

How to Cite:

Arnepalle, R. R., Marigowda, J., & Mishra, P. K. (2022). A co-relation study in analyzing and reviewing employees' performance based on 1800, BARS and weighted average method: Case of MGCH Hospital-Visakhapatnam, Andhra Pradesh, India. *International Journal of Health Sciences*, 6(S8), 1877–1890.
<https://doi.org/10.53730/ijhs.v6nS8.11591>

A co-relation study in analyzing and reviewing employees' performance based on 180⁰, BARS and weighted average method: Case of MGCH Hospital-Visakhapatnam, Andhra Pradesh, India

Raja Rajeswari Arnepalle

Symbiosis International University -SIHS
Email: Rajeswari.arnepalle@gmail.com

Dr Jagadeesha Marigowda

Symbiosis International University -SIHS
Corresponding euthor email: jaggisun@gmail.com

Dr Pramod Kumar Mishra

Symbiosis International University -SIHS
Email: pramod_neeta@yahoo.co.in

Abstract---Purpose of the study: This study aims to find the need of performance evaluation by assessing probationer's attitude for performance improvement and correlation between self-scores and evaluator scores. Background: Performance appraisal is a formal assessment tool to regularly review employee's job performance and overall contribution to the organization. It is a key aspect of the talent management for a hospital to retain its best talent and provide quality care to its patients. A study conducted mix of performance appraisal methods to recognize the best skills of the probationers and holistic view in making best decisions. Design/Methodology/Approach: The study was conducted in the form of questionnaire (i.e., performance evaluation form). Appropriate methods for preparing the evaluation were identified to cover all the aspects of the Probationers' skills. 46 probationers were identified from 13 departments. Findings were generated with the help of statistical tools such as Karl Pearson coefficient of correlation and MS Excel. Findings& Suggestions: 24 out of 46 participants were designated with permanent position and remaining was given Performance Improvement Plan and next review will be taken for them after 6 months. Also, the moderately positive relation was found between self-scores and evaluators scores. The correlation exists but not a perfect correlation. The employees and the

managers of departments who are not on same page were suggested to have a face-to-face conversation to identify gaps. Also, few best Performance Appraisal Practices were suggested for improvement of the performance management of the organization.

Keywords---probationers attitude, performance evaluation, performance improvement plan, quality care.

Introduction

An organization's success is depends on employee's performance; to magnify employee performance employee motivation is the right tool. Performance evaluation and appraisals are the best tools. However, the existing performance appraisal methods do not motivate employees' in improving their performance. Frequent discussions between employees and immediate supervisors may create harmony, but such discussions enable to identify whether they are in line with the organisational objectives or not upto certain extent. Probationer's performance will be an inner stimulus, so that they can effectively communicate. Managers must monitor and review frequently employee contributions in context of long-term goals of the company. HR managers must incorporate modern approaches like Management by Objectives, 180 Degree Appraisal Method, Behaviourally Anchored Rating Scale Method, Psychological Appraisals, Human Resource Cost Accounting Method and many more.

Literature Review

Performance Appraisal

According to Elizabeth Renju Koshy, Dr.P.Suguna (2014), Performance appraisals supports supervisors and employees to recognise strengths and weaknesses of employee performance which leads to build rapport between manager and employees, increases job satisfaction and improves employees' loyalty towards the organisation. A study was conducted focusing on how talent management affects the employee commitment. The results stated that talent management with human resource procedures and performance systems have positive impact on employee commitment (Yalcin Vural, PelinVardarlier, Abdullah Aykir, 2012). Employee Performance Management when complemented with a Leader who are genuine, self-aware and transparent can enhance and improve employees' quality of life (Mieke Audenaert, Adelién Decramer, Bert George, 2021)

The performance appraisal process starts with the observation of job-related behaviour by manager, then manager performs the formation of comprehensible representation of behaviour, this will be stored in database and retrieved when required for performance evaluation and finally manager evaluates the employee using appropriate rating instrument (Angelo S. Denisi, Thomas P. Cafferty and Bruce M. Meglino, 1984). The implementation of best practices of performance appraisal led to perform in an high level and the employees are satisfied with the existing performance appraisal systems at the Hiram hospital (Zaynab Badreddine, Malak Aoun, Vol 5 No 2 (2019)).

