



Effect of Motivation on Health Workers' Job Performance at a Teaching Hospital, Ghana

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/107240>

Original Research Article

Received: 09/08/2023

Accepted: 16/10/2023

Published: 30/10/2023

ABSTRACT

Aim: To determine the effect of intrinsic and extrinsic motivation on health workers' performance among clinical health personnel.

Study Design: An exploratory cross-sectional design was applied.

Place and Duration of Study: Korle-Bu Teaching Hospital in the Greater Accra Region of Ghana in June 2016.

Methodology: Quantitative methods were employed and 324 clinical health personnel responded to a self-administered structured questionnaire. Stata version 13 was used for the statistical analysis. An ANOVA test was conducted to compare the effect of motivation on job performance. Simple and multiple linear regression models were used to estimate the overall effect of the independent variables on the outcome variable. The level of significance was a probability less than 5% ($P < 0.05$).

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Results: The study identified achievement and personal satisfaction, and incentive packages as intrinsic motivation factors that could influence the performance of health workers. All the extrinsic motivation factors (availability of equipment, job security, good interpersonal relationships with co-workers, recognition and promotion, improved salary, and workload or feeling burned out and emotionally drained after work) could significantly affect job performance. The overall multiple regression model showed that both intrinsic ($F(4, 319) = 8.66, P = .001$) and extrinsic ($F(6, 317) = 23.97, P = .001$) motivation factors were significantly associated with job performance.

Conclusion: Generally, the study concludes that providing an enabling environment and motivation could have a positive effect on health workers' job performance.

Keywords: Career development; extrinsic motivation; intrinsic motivation; job performance; motivation; public health.

1. INTRODUCTION

“Arguably, strengthening human resource tools can uphold and strengthen the professional ethics of health workers; increase their motivation and professionalism; and address their professional goals such as recognition and career development since continuous education increases their chances of performing better” [1]. “Therefore, the provision of appropriate structures for professional and personal support for quality management processes from members of the health force is essential in any health system” [2]. “Performance measurement is said to be a continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning performance with the strategic goals of the organization” [3]. “The recognition is that many factors influence employee performance such as satisfaction from the profession, work environment, and compensation policies among others” [4].

“Consequently, improving the performance of workers has gained attention, especially in the public sector - it is important to understand the relationship between human resource practices and performance” [5]. “This is particularly so because the evidence shows that public health clinics are often portrayed as low quality with long waiting times and unexpected costs. This is in contrast to private clinics which are seen to provide more convenient health care” [6]. Gould-Williams [7] suggests that “attention needs to be placed on the effort of motivating workers while efforts are made to identify reasons that prevent optimal performance”. Alhassan et al. [8] recommended that “most public health facilities should adopt a more comprehensive staff motivation intervention to enable quality improvement in performance for health workers, particularly in Ghana”.

“Subsequently, several strategies, including contract management and health equity funds, were introduced to improve public sector performance and encourage the utilization of health services in Cambodia” [6]. “The view is that every employee will perform better if the incentive package is rewarding and goes along with meeting the individual's needs, taking into consideration the economic factors” [8]. “For instance, the important self-job performance parameters identified include self-satisfaction with the quantity of work, self-satisfaction with productivity, self-satisfaction with initiatives, self-satisfaction with working targets, and self-satisfaction with quality improvements” [4].

Afful-Broni [9] revealed that “the problem of low job performance was due to a lack of motivation in Ghana”. “Thus, mechanisms to direct a proportion of funds to the workforce's financial incentives would enhance worker performance and contribute to improved outcomes” [10]. “The World Health Organization suggests that improved performance will mean availability, improved waiting time, adequate staff ratios, and attendance of health workers. For this reason, the organization declared 2006 to 2015 as ‘a decade for the health workforce’ with emphasis on the performance of adequate human resources for health” [10].

Bonenberger et al. [11] admonished that “it is worth strengthening human resource management skills at the district level and supporting district health managers to implement retention strategies. These analysts justified this point by indicating that effective human resource management practices at the district level influenced health workers' motivation and job satisfaction, thereby, reducing the likelihood of turnover in Ghana. The assumption is that the provision of adequate motivation by the management of health institutions, including the

teaching hospitals, would lead to improved performance and retention of their staff”.

“The enthusiasm with which health workers perform serves as a motivation for them to improve their performance and that of the health sector” [12]. “Research shows that in every organization, employee motivation is necessary, especially in government-owned healthcare facilities” [7]. “Another study argues that the reward package matters a lot and should be of concern to both employees and employers” [13].

Aladwan et al. [14] define motivation as ‘the set of forces that leads people to behave in particular ways’. It is also ‘the fuel that drives people towards achieving their goals and objectives’ [15]. Ampofo [16] argues that “where there is motivation, there is strong desire and enthusiasm to achieve in Ghana, thus, a lack of motivation shows a lack of enthusiasm” [17]. “This study adopted the definition of motivation as a process that explains one’s intensity, direction and perseverance in trying to achieve set goals” [18,19].

