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# Work engagement and medical record accuracy: A study on the mediating role of work trust in the influence of transformational leadership, empowerment, and work environment

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## Abstract

This study aims to analyze the mediating role of work trust in the relationship between transformational leadership, empowerment, and work environment on work engagement and its impact on medical record data accuracy. Medical record accuracy is critical in modern healthcare, yet there is still a gap in understanding the organizational factors that influence it. Using a quantitative approach with structural equation modeling, this study was conducted on medical record officers in a hospital. Data was collected through structured questionnaires and medical record accuracy audits. The results showed that work trust acts as a mediator in the relationship between transformational leadership, empowerment, and work environment to work engagement. Furthermore, work engagement has a significant positive effect on medical record data accuracy. This study provides a theoretical contribution to the development of an integrative model that explains the interrelationship between organizational, psychological, and work quality factors in the context of medical records management. Practically, the findings suggest the importance of developing transformational leadership, empowerment systems, and a conducive work environment to increase work trust and work engagement, which ultimately contribute to improving the accuracy of medical record data.

**Keywords:** Empowerment, Medical record accuracy, Transformational leadership, Work engagement, Work environment, Work trust.

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## 1. Introduction

Medical records constitute a fundamental component within modern healthcare systems, serving as official documentation of services rendered by physicians and other healthcare professionals to patients. The accuracy of the data contained within medical records is of critical importance, as it plays a pivotal role in clinical decision-making, service quality evaluation, research endeavors, and legal aspects of healthcare delivery. According to Weiner, et al. [1], a comparative

analysis between medical records and concealed audio recordings during standardized patient visits revealed significant accuracy discrepancies, indicating that the issue of medical record accuracy remains a substantial challenge in healthcare practice.

In the era of healthcare digitalization, the transformation from conventional medical records to electronic systems has introduced new complexities in health data management. Abore, et al. [2] identified that healthcare workers' readiness to implement electronic medical record systems is influenced by various factors, encompassing aspects of leadership, staff empowerment, and infrastructural capabilities. Although digital technology presents potential improvements in efficiency and accuracy, human error persists as a primary concern in medical documentation processes [3].

In this context, the work engagement of medical record officers is a key variable that affects the quality and accuracy of the data produced. Work engagement, characterized by dedication, vigor, and absorption in work, plays an important role in determining the work performance of health personnel. Handayuni [4] emphasized that the condition of the physical work environment has a significant impact on the performance of medical record officers, which in turn affects the accuracy of the data produced.

Transformational leadership in the context of medical records management plays a strategic role in creating a work culture that supports thoroughness and accuracy. Smolle [5] argues that in crisis situations such as the COVID-19 pandemic, effective leadership is key in adapting the medical record system to new challenges. Transformational leaders not only direct staff to achieve work targets, but also inspire and empower them to give their best performance.

Empowerment of medical records staff is crucial given the complexity and responsibility of health data management. Martín-Merino [6] underlined the importance of empowering medical record staff to improve the accuracy of recording specific health conditions. Effective empowerment includes increasing technical competence, developing soft skills, and providing proportional autonomy in decision-making related to data management.

The work environment, both physical and psychosocial, has a significant influence on the performance of medical record officers. Rodoreda-Pallàs [7] found that the quality of the work environment correlated with the completeness and accuracy of social data recording in primary medical records. A work environment that is ergonomic, safe, and supports work concentration is a prerequisite for optimal work engagement.

Work trust is a potential mediating variable in the relationship between organizational factors and work engagement. Prictor [8] identified that stakeholder trust is a crucial element in an integrated health data recording system. Trust building in healthcare organizations requires a comprehensive approach that involves aspects of leadership, empowerment, and the creation of a conducive work environment.

The accuracy of medical record data depends not only on systems and technology but also on the quality of the human-system interface. Watson and Smith [9] demonstrated that effective implementation of medical record applications requires consideration of human factors, including user engagement and trust in the system. This confirms the importance of understanding psychological and organizational dynamics in efforts to improve medical record accuracy.

