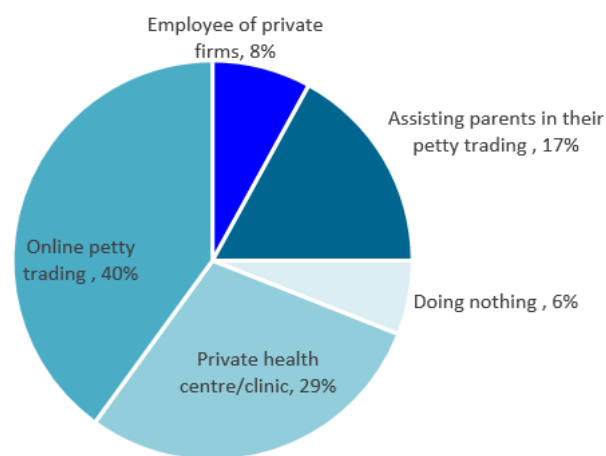


Figure 1. Type of Employment of Respondent Prior to Posting.

The results in Figure 1 shows that most of the respondents were engaged in online petty trading (40.0%). The remaining were employed in private health centres or clinics (29.0%), assisting parents in their petty trading (17.0%), employed in other private firms (8.0%) and doing nothing (6.0%) during the period they were waiting for recruitment by GHS, CHAG or Teaching Hospital.

3.2. Analysis of Delayed Desired Job Employment

The descriptive analysis of the number of years the respondents stayed at home before they were recruited in the various healthcare facilities are shown in Table 3.

Table 3. Number of Years Respondents Stayed at Homes Before Recruited into Various Health Facilities.

Categories	GHS		CHAG		Teaching Hospital		Full Sample	
	F	%	F	%	F	%	F	%
1	181	31.2	113	31.2	29	30.2	323	31.1
2	207	35.6	118	32.6	20	20.8	345	33.2

	GHS		CHAG		Teaching Hospital		Full Sample	
Categories	F	%	F	%	F	%	F	%
3	89	15.3	72	19.9	29	30.2	190	18.3
4	67	11.5	45	12.4	14	14.6	126	12.1
5	37	6.4	14	3.9	4	4.2	55	5.3
Average	2.3		2.4		2.3		2.3	

Source: Field Data (2023)

The results in Table 3 further show that 31.1%, 33.2%, 18.3%, 12.1% and 5.3% of the respondents spent one year, two years, three years, four years and five years respectively after national services before posting to employed into their desired jobs. The presents spent almost 2 years on average at home after national service.

3.3. Description of Job Satisfaction

The descriptive analysis of the 8 items of job satisfaction used in this study is shown in Table 4.

Table 4. Descriptions of Job Satisfaction Elements and their Association with Delayed Desired Employment.

Items	Min.	Max.	Mean	Std Dev	Factor Loading	KMO	Bartlett's test of sphericity	Overall Cronbach's Alpha	Chi-square Value	p-value
Achievement	2	7	3.9586	0.79086	0.953				206.771	0.000**
Personal initiative	2	7	4.0038	0.79618	0.893				182.879	0.000**
Influence on the job	2	7	4.0144	0.76960	0.745				133.969	0.000**
Remuneration	2	7	3.8450	0.81771	0.797	0.700	$\chi^2=5966.504$ $p=0.000^{**}$	$\alpha=0.722$	168.698	0.000**
Job security	2	7	4.4947	0.52465	0.670				93.873	0.000**
Job training	1	7	3.9740	0.78663	0.869				217.652	0.000**
Nursing profession	1	7	3.9201	0.81080	0.852				227.677	0.000**
Decision making	2	7	3.9500	0.80065	0.922				207.244	0.000**
Overall, Job Satisfaction	2.75	6.88	4.022	0.4664	-	-	-	-	742.502	0.000**

Source: Field Data (2023); **Significant at 1%

Job satisfaction scale was 7-point likert scale, ranging from 'disagree very strongly' to 'agree very strongly' and the results in Table 4 show that respondents expressed neutral to overall job satisfaction (Mean=4.0422; std dev.=0.4664). Thus, the respondents were moderately satisfied with their job.

All the internal consistency checks were met (see Factor Loading, KMO and Bartlett's test of Sphericity). Also, from the chi-square tests, delayed desired job satisfaction was statistically significantly associated with all the items of job satisfaction.