“While motivation is seen as the most important factor in improving health workers’ performance, it is also the most difficult to manage” [20]. “The reason is that if a worker lacks the ability or knowledge to perform, a training program could help to acquire more skills. Tools can also be provided if there are none. However, if motivation is the problem, there will be difficulty in determining what could be done to motivate the employee to work harder and well” [17].

“A significant relationship between motivation and performance was found in Ghana” [9]. “If individuals are highly motivated, they will perform better, thus, improving the quality of health care delivered. Additionally, better performance may lead to a sense of achievement, resulting in greater motivation. Thus, the view was that motivation was related to performance in Jerash” [21]. “While some researchers disagree on how much influence motivation has on performance, others argue that high levels of performance can be difficult to achieve when there is little or no motivation to perform” [22].

“Ghana is one of the Sub-Saharan African countries making considerable progress in many health outcome indicators” [7]. “However, there are seeming challenges to attaining the health-sector-specific sustainable development goals due to factors such as understaffing in health

facilities, inequitable distribution of health-sector human resources, demotivated staff, and inadequate healthcare infrastructure. Increasingly, the workload on staff at Korle-Bu Teaching Hospital (KBTH) in southern Ghana has seen a significant increase over the years, especially since the introduction of the National Health Insurance Scheme (NHIS). The general outpatient attendances recorded do not correspond with the rate of increase in staff numbers by way of recruitment” [23]. “Korle-Bu Teaching Hospital cannot exempt itself from contempt of motivation which is likely to affect the performance of staff. The compelling and competing demands facing the hospital are affecting the best delivery of health care to Ghanaians since it is one of about five teaching hospitals in the country” [24].

“Most of the challenges facing the hospital are inadequate staff compounded with inadequate and frequently broken-down equipment. The shortage of staff cuts across all clinical departments. The continuous trend of this factor could affect motivation and performance, thereby, affecting the overall quality of health care” [23]. “Even though management has instituted some motivational packages, including an award system, it is believed that the current coverage is limited” [25]. “Arguably, the migration of health workers from Korle-Bu Teaching Hospital to better-endowed clinics and hospitals is becoming common. This migration has created problems of understaffing and demotivation of staff due to excessive workload. Moreover, requests from staff to be transferred to other hospitals are being turned down” [25].

Watt and Hargis [26] observed “a relationship between trait boredom, subjective underemployment, perceived organizational support, and job performance”. However, few studies have examined some aspects of motivation, job satisfaction, and performance among health workers in Ghana in areas of health worker satisfaction and motivation [27], motivational packages and their effects on employee performance [16], the relationship between motivation and job performance [9], the association between health worker motivation and healthcare quality efforts [7], motivation and employee satisfaction, perception of workers [17], and the effects of health worker motivation and job satisfaction on turnover intention [11].

“None of these existing studies has examined how intrinsic and extrinsic motivation factors

could affect the performance of health workers at tertiary healthcare facilities in Ghana” [7,9,11,15,16]. This study assessed the effects of both intrinsic and extrinsic motivation on health workers’ job performance at Korle-Bu Teaching Hospital. The study was to identify how motivation could affect how health workers performed their duties and help management and policymakers to find ways to curb the present undesirable situation and understand pertinent motivation issues. The outcomes of the study would catalyze improvement in staff motivation that would improve the quality of healthcare delivery at KBTH. In totality, when healthcare workers are motivated, they will perform better, and this will help uplift the hospital to a state that will make it more functional and, in a way, guarantee its effectiveness.

2. LITERATURE REVIEW

2.1 Job Performance and Satisfaction

“Performance as a phenomenon is closely related to aspects of effectiveness, knowledge management, and quality from one side and to management, financing, and development of the organization from the other. For doctors and nurses, performance issues are inextricably linked to patient safety” [4]. Thus, performance cannot be measured without attributes such as job satisfaction and motivation [28]. Blaauw et al. [28] contend that “job satisfaction is an important determinant of health worker motivation, retention, and performance; all of which are critical to improving the functioning of health systems in low-and-middle-income countries”. Platis et al. [4] suggest that the most important parameters of job satisfaction are: satisfaction from the manager, satisfaction from manager administration, satisfaction of ways of working, satisfaction of recognition, satisfaction of working hours, and satisfaction of working security. The challenge to achieving effectiveness among healthcare professionals may include exposure to psychological aggression at work [29].