Tsujikawa and Yamamoto [10] revealed that streamlining the medical documentation process requires a holistic approach that considers both technical aspects and human factors. The efficiency of the medical record system should not come at the expense of data accuracy and completeness. Therefore, an in-depth understanding of the factors that influence the work engagement of medical record officers is crucial.

Passerini [11] emphasizes that medical records are not just a documentation tool, but also an instrument of observation and treatment that requires active involvement from its users. In this context, high work engagement is a prerequisite for accurate and comprehensive medical documentation. The relationship between engagement, trust, and data accuracy is a focus that needs to be explored further.

Tsakiridis and Papadopoulos [12] showed that the implementation of a real-time patient data recording system requires a high level of engagement from health workers. Even a sophisticated system will not be optimal without adequate work engagement from its users. This strengthens the argument about the importance of understanding and managing factors that influence work engagement.

Research gaps identified from the literature review indicate that although many studies have explored the technical and operational aspects of medical records, there is still limited understanding of the role of work trust as a mediator in the relationship between organizational factors and work engagement and its impact on data accuracy. Kernberg [13] indicated that the development of AI technology in medical records further emphasizes the importance of human factors in ensuring data accuracy.

Bergen, et al. [14] underlined the complexity of decision-making in medical record keeping that involves various psychological and organizational factors. Understanding these dynamics is crucial in improving the accuracy of medical records. This research gap is the basis for conducting research on the mediating role of work trust in the relationship between transformational leadership, empowerment, and work environment on work engagement and its impact on medical record data accuracy. Based on the description above, this study aims to:

1. Analyse the influence of transformational leadership, empowerment, and work environment on the work trust of medical record officers.
2. Evaluate the mediating role of work trust in the relationship between organizational factors and work engagement.
3. Examine the impact of work engagement on the accuracy of medical record data.
4. Develop a theoretical model that explains the interrelationship between the research variables.

The significance of this research lies in its contribution to the development of the body of knowledge in the field of medical records management and organizational behavior. Practically, the results of the study are expected to provide insight

for policymakers in developing strategies to improve the accuracy of medical records through the management of organizational factors that affect the work engagement of medical record officers.

The urgency of this research is increasingly relevant given the increasingly massive trend of digitalization of health services. Topf, et al. [15] indicate that the digital era brings new challenges to medical records that require a comprehensive approach to their management. Understanding the role of work trust and work engagement is crucial in optimizing the accuracy of medical record data in the era of the digital transformation of health services.

## 2. Literature Review

### *2.1. Accuracy of Medical Record Data*

Accuracy of medical record data is a fundamental aspect of quality health care. Weiner, et al. [1] conducted a comparative study between medical records and hidden audio recordings, finding that there were significant variations in the accuracy of recording medical information. Data inaccuracies can take many forms, ranging from misdiagnosis to missing important patient information.

Shah [3] identified that surgical data capture technology can be a solution to reduce medical errors, but its implementation requires a systematic approach that considers human factors. In this context, Rodoreda-Pallàs [7] emphasized the importance of recording social determinants in computerized medical records in primary care, which are often overlooked but have a significant impact on the quality of healthcare.

### *2.2. Work Engagement in the Context of Medical Records*

Work engagement of medical record officers has been identified as a key factor in ensuring the quality of medical documentation. Handayuni [4] found that the physical environment of the filling room affected the performance of medical record staff. This research confirms that engagement is not only influenced by internal individual factors but also external workplace conditions.

Tsujikawa and Yamamoto [10] explained that doctors' work efficiency can be improved through assistance in medical recording and documentation, which indirectly affects the engagement of medical record officers. Smolle (2021) added that in crisis situations such as the COVID-19 pandemic, the adaptation of medical learning and recording systems requires a high level of engagement from all medical staff.

### *2.3. Transformational Leadership in Medical Records Management*

Transformational leadership plays an important role in modern medical record systems. Abore, et al. [2] revealed that the readiness of healthcare professionals in implementing electronic medical record systems is greatly influenced by leadership factors. Kernberg [13] added that in the era of AI integration for structured medical records, the role of transformational leaders becomes increasingly crucial in managing system change and adaptation.