Rafikul Islam, Shuib bin Mohd Rasad explained in their research about the case study on Employee Performance Evaluation by AHP highlighted that guidelines mentioned in the paper including “employee participation, developing performance standards with goal setting methods, good appraisal interview, self-evaluation and management feedback, design relevant appraisals, develop user friendly procedure, training for evaluator and finally keeping updated with performance appraisal process supports in keeping the performance appraisal system receptive to organisational needs” (2006). A study was conducted to “Identify the relationship between participation in the performance appraisal process and various employee reactions”. This study stated that participation of employees and managers in appraisal process was strongly related to satisfaction, and value-expressive participation (Cawley, B. D., Keeping, L. M., & Levy, P. E., (1998)).

In the study conducted by RUBY MELODY AGBOLA at Korle-Bu Teaching Hospital (a public health institution) found that weak appraisal system leads to lack of motivation to improve individual performance and they tend to reduce target setting, effective communication, frequent performance appraisal, regular monitoring, rewards and recognition for performance and finally shows no impact on employees performance.

Robbins and Decenzo (1998) state that there are three procedures to perform performance appraisal including relative standards absolute standards, and management by objectives. Absolute Standards include essay appraisal method, critical incident appraisal method, check list graphic rating scale appraisal method, forced choice appraisal method, behaviourally anchored rating scale appraisal method. The relative standards include group order ranking and individual ranking methods. Other appraisal methods include Management By Objectives, 360° feedback appraisal and 180° feedback appraisal. Mostafa Jafari, Atieh Bourouni, Roozbe and Hesam Amiri (2009) conducted study to determined best appraisal method and found that MBO is the best method to apply followed by 360 degree feedback, checklist and Behaviourally Anchored Rating Scale methods are the most appropriate for performance appraisal. Forced choice appraisal method, group order ranking appraisal method, individual ranking appraisal method and paired comparison appraisal method are average fitting whereas critical incident appraisal method, the essay appraisal method and the graphic rating scale appraisal method are the worst methods to apply.

180° Appraisal Method

Aishwarya PT, Srikanth N denotes that 180 degree appraisal method is one of the least difficult approaches to assess employees. This appraisal method process begins with self-assessment step where the employee fills the form by giving suitable positioning to him/her and offers criticism on their own particular performance. Then, the manager talks about the self-evaluation of the representative in a review meeting. When all the information is gathered, including the managers’ and the employees’ views, appraisal will be finalised. Ramila Devi Ram Sing, S. Vadivelu conducted a study in various hospitals where most of the hospitals use 180° appraisal method and the results shows that 85% employees think current performance appraisal is useful.

Behaviourally Anchored Rating Scale Method:

Sukumar C. Debnath, D.B.A., B. Brian Lee, Ph.D., CPA, Sudhir Tandon, Ph.D. (February 2015) denoted that when other appraisal methods are compared with BARS like trait, results, and behavioural aspects BARS have more advantages over these methods. BARS ensures that it covers the complete performance area of a job and include all major job dimensions based on an employee job analysis and job-relatedness, critical incidents are developed to identify highly effective to highly ineffective observable behaviours for each aspect of the job.

The process of BARS starts with the managers generating critical incidents and then they were converted into behavioural statements. After that, another set of managers who were not related to employee will validate that the statements whether they were applicable for the employee they monitored. Then the managers will retranslate those statements back into job aspects after confirming that the statements indicate the appropriate job aspects. Finally, the managers will rate the effectiveness level for each behavioural statement (David M. Klieger, Harrison J. Kell, Samuel Rikoon, Kri N. Burkander, Jennifer L. Bochenek and Jane R. Shore, ETS RR-18-24).

The results of the study conducted by Carlenn H. Stoskopf, Deborah C. Glik, Samuel L. Baker, James R. Ciesla, Catherine M. Cover (June 1, 1992) revealed in support to the reliability and validity of the hospital's BARS prepared for nursing assistants as the nurses indicated that BARSs reduced the perceptions and personal bias. A research on "A novel tool for assessing primary care quality at the point of care in Vietnam" concluded that with more refining of Behaviourally Anchored Rating Scale Method acts a feasible tool to use for the primary care practice.

