

A STUDY ON "EMPLOYEE DATA MANAGEMENT SYSTEM IN HEALTHCARE " AT KAUVERY HOSPITAL

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ABSTRACT

Employee Data Management Systems (EDMS) play a crucial role in improving organizational efficiency, particularly in the healthcare sector where managing large volumes of employee information is essential. This study examines the existing employee data management practices at Kauvery Hospital, Hosur. It focuses on understanding the current system, identifying challenges such as data inaccuracy, security concerns, and lack of user training, and evaluating system effectiveness. The study uses both primary and secondary data, collected through questionnaires and institutional records. The findings highlight the need for improved digital systems, better training, and enhanced data security measures. The study concludes with suggestions to improve efficiency, accuracy, and decision-making in employee data management.

KEYWORDS: Employee Data Management, Healthcare Systems, HRIS, Hospital Administration, Data Accuracy, Payroll Management.

1. INTRODUCTION

In modern healthcare institutions, employee data management plays a vital role in ensuring smooth administrative operations. Hospitals manage diverse employee groups and large volumes of information, including personal records, attendance, salaries, leave, and performance details. Manual methods are often slow, error-prone, and difficult to maintain. Therefore, digital Employee Data Management Systems are increasingly adopted to improve efficiency, accuracy, and accessibility.

Kauvery Hospital, Hosur, like many growing healthcare institutions, depends on systematic employee data management for effective workforce administration. This study investigates the current system, identifies challenges, and evaluates how digital tools support hospital performance.

2. REVIEW OF LITERATURE

1. **Edward Tufte (2001)** stated that effective data presentation improves clarity, communication, and decision-making in organizations. Well-structured systems help managers understand information quickly.
2. **Colin Ware (2004)** explained that data visualization improves human understanding and helps administrators analyze employee data more effectively.
3. **Kenneth C. Laudon and Jane P. Laudon (2018)** highlighted that Management Information Systems are essential for collecting, storing, and processing organizational data efficiently.
4. **Michael J. Kavanagh and Richard D. Johnson (2017)** noted that Human Resource Information Systems improve workforce planning, reduce paperwork, and minimize manual errors.
5. **Karen A. Wager, Frances W. Lee, and John P. Glaser (2017)** found that healthcare information systems improve coordination and administrative efficiency in hospitals.
6. **Christopher S. Kruse et al. (2016)** stated that electronic health records and digital systems improve operational efficiency but require proper employee training.
7. **Qin et al. (2023)** found that effective HRM practices supported by digital systems improve employee performance and service quality in healthcare institutions.
8. **Sharma and Gupta (2020)** identified that employee data systems help in attendance tracking, payroll management, and performance evaluation.
9. **Patel (2019)** emphasized that data privacy and security are major concerns in healthcare, and strong protection measures are necessary.
10. **Davenport (2013)** explained that data-driven systems improve decision-making, productivity, and overall organizational performance.

3. OBJECTIVES OF THE STUDY

1. To examine the current employee data management practices.
2. To evaluate the efficiency and accuracy of the system.
3. To identify issues in attendance, payroll, and record management.

4. To assess employee satisfaction with the system.
5. To suggest improvements for better performance.

4. METHODOLOGY

Sample Size

The sample size of the study consisted of 103 employees from Kauvery Hospital, Hosur. The respondents included HR staff, administrative staff, doctors, nurses, and support staff who were directly involved in using the employee data management system.

Sampling Method

The study used convenience sampling method. Respondents were selected based on their availability, accessibility, and willingness to participate in the survey.

Data Collection

Both primary data and secondary data were used in the study. Primary data were collected through a structured questionnaire from the employees. Secondary data were collected from hospital records, reports, books, journals, and online sources related to employee data management systems.

5. DATA ANALYSIS AND INTERPRETATION

DEMOGRAPHIC ANALYSIS

Data analysis and interpretation is an important part of the research process. It involves examining, organizing, and interpreting the data collected from respondents in order to achieve the objectives of the study. In this research, the data collected from employees of Kauvery Hospital, Hosur were analyzed using percentage analysis, charts, Chi-square test, and ANOVA. The results were presented in tables, pie charts, bar charts, and line charts for better understanding. The purpose of the analysis was to evaluate the effectiveness of the Employee Data Management System and to understand employees' opinions regarding its usage, efficiency, accuracy, security, and overall performance.

