Risk Evaluation and Information Security Protection in the Implementation of Management Information Systems

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Abstract

Data is one of the asset important and valuable Good for individual and organization . In the System Information Management (SIM), stored data can in the form of financial data , customer data, employee data , and important data others . Therefore that , data security in SIM is very important For protect information from threat like data theft , damage physique to system information and threats other . Articles This aim For discuss about data security in SIM, risks that can occur occurs in data security , and protection strategies that can be done For overcome risk said . Data security in system information management is effort For protect , secure asset information from possible threats will arise that can endanger confidentiality , availability , and integrity all asset information company , not only device hard and soft , but also the sensitive data stored on it Data security in System Information Management is critical aspects For every organization . Risk data security can originate from various sources and their impacts can be very serious . Practical suggestions For overcome risk data security in SIM , namely Cyber Security Topics, Awareness Employees , Security Solutions Network , Plan Data Recovery , Compliance Audits , and Evaluations Periodic .

Keywords: *System Information Management; Data Security;, Risks and Protection Strategies*

Abstract: Data adalah aset penting dan berharga bagi individu dan organisasi. Dalam Sistem Informasi Manajemen (MIS), data yang disimpan dapat mencakup data keuangan, data pelanggan, data karyawan, dan data penting lainnya. Oleh karena itu, keamanan data dalam MIS sangat penting untuk melindungi informasi dari ancaman seperti pencurian data, kerusakan fisik pada sistem informasi, dan ancaman lainnya. Artikel ini bertujuan untuk membahas keamanan data dalam MIS, risiko yang dapat terjadi pada keamanan data, dan strategi perlindungan yang dapat diterapkan untuk mengatasi risiko tersebut. Keamanan data dalam MIS adalah upaya untuk melindungi dan mengamankan aset informasi dari potensi ancaman yang dapat membahayakan kerahasiaan, ketersediaan, dan integritas semua aset informasi perusahaan, tidak hanya perangkat keras dan perangkat lunak, tetapi juga data sensitif yang tersimpan di dalamnya. Keamanan data dalam MIS adalah aspek penting bagi organisasi mana pun. Risiko keamanan data dapat berasal dari berbagai sumber, dan dampaknya bisa sangat serius. Saran praktis untuk mengatasi risiko keamanan data dalam MIS termasuk Memprioritaskan Keamanan Siber, Kesadaran Karyawan, Solusi Keamanan Jaringan, Rencana Pemulihan Data, Audit Kepatuhan, dan Evaluasi Berkala.

Kata kunci: *Sistem Informasi Manajemen (MIS). Keamanan Data, Risiko, dan Strategi Perlindungan.*

INTRODUCTION

Data is one of the asset important and valuable Good for individual and organization . In the System Information Management (SIM), stored data can in the form of financial data , customer data, employee data , and important data others . Therefore that , data security in SIM is very important For protect information from threat like data theft , damage physique to system information and threats other.

today's digital era this , threat to data security is increasing increased . Data theft , virus and malware attacks , and error man can endanger data security in SIM. Therefore that , it is necessary appropriate protection strategies are implemented For overcome risk said.Article This aim For discuss about data security in SIM, risks that can occur occurs in data security , and protection strategies that can be done For overcome risk also discusses about importance guard data security in SIM and things that need to be done noticed in guard data security . Information assets (hardware, software, systems , information and people) are important assets for something organizations that need protected from risk the security of the bark from party inside and out organization.

Security information No Can only based on tools or technology security information , but rather need existence understanding from organization about What should protected and determined in a way appropriate solutions that can handle problem need security information . For That need management security systemic and comprehensive information . Aspects need security information must contains 3 elements important namely : Confidentiality (confidentiality) is an aspect that guarantees data confidentiality or information . ensure that information only can accessed by authorized persons and guaranteed confidentiality of data sent , received and stored.

Integrity (integrity) is an aspect that guarantees that the data is not changed without There is permission authorized party . must awake accuracy and integrity information and . Availability (availability) aspects that guarantee that the data will available moment required , ensure authorized users can use information and devices related when required.Security mformasi is guard information from possible threats happen in effort ensure continuity business , reduce level risk and accelerate or maximize taking decision investment as well as opportunity business.