Ms. Ramila Devi Ram Sing, Dr. S. Vadivelu (Volume 119 No. 15 2018, 1101-1118) stated that "Today not only feedback is important for the organizational environment and culture but also retaining, aligning and motivating employees is also vital for the organisational growth. The organizations can use any form of appraisal tool provided that there is right work place atmosphere, attitude, perception, culture, follow-up mechanism and training that seek for further employees' career improvements".

Aims and objectives

Aim

The purpose of the study to perform performance evaluation for probationers, compare employee's self-score against manager's evaluation score to find the gaps and determine their permanent position based on the employee's performance.

Objectives

- To perform the performance evaluation for the probationers.
- To identify gaps between self-score and evaluation score of the probationers.

- To conduct performance review meeting for probationers with managers.
- To make decision on permanent position for the probationers.

Research Methodology

Study design: Descriptive analysis is used to analyze the scores of the probationers and take decision on the permanent position. Correlational study is used to determine the relation between the evaluator score and the manager score.

Sampling type: Judgement sampling technique was used to determine the sample the sample size. Participants were chosen with the criteria that a probationer should complete at least 6 months of their service in hospital.

Sampling Size: After filtering the participants based on the criteria 46 probationers from 13 departments were identified.

Type of data: Quantitative data was collected through questionnaires of probationers evaluation form.

Method of data collection: Questionnaire was developed to collect the performance scores of the probationers.

Development of Questionnaire

Questionnaire (Performance Evaluation Form) was developed by using the mix of 180 Degree performance appraisal, Behaviorally Anchored Rating Scale and weighted averages methods. So, the questionnaire was divided into two parts i.e., Part-A and Part-B for collecting the scores.

Part-A: Part-A is developed using 180 Degree performance appraisal method and dedicated to evaluate job-specific skills of the probationers. The skills of each probationer are collected from their immediate supervisor and reviewed by the HR manager. Then, five-point rating scale was defined and also, "Not Applicable" option was included so that employees or managers can use that option if they find any skill irrelevant to the job description of the probationer.

Part-B: Part-B is developed using Behaviorally Anchored Rating Scale method and dedicated to evaluate the job-specific behavioral patterns of the probationers. Firstly, examples of job-specific, concrete, highly effective, and highly ineffective workplace behaviours are collected from probationers' immediate supervisor. Secondly, the incidents were assembled into a common format and eliminated redundancies. Finally, the labels and definitions for these groups are formed according to these content similarities. Then, five-point rating scale was defined to score the performance of employee in each behavioural aspects.

After collecting the ratings of the employees, scores were calculated for Part-A and Part-B separately. For calculating the final score, weighted averages method was used. Part-A was given 70% weightage and Part-B was given 30% weightage. For the final score, 5-point performance rating scale was defined to determine the performance of the probationer.

The criteria are set for the permanent position based on the department:

Department	Criteria
<i>Chemo</i>	Overall Score \geq 3.5
<i>Clinical Research Nurse</i>	
<i>RT-OP Nurse</i>	
<i>Sample Collection Nurse</i>	
<i>ICU Nurse</i>	
<i>OT Nurse</i>	
<i>RT Technologist</i>	
<i>Pre-Op & Post-OP</i>	
<i>Arogya Shree</i>	Overall Score \geq 4.0
<i>Cash & Corporate</i>	
<i>Front Office</i>	
<i>RT-Front Office</i>	
<i>OP Nurse</i>	

Data Analysis Tools

1. Excel is used to calculate the rating scores of the probationers. Also, to segregate the list of the probationers who are selected for permanent position and who have to extend their probation period based on the analysis of the scores.
2. SPSS software is used to find the correlation between the self-score and evaluator score and graphically represent it in scatter chart.

Analysis & Interpretations

Profile of probationers

Department-wise employee count

Table No:2 Department details of probationary employees

Department	Count of Employees
<i>Arogya Sri</i>	4
<i>Cash & Corporate</i>	3
<i>Chemo</i>	4
<i>Clinical Research Nurse</i>	1
<i>Front Office</i>	5
<i>ICU Nurse</i>	6
<i>OP Nurse</i>	3
<i>OT Nurse</i>	2
<i>Pre-OP& Post-OP</i>	8
<i>RT Technologist</i>	6
<i>RT-Front Office</i>	2
<i>RT-OP Nurse</i>	1
<i>Sample Collection Nurse</i>	1
Grand Total	46

46 probationers from 13 departments were identified eligible for the performance evaluation.