3.4. Principal Component Analysis

Total Variance Explained indicates how much total variability in the dataset is explained by components. The total variance explained is shown in Table 5.

Table 5. Total Variance Explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	2.706	33.827	33.827	2.706	33.827	33.827	2.698
2	2.643	33.038	66.865	2.643	33.038	66.865	2.647
3	1.052	13.155	80.021	1.052	13.155	80.021	1.090
4	.905	11.309	91.329				
5	.292	3.650	94.979				
6	.234	2.930	97.909				
7	.101	1.257	99.166				
8	.067	.834	100.000				

Source: Field Data (2023)

From Table 5, three components were identified by the total variance explained as and the items for each component are shown in Table 6.

Table 6. Principal Components of Job Satisfaction.

Job Satisfaction	Component		
	1	2	3
Satisfied with achievement on the job	.911	-.351	-.017
Satisfied with scope of personal initiative on the job	.867	-.376	-.014
Satisfied with their influence on the job	.050	.256	.614
Satisfied with remuneration	.326	.829	-.059
Satisfied with Job security	.029	-.047	.816
Satisfied with Job training	.339	.868	-.032
Satisfied with nursing profession on the job	.875	-.293	.025
Satisfied with their job involvement in decision making	.369	.885	-.052

Source: Field Data (2023); Extraction Method: PCA, 3 components extracted

From Table 6, three components were extracted, Component 1, Component 2 and Component 3. Component 1 comprises job achievement, scope of professional initiative and

nursing profession and these three items collectively can be referred to professional achievement. Component 2 comprises remuneration, job training and decision and these can

collectively be called performance management. Component 3 comprises influence on the job and job security, and these can be called job stability.

3.5. Correlation Analysis and Serial Collinearity Analysis

The correlation and serial collinearity analyses of the study variables are shown in Table 7.

Table 7. Correlation and Serial Collinearity Analysis.

	JobStat	DDEMP	Gen	Age	EduLev	MarStat	LocFac	FacType	CapFac	Rank	TWKPF	YWKEK
JobStat	1	-.651*	.366*	-.045	.005	.026	-.447*	-.034	-.087*	-.045	0.431*	0.021
DDEMP		1	.023	-.018	.010	.007	.467*	.056	.056	-.014	0.031	0.021
Gen			1	-.058	-.013	-.015	-.028	.027	.071*	-.023	-0.011	0.007
Age				1	-.007	-.044	-.033	-.015	.051	.038	-0.021	0.065
Edulev					1	.005	.028	-.004	-.028	.012	-0.113	-0.044
MarStat						1	-.022	-.053	-.031	-.007	0.002	-0.051
LocFac							1	.137*	.098*	.019	0.058	0.037
OwnFac								1	-.105*	.033	0.131	0.025
CapFac									1	-.049	-0.023	-0.019
Rank										1	-0.016	0.008
TWKPF											1.000	0.039
YWKEK												1.000

Source: Field Data (2023); *Significant at 5%

The results in Table 7 show that delayed desired employment and job satisfaction have strong and significant negative correlation with correlation coefficient of -0.651 ($r = -0.651$). This suggests that an increase in delayed desired employment (number of years nurse spent at home after national services) reduces job satisfaction of nurse. Similarly, job satisfaction and location facility have significant negative correlation ($r = -0.447$), suggesting that nurses in rural facilities lower job satisfaction. Also, facility capacity and job satisfaction have significant negative relationship ($r = -0.087$), indicating that nurses in health center have lower job satisfaction. However, gender (male) of nurse has significant positive relationship with job satisfaction, suggesting that male nurses have higher job satisfaction. Furthermore, temporal work in private facility prior to posting by GHS,

CHAG or Teaching Hospital has significantly positive relationship with job satisfaction.

3.6. Impact of Delayed Desired Job Employment on Job Satisfaction of Nurses

The study estimated the impact of delayed desired job employment on job satisfaction of nurses. Based on the PCA, job satisfaction has three components, namely, professional achievement, performance management and job stability. Therefore, the study estimated the impact of delayed desired job satisfaction on each component and the overall job satisfaction, using Ordinary Least Square Regression Model. The estimated results are summarized in Table 8.

Table 8. Impact of Delayed Desired Employment on Job Satisfaction of Nurses.