2.2 Motivation

“Motivation is likely to strongly influence any effort to change or improve health workers and hospital practice” [30]. Maslow [31] argued that “once people satisfy their social needs, they often would want to hold themselves and be held by others in high esteem”. “Esteem needs

produce satisfaction such as power, prestige, status, and self-confidence. It includes both internal esteem factors (such as self-respect, autonomy, and achievement) and external esteem factors (such as status, recognition, and attention). A sense of degree of importance emerges after a person feels ‘belonging’ to a group. Esteem needs are categorized as external motivations and internal motivations. There are two sources of motivation (intrinsic and extrinsic) as discussed below” [9,32].

2.3 Intrinsic Motivation Factors

“Intrinsic motivation means to perform a task because it is inherently interesting or enjoyable” [33]. Cerasoli et al. [33] found that “intrinsic motivation predicted more unique variance in the quality of performance whereas incentives were a better predictor of the quantity of performance. For this study, emphasis was placed on the following intrinsic motivation factors: achievement, continuous education, supervision, and incentive packages”.

Achievement and personal satisfaction: “The need for achievement (n-Ach) is typical of people who are driven by the challenge of success and the fear of failure. These people normally want to do something better or more efficiently than it has been done before” [34]. “Health workers’ desire to achieve both personal and organizational goals may be likened to the theory of goal setting which means that when workers are given specific and pronounced objectives (instead of vague ones), they achieve the former faster” [35]. Lambrou et al. [36] revealed that ‘achievement’ was ranked first among the four main motivators, followed by remuneration, co-workers, and job attributes among medical and nursing staff in a public general hospital in Cyprus.

Continuous Education, Training, and Professional Development: “To improve the health workers’ competency and motivation, continuing professional development (CPD) programmes, which aim to enhance health professionals’ practice and improve patient outcomes, are offered to practitioners across the spectrum of health professions through both formal and informal learning activities” [37] World Health Organization [10] notes that training programs with a focus on local needs can help improve health workers’ performance and lessen attrition. Manongi et al. [38] emphasized “career development as one of the nine motivational themes identified”. “This

enables workers to cope with job requirements and take on more challenging tasks, thus, contributing to job satisfaction and improved health delivery” [39]. Prabhakar et al. [40] suggested that “training should be made a critical part of the government healthcare entity’s organizational structure since it can influence health staff performance”.

Supervision: Manongi et al. [38] identified “nine motivational themes and emphasized supportive supervision as key. Improvement of communication between different levels of the health system promotes performance”. “However, in a facility where there is a lot of junior staff and supervision is reduced, the staff experiences frustration in career development and the use of skills. A study found a link between transformational leadership and higher levels of supervisory coaching and performance feedback, and how these job resources mediated the relationship between transformational leadership and work engagement” [41].

Incentive Packages: “The existence of periodic salary increase, bonuses, and allowances contributes to health worker motivation and, thus, the enthusiasm to improve performance” [8]. Manongi et al. [38] revealed that “while money as a financial incentive remains the most significant strategy of motivation, this alone cannot motivate staff. Non-financial incentives like performance appraisal and promotions are, however, prioritized by health workers for improving the services they deliver”. To create a balance, Miller and Babiarez [42] suggested that “research on performance incentives should focus on the underlying conceptual issues that constrain the design of better performance incentives in low-and-middle-income countries’ health programs”.

2.4 Extrinsic Motivational Factors

“Extrinsic motivation means to perform an activity to attain an outcome” [43]. Herzberg et al. [44] developed “a two-factor theory arguing that certain groups of factors (motivations) could lead to job satisfaction whereas another group (hygiene factors) could prevent dissatisfaction. For this study, emphasis was placed on the following extrinsic motivation factors: availability of equipment and materials, working environment, recognition and promotion, job security, salaries and benefits, and inter-personal relationships”.

Equipment and Materials: “Adequate resources and appropriate infrastructure can improve the morale of health workers significantly, thus, improving performance. An absence is a source of demotivation” [39]. Henderson and Tulloch [8] conclude that “the working environment influences job satisfaction and performance since most workers require adequate facilities and conditions to do their work properly”. Therefore, Anitha [45] suggests that “special focus and effort is required to specifically focus on the factors regarding the working environment among others”.

Job Security: “A study assessed the extent to which job insecurity affects employees’ subjective well-being and consequently their job performance and highlighted the mediating role of subjective well-being, affirming that job insecurity negatively impacts employees’ job performance via decreasing their subjective well-being in Iran” [46]. The lack of job security in the organization may affect the personal lives of workers as well as the performance of the organization. Sageer et al. [47] suggest that “organization development factors responsible for employee satisfaction include job security factors and opportunities that give satisfaction to employees such as promotion and career development”.

Inter-personal Relationship: Paillé et al. [48] indicate that “organizational citizenship behavior for the environment fully mediates, among other things, the relationship between strategic human resource management and environmental performance”. “Studies revealed that health workers rated motivating factors such as good inter-personal relationships with colleagues at work as an enhancement to performance” [49,50]. Anitha [45] suggests that “the working environment should seek to enhance inter-personal relationships since the variables that have a major impact are the working environment and team/co-worker relationships”.