The level of security of information also depends on the level sensitivity information in the database, information that is not too sensitive system its security No too strict whereas For highly sensitive information need arrangement level tight security For access to information said.Security Information is effort For protect asset information from potential threats . Security information in a way No direct ensure continuity business , reduce

emerging risks , and allows you to optimize profit on investment . (Puriwigati & Buana, 2020). Dimension or indicator Security . Information is there is four definition privacy information that is privacy as right basic human , privacy as commodities , privacy as condition access limited and privacy as ability For control information about self Alone . (Smith et al., 2011).

METHOD

Methods used in study This is qualitative through approach descriptive analysis . This method own objective mainly is For give description with using words and numbers as well as For serve profile (issues), classification type , or outline stages use answer question like who , when , where , and how (Neuman, 2014) and not only used For look for answer from the question ' how ', but also ' why ' of the topic raised through information random . which is used as data, such as transcripts and recordings interviews , emails, videos, pictures , and notes . Approach qualitative also provides presentation comprehensive related what becomes gap from das sein and das sollen that arise on the object study based on theory and data obtained in the field . For obtain valid data credibility test was conducted with method.

RESULTS AND DISCUSSION
Influence Management Leadership to Professionalism of Health Workers

Research result show that management effective leadership own very significant influence to improvement professionalism power health in various institutions service health , both at home hospitals , health centers , and facility service health others . In the context of system complex health , leadership play role strategic For ensure all over source Power man Work with Spirit professional , ethical , and quality - oriented service . Effective leadership No only focused on achieving administrative targets only , but also on development character , responsibility answer , and moral awareness of labor health in operate its role . With thus , leadership functioning as driving force the main determining factor to what extent is professionalism can grow and stick in culture Work something Health (Julianto & Agnanditiya Carnarez, 2021)organization.

Effective leadership create atmosphere Collaborative , open and mutual work value Interprofessionalism . In daily practice, healthcare workers comprise various disciplines, such as doctors, nurses, midwives, pharmacists, laboratory personnel, and health administrators, who must work in an integrated manner. Without good leadership management, interprofessional coordination can be hampered by sectoral egos or differing views on service priorities. Effective leaders act as liaisons, ensuring all team members work in the same direction with the same goal of providing the best healthcare for the community. In this regard, leaders serve not only as decision-makers but also

as facilitators, encouraging communication, mediating conflicts, and maintaining a collective work spirit (Ngadin, 2022).

Healthcare workers who work under a participative leadership style demonstrate higher levels of work motivation and loyalty compared to those under an authoritative leadership style. Participative leaders typically involve team members in the decision-making process, allowing them to express their opinions, and valuing their input. This participation not only increases a sense of fairness in the workplace but also fosters a sense of belonging to the organization. When healthcare workers feel heard and valued, they tend to demonstrate a stronger commitment to their professional responsibilities. This directly impacts the quality of care provided to patients, as each healthcare worker works with a full awareness of the importance of their role in the healthcare system (Ocktaviana Saputri et al., 2022).

Leadership participatory is also capable create balance between authority leaders and autonomy professional power health . In the world of health , every power professional own competence and responsibility answer certain things that are not Can intervened in a way arbitrary . Good leader understand limitation this and respect room professional every individual . However , on the other hand , leaders must also capable direct all over potential so that it runs in harmony with vision and mission organization . With balance said , the power health can Work with free express ability professionalism without lost direction to objective together . Such a leadership style create climate productive and harmonious work , at the same time strengthen values professionalism like integrity , responsibility responsibility and empathy (Kodariah et al., 2023).

In addition to improving motivation work , effective leadership also plays a role important in build discipline and ethics high workload . Health workers often face situation emergency that requires speed taking decisions and accuracy Action . In such conditions, only a solid and well-trained team can work efficiently. A firm but wise leader can instill the values of discipline through example and consistent policies. When leaders demonstrate punctuality, thoroughness in their work, and responsibility towards patients, these behaviors become role models for all team members. The domino effect of this leadership example creates an organizational culture oriented towards professionalism, where each individual feels bound to work according to the ethical standards of their profession (Humairo & Wahyuddin, 2023).