Main Variables	Study Variables	Professional Achievement		Performance Management		Job Stability		Overall job satisfaction	
		Coef.	Robust Std. Err	Coef.	Robust Std. Err	Coef.	Robust Std Err	Coef.	Robust Std Err
Delayed Desired Employment	-	-.0702	.0152*	-.1989	.0186*	-.0735	.0129*	-.1197	.0086*
Gender	Female	-.1234	.0361*	-.0445	.0481	-.0390	.0322	-.0702	.0218*
Age	Age (in years)	-.0039	.0028	-.0024	.0039	-.0014	.0025	-.0027	.0017
Educational Level	Certificate	.0386	.0462	-.0858	.0588	-.0457	.0392	-.0243	.0276
	Diploma	-.0025	.0394	.0044	.0502	-.0375	.0342	-.0091	.0229
	Married	-.0557	.0335	.0403	.0438	-.0156	.0295	-.0069	.0197
Marital Status	Divorced / Separated	.0228	.0696	.0626	.0906	.0387	.0563	.0429	.0399
Facility Location	Urban	.2155	.0360*	.2878	.0503*	.2211	.0330*	.2419	.0216*
Facility Type	GHS	.1343	.0598*	.3195	.0810*	.2990	.0543*	.2394	.0360*
	CHAG	.1366	.0635*	.3157	.0869*	.2389	.0578*	.2263	.0386*
Facility Capacity	Hospital	.0348	.0421	-.0345	.0554	.0130	.0363	.0057	.0248
Rank	Staff Nurse	-.0145	.0495	.1681	.0715*	-.0003	.0483	.0584	.0329
	Nursing Officer	-.0309	.0513	.1825	.0705*	-.0048	.0493	.0592	.0329
	Senior Staff Nurse	.0149	.0522	.1247	.0760	-.0353	.0507	.0419	.0338
Years of Working Experience	-	.3476	.0287*	.0402	.0374	-.0177	.0230	.1413	.0156*
Employment during Waiting Period	Temporal work in Private Health Facilities	.8531	.0371*	.1323	.0515*	-.0606	.0333	.2532	.0227*
	Constant	2.7495	.1660*	3.8141	.2183*	4.2103	.1420*	3.5130	.0927*
	No. Observation	1,039		1,039		1,039		1,039	
	F-stats	141.88		17.58		9.33		71.08	
	P-value	0.0000		0.0000		0.0000		0.0000	
	R-square	0.5473		0.1872		0.1281		0.4935	
	Root MSE	.5134		.67843		.451		.30685	

Source: Field Data (2023); *Significant at 5%.

From Table 8, a unit increase in the number of years spent at home after national services statistically significantly reduces professional achievement, performance management

satisfaction and job stability satisfaction of the respondents by 0.070 units, 0.199 units and 0.074 units respectively. Also, delayed desired job employment significantly reduces job

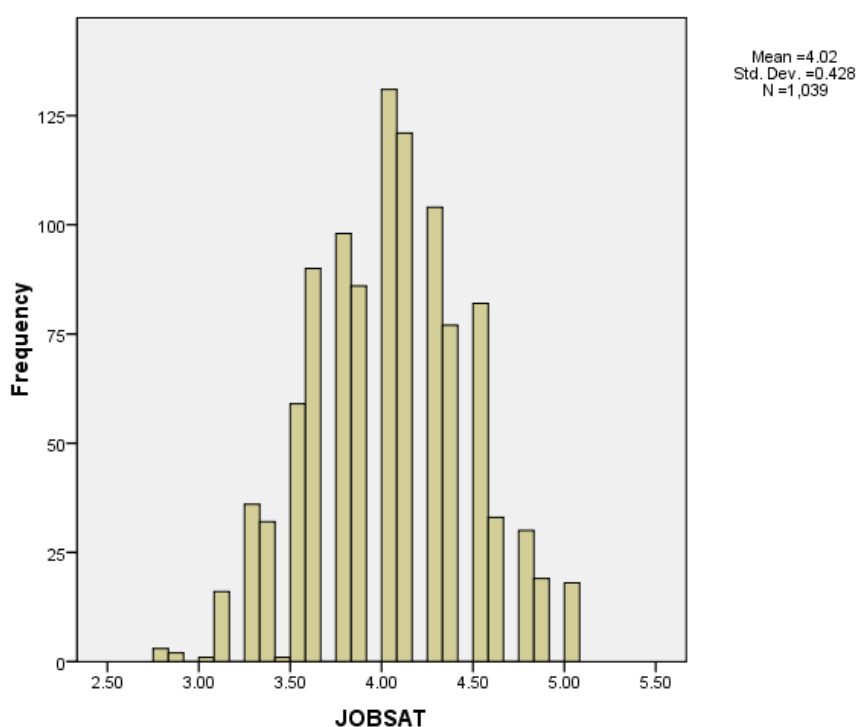
satisfaction by 0.112 units. This implies that delayed desired job employment of nurses significantly reduces professional achievement of nurses, performance management of nurses and job stability of nurses and the entire job satisfaction of nurses. For example, a nurse who stayed at home for four years after national services before posting to health facility is likely to have 0.28 units (0.070×4 years), 0.796 units (0.199×4 years) and 0.296 units (0.074×4 years) reduction in performance achievement, performance management and job stability respectively.