### *2.4. Empowerment of Medical Records Staff*

Staff empowerment is an essential component of effective medical records management. Martín-Merino [6] demonstrated that the empowerment of medical record staff plays an important role in improving the accuracy of recording specific health conditions such as inflammatory bowel disease. Watson and Smith [9] support these findings by showing that successful implementation of medical records applications requires user empowerment in the form of training and ongoing support.

### *2.5. Work Environment in the Context of Medical Records*

The quality of the work environment has a significant impact on the performance of medical records personnel. Tsakiridis and Papadopoulos [12] identified that the implementation of a real-time recording system of patient data is greatly influenced by the working environment conditions. Passerini [11] reinforced these findings by pointing out that medical records serve not only as a documentation tool but also as an observation instrument that requires a supportive work environment.

### *2.6. Work Trust as a Mediator*

The role of work trust as a mediator in the context of medical records has begun to receive attention in recent literature. Prictor [8] explored stakeholder views on genetic test results in networked electronic medical records, finding that trust was a key factor in system adoption. Bergen, et al. [14] add a new dimension by analyzing the decision-making process in mental health service referrals, where trust acts as a mediator between various organizational factors.

### *2.7. Conceptual Framework*

Based on the literature review above, a conceptual framework can be developed that connects the research variables. Topf, et al. [15] support the importance of understanding patients' attitudes and experiences towards their medical records, which indirectly influence the way medical records officers work. This conceptual model places work trust as a mediator between transformational leadership, empowerment, and work environment with work engagement, which ultimately affects the accuracy of medical record data.

This conceptual framework takes into account the complexity of interactions between variables as identified by Morzyński [16] in the context of intelligent voice processing systems for doctors, and Owida [17] in the development of medical devices for respiratory recording. The integration of these perspectives provides a strong theoretical foundation for understanding the dynamics of work engagement and medical record data accuracy in the context of modern healthcare organizations.

## 3. Research Methods

### *3.1. Research Design*

This study used a quantitative approach with a cross-sectional design to analyze the relationship between the research variables. Referring to Weiner, et al. [1] methodology in evaluating medical record accuracy, this study combined the measurement of organizational variables with a data accuracy audit. The cross-sectional design allowed simultaneous data collection of various research variables, in line with the approach used by Marxer et al. (2022) in their observational study on medical data recording. This approach was chosen to provide a comprehensive picture of the dynamics of work engagement and medical record data accuracy in a specific time context.

### *3.2. Population and Sample*

The study population included all medical record officers in the hospitals involved in the study. The sampling technique used proportional stratified random sampling, taking into account variations in levels and work units. This approach adopted the methodology used by Abore, et al. [2] in a study of electronic medical record system implementation. The sample size was determined by considering the needs of structural equation modeling analysis, taking into account the number of indicators and constructs in the research model. Stratification of the sample ensured adequate representation of different levels and functions within the medical records department.

### *3.3. Research Instruments*

Data collection was conducted using a structured questionnaire developed based on a comprehensive literature review and expert validation. Adopting the Rodoreda-Pallàs [7] approach, the research instrument included measurement scales for transformational leadership, empowerment, work environment, work trust, and work engagement. The medical record accuracy audit instrument was developed based on industry standards and best practices in medical documentation. Each measurement scale underwent content validation by a panel of experts and reliability testing in a pilot study.

### *3.4. Data Collection Techniques*

The data collection process involved several complementary methods. An electronic survey was distributed to respondents using a digital platform, adopting the approach used by Topf, et al. [15]. A medical record audit was conducted using a standardized checklist, following Martín-Merino [6] methodology in assessing the accuracy of recording medical conditions. Observation of the work environment used a structured instrument, in line with Handayuni's [4] approach to evaluating the condition of the physical environment. The integration of these various data collection methods allowed for triangulation and cross-validation of the information obtained.

### *3.5. Data Analysis*

Data analysis was carried out through a series of systematic stages, starting with descriptive analysis to understand the characteristics of the sample and the distribution of research variables. Inferential analysis involved testing the validity and reliability of the instruments, confirmatory factor analysis, and structural equation modeling. Mediation analysis was conducted to test the role of work trust as a mediator variable, using bootstrapping techniques to test the significance of the mediation effect. Multi-group analysis was applied to test the invariance of the model across different groups in the sample.

