

HUMAN RESOURCE EMPLOYEE APPRAISAL ANALYTIC AND EMPLOYEE RETENTION IN PUBLIC HEALTH SECTOR IN GHANA

Diana Anokye-Larbey, Josphat Kwasira, Elizabeth Makokha Nambuswa

School of Business and Entrepreneurship, Jomo Kenyatta University of Agriculture and Technology, Kenya

Corresponding Author's Email: dianalarb@gmail.com

Abstract

Employee retention is a challenge in the public health sector, and human resource professionals are researching to understand the causes. In pursuit of this, the study sought to investigate the impact of human resource employee appraisal analytic on employee retention in the public health sector, particularly in Ghana's teaching hospitals. Structured onboarding, performance standards, feedback, and incentive are the sub constructs measured under the predictor variable. Positivist research philosophy was applied, and the study dwelt on equity theory. The study used a descriptive survey design with a quantitative research approach. The target population was 605 from all teaching hospitals, and data were gathered using structured questionnaires. The study used a clustered sample of 240 people from the human resources units of the teaching hospitals. The data was examined using SPSS 2.0. The KMO score of 0.782 was obtained with a Bartlett's test significant value of 0.000. Cronbach Alpha value of 0.827 was obtained, exceeding the cut off value of 0.7. Validity was obtained through experts in the human resource development field. The linear regression model statistics coefficient of determinants yielded an R-square of 34% and an adjusted R-square of 33.7%. The linear association between the independent and dependent variables was 58.3%. The ANOVA test showed F-test (89.307) $P = 0.000 < 0.05$. The unstandardized model coefficient, used to evaluate the study's hypothesis, was significant at $0.00 < P\text{-value of } 0.05$. As a result, the study discovered that human resource employee appraisal analytic statistically had a significant impact on employee retention. Human resource employee appraisal analytic encourages using evidence-based data to make decisions about appraisal concerns. The study recommends the health sector using continuous feedback analytics as a technique for employee appraisal and retention.

Keywords: *employee retention, human resource employee appraisal analytic, public health sector*

Introduction

Strategies to retain employees has become a priority for health sectors for institutional growth. In the Indian context, Bharath (2023) explored a strategy that is beyond regular and fat salary to boost health sector staff retention. He opines that though, employees may be highly paid but if they are ill-treated it will spark them to leave. He found that when marital status, location of residence, age, are considered in relation to work schedule, it heightens staff retention.

Sirili and Simba (2021) study on Tanzania subjects proposed that many things should be put together for retention. It should not dwell only on increase in remuneration. In this approach, the various health institution identify vacancies and the central government fill those positions. In some districts, students joined training institutions following signing of a bond. They found that in addition to this, plans are in place to provide housing, better incentive packages in view of boosting retention.

In Ghana, Osei et al (2023) studied the issues that trigger health sector employees to leave for other countries. Their study discovered that there exist a high rate of burnout among staff. The

study concluded that job satisfaction, training and development opportunities, salaries and addressing employee complaints augments retention.

According to Armstrong and Taylor (2020), increasing employee retention has a positive impact on business performance. From the report of World Health Organization in 2020, it is imperative for every health sector institution to deliver good and quality healthcare to its population to aid plans to achieve the health-related targets agenda of the sustainable development goals (SDGs) and universal health coverage (UHC). Else, there is the likelihood of defeat in these two agenda (World Health Organization, 2020).

Fadilla, et al (2021) describe employee retention as institutional strategies to reduce employee turnover, or the amount of workers who quit their jobs either voluntarily or involuntarily, within a given time frame. According (Smriti, 2021) definition of appraisal analytics states it is a methodical, regular, and, to the greatest extent feasible by human means, unbiased assessment of an employee's excellence in areas related to his current position and prospects for advancement. Further, Marler and Boudreau, (2017), refer to HR analytics as the primary objective enhancing institutional sustainability This approach involves making informed human resource decisions based on data analysis utilising analytical methods to improve overall institutional performance Public health sector are health institutions that are government owned. In Ghana, the teaching hospitals operate under the public health sector and they serve as referral point for all health care in the regional as well as the districts in the sixteen regions. (Ghana Health Services, 2020).