3.7. Post Diagnosis Analysis

The study performance post diagnosis analysis and these comprised normality test, multicollinearity test and endogeneity test as follows.

3.7.1. Normality Test

The study used histogram and Shapiro-Wilk Test to check for the normality of the data. From the histogram in Figure 2, overall job satisfaction computed with 8 items is normally distributed (Mean=4.02; SD= 0.428).



Source: Field Data (2023)

Figure 2. Histogram of Job Satisfaction of Nurses.

The study used the Shapiro-wilks test to check whether the residual of job satisfaction is normally distributed and the results are summarized in Table 9.

Table 9. Normality Test with Shapiro-Wilk Test.

Variable	Obs.	W	V	Z	p-value
Job satisfaction	1039	0.99851	0.974	-0.066	0.5260

Source: Field Source (2023)

From Table 9, job employment is normally distributed since the p-value of the test is more than 5%.

3.7.2. Multicollinearity Test

The study used Variance Inflation Factor and tolerance level for check for multicollinearity of the explanatory variables, and the outcomes are shown in Table 10.

Table 10. Multicollinearity Test.

Study variables	VIF	1/VIF
CHAG	3.63	0.276
GHS	3.48	0.288
Staff nurse	2.37	0.422
Nursing officer	2.33	0.429

Study variables	VIF	1/VIF
Senior staff nurse	2.08	0.481
Diploma	1.46	0.683
Certificate	1.46	0.683
Urban	1.29	0.778
Delayed desired employment	1.22	0.818
Years of working exp	1.22	0.820
Temporal employment in health facility	1.21	0.826
Married	1.06	0.941
Divorced	1.06	0.941
Hospital	1.05	0.950
Female	1.04	0.962
Age	1.03	0.975
Mean VIF	1.69	-

Source: Field Data (2023)

From the table above, all the VIF were less than 5.0, suggesting the multicollinearity not a serious problem in the dataset for the estimation of the impact of delayed job satisfaction on performance achievement, performance management and job stability.

3.7.3. Model Specification Test

The study checked for model specifications, using Ramsey RESET. From the Ramsey RESET test, F-test [F93,1019] was 0.31 with p-value =0.8217; hence, the model was well specified for the study.

3.8. Interaction Impact of Educational Level and Delayed Desired Job Employment on Job Satisfaction

Here, the study estimated the interactive impact of educational level and delayed desired employment on job satisfaction, and the results are summarized in Table 11. The idea here is to establish whether the impact of delayed desired employment on job satisfaction of nurses depends on their educational level prior to their first posting.

Table 11. Interaction Impact of Delayed Desired Employment and Educational Level on Job Satisfaction.