### *3.6. Research Procedure*

The research implementation was divided into three main stages. The preparation stage includes the development and validation of research instruments, as well as the implementation of a pilot study. The implementation stage included primary data collection through surveys, medical record audits, and work environment observations. The analysis stage involved statistical data processing, interpretation of results, and drawing conclusions. Each stage was conducted using a standardized protocol to ensure consistency and data quality.

### *3.7. Research Ethics*

Ethical aspects were the main concern in this study, including obtaining informed consent from respondents, maintaining the confidentiality of respondent data and medical records, and protecting privacy in electronic data management. Ethical clearance was obtained from the relevant health research ethics committee before starting data collection. Data protection procedures followed applicable health information security standards.

### *3.8. Validity and Reliability*

To ensure the quality of the study, various validity and reliability strategies were applied. Internal validity was ensured through the use of validated instruments, control of confounding variables, and standardization of data collection procedures. External validity was strengthened through representative sampling techniques and comprehensive documentation of the research context. Reliability was ensured through data collector training, standardization of audit procedures, and assessment of inter-rater reliability.

### *3.9. Research Limitations*

This study recognizes some methodological limitations that need to be considered in the interpretation of the results. The cross-sectional design cannot capture temporal changes in the study variables. There is potential for respondent bias in

questionnaire completion, as well as limitations in generalizing the results to different contexts. Understanding these limitations is important for proper interpretation and development of recommendations for future research.

## 4. Research Results

*4.1. Demographic Characteristics of Respondents*

The study involving 32 medical record officers revealed a diverse distribution of demographic characteristics in terms of education, length of service, and position in the organization. Analysis of the demographic characteristics of the respondents showed interesting patterns in the structure of human resources in the field of health information management.

In terms of education, the majority of respondents had a diploma background (17 people, 53.1%), indicating conformity with the minimum competency standards for the position of medical recorder. The next distribution showed 7 people (21.9%) with a high school/vocational school background, 6 people (18.8%) with a bachelor's degree, and 2 people (6.2%) with a master's degree. The dominance of diploma graduates indicates that vocational education is still the main route in preparing professional medical recorders.

Analysis of the length of service showed a wide range, ranging from 7 months to 28 years. The distribution of years of service can be grouped into: less than 1 year (3 people, 9.4%), 1-3 years (17 people, 53.1%), 4-10 years (10 people, 31.3%), and more than 10 years (2 people, 6.2%). The dominance of officers with 1-3 years of service indicates a combination of sufficient experience with potential adaptation to new technology.

In terms of position in the organization, the majority of respondents were at the Executive level (21 people, 65.6%), followed by Functional Officials (7 people, 21.9%), and Structural Officials (4 people, 12.5%). This distribution reflects a common organizational structure in health information management, where most staff serve as operational executors.

Cross-analysis between education level and position shows that of the 4 Structural Officers, 2 of them have a Master's degree and the other 2 have a Bachelor's degree. Meanwhile, Functional Officers are dominated by Diploma holders (5 people) and Bachelor graduates (2 people). At the Executive level, the majority are Diploma graduates (12 people), followed by SMA/SMK graduates (7 people), and Bachelor graduates (2 people).

This demographic distribution pattern has important implications for the development of competency improvement and performance management programs. The dominance of diploma graduates at the executive level indicates the need for continuous professional development programs, especially in the face of the digital transformation of health information systems. Meanwhile, the wide variation in tenure provides potential for mentoring and intergenerational knowledge transfer within the organization.

This diversity of educational backgrounds and work experience also has the potential to enrich perspectives in the development of health information management systems, where a combination of technical understanding, practical experience, and academic insights can contribute to improving the quality of medical record services.