The emerging issues in public health brought out that Ghana is facing a shortage of healthcare staff. A report from the Minister of Health in 2021 indicated that doctor to patient ratio is 1:6255 which does not meet the standard of World Health Organization. Ghana Registered Nurses and Mid-Wives Association has documented that more than 2800 nurses left Ghana in 2022 while the Ghana Medical Association also reported 90% of medical doctors had an intention to leave. Health workers service union congress, Ghana, in a meeting with fair wages compensation facilitated by Ministry of Health in 2021 raised the issue of the unfair treatment to the nurses, among other things in 2015 but the government has paid no attention to them. According to Szabo *et al.*'s (2020), the nurses represents the largest workforce in the health sector which is more reasonable to consider their complaints to enable them deliver good health services to the public. Further to this, The Ministry of Health Inter-Agency Review Conference of Teaching hospitals in 2020-2022 on the health workforce higher rate of exit attributed it to poor working conditions, remuneration package, unstructured human resource development, employee wellbeing and infrastructure. From the extant literature, there has not been a study on HR employee appraisal analytic in the public health sector specifically in the teaching hospitals. Therefore, this study sought to fill a gap by empirically using HR employee appraisal analytic to test employee retention in the public health sector specifically in the teaching hospitals in Ghana.

Objective

To explore the effect of human resource employee appraisal analytic on employee retention in the public health sector in Ghana.

Hypothesis

H₀₁: Human resource employee appraisal analytic has no significant effect on employee retention in the public health sector in Ghana.

Literature Review

Employee appraisal equity theory

Equity theory propounded by Adams (1965) states that employees compare themselves with each other in terms of input and outcomes. Though researchers suggest that exact comparison is difficult since performance are not equal and if all are treated equally, best performers will leave for high offer.

In their book “Costing human resources: how to measure human resource management, Cascio (1987) and Fitz-enz and Davidson (2002) wrote, managers are to set analytics for a measurement through surveys on Likert scale. Upadhyay, Tyagi and Malhotra (2021) support that the quantification of activities of HR is critical in HR decision-making and it thus helps to forecast into the future on handling the employees without bias.

In his book principles of management, Flippo (1976) expounds on employee appraisal as a “systematic, periodic and so far as humanly possible, an impartial rating of an employee’s excellence in matters pertaining to his present job and potentialities for a better job”. (Smriti) This focuses mostly on the institutional goals. Thus, if the institution wishes to increase productivity, it may explore interdepartmental reshuffles and to be able to discover potential employees with intention to stay, the institution’s HR analytics team should set out indicators on the activities that need to be tracked.

Carpenter (2023), examined effective onboarding strategies to increase talent retention. He pointed out that effective onboarding establishes employer employee relationship specifically, where newly hired become conversant with the institutional dos and don’ts. Actually, this could be of the hiring process and should not be confused with orientation. When there is structured onboarding, new employees engage with mentors where succession planning and retention are assured. It was found that onboarding handled at the management level gives the newly hired a sense of belongingness which boost retention.

Abboud, (2021) study on the impact performance appraisals on employee retention focused on high turnover rates. Feedback on appraisal affects workers and their decision to leave or stay in an institution. The study established that the lack of the system of performance assessments results in workplace create discontent, hence raising the turnover rate of the employees. Therefore, management should not only dwell on increase in rewards concerning high performance but also rather create a balance between workers wanting cash incentives and those wanting a strong career path.

In 2021, Muriuki and Wanyoike study on performance appraisal and its impact on employee performance realized that health sector achieve its performance through the employees who are committed to the task. This calls for health sectors setting a performance appraisal standard that are attainable, that could be reviewed and communicate to the employees for feedback. They found that effective and established appraisal helps to avoid inequity in allocation of jobs and rewards.

Jerusha and Alexander (2021) examined the influence of performance appraisal. The aim focused on goal setting and feedback influence on retention. They opined that the low level of retention has affected many institutions in Kenya, which needs to be addressed to curb the talent being drained. They found that in employee appraisal, feedback and goal setting have influence on retention.