Main Variables	Study Variables	Professional Achievement		Performance Management		Job Stability		Overall job satisfaction	
		Coef.	Robust Std. Err	Coef.	Robust Std. Err	Coef.	Robust Std Err	Coef.	Robust Std Err
Delayed Desired Employment	-	-.0822	.0275*	-.1896	.0352*	-.0738	.0233*	-.1206	.0169*
Gender	Female	-.1234	.0361*	-.0449	.0481	-.0387	.0322	-.0703	.0218*
Age	Age (in years)	-.0039	.0028	-.0023	.0039	-.0015	.0025	-.0027	.0017
Educational Level	Certificate	-.0506	.1028	-.1021	.1234	.0203	.0814	-.0510	.0562
	Diploma	-.015862	.0888	.0518	.1043	-.0671	.0708	-.0010	.0472
Marital Status	Married	-.0572	.0335	.0392	.0440	-.0139	.0295	-.0075	.0197
	Divorced/Separated	.0253	.0694	.0654	.0907	.0351	.0559	.0443	.0401
Facility Location	Urban	.2184	.0362*	.2900	.0506*	.2177	.0333*	.2432	.0216*
Facility Type	GHS	.1358	.0599*	.3188	.0812*	.2986	.0544*	.2396	.0359*
	CHAG	.1379	.0636*	.3154	.0870*	.2384	.0579*	.2263	.0386*
Facility Capacity	Hospital	.0363	.0420	-.0342	.0555	.0118	.0363	.0062	.0247
	Staff Nurse	-.0142	.0495	.1687	.0714*	-.0009	.0481	.0586	.0330
Rank	Nursing Officer	-.0317	.0517	.1850	.0704*	-.0064	.0495	.0596	.0329
	Senior Staff Nurse	.0144	.0521	.1254	.0759	-.0357	.0505	.0419	.0337

Main Variables	Study Variables	Professional Achievement		Performance Management		Job Stability		Overall job satisfaction	
		Coef.	Robust Std. Err	Coef.	Robust Std. Err	Coef.	Robust Std Err	Coef.	Robust Std Err
Years of Working Experience	-	.3476	.0287*	.0415	.0375	-.0187	.0230	.1416	.0157*
Employment during Waiting Period	Temporal work in Private Health Facilities	.8534	.0372*	-.1309	.05165*	-.0619	.0333	.2536	.0228*
Delayed Employment*Certificate	-	.0398	.0385	.0072	.0463	-.0294	.0328	.0123	.0224
Delayed Employment*Diploma	-	.0061	.0328	-.0209	.0414	.0130	.0283	-.0035	.0197
	Constant	2.7703	.1761*	3.7845	.2289*	4.2216	.1490*	3.5112	.0989*
	No. Observation	1,039		1,039		1,039		1,039	
	F-stats	128.54		15.76		8.54		63.08	
	P-value	0.0000*		0.0000*		0.0000*		0.0000*	
	R-square	0.5479		0.1876		0.1298		0.4938	
	Root MSE	.51358		.67893		.451		.30706	

Source: Field Data (2023); *Significant at 5%.

The results in Table 11 show that the interaction of educational level of nurses and delayed desired job employment did not statistically significantly impact any of the job satisfaction components and job satisfaction. Therefore, educational level of nurses does not have significant roles in the relationship between delayed desired employments of professional nurses by GHS or CHAG or Teaching Hospitals and their job satisfaction. This implies that delayed desired job employment significantly reduces job satisfaction among all nurses, regardless of their educational level (whether certificate nurses, diploma nurses or degree nurses), delays.

4. Discussions

The results in this study revealed that respondents who were nurses had moderate job satisfaction. By this implication, nurses in Ghana are moderately satisfied with their job. The only item on the job satisfaction scale that the respondents were satisfied with was job security. This moderate job satisfaction among nurses has been identified in other studies. For example, a study in sub-Saharan Africa (SSA) prior to Covid-19 pandemic showed high levels of dissatisfaction among nurses [3, 4]. In Ghana, a study by [9] show that 78.7% of nurses and midwives in Savannah Region of Ghana are moderately satisfied with their jobs. The major reason cited in literature for moderate or low job satisfaction among

nurses in Ghana is low remuneration. This is the reason, among others such as moderate personal achievement on the job, moderate personal influence on the job, moderate involvement in decision and low perception about nursing profession among the nurses.

Other issue that is of great concern in this study is delayed desired job employment (that is, time lag between year of national service completion and year of first posting into GHS, or CHAG or Teaching Hospital). The study revealed that some of the nurses stayed at home for some years with some waiting for 1 years, 2 years, 3 years, 4 years, and 5 years with a mean waiting year of 2 years, 3 months. During the waiting period, some of these trained nurses engage mostly in online petty trading businesses and casual employment in private clinic health center. Some also assist in family business and engaged in private firms, other than healthcare services firms. This clearly shows that some nurses in Ghana, regardless of their qualification (whether, certificate, diploma, and first degree) have to wait for some years without any remedial professional development, before they finally land in their desired jobs. This delay according to [32], may be as a result of resource constraint on the part of government. The situation of delayed desired job employment of nurses in Ghana is not much different from other Sub-Saharan African countries and some of the developed countries like Australia [26]. In Australia, for example, about 57.9% of trained nurses immediately find permanent job

after completing training [26].