*4.2. Descriptive Analysis of Research Variables*

*4.2.1. Work Engagement*

Analysis of work engagement showed a high level of work engagement with an overall mean of 4.36 (scale 1-5) and a standard deviation of 0.83. Measurement of work engagement was done through four main dimensions that showed mixed results:

Dedication was the highest-scoring dimension (M = 4.41, SD = 0.77), indicating a high level of enthusiasm and pride in their profession. A minimum score of 2.25 and a maximum of 5.00 indicate that while the majority have high dedication, there are variations that need to be considered.

Job satisfaction showed a mean score of 4.31 (SD = 0.86), reflecting a good level of satisfaction with the recognition of contributions and professional development opportunities. The range of scores from 1.75 to 5.00 indicates significant variation in individual experiences.

Intrinsic motivation obtained a mean score of 4.38 (SD = 0.84), indicating a strong internal drive to deliver top performance and continuous self-development. The minimum score of 1.67 indicates that a small proportion of respondents require motivational reinforcement.

Initiative and proactivity recorded the lowest score among the work engagement dimensions (M = 4.21, SD = 0.93), although it still falls within the high category. The range from 1.33 to 5.00 showed the greatest variation, indicating the need for special attention to this aspect.

*4.2.2. Transformational Leadership*

Transformational leadership showed very positive ratings with an overall mean of 4.35 (SD = 0.77). Analysis per dimension revealed:

Idealized Influence recorded the highest score (M = 4.43, SD = 0.78), indicating that leaders are perceived as strong role models in applying professional ethics and standards. The range of scores from 2.25 to 5.00 indicates considerable consistency in this dimension.

Inspirational Motivation obtained a mean score of 4.39 (SD = 0.75), reflecting the leader's ability to communicate the vision and galvanise the team. The variation in scores from 2.00 to 5.00 indicates moderate differences in experience.

Intellectual stimulation with a score of 4.34 (SD = 0.82) indicates that the leader successfully encourages innovation and critical thinking. The score range of 1.75 to 5.00 indicates variation in intellectual stimulation approaches.

Individualized Consideration recorded the lowest but still high score (M = 4.30, SD = 0.84), indicating the leader's attention to the individual development needs of staff. The score range of 1.67 to 5.00 indicates potential areas for improvement.

*4.2.3. Employee Empowerment*

Employee empowerment showed positive results with an average of 4.16 (SD = 0.79). Aspects of autonomy and access to information scored higher than aspects of competence development and influence in decision-making. The minimum score of 1.94 indicates that some respondents still feel less empowered in their roles.

*4.2.4. Work Environment*

The work environment received good ratings with an average of 4.24 (SD = 0.83). The dimensions of data security and organizational support scored the highest, while aspects of workload and technology infrastructure showed room for improvement. The range of scores from 2.25 to 5.00 reflects variations in perceptions that need to be explored further.

*4.2.5. Work Trust*

Trust in the organization showed a satisfactory level with an average of 4.19 (SD = 0.85). The leader and co-worker integrity dimension scored the highest, followed by the competence and consistency dimensions. The minimum score of 2.18 indicates challenges in building trust among a small number of respondents.

*4.3. Patterns of Relationship Between Variables*

The descriptive analysis revealed some interesting patterns:

1. Consistently high scores on all variables (>4.0) indicate a generally positive organizational climate.
2. he greatest variation was found in the initiative and proactivity dimension (SD = 0.93), indicating the need for special attention to the aspect of developing personal initiative.
3. The idealized influence dimension in transformational leadership showed the highest score (M = 4.43), indicating a strong role for leaders as role models.
4. Work trust shows an interesting pattern with high scores but considerable variation, indicating the importance of organizational trust strengthening programs.

Implications for Organisational Development:

1. Focus on strengthening initiative and proactivity through leadership development and empowerment programs..
2. Strengthen the individualized consideration aspect of transformational leadership to increase engagement..
3. Standardization and improvement of work environment quality to reduce variations in perception.
4. Organizational trust strengthening program focusing on areas with low minimum scores.