On another note, Noorazem *et al.*'s in 2021 opine that non- financial and financial reward play an important role in employees' intention to work with an institution, this phenomenon does not benefit only the employees it also has impact on institution. If HR analysts overlook this as integral strategy for retention, it will turn out to be spending more in recruiting staff than to investing in the existing employee's rewards. It was found that, salaries, bonuses, appreciation and health care benefits have positive impact on employee retention.

McCoy *et al.*'s (2008) say it is tricky to get the exact allowances and salary per various category of health workforce. Additional duty hours allowance was introduced and later this allowance was embedded in the salary, which brought confusion. In 2021 data shows that a person with five years of experience working as Doctor / Physician in Ghana is paid a net salary of 11000 GHS per month approximately (1,800.82 USD).

Figure 1, shows the salaries of four countries in the Sub Saharan African which studies have shown health workforce have the intention to migrate to countries that earn higher income specifically USA and Britain.

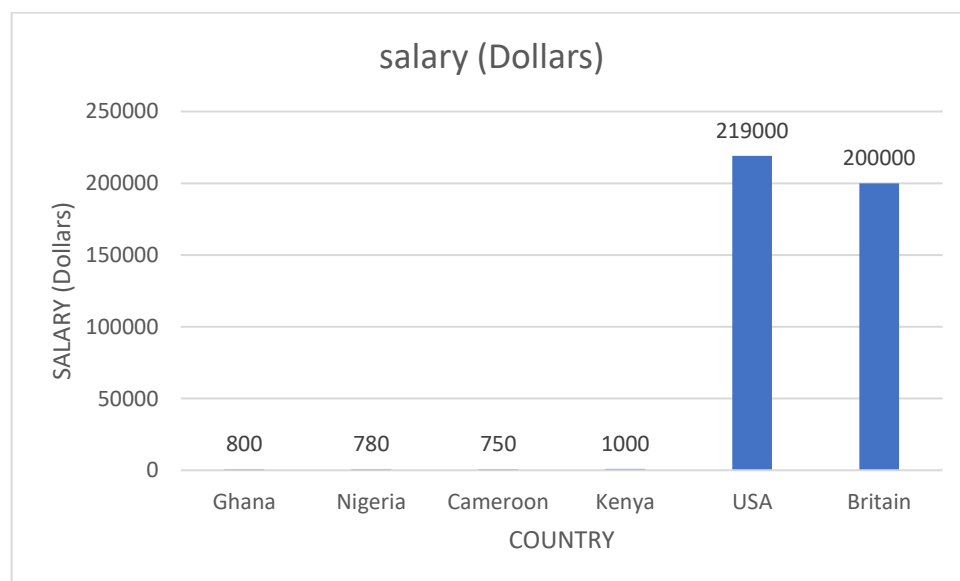


Fig 1: *Salaryexplorer2023 (n.d) doctor /physician salary modified by author 2024*

Research Methodology

Deducing from the positivist research philosophy, hypothetical –deductive model was deployed, to guide the study to form a testable hypothesis by developing a pragmatic study to confirm or fail to confirm the hypothesis. In support of this, numerical data based on study objective was measured on a five point Likert scale. (Creswell, 2014), and analyzed for causal relationships this allows the study findings to be generalized.

Research design

The study adopted descriptive design specifically a survey. Methodology used was primary data collection and a quantitative research approach where structured questionnaires were distributed to a sample size of 240 out of a target population of 605 in HR department of the teaching hospitals in Ghana. Cluster sampling was used because of the geographical dispersed of the target population. The questionnaires were piloted in the regional and district hospitals to detect weaknesses or errors, where they were adjusted for the main data collection.

Sampling and setting

Yamane's (1967) formular was deployed in the sample size determination.

Determination of sample size

$$n = \frac{N}{1 + Ne^2}$$

$$n = 605 / 1 + 605(0.05)^2$$

Where:

n - represents desired sample size

N - represents population

e - represents margin of error at 5% (standard value of 0.05)

The sample size for the study is thus: 240.