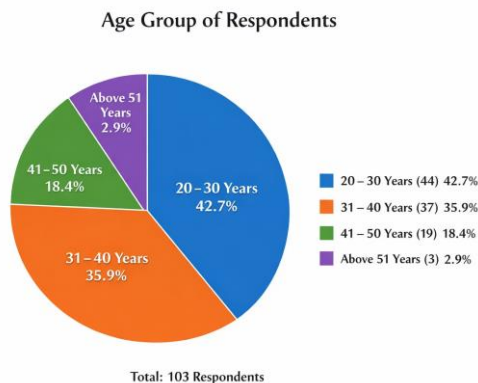


Figure 1 Age.

Interpretation:

The pie chart shows the distribution of respondents based on their age groups. The majority of respondents belong to the 20–30 years category (42.7%), making it the largest group. This is followed by the 31–40 years group (35.9%), which also represents a significant portion of the sample. The 41–50 years group accounts for a smaller share (18.4%), while respondents above 51 years form the least proportion (2.9%). Overall, the data indicates that most respondents are young adults, with participation decreasing as age increases.

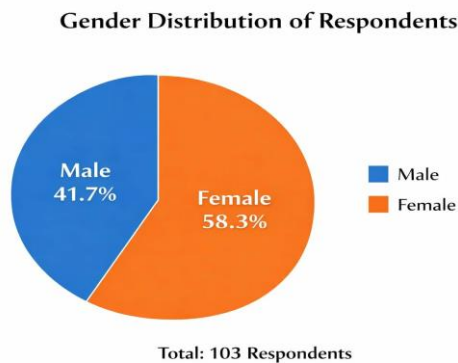


Figure 2 Gender.

Interpretation:

The pie chart illustrates the gender distribution of respondents. It shows that females constitute the majority with 58.3% of the total respondents, while males account for 41.7%. This indicates that the survey has higher participation from females compared to males. Overall, the data reflects a moderately balanced distribution, but with a noticeable dominance of female respondents.

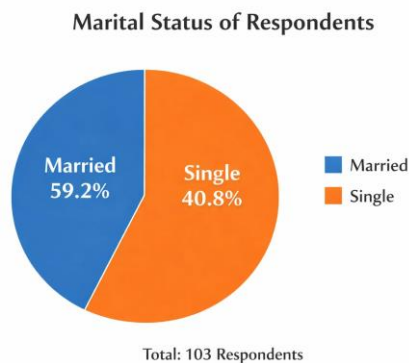


Figure 3 Marital Status.

Interpretation:

The pie chart shows the marital status of respondents. A majority of the respondents are married (59.2%), while 40.8% are single. This indicates that most participants in the survey are married individuals. However, the proportion of single respondents is also considerable, suggesting a fairly balanced representation, though with a clear dominance of married respondents.

EMPLOYEE DATA MANAGEMENT

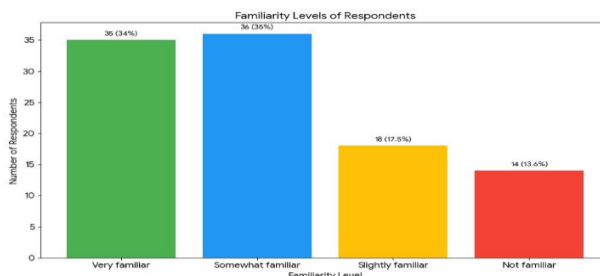


Figure 4. How familiar are you with the employee data management system used in the hospital

Interpretation:

The chart shows that most respondents are at least somewhat familiar with the system, with "Somewhat familiar" (35%) being the highest, closely followed by "Very familiar" (34%). A smaller portion of respondents are "Slightly familiar" (17.5%) and "Not familiar" (13.6%), indicating that only a minority have low or no familiarity with the system

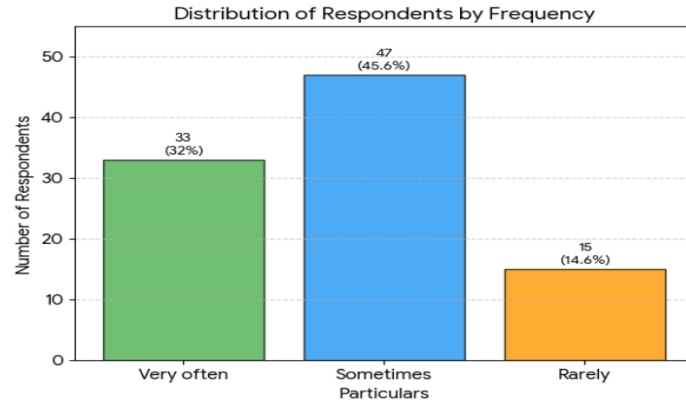


Figure 5 How often do you use the employee data system in your work.