Improved Salary: “A study argues that while higher salaries make employees happier, their absence could make people angry and lead to dysfunctional teams” [51]. “Importantly, payment of salaries and other allowances regularly is a key driver of motivation and performance of health workers” [10]. Willis-Shattuck et al. [39] found that “low salaries demotivated health workers as they felt that their skills were not valued”. “However, improved salaries and

benefits are major monetary incentives for workers to remain in the health sector” [8].

Workload: Glenton et al. [52] report that “even though lay health workers (LHWs) were motivated by factors including altruism, social recognition, knowledge gain, and career development, some health professionals thought that LHWs added to their workload and feared a loss of authority”. Jaskiewicz and Tulenko [53] propose that “when community health workers (CHWs) have a manageable workload in terms of a realistic number of tasks and clients and respect and acceptance from the community and health system, they can function more productively and contribute to an effective community-based strategy”. “Therefore, it is recommended that each country facing a shortage of health workers needs to identify the underlying reasons for the shortage and determine what motivates health workers to remain in the health sector” [8].

Recognition and Promotion: “Recognising the contribution of health workers through an effective management of their potentials could boost their morale. A study observed that talent management and employee performance are seen as strategic tools to implement strategic objectives and to enhance employees and organization’s performance” [54]. Awases et al. [55] found that “among the factors affecting the performance of nurses negatively in Namibia were a lack of recognition of employees who were performing well and poor working conditions”. Mafini and Dlodlo [56] found “statistically significant relationships between job satisfaction and four extrinsic motivation factors: remuneration, quality of work life, supervision, and teamwork among employees in a public organization in South Africa”.

3. METHODS

3.1 Study Setting and Design

The study adopted a cross-sectional design using the quantitative research approach at Korle-Bu Teaching Hospital. The hospital is one of five teaching hospitals in Ghana with a bed capacity of over 2000, daily OPD attendance of over 1500, and patient admission of over 250. It delivers services in twenty-one clinical and diagnostic departments/units [23,24,25]. As an NHIS-accredited health provider located in Southern Ghana, it provides healthcare services to insured members of NHIS. The hospital also

serves clients from all parts of the country and beyond [23].

3.2 Study Population and Sampling

A simple random sampling method was applied to select the participants [57]. The total numbers were selected according to the quota assigned to the categories of clinical health workers obtained from the administrative authorities of the surgical, radiology, maternity, and laboratory departments in alphabetical order with numbers assigned to each. The clinical staff population of the hospital was approximately 2,566 as of 2013 [23]. Clinical health workers including nurses, midwives, doctors, pharmacists, biomedical scientists, and radiographers made up the study population. Therefore, it was very diverse and had a fair representation of Ghana’s health workers’ population. The inclusion criteria involved all full-time employed clinical staff with, at least, six months’ work experience among others. This was to gain a response from health workers who were more informed about the working environment. All clinical staff members who were officially on leave or absent because of illness and all categories of supporting staff who do not directly provide care to patients at the hospital were excluded.

A similar method was applied in a study which conducted a cross-sectional survey in three districts of Eastern Region in Ghana and interviewed 256 health workers from several staff categories (doctors, nursing professionals, allied health workers, and pharmacists) on their intention to leave their current health facilities as well as their perception of various aspects of motivation and job satisfaction [11].

3.3 Data collection

Data for the study was collected using the quantitative research approach from a total of 324 out of an estimated 338 clinical health workers at Korle-Bu Teaching Hospital in June 2016. Data was collected using an adapted Likert scale questionnaire which was used to measure the motivation of health personnel in district hospitals in Kenya and validated at a community-level hospital in Zambia [30,58,59]. The questionnaire was divided into three sections. Section A collected data on socio-demographic characteristics: age, sex, rank/position, educational background, ethnicity, religion, and income. Section B collected data on the intrinsic motivation factors: achievement and

satisfaction, continuous education, supervision, and incentive packages. Section C collected data on the extrinsic motivation factors: availability of equipment and materials, job security, interpersonal relationships, improved salary, workload, and recognition and promotion. The responses consisted of 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The structured questionnaires were self-administered after distribution to the participants by a research assistant who was oriented on the aims of the study and questionnaire administration with supervision by the researchers. Each respondent took 10 to 20 minutes to answer the questionnaire. The study variables measured have been shown (Table 1).

3.4 Data Analysis

Data entry and statistical analysis were done using Microsoft Excel and STATA Version 13.0 (STATA Corp College, Stata TX USA). Continuous variables were summarized as means and standard deviations and discrete variables were summarized as frequencies and percentages. An ANOVA test was conducted to compare the effect of motivation on job performance. Simple and multiple linear regression models were used to estimate the overall effect of the independent variables (extrinsic and intrinsic motivation) on the outcome variable (job performance). The level of significance was set at a probability less than 5% ($P < 0.05$).