After which a cluster sampling technique was used to determine the unit of observation. Cluster was chosen because these teaching hospitals are geographically dispersed. This is illustrated in table 1.

Table 1: Sample Size

Facility	Sample Size	Proportionate Target Population
1. Cape Coast Teaching Hospital	20	8.3/100*240
2. Ho Teaching Hospital	25	10.7/100*240
3. Komfo Anokye Teaching Hospital	52	21.5/100*240
4. Korle-Bu Teaching Hospital	107	45/100*240
5. Tamale Teaching Hospital	36	15/100*240
Total	240	

Data collection

The data collection instrument was administered to the respondents. The study used telephone calls to follow up on the respondents to ensure that they complete the questionnaire and submit. Approximately 177 filled out the questionnaires out of which 175 were correctly filled representing 73%.

Ethical consideration

All protocols were followed to obtain clearance from the IRB committee in the teaching hospitals to undertake the data collection. Participants were informed of the rights and benefits of this research ensuring that they participate voluntarily. That the responses are kept confidential for research purposes.

Data analysis

Following Gujurati and Porter (2010), when the raw data collection was complete, the study eliminated those that were not completely filled correctly. The data were uploaded into SPSS 2.0 for coding where this study used 5 Point Likert scale: 5=strongly agreed; 4=agreed; neutral=3; disagree=2 ; strongly disagree =1 and these were analysed for the effect of X and Y. The assumption for regression model met the threshold for further analysis.

This study analysed the demographic characteristics, descriptive, it also checked for reliability and validity through principal component factor, correlation through Pearson (r) correlation; ANOVA, coefficient of determinants and model coefficient that was used to test the hypothesis.

This helped to ascertain the effect of Human resource analytic employee appraisal and employee retention to enable the study accept or fail to accept the null hypothesis.

Results and Discussion

Ensuing Ghasemi and Zahediasl (2012) Normality was tested using the Shapiro-Wilk test, and Kolmogorov – Smirnov. A statistic value of 0.224 greater than 1.96 or lesser than -1.96 is significant at $P < 0.05$ indicate the residual values for the multiple regression model is normally distributed. The normality was achieved for both tests at 0.000 and therefore, the study used parametric tests. Multi-Collinearity assumption using VIF cut off, of value statistic of less than 5 and a value of 2.069 was achieved with a tolerance statistic value of 0.483. Inferring from (Legendre, 2017), the study adopted a first order autocorrelation test, where Durbin Watson test statistic was used to detect autocorrelation in the observed and the mean value or the residuals from the regression analysis with a cut off values between 1.5 and 2.5. 1.56 was achieved.

From the descriptive findings, the respondents had a differing view on the statements on HR employee appraisal analytic, 10.9 percent representing 19 respondents strongly agreed that the institution has a structured onboarding system. 64.4% represented by (112) agreed on the same. Further 17.8% representing (31) neither agreed nor disagreed on this statement. 6.3 percent represented by (11) respondents disagreed and 0.6 percent strongly disagreed. This accounted for a mean of 3.79 and standard deviation of 0.74.

Further 20.0% representing (35) respondents strongly agreed that the institution sets performance standard for individuals and teams. 59.4% representing 104 respondents agreed 14.9% representing (26) respondents neither agreed nor disagreed. 5.7% representing 10 respondents disagreed and no one strongly agreed This brought the mean to 3.94 and a standard deviation of 0.759.

Furthermore, 9.2% representing (16) strongly agreed that the institution provides feedback on all evaluation of appraisals to employees. 60.3% agreed represented by (105) and 19.5 percent representing (34) neither agreed nor disagreed. 9.8% representing (17) respondents disagreed 1.1% representing two strongly disagreed. This accounted for a mean of 3.67 and standard deviation of 0.821.

In addition, 17.1percent representing (30) respondents strongly agreed that the institution rewards employees with non financial and financial incentives. 53.1 percent representing (93) averred. 17.1percent represented by (30) neither agreed nor disagreed. On the other hand 9.1 percent representing (16) respondents disagreed, and 3.4percent representing 6 respondents strongly disagreed. This accounted for an average mean of 3.71 and standard deviation of 0.970.