Qualifications of the employees:

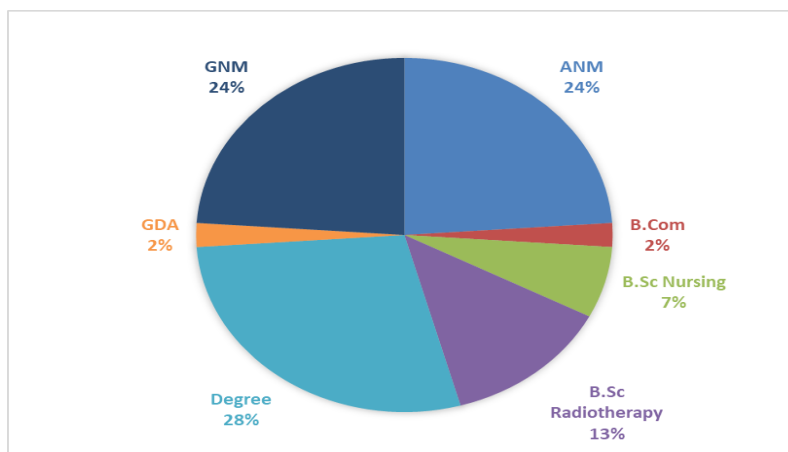


Fig No:1: Pie-chart to represent the distribution of qualification of the probationary employees

Graphical interpretation

The sample has higher percentage i.e., 28% has qualification as degree. There is equal distribution of GNMs and ANMs with 24%. B. Sc Radiotherapy has third highest percentage of sample size i.e., 13%. Other qualifications include B.Com, B.Sc Nursing and GDA ranging from 2% to 7%.

Gender Distribution:

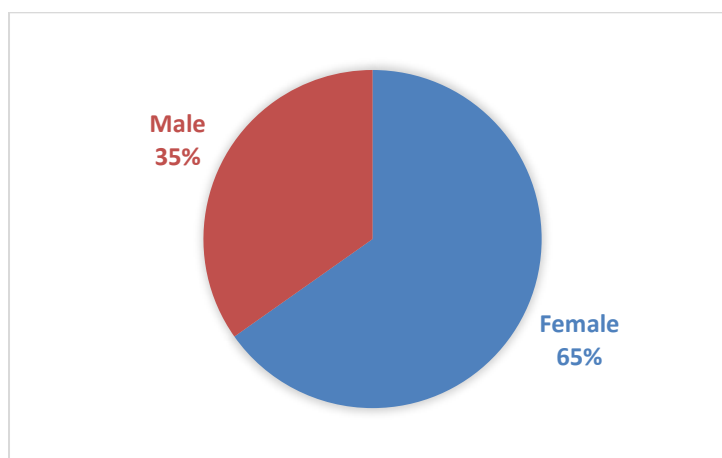


Fig No:2: Pie-chart to represent the distribution of gender among the probationary employees

Graph Interpretation

The sample size consists of 65% of females and 35% of males.

Experience of the employees:

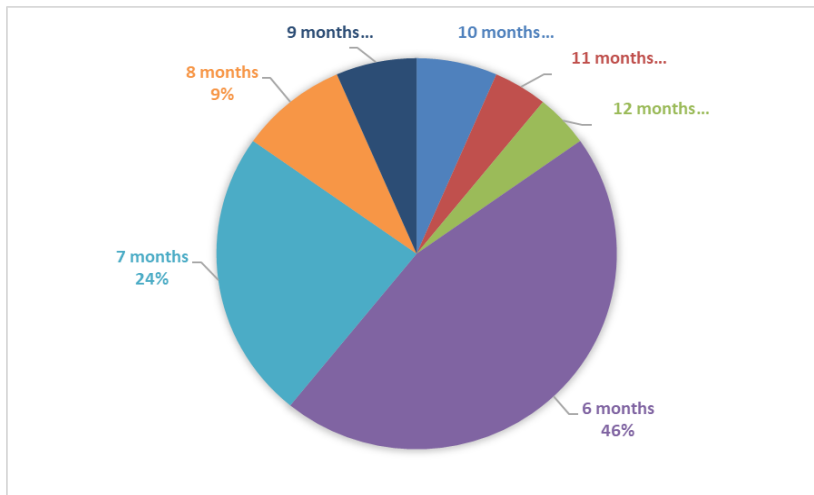


Fig No:3: Pie-chart representing the distribution of experience among the probationary employees

Graphical interpretation

We can interpret from the above pie-chart that about 46% of the probationers have 6 months experience followed by 24% of the probationers have 7 months experience. 8-, 9-, 10-, 11- and 12-months experience constitute less percentage ranging from 4 % to 9%.