Table 1. Study Variables

Variables	Description	Measurement
Dependent		
Health worker performance	The variable is defined in this study as staff being available, competent, productive, and responsive in order to improve upon the quality of care given to clients.	The extent of health worker agreement or disagreement to the perception of performance.
Independent		
<i>Intrinsic Motivational factors</i>		
Achievement/satisfaction	Achievement and satisfaction improve performance.	The extent of health worker agreement or disagreement.
Continuous Education	Continuous education through training programs.	The extent of health worker agreement or disagreement.
Supervision	Working with little or no supervision	The extent of health worker agreement or disagreement.
Incentive packages	Incentive packages available at KBTH	The extent of health worker agreement or disagreement.
<i>Extrinsic Motivational Factors</i>		
Equipment and Materials	Availability of materials and equipment to work with.	The extent of health worker agreement or disagreement.
Job security	Availability of job security	The extent of health worker agreement or disagreement.
Interpersonal Relationship	Good inter-personal relationships among co-workers	The extent of health worker agreement or disagreement.
Improved Salary	Improving the salary of health workers.	The extent of health worker agreement or disagreement.
Workload	Feeling burned out and emotionally drained after work.	The extent of health worker agreement or disagreement.
Recognition and promotion	Recognized for a job done and appropriate reward.	The extent of health worker agreement or disagreement.

4. RESULTS

4.1 Socio-Demographic Characteristics of Respondents

The study surveyed 338 employees and 324 completed questionnaires were received, representing a response rate of 95.9% (324/338). About 191 (59%) respondents were females and the rest (133 (41%)) were males. Close to half (143 (44.1%)) were in the age group 30-39 years, about 119 (36.7%) were in the age group

20-29 years and no one was above 60 years. About 118 (36.4%) had a bachelor's degree, 98 (30.2%) had a diploma while others (39 (12%)) had other certificates. About 234 (72.2%) were nurses, 56 (17.3%) were doctors, 17 (5.2%) were midwives, 11 (3.4%) were pharmacists and 3 (0.9%) were biomedical scientists and radiographers. About 98 (30.2%) had worked for 5-9 years, 74 (22.8%) had worked for 1-4 years and the rest (36 (11.1%)) had worked for more than 15 years. The results are shown (Table 2).

Table 2. Socio-demographic characteristics of respondents

Variable	Frequency	Percent (%)
Sex		
Male	133	41.0
Female	191	59.0
Total	324	100
Age group		
< 20	2	0.6
20-29	119	36.7
30-39	143	44.1
40-49	40	12.3
50-59	20	6.2
60 and above	0	0.0
Total	324	100
Level of education		
Certificate	39	12
Diploma	98	30.2
Bachelor's degree	118	36.4
Postgraduate	55	17.0
Others	14	4.3
Total	324	100
Marital status		
Married	194	59.9
Single	124	38.3
Divorced	2	0.6
Separated	4	1.2
Widowed	0	0.0
Total	324	100
Profession		
Doctor	56	17.3
Nurse	234	72.2
Midwife	17	5.2
Pharmacist/Technician	11	3.4
Biomedical scientist	3	0.9
Radiographer	3	0.9
Total	324	100
Duration of work		
Less than a year	61	18.8
1-4	74	22.8
5-9	98	30.2
10-14	55	17.0
15 years and above	36	11.1
Performance as quality of care		
Agree	318	98.1
Disagree	6	1.9
Total	324	100

4.2 Intrinsic Motivation Factors and Job Performance

The results of the ANOVA showed that certain intrinsic factors were significantly associated with job performance whereas others were not. There was a significant association between achievement and satisfaction at the workplace and job performance ($F(1, 322) = 9.28, P = .003$). Incentive package available at the workplace was found to be significantly associated with job performance ($F(1, 322) = 24.55, P = .001$). Continuous education through training and working with little or no supervision were found to be insignificantly associated with job performance, given a statistic of $F(1, 322) = 1.34, P = .248$ and $F(1, 322) = 2.32, P = .137$ respectively. The results are displayed (Table 3).

4.3 Extrinsic Motivation Factors and Job Performance

The results showed that all the extrinsic motivation factors were significantly associated with job performance. These extrinsic motivation factors include availability of materials and equipment to work with, availability of job security, good inter-personal relationships among co-workers, improving the salary of health workers, feeling burned out and emotionally drained after work, and recognition and promotion at the workplace. They all had a $P = .001$ except for feeling burned out and emotionally drained after work which had a $P = .002$. The results are presented (Table 4).