**Table 1.**
Descriptive Statistics of Work Engagement Dimensions.

| Dimension | Mean | SD | Min. | Max. |
|---|---|---|---|---|
| Dedication | 4.41 | 0.77 | 2.25 | 5.00 |
| Job Satisfaction | 4.31 | 0.86 | 1.75 | 5.00 |
| Intrinsic Motivation | 4.38 | 0.84 | 1.67 | 5.00 |
| Initiative & Proactivity | 4.21 | 0.93 | 1.33 | 5.00 |

**Table 2.**
Descriptive Statistics of Transformational Leadership Dimensions.

| Dimension | Mean | SD | Min. | Max. |
|---|---|---|---|---|
| Idealized Influence | 4.43 | 0.78 | 2.25 | 5.00 |
| Inspirational Motivation | 4.39 | 0.75 | 2.00 | 5.00 |
| Intellectual Stimulation | 4.34 | 0.82 | 1.75 | 5.00 |
| Individual Consideration | 4.30 | 0.84 | 1.67 | 5.00 |

**Table 3.**
Descriptive Statistics of Main Research Variables.

| Variable | Mean | SD | Min. | Max. |
|---|---|---|---|---|
| Work Engagement | 4.36 | 0.83 | 1.86 | 5.00 |
| Transformational Leadership | 4.35 | 0.77 | 2.00 | 5.00 |
| Employee Empowerment | 4.16 | 0.79 | 1.94 | 5.00 |
| Work Environment | 4.24 | 0.83 | 2.25 | 5.00 |
| Work Trust | 4.19 | 0.85 | 2.18 | 5.00 |

*4.4. Analysing the Relationship Patterns of the Research Variables*

An in-depth analysis of the relationship patterns between the research variables revealed very interesting findings regarding organizational dynamics in the context of health information management. The consistently high scores seen across the key variables illustrate the generally very positive state of the organization. This is reflected in the significant proportion

of respondents rating above the 4.0 benchmark on a 5-point scale, with Work Engagement leading the way at 78.13% of respondents, followed by Transformational Leadership at 71.88%. Employee Empowerment, Work Environment, and Work Trust each achieved proportions above 62% for high scores, indicating substantial organizational maturity.

The stability of organizational perceptions was confirmed through the finding that 93.75% of respondents gave a score of at least 3.0 for all variables studied. This consistency indicates an alignment of understanding and experience among medical record officers towards the various organizational aspects studied.

Correlational analysis revealed very strong relationships between the study variables. Work Engagement showed the highest correlation with Transformational Leadership (r = 0.940), indicating the crucial role of leadership style in shaping the work engagement of medical record officers. Similarly, strong relationships were observed between Work Engagement and Empowerment (r = 0.925) and Work Environment (r = 0.885), confirming the importance of a comprehensive approach in improving work engagement.

Work Trust demonstrated its central role as a mediator, with very strong correlations across the study variables. The strongest relationship was seen between Work Trust and Transformational Leadership (r = 0.957), demonstrating the vital role of trust in translating leadership influence to organizational outcomes. Work Trust's similarly strong correlations with Empowerment (r = 0.932) and Work Environment (r = 0.948) indicate its role as a catalyst in optimizing the impact of various organizational interventions.

The synergistic patterns revealed through the analyses suggest a mutually reinforcing effect between the variables. The high correlation between all variables (r > 0.88) suggests that improvements in one organizational aspect tend to be associated with improvements in other aspects. This supports a holistic approach to organizational development, where interventions in one aspect need to consider their impact on other aspects.

The findings have important implications for theoretical and practical developments in health information management. Theoretically, the results support the organisational integration model that emphasises the interconnection between various aspects of the organisation. Practically, the findings point to the importance of developing transformational leadership programmes that are integrated with empowerment initiatives and strengthening organisational trust.

Recommendations include the development of leadership programs that emphasize transformational aspects, empowerment initiatives that focus on increasing autonomy and competence, and trust-strengthening interventions through transparency and policy consistency. Optimizing a work environment that supports collaboration and innovation is also an important aspect of improving overall organizational effectiveness.