Interpretation

Most respondents (47 or 45.6%) reported that they sometimes engage in the activity, making it the most common response. A considerable number (33 or 32%) stated they do it very often, while a smaller group (15 or 14.6%) indicated they rarely engage in it. Overall, the activity is performed occasionally by the majority rather than consistently or rarely.

STATISTICAL ANALYSIS

1. Chi Square Test

The Chi-Square test was used to examine whether there is a significant difference among the respondents’ opinions regarding the performance level. The null hypothesis (H₀) states that there is no significant difference among the respondents’ opinions, while the alternative hypothesis (H₁) states that there is a significant difference among the respondents’ opinions. The total number of respondents was 103, and since there were four categories, the expected frequency for each category was calculated as $103 \div 4 = 25.75$.

The observed frequencies were 27 for “Very well,” 46 for “Fairly well,” 19 for “Slightly well,” and 11 for “Not at all.” The Chi-Square values for each category were calculated as 0.06, 15.93, 1.77, and 8.45 respectively. The total calculated Chi-Square value (χ^2) was 26.21. This result indicates that the responses are not equally distributed across the categories. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. It can be concluded that there is a significant difference among the respondents’ opinions regarding the performance level.

Interpretation

The Chi-Square test shows that the respondents did not give equal opinions about the performance level. Most of the respondents selected “Fairly well,” while only a few selected “Not at all.” This means the opinions are different from one another. So, there is a significant difference in the respondents’ views, and most people feel the performance level is fairly good.

2. ANOVA Test

The ANOVA test was conducted to determine whether there is a significant difference among the response categories such as Very often, Sometimes, Rarely, and Never. The null hypothesis (H_0) states that there is no significant difference among the categories, while the alternative hypothesis (H_1) states that there is a significant difference among them. From the ANOVA table, the sum of squares between groups is 362.25 and within groups is 1370.00. The degrees of freedom are 3 and 16 respectively. The mean square values are 120.75 for between groups and 85.63 for within groups. The calculated F value is 3.52. Based on the result, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it is concluded that there is a significant difference among the response categories.

Interpretation

The ANOVA test shows that the opinions of respondents are different across the response categories. Most respondents did not choose the same option, which means their answers vary. This difference is statistically significant and not due to chance. Therefore, it can be understood that respondents have different views, and the response categories are not equally preferred.

6.FINDINGS

1. The Employee Data Management System improves overall administrative efficiency in the hospital.
2. Employee records are maintained in an organized and accurate manner.
3. The system supports attendance management effectively.
4. Payroll processing is handled smoothly through the system.
5. Most employees find the system easy to access and use in their daily work.
6. A majority of respondents trust the security and confidentiality of employee data.
7. The system helps in quick retrieval of employee information when needed.
8. Digital data management has significantly reduced manual paperwork and record errors.

9. Some employees require additional training to use the system more effectively.
10. Technical support and regular system updates are needed for better performance and user satisfaction.

7.SUGGESTIONS

1. Conduct regular training programs to improve employees' knowledge and system usage skills.
2. Provide effective technical support for quick resolution of system errors and issues.
3. Upgrade the system periodically by adding new features and advanced functions.
4. Strengthen data security measures to protect sensitive employee information.
5. Maintain proper backup systems to prevent data loss and ensure recovery.
6. Improve system speed for faster data entry, processing, and retrieval.
7. Make the system more user-friendly with a simple and easy interface.
8. Collect employee feedback regularly to identify problems and improve the system continuously.
9. Perform regular maintenance checks to ensure smooth and reliable system performance.
10. Increase management support and investment for future development

8.CONCLUSION

The Employee Data Management System at Kauvery Hospital, Hosur, plays a significant role in managing employee information in an efficient and systematic manner. It has become an essential tool for handling important workforce functions such as attendance management, payroll processing, employee record maintenance, leave management, and performance monitoring. By using a digital system, the hospital is able to reduce manual errors, save time, and improve the accuracy of employee data.

The study findings show that the majority of employees have a positive opinion about the system and believe that it contributes to smoother administrative operations. The system also supports faster retrieval of information, better confidentiality of records, and improved decision-making for management. In addition, digital data management has reduced paperwork and increased overall productivity within the organization.

However, the study also identified certain areas that require improvement. Some employees need better training to use the system effectively, and occasional technical issues may affect daily operations. Regular software updates, stronger technical support, and continuous monitoring are necessary to ensure long-term efficiency and user satisfaction.

Overall, the study concludes that a well-managed Employee Data Management System is highly important for effective healthcare administration. It not only improves internal operations but also supports better workforce management and organizational growth. With continuous improvements and proper support, the system can deliver even greater benefits to Kauvery Hospital in the future.

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