4.4 Association Between Intrinsic/ Extrinsic Motivation Factors and Job Performance

The results revealed that achievement and satisfaction at the workplace and incentive

package available at the workplace were the intrinsic motivation factors that were significantly associated with job performance in the unadjusted linear regression model. The effect of a unit increase in a respondent's achievement and satisfaction and incentive package on their job performance was 0.51 and 0.44 respectively. All the extrinsic motivation factors were significantly associated with job performance in the unadjusted linear regression model. The results revealed that the effect of a unit increase in availability of equipment on job performance was 0.66, the effect of a unit increase in job security on job performance was 0.94, the effect of a unit increase in good inter-personal relationships with co-workers on job performance was 1.28, and the effect of a unit increase in recognition and promotion on job performance was 1.18. Moreover, the effect of a unit increase in improved salary on job performance was 0.66 and the effect of a unit increase in feeling burned out and emotionally drained after work on job performance was 0.48.

The overall multiple regression model showed that intrinsic motivation was significantly associated with job performance ($F(4, 319) = 8.66, P = .001$). Continuous education through training and working with little or no supervision were intrinsic motivation factors that did not significantly predict job performance ($P > 0.05$). The multiple regression model further showed that extrinsic motivation could significantly predict job performance ($F(6, 317) = 23.97, P = .001$). Even though feeling burned out and emotionally drained after work significantly predicted job performance in the simple linear regression model, its significance disappeared in the multiple linear regression model after controlling the effect of other extrinsic motivation factors ($P = .080$). The results are shown (Table 5).

Table 3. Intrinsic motivation factors and job performance

Intrinsic Motivation Factors	Mean score (SD)	F	p-value
Achievement/Satisfaction	4.13 (0.82)	9.28	0.003
Continuous education	4.37 (0.92)	1.34	0.248
Little or no supervision	2.32 (1.16)	2.32	0.137
Incentive package	3.10 (1.49)	24.55	<0.001

Table 4. Extrinsic motivation factors and job performance

Extrinsic motivation factors	Mean Score (SD)	F	p-value
Availability of equipment	4.02 (1.17)	34.84	<0.001
Job Security	4.08 (0.96)	48.81	<0.001
Inter-personal relation	4.36 (0.74)	54.39	<0.001
Recognition and Promotion	4.09 (0.91)	72.21	<0.001
Improved Salary	3.65 (1.23)	38.34	<0.001
Workload	4.15 (0.97)	11.93	0.002

Table 5. Association between intrinsic/extrinsic motivation factors and job performance

Motivation factors	Unadjusted model Coefficients (95% CI)	p-value	Adjusted model Coefficients (95% CI)	p-value
Intrinsic motivation				
Achievement/satisfaction	0.51 (0.18, 0.83)	0.003	0.49 (0.15, 0.83)	0.005
Continuous education	0.17 (-0.12, 0.47)	0.248	-0.07 (-0.38, 0.24)	0.650
Little or no supervision	0.18 (-0.06, 0.41)	0.137	0.14 (-0.08, 0.37)	0.217
Incentive package	0.44 (0.27, 0.62)	<0.001	0.42 (0.24, 0.60)	<0.001
Extrinsic motivation				
Availability of equipment	0.66 (0.44, 0.88)	<0.001	0.29 (0.07, 0.52)	0.012
Job Security	0.94 (0.67, 1.20)	<0.001	0.30 (0.02, 0.59)	0.038
Inter-personal relation	1.28 (0.93, 1.62)	<0.001	0.70 (0.35, 1.04)	<0.001
Recognition and Promotion	1.18 (0.90, 1.45)	<0.001	0.56 (0.26, 0.86)	<0.001
Improved Salary	0.66 (0.45, 0.87)	<0.001	0.28 (0.08, 0.49)	0.007
Workload	0.48 (0.21, 0.76)	0.002	0.21 (-0.03, 0.46)	0.080

5. DISCUSSION

5.1 Intrinsic Motivation and Job Performance

Some researchers have defined motivation as a process that explains one's intensity, direction, and perseverance in trying to achieve set goals [18,19]. Based on this premise, the study identified intrinsic motivation factors that were perceived by respondents as impacting their job performance.

5.2 Achievement and Satisfaction

Achievement and satisfaction at the workplace as a variable was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. The study showed that achievement and personal satisfaction could motivate employees to look up to solving more difficult tasks, thereby, increasing their performance. Personal satisfaction also propels employees to look forward to each day at work and psyche them up to overcome any challenge they might encounter. This finding agrees with a study that found that nurses' work motivation was often affected by several personal and organizational factors [60]. However, it is contrasted by a study that noted that plagued by low job satisfaction and severe burnout, primary care providers in rural China may have high turnover intentions as job satisfaction had not only negative direct effects on burnout and turnover intention but also an indirect effect on turnover intention through burnout as a mediator [61]. The dynamics in the findings show that, unlike the healthcare sector, there is a particular focus on the impact of new types of workspaces

on job performance, job satisfaction, organizational performance, professional growth and development, social and professional relationships, and personal professional performance as well as on the overall level of work motivation [62].