Results

Performance Evaluation Results:

The results as per the criteria are concluded as:

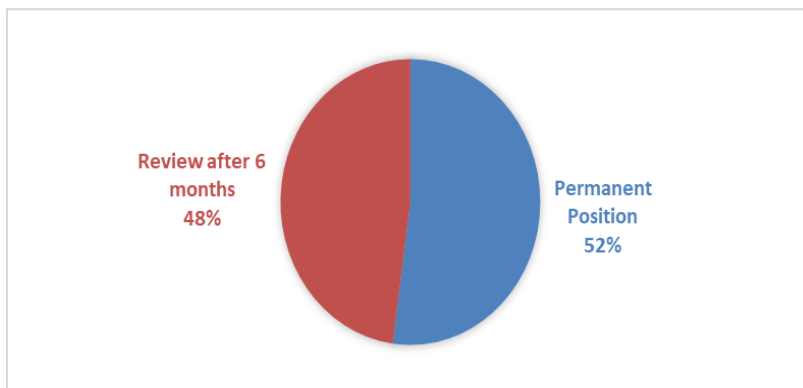


Fig No:4: Pie-chart representing the results of the performance evaluation

Table No:3 Details of the permanent position results

Results	Count
<i>Permanent Position</i>	24
<i>Review after 6 months</i>	22
Grand Total	46

After finding the results, the correlation analysis was performed between self-scores and evaluator scores. The results are shown in below table:

Correlation Results:

Correlations			
		Evaluator Score	Self-Score
Evaluator Score	Pearson Correlation	1	.688**
	Sig. (2-tailed)		<.001
	N	46	46
Self-Score	Pearson Correlation	.688**	1
	Sig. (2-tailed)	<.001	
	N	46	46

** . Correlation is significant at the 0.01 level (2-tailed).

The value of the Pearson correlation is 0.688. We can interpret that self-score and evaluator score have moderately positive relation.

Graphical representation:

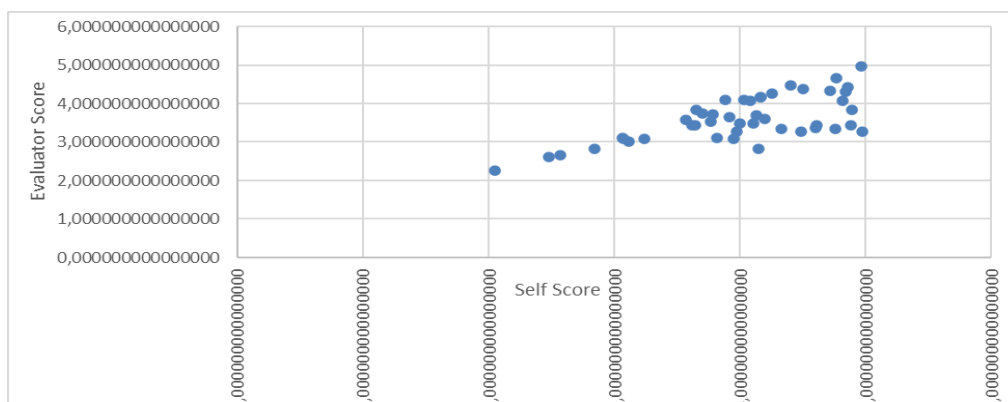


Fig No:5: Scatter plot representing the relation between the self-scores and evaluator scores

Graphical interpretation

The scatterplot above displays the evaluator scores and self-scores of the probationers. Each dot on the graph represents an employee and his/her combination of evaluator score and self-score. Positive coefficients indicate that when the value of one variable increases, the value of the other variable also tends to increase. Positive relationships produce an upward slope on a scatterplot. We can observe there is a relationship between evaluator score and