Furthermore, delayed desired job employment significantly reduces all three components of job satisfaction, namely professional achievement, performance management and job stability with performance management satisfaction have the most impact. Any additional year spent at home after national services significantly reduces professional achievement satisfaction, performance management satisfaction and job stability satisfaction by 0.28 units, 0.796 units and 0.296 units respectively. In the view of [2], the delay desired job employment creates injustices which influences the behavior of nurses at post, with resultant negative impact on job satisfaction of the nurses. Moreover, [13] explained that the delayed desired job employment creates worse situation for nurses who are job maximizers as they become more dissatisfied with their job because of the delayed employment, regardless of leadership style exhibited by their superiors [14].

The results from the study are consistent with Rational Choice Model and Effort-reward imbalance model. Rational Choice Model posits that individuals are utility maximizers; hence, rational. Thus, based on the Rational Choice Model, if a trained nurse after national service is given the alternatives between earlier posting (for example, first year after national service) and later posting (say five years after national service), the trained nurse would choose the earlier posting. Thus, trained nurses who stay at home for many years before their posting are likely to be unhappy, especially when they know that some of their colleagues are gaining desired employments. This dissatisfaction may be overcome in the workplace when they are employed, leading to lower professional achievement, performance management and job stability satisfaction.

Similarly, Effort-Reward Imbalance Model compares efforts and rewards in the employment process. When efforts exerted are more than the rewards, job dissatisfaction sets in. Though rewards for nurses of the same rank are the same, but efforts exerted in the execution of tasks at health facility is not the same [31]. As noted by [33], trained nurses who stay at home for more years after national services exert more efforts than those who get posting immediately after national services at a facility. Again [33] explained that nurses who stay at home for many years prior to their first posting, get depleted in terms of experience and knowledge of health profession gained from their training (that is, school). Thus, with depleted knowledge and experience, some nurses who stay at home for many years before posting become uncomfortable in performance of certain tasks in their facility, leading to lower professional achievement.

Another revelation in this study is that education level of nurses prior to posting does not affect the influence of delayed desired job employment on professional achievement, performance management and job stability satisfaction. Thus, how delayed desired job employment affects all the job satisfaction components do not significantly vary by education-

al level of the trained nurses.

5. Conclusions

Delayed desired job employment or recruitment of nurses into GHS, CHAG or Teaching Hospitals has become a common phenomenon in Ghana. This study estimated this phenomenon on job satisfaction of nurses at post. Through Ordinary Least Square Regression Model, this study makes very interesting conclusions about delayed desired job employment of trained nurses. Firstly, delayed desired job employment has significant negative impact on professional achievement, performance management satisfaction and job stability satisfaction of nurses at post. This negative impact of delayed employment is experienced by certificate nurses, diploma nurses and first-degree nurses.

The study based on the conclusions, recommended as follows. Firstly, Government of Ghana through Ministry of Health should train the number of nurses that it can recruit in a year. The study also recommended that government should consider exporting some trained nurses to neighboring countries where their services are needed most. A major challenge to recruiting and posting trained nurses in Ghana is limited fiscal space on Government of Ghana annual budget. To address this problem, the Government of Ghana can consider exporting some of the trained nurses to countries where their services are needed to help reduce the incidence of delayed desired job employment of nurses.

Though the study is novel, it did not compare the job satisfaction of the nurses in rural and urban areas to establish how delayed desired employment affect each of them. This implies that the outcomes of this study could not be used to inform policy for nurses in rural areas or urban areas but would guide general policy on timing of nurses posting after graduation or national services.

Abbreviations

CHAG	Christian Health Association of Ghana
GHS	Ghana Health Service
KMO	Kaiser-Mayer-Olkin
OLS	Ordinary Least Square
PCA	Principal Component Analysis

Author Contributions

Prince Amoako: Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing

Eugenia Amporfu: Conceptualization, Methodology, Supervision

John Bosco Dramani: Supervision

Conflicts of Interest

The authors declare no conflicts of interest.

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