5.3 Incentive Packages

Respondents were of the view that the availability of incentive packages at the hospital could impact their job performance as the workplace was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. This suggests that when incentives are appropriately given to achieve the intended purpose, they usually lead to improved performance. Thus, this finding supports the suggestion that introducing and/or sustaining a form of financial incentive seems key towards strengthening community health workers' motivation [63]. On the other hand, when there is inequity in the packages provided, it could lose its purpose and this will negatively affect their performance. This explains why a study that may contradict this finding argues that even as intrinsic motivation factors are important to and experienced by both types of community health workers (CHWs), for many salaried CHWs, they do not compensate for the demotivation derived from the perceived low level of financial reward [63]. It is anticipated that every employee will put up improved performance if the incentive packages are rewarding. Indeed, another research found that non-reward incentives had a better impact on employee success because they encouraged them to be more environmentally conscious [64].

5.4 Extrinsic Motivation and Job Performance

Performance is real work achieved by a person in carrying out the tasks assigned to them based on skills, experience, sincerity, and time. It is also influenced by several factors, especially motivation, ability, skills, social security, compensation, and achievement opportunities [19]. Against this background, the study's findings showed some relationship between extrinsic motivation factors and job performance.

5.5 Availability of Materials and Equipment

The study found that the availability of the right materials and equipment makes achieving tasks easier and quicker, and this leads to improved performance. This extrinsic motivation factor was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. Materials such as gloves, syringes, and oxygen outlets enable health professionals to work more efficiently. Their absence could slow work down and prevent staff from delivering quality service. Moreover, without adequate gloves, health professionals may expose themselves to harmful and hazardous materials, and this may prevent them from working efficiently. There is a need for the management of health institutions to integrate their human resource activities into the community programs since most of the staff reside among people in the community. This will respond to the suggestion that enables positive health worker (e.g. community-based health worker) program outcomes to include community embeddedness, supportive supervision, continuous education, and adequate logistical support and supplies [65].

5.6 Availability of Job Security

Availability of job security as an extrinsic motivation factor was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. This means that job security is essential in providing the needed psychological stability to staff to enable them to work more efficiently. When there is the possibility of losing a job hanging on the neck of staff, they would lack the confidence and peace to put in their best. This eventually affects their day-to-day performance, leading to an overall minimal performance. The lack of job security in

the organization may affect the personal lives of workers as well as the performance of the organization. A study found that the turnover intentions of rural health workers in western China was significantly associated with job satisfaction, work stress, age, income, and medical institution [66]. To create a balance and assure staff of job security, the management of health institutions and policymakers have to ensure evidence-based decisions and proper utilization of financial and human resources at institutional and national levels which are crucial for the sustainability of the health workforce [67].

5.7 Good Inter-Personal Relationships among Co-workers

All respondents in the study agreed that good inter-personal relationships among co-workers enhance work performance. This extrinsic motivation factor was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. The health profession is an interdisciplinary team involving contributions from other specialized areas within the workforce. When there is a lack of inter-personal relationships with co-workers, it is very difficult to communicate with each other and this could adversely affect the quality of output in the hospital. At every stage, communication (whether verbal or written) is required for the continuity of health provision. When communication is poor, the process is either truncated or its quality is compromised, leading to reduced performance. In cases where inter-personal communication is effective, the exchange of ideas, skills, and experience is often used to obtain optimum care for the patient, and this leads to improved performance. Managers at all levels in the health sector should seek to adopt an appropriate leadership style to enable them to provide an enabling environment for their colleagues to work harmoniously. Notably, a study observed that transformational styles of leadership had a positive impact on stimulating motivation, assuring job satisfaction, and consolidating teamwork among health workers compared with those who demonstrated transactional skills or laissez-faire styles [68].

5.8 Recognition and Promotion at the Workplace

Recognition and promotion was also identified as a major factor in motivating staff to improve job performance. This extrinsic motivation factor was significantly associated with job performance in

both the unadjusted linear regression model and the overall multiple regression model. When this happens, the staff may become aware that their efforts have been recognized both privately and publicly. This gives them some enthusiasm and they will want to do more. Such situations lead to improved performance across the value chain. This has been confirmed by a study that argues that talent management and employee recognition can significantly affect the level of employee performance as well as contribute to organizational success and positioning [54]. However, when the system fails to recognize the contribution of staff, they become discouraged and refuse to give their best. This gradually leads to apathy towards assigned roles and responsibilities. Evidence supports this position that the work environment significantly impacts burnout, job satisfaction, and perceived stress experienced by health workers like trauma nurses [69].