Limitations

- The study period is short i.e., only for two months.
- Qualitative aspects are included in the questionnaire (evaluation form) but many of the employees and managers did not fill the complete details. They were reluctant to fill the qualitative aspects. So, qualitative aspects were removed for analyzation to reduce the redundancies. If qualitative aspects were included there could be more scope for research.
- Most of the managers do not know how to fill the evaluation form and also behavioral aspects were difficult for them to understand. So, each and every behavioral aspect was explained to them by spending extra time. Also, most of the managers lack the knowledge of performance appraisal process.
- The evaluation form was a single hard copy for both probationers and managers. If first self-scores are filled and then evaluator scores are filled or vice versa, there could be at least little impact on the scores because managers or probationers can view the scores what the other person filled.

Recommendations

- The proper Standard Operating Procedure or format for the performance appraisal is unavailable. This led to the increase of the performance evaluation period and delay of the permanent position designation. If this continues there is a possible chance of increase in the high turn-over rates of the employees. SOPs should be prepared keeping on the below components in consideration:
 - Evaluation Period
 - Procedure of the performance appraisal
 - Performance appraisal guidelines
 - Keeping update of job descriptions (all departments & dynamic to employees)
- Most of the probationers and managers are not aware of the performance appraisal process. The process and guidelines of performance appraisal should be clearly explained to managers or immediate supervisor by the HR Manager. This will help to speed up the process of performance evaluation process.
- Remarks are important for an employee to understand better about their performance and plays an important role for their next review. We can analyze whether there is improvement in the areas he is lacking previously. But most of the managers did not fill in remarks which lead to reduce the scope of the study. So, managers should be explained about the importance of the remarks and how its useful.
- Technology should be introduced to reduce paper work and time. With the help of talent management software, we can efficiently manage the process of performance management without paper work (i.e., distribution of forms, writing scores, and transforming the data into excel). Also, recruitment, learning and development and compensation will be in one place which helps us to consider more factors and increase our scope for the performance evaluation.

- Probationers and managers should be given separate forms to get accurate results to avoid the impact of self-scores on evaluators scores and vice versa.

Conclusion

Employees are the important assets of the hospital because they play a key role in saving lives and making peoples' lives better. Without employees, a hospital cannot expect to provide quality care to patients. Performance management helps employees to work their best when they are being challenged, acknowledged, and motivated. Also, it acts as a platform to solve their problems and give suggestions. Hence, the hospital should set up a proper performance management system and start implementing a few Performance Management best practices. In order to do this, the first thing hospital needs to do is set goals for their organization. Then they have to meet with the different department heads to find out the goals of their respective departments. When everyone is in agreement, these goals should be distributed to the rest of the employees. When employees are performing their best, above and beyond what they were employed to do, those achievements should be recognised. There is intensity in being apprise how much an employees' work is appreciated and how it positively influences the organization. Lastly, continual performance assessments and reviews should be conducted. A little effort to conduct face-to-face meetings with employees and having a conversation with them about their job helps to find out how they're doing and offer them some guidance on how they can improve.

References

1. Aishwarya PT, Srikanth N, "Transition of performance appraisal from the 90 degree to 720 degree".
2. ANGELO S. DENISI, THOMAS P. CAFFERTY, AND BRUCE M. MEGLINO, "A Cognitive View of the Performance Appraisal Process: A Model and Research Propositions", 1984.
3. Ashima Aggarwal, Gour Sundar Mitra Thakur, "Techniques of Performance Appraisal-A Review", February 2013.
4. Asst. Prof. Ganesh B. Choudhary, Asst. Prof. Shankar Puranik, "A Study on Employee Performance Appraisal in Health Care", 2014; 59-64.
5. Atieh Bourouni, Roozbe and Hesam Amiri, "A New Framework for Selection of the Best Performance Appraisal Method", (2009).
6. Carlenn H. Stoskopf, Deborah C. Glik, Samuel L. Baker, James R. Ciesla, Catherine M. Cover, "The Reliability and Construct Validity of a Behaviourally Anchored Rating Scale Used To Measure Nursing Assistant Performance", (June 1, 1992).
7. Cawley, B. D., Keeping, L. M., & Levy, P. E. , "Participation in the performance appraisal process and employee reactions: A meta-analytic review of field investigations", (1998).
8. Daniel A Devcich, Jennifer Weller, Simon J Mitchell, Scott McLaughlin, Jenny W Rudolph, Danile B Raemer, Martin Zammert, Sara J Singer, Chris MA Frampton, Alan F Merry, "A behaviourally anchored rating scale for evaluating the use of the WHO surgical safety checklist: development and initial evaluation of the WHOBARS", Volume 25, Issue 10.