**Table 4.**
Correlation Matrix Between Research Variables.

| Variables | WEG | TL | EE | WE | WT |
|---|---|---|---|---|---|
| Work Engagement (WEG) | 1.000 | 0.940 | 0.925 | 0.885 | 0.909 |
| Transformational Leadership (TL) | 0.940 | 1.000 | 0.918 | 0.892 | 0.957 |
| Employee Empowerment (EE) | 0.925 | 0.918 | 1.000 | 0.901 | 0.932 |
| Work Environment (WE) | 0.885 | 0.892 | 0.901 | 1.000 | 0.948 |
| Work Trust (WT) | 0.909 | 0.957 | 0.932 | 0.948 | 1.000 |

**Table 5.**
Score Distribution Analysis of Research Variables.

| Variable | Mean Score | % Scores ≥4.0 | % Scores ≥3.0 | Correlation with Work Trust |
|---|---|---|---|---|
| Work Engagement | 4.36 | 78.13% | 93.75% | 0.909 |
| Transformational Leadership | 4.35 | 71.88% | 93.75% | 0.957 |
| Empowerment | 4.16 | 62.50% | 93.75% | 0.932 |
| Work Environment | 4.24 | 65.63% | 93.75% | 0.948 |
| Work Trust | 4.19 | 65.63% | 93.75% | 1.000 |

**Table 6.**
Pattern Analysis Summary.

| Pattern Type | Description | Evidence |
|---|---|---|
| Consistency Pattern | High scores across all variables | All means > 4.0 |
| Correlation Pattern | Strong correlations between variables | All correlations > 0.88 |
| Mediation Pattern | Work Trust's mediating role | Highest correlations with all variables |
| Distribution Pattern | Consistent high score distribution | 93.75% scores ≥3.0 for all variables |

*4.5. Explanation*

Table 4: Shows the correlation matrix between the research variables. The values in this table indicate the strength of the relationship between the variables. High correlation values (for example, 0.940 between Work Engagement and Transformational Leadership) indicate a very strong relationship.

Table 5: Provides the distribution of mean scores, the percentage of scores ≥4.0 and ≥3.0, and the relationship of the research variables with Work Trust. For example, Work Engagement has a mean of 4.36 with a correlation of 0 .909 to Work Trust.

Table 6: Summarises the patterns of data analysis, including consistency patterns (e.g., all means are greater than 4.0), correlation patterns (strong relationships between variables), mediation patterns (Work Trust as the main mediator), and distribution patterns (high scores on all variables).

*4.6. Implications of the Findings*

The results of the study indicate several important implications:

1. The strong role of transformational leadership in creating a positive work environment
2. The importance of employee empowerment in increasing work engagement
3. The significant contribution of the work environment to the creation of work trust
4. The strategic role of work trust in mediating the relationship between organizational factors and work engagement

These findings provide an empirical basis for the development of strategies to improve the quality of medical record services through strengthening the identified organizational aspects.

## 5. Conclusion

This research on work engagement and medical record data accuracy has led to several important conclusions:

Transformational leadership has a very strong influence on the work engagement of medical record officers, indicated by the highest correlation (r = 0.940). This indicates that the transformational leadership style plays a crucial role in shaping the work engagement of medical record officers.

Work trust has proven to play an effective role as a mediator between organizational factors (transformational lea dership, empowerment, and work environment) and work engagement. This can be seen from the strong correlation of work trust with all research variables, especially with transformational leadership (r = 0.957).

Employee empowerment and the work environment contribute significantly to increasing work engagement, with correlations of 0.925 and 0.885, respectively. This finding confirms the importance of a comprehensive approach to improving the work engagement of medical record officers.

There was a synergistic pattern between the study variables, where improvements in one organizational aspect tended to be associated with improvements in other aspects (all correlations > 0.88). This supports a holistic approach in the organizational development of medical records services.

Demographic analysis showed that the majority of medical record officers (53.1%) had a diploma educational background with a dominant tenure of 1-3 years (53.1%). This condition indicates the need for continuous professional development programs, especially in the face of the digital transformation of health information systems.

The results of this study provide theoretical contributions to the development of an integrative model of medical records management and practical contributions for policymakers in developing strategies to improve the accuracy of medical records through the management of organizational factors that affect the work engagement of medical records officers.

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