Therefore, a study recommends the need for awards for good job performance and promotion and advancement opportunities to increase the level of work motivation and job satisfaction of health workers in rural areas [70]. Employees look out for promotions when they are due but when this fails to happen, they tend to think that their efforts are not good enough and they are not needed by the organization. They tend to put in minimal effort which gradually affects their performance. However, when they are promoted as they envisaged, it motivates them to find more effective ways of improving their contribution to the organization. When both recognition and promotion occur at the appropriate time, the performance improvement is twofold and vice versa. While recognition is highly influential in health workers' motivation, adequate resources and appropriate infrastructure may improve the workers' morale significantly. Recognition as motivation had a significant positive influence on job satisfaction [54].

5.9 Improving the Salary of Health Workers

Respondents in the study were unanimous in their opinion on the impact of improved salary on overall job performance. This extrinsic motivation factor was significantly associated with job performance in both the unadjusted linear regression model and the overall multiple regression model. A study suggests that adequate expectation management regarding financial and material incentives is essential to

prevent frustration about expectation gaps or broken promises which negatively affect motivation [54]. Respondents believed that an improved salary was enough to meet their expenses and influence their performance. When salaries are low, staff are unable to meet their normal expenses and they might want to find alternative sources of income. This gives them divided attention and they may come to work exhausted from other jobs. Therefore, they are unable to put in their best, leading to reduced performance. However, when salaries are adequate and are paid on time, it motivates staff to concentrate on their assigned roles and be committed to their work, leading to improved performance. Therefore, appropriate strategies should be implemented to improve rural health workers' (RHWs) job satisfaction and reduce their work stress. Meanwhile, providing more attractive wages and non-monetary support, improving working conditions, etc. could be effective in the reduction of RHWs' turnover intentions [66]. A similar package could be provided for health workers in tertiary health facilities.

6. CONCLUSION

The study examined how intrinsic and extrinsic motivation factors could affect the job performance of health workers at a tertiary healthcare facility in Ghana. The study identified achievement and personal satisfaction and incentive packages as intrinsic motivation factors that could predict the job performance of health workers at Korle-Bu Teaching Hospital in Ghana. The study argues that the effect of a unit increase in a respondent's achievement and satisfaction and incentive package on their job performance was 0.51 and 0.44 respectively. However, continuous education and working with little or no supervision were not significantly associated with job performance. The study concludes that all the extrinsic motivation factors (availability of equipment, job security, good inter-personal relationships with co-workers, recognition and promotion, improved salary, workload or feeling burned out and emotionally drained after work) could significantly predict job performance. For instance, the effect of a unit increase in good inter-personal relationships with co-workers on job performance was 1.28. The study concludes that the availability of equipment and drugs could motivate staff to work to enhance their performance. However, while feeling burned out and emotionally drained after work significantly predicted job performance in

the simple linear regression model, its significance disappeared in the multiple linear regression model after controlling for the effect of other extrinsic motivation factors. It is, therefore, recommended that the management of healthcare institutions and health policymakers (in Ghana and elsewhere) should involve employees at all stages of designing motivation factors that directly affect performance to ensure buy-in from all. There is a need for employees as well as managers to be educated thoroughly on the impact of motivation factors on job performance.

7. LIMITATIONS AND FUTURE RESEARCH

The first limitation was that, since the study focused on the effect of intrinsic and extrinsic motivation factors on the job performance of employees at a teaching hospital (KBTH), any conclusions drawn from the study may not fit into every health institution within Ghana and beyond. However, the conclusions might extend to other health institutions that share a similar organizational structure, hierarchy, and culture. The second potential limitation was that employee survey data was used as the basis for evaluating employees' understanding of the effect of motivation factors on performance. Such data may be limited to making descriptive analyses and associations and may not provide insight into the cause and effect of the factors studied. The third limitation was the fact that the data might be subject to bias courtesy of how the questionnaire was structured and the sincerity of respondents' answers. Recall bias may also have influenced the acquisition of information from the respondents. The other limitation is that the delay in the publishing process means that new evidence might have emerged since the study was conducted. Future researchers should seek to examine the effect of intrinsic and extrinsic motivation factors on health workers' performance by increasing the number of participants and health facilities in the country. There will be a need to apply qualitative research methods to understand the perspectives of the health workers on the quantitative responses provided.

CONSENT AND ETHICAL APPROVAL

The study was approved by the Korle-Bu Teaching Hospital's Scientific and Ethics Review Board with reference number: KBTH-STC/IRB/00016/2016 before the study was

conducted. Participants signed an approved consent form. Issues of confidentiality and anonymity were addressed.

ACKNOWLEDGEMENT

The authors wish to acknowledge the support and contribution of the management of the study organisation and participants who voluntarily opened up to us during data collection.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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