9. David M. Klieger Harrison J. Kell Samuel Rikoon Kri N. Burkander Jennifer L. Bochenek Jane R. Shore, "Development of the Behaviourally Anchored Rating Scales for the Skills Demonstration and Progression Guide", ETS RR-18-24.
10. Decenzo, D. A. and Robbins, Stephen P, "Human resource management. John Wiley and sons, 7th edition" .2002.
11. Elizabeth Renju Koshy, Dr.P.Suguna, "Performance Appraisal in the Contemporary World", Volume 2, Issue 9, September 2014.
12. Lucas W. Thornblade, Elizabeth G Henry, Nguyen Minh Tam & Jeffrey F. Markuns, "A novel tool for assessing primary care quality at the point of care in Vietnam", 21 Mar 2016.
13. Mieke Audenaert, Adelién Decramer, Bert George, " How to foster employee quality of life: The role of employee performance management and authentic leadership", 4th February, 2021.
14. Ms. Ramila Devi Ram Sing, Dr. S. Vadivelu, "The Need for 360 and 720 Degree Performance Appraisal System in Indian Organizations", Volume 119 No. 15 2018, 1101-1118.
15. Paul O. King storm, Alan R. Bass, "A CRITICAL ANALYSIS OF STUDIES COMPARING BEHAVIORALLY ANCHORED RATING SCALES (BARS) AND OTHER RATING FORMATS", June 1981.
16. Primadewi, K., & Biomi, A. A. (2021). Effect of occupational health safety on medical staff performance in Bali Royal Hospital Denpasar. *International Journal of Health & Medical Sciences*, 4(1), 141-144. <https://doi.org/10.31295/ijhms.v4n1.1642>
17. R.D. Arvey and K.R.Murphy, "Performance evaluation in work settings", February 1988.
18. Ramila Devi Ram Sing , S. Vadivelu, "A Study on Employee Performance Appraisal System in Hospitals—With Respect to Hospitals in Vellore City".
19. RUBY MELODY AGBOLA, "The Effectiveness of Performance Appraisal as a Tool for Enhancing Employee Performance in the Public Health Sector", Korle-Bu Teaching Hospital P. O. Box 77, Korle-Bu, Accra GHANA.
20. Sukumar C. Debnath, D.B.A., B. Brian Lee, Ph.D., CPA, Sudhir Tandon, Ph.D., " Fifty Years and Going Strong: What Makes Behaviourally Anchored Rating Scales So Perennial as an Appraisal Method?", (February 2015).
21. Sutapa, I. K., Kader, I. M. S., Santiana, I. M. A., Wibawa, I. G. S., Yasa, I. M. T., & Suasira, I. W. (2021). Work accident risk analysis with FMEA (failure mode and effect analysis) method on steel frame bridge project. *International Journal of Physical Sciences and Engineering*, 5(3), 52–60. <https://doi.org/10.53730/ijpse.v5n3.2942>
22. Tahere Moradi, Marzeih Adel Mehraban, Mahin Moeini, "Comparison of the Perceptions of Managers and Nursing Staff Toward Performance Appraisal", 2017 Mar-Apr; 22(2): 128–134.
23. Widana, I.K., Sumetri, N.W., Sutapa, I.K., Suryasa, W. (2021). Anthropometric measures for better cardiovascular and musculoskeletal health. *Computer Applications in Engineering Education*, 29(3), 550–561. <https://doi.org/10.1002/cae.22202>
24. Yalcin Vural, PelinVardarlier, Abdullah Aykir, "The Effects of Using Talent Management With Performance Evaluation System Over Employee Commitment", 9th November 2012.

25. Zaynab Badreddine, Malak Aoun, "Performance Appraisal Systems in Hiram Hospital and its Relationship with Employees' Performance: Empirical Study", Vol 5 No 2 (2019).