Averagly the mean for HR employee appraisal is 3.78 This indicates that appraisal not only helps the employee to achieve targeted goals. It is a two way fold it helps organization and employees. Employees are recognized whiles it helps organization to set achievable goals which boosts employee retention. Kavitha and Saravanan (2019) study corresponds with the current study that proper management of employees through frequent appraisals and giving feedback on performance should be adopted to retain employees. Thus in the workplace employees compare themselves as to their performance and reward attached to it tends to boost their moral to be committed and thereby retention.

Demographic characteristics results

Demographic results based on highest and the lowest results are as follows in table 2.

Table 2: Demographic Characteristics of Respondents

Characteristic	Highest	Lowest
Gender	Male: 52%	Female : 48 %
Age:	31-40: 30.3%	51-60:13.1%
Marital Status	Married: 56%	Divorced : 2.9%
Highest Education	Bachelor's : 47.4%	Other: 1.7%
Years of Service:	Below 5: 41.1%	Above 16 :4%
Years since last promotion	Below 5- 85.1%	11-15 yrs;2.3%

The results from the demographic reveals that out of the 175 respondents. Female was 48% and Male 52%. The highest age group of the respondents was between 31-40 indicating 30.3%. The lowest age group was between 51-60 indicting 13.1%. Those found to be married represented 56% representing the highest in marital status and divorced 2.9% representing the lowest. 47.4% has Bachelor's degree, this is the highest among the level of education and other certificates being 1.7% and this is the lowest. Years of service below five years is 41.1% which is the highest and 4% indicating the lowest for above years of service. Years since last promotion, below five years is 85.1% representing the highest and 11 to 15 years has 2.3 % representing the lowest.

Reliability and validity of results

KMO value of 0.782, achieved through a reliability test. Leech *et al's* (2014) indicate KMO value greater than 0.5 is adequate, and it was significant at 0.000 for Bartlett's test. Further combined reliability test conducted following Bryman (2016) with Cronbach alpha value of 0.827, which was greater than accepted rule of thumb = 0.7, was achieved.

Following Schober, et al (2018), correlation cut off value of 0.3 was used. The study used Pearson Correlation (r) extraction. A static value of 0.538 > 0.3 was achieved which indicates a strong correlation between HR Employee Appraisal Analytic and Employee Retention.

The findings concur with Muriuki and Wanyoike (2021) study on performance appraisal and its impact on employee, that institutions achieve its success through the employees who are committed to the task and this call for institutions to set a performance appraisal standard that are attainable, and communicate to the employees for feedback. HR employee appraisal analytic had a strong, positive and significant relationship with employee retention ($r = .583 > 0.5$) P value $0.000 < 0.05$

Coefficients of determinants

Inferring from the study objective, the extant literature that was studied and theoretical resonate with HR employee appraisal and employee retention. Employee retention in public health sector was indicated by intention to leave or stay, job satisfaction, team work and work efficiency following the theoretical argument the following hypothesis was formulated and tested:

H₀₁: HR employee appraisal analytic has no significant effect on employee retention in Public Health sector in Ghana.

Table 3: HR Employee Appraisal Analytic and Employee Retention Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig F Change
1	.583 ^a	.340	.337	2.82664	.000

a. Predictors: (constant) HR Employee Appraisal Analytic

b. Dependent Variable: Employee Retention

The findings of model summary in table 3 - HR Employee Appraisal Analytic was able to explain 34% of the variation in the employee retention in Public health sector in Ghana as indicated by the R, which tells the strength of linear association between X and Y . 58.3% linear association between the predictor variable and dependent variable. The adjusted R square also explains the sample adequacy of the model at 33.7 % and therefore, the model is significant at -000

Table 4: HR Employee Appraisal Analytic and Employee Retention Model ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	713.548	1	713.548	89.307	.000 ^b
1 Residual	1382.247	173	7.990		
Total	2095.794				

a. Dependent Variable: Employee retention

b. Predictors: (Constant), HR Employee Appraisal Analytic

The results from table 4 indicates ANOVA test was significant at $P = 0.000 < 0.05$, where F test value was (89.307). This indicate the model was adequate fit. This denotes the linear regression model measurement significantly predicts the outcome variable and is, therefore, a good fit for the data. This is an indication that there exists a significant relationship between human resource employee appraisal analytic and employee retention.

Table 5: Appraisal Analytics and Employee retention Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	β	Std. Error	Beta			
1 (Constant)	2.049	1.279			2.602	.011
HR Employee Appraisal Analytic	.789	.083	.583		9.450	.000

a. Dependent Variable: Employee Retention

With reference to table 5, the following equation can be derived

$Y = B_0 + B_3 X_3$ which is conceptualized as:

$$\text{Employee Retention} = 2.049 + 0.789 X_3$$

The regression equation demonstrates that when the HR employee appraisal analytic is set to 0, employee retention is 2.049 units. There is a favorable and significant relationship between HR employee appraisal analytic and employee retention in Ghana's public health sector. A unit increase in HR appraisal analytic boosts employee retention by 0.789 units. Because the P-value was less than 0.05, there is enough evidence to justify the failure to reject the null hypothesis and accept the alternative hypothesis that there is a positive and statistically significant influence of HR employee appraisal analytic on employee retention.

The findings validate that employee retention is positively influenced by employee appraisal analytics. The study findings affirm previous findings of the study of Jerusha and Alexander (2021) who examined the influence of performance appraisal on employee retention. When organizations set performance standard, communicate it to employees and also give feedback on actual performance they influence employee retention. However, Abboud (2021) expounds that employee appraisal system affects workers and their decision to leave or stay in an organization and therefore management should not only dwell on increase in rewards with regards to high performance but rather create a balance between workers wanting cash incentives and those wanting a strong career path. Kavitha and Saravanan (2019) study corresponds with the current study that proper management of employees through frequent appraisals and giving feedback on performance should be adopted to retain employees.

Conclusion and Recommendation

The study investigated the effect of human resource employee appraisal analytic on employee retention in public health sector in Ghana. The results of the analyses show that HR employee appraisal analytic statistically predicts employee retention positively. The coefficient determinants depicts causal relationship of the independent variable and dependent variable and more so the fitness of the sample adequacy which shows that the variable has the highest measurable.

The findings show that when the teaching hospitals consider the sub variables of the predictor, retention rate will be high. This indicates that appraisal not only helps the employee to achieve targeted goals. It is a two way fold ,employees are recognized whiles it helps institution to set achievable goals which boosts employee retention. Inferring from this study's theory,

employees expect equitable treatment in relation to feedback received during appraisal and reward attached to it tends to boost their moral to be committed and thereby retention.

This equitable treatment induce them to compare themselves and measure their contribution against performance standards. It also promotes transparency in the appraisal system since it is evidence based, that is supported by data. Onboarding should not be interpreted as orientation; rather, structured onboarding should introduce the newly hired to the organization's culture and establish employer-employee relations. If this is overlooked, top talent may leave for more competitive institutions. Onboarding establishes performance standards. If an employer has an employee on an international assignment, deploying analytics can help determine the accomplishments. The rate of work done through communication can be used as a standard for employee on international assignment, does the person communicate or he or she is just there and no one knows what is going on. Appraisal analytics is a strategic way to assist employers to treat workers fairly in terms of rewards during their stay with employer and after retirement. This should not be kept silent it should be communicated to the employees on what affects them to motivate them to stay.

Therefore, the study recommends Ghana parliament in collaboration with Ghana Health services to implement a continuous feedback analytics as a strategy for employee appraisal issues and retention. Regular reviews and providing feedback will help employees to know areas where they need to improve. The feedback is a two-way communication to the employer and employee. It fosters transparency and trust where employer gives support to employees to develop themselves.

Acknowledgements: We express our profound gratitude to human resource unit of the teaching hospitals in Ghana for accepting to respond to the questionnaires to enable us realize this empirical research.

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