This study also found that effective leadership plays a significant role in managing potential conflict in the workplace. The healthcare industry is a stressful environment, with high workloads, intense interprofessional interactions, and increasingly complex societal demands. This situation often creates friction between individuals and between professions, whether in the form of differing medical perspectives, workload distribution, or ethical decision-making. Leaders with strong interpersonal communication and

negotiation skills are able to bridge these differences so they don't escalate into detrimental conflict. Through open dialogue and a humanistic approach, leaders can foster mutual respect and strengthen team cohesion. This harmonious and trusting work environment forms the basis for the continuous improvement of healthcare professionals (Helga, 2020).

Effective leadership also fosters an organizational culture oriented toward continuous learning. Forward-thinking leaders understand that professionalism is not static, but rather dynamic and must be continually honed in line with advances in science and technology in the healthcare sector. By encouraging training, workshops, and scientific discussions, leaders create a space for healthcare workers to continuously learn and improve their competencies. This learning process not only strengthens technical skills but also fosters a professional attitude that reflects a sense of responsibility for improving the quality of care. Under this kind of leadership, healthcare workers will be motivated to innovate, think critically, and provide more humane care (Zachrofi et al., 2023).

Furthermore, effective leadership can also establish a fair reward system as a form of appreciation for the professionalism of healthcare workers. In a well-managed organization, leaders assess performance not based on personal ties, but on achievements and tangible contributions to service delivery. This reward can take the form of incentives, moral recognition, or career development opportunities. With a transparent and fair system, healthcare workers will be motivated to improve their performance because they feel that every effort they make is properly recognized and valued. On the other hand, unfair or discriminatory leadership can lower morale and undermine professionalism (Zaini Robitul Wafa, 2021).

The study also revealed that healthcare workers working under effective leaders tend to demonstrate greater empathy and concern for patients. This is directly influenced by a leadership style that emphasizes humanitarian values and public service. Leaders who consistently prioritize patient well-being will instill these values in their subordinates. Therefore, professionalism is measured not only by technical skills but also by the extent to which healthcare workers are able to provide empathetic, ethical, and dignified service (Bahri, 2020).

From these various findings, it can be concluded that the influence of leadership management on the professionalism of healthcare workers is holistic. Effective leadership touches all aspects of work—from motivation and communication to ethics and discipline to the psychological well-being of healthcare workers. Leaders oriented toward collaborative and humanitarian values will be able to build health organizations that are structurally and culturally healthy. In the long term, such a leadership style not only enhances individual professionalism but also strengthens the image and public trust in healthcare institutions. In other words, effective leadership is the primary

foundation supporting the sustainability and quality of the overall healthcare system (Rusnayuni & Mashun, 2023).

Effectiveness of Leadership Style Transformational in Health services

In the world of service dynamic and demanding health professionalism high , leadership transformational appear as one of the the most effective approach in increase quality power health at a time create culture service - oriented work humane . From the results interview with various power health like nurses , midwives , doctors and other health workers administration House sick , found that style leadership transformational become key in build connection positive and productive work in the environment service health . Leader transformational No just direct subordinate For achieve targets, but also focus on development potential individual , implant moral values , and foster Spirit Work collective (Supriyanto & Farhan, 2020).

Leader with style transformational play a role as a capable inspirator turn on Spirit Work team through vision and goals together . In the context of service health , vision This often related with commitment to safety patient , improvement quality service and satisfaction society . When a person leader capable articulate vision the in a way clear and touching values humanity , energy health will feel deeper meaning deep from work they . This is make they No only Work For fulfil not quite enough answer administratively , but also because moral encouragement and sense of responsibility answer social to the patients they serve (Rifa'i, 2023).

As example concrete , a head room that applies style leadership transformational show high attention to development professional his subordinates . He No only uphold disciplined , but also active listen aspirations , giving bait come back constructive , and creative atmosphere mutual work Appreciation . Through open and empathetic communication, nurses feel heard and their contributions recognized. This has a direct impact on improving discipline, empathy, and patient performance. Such leaders serve not only as superiors but also as mentors who foster professional awareness and strengthen ethical commitment in healthcare practice (Sofwan, 2020).

Leadership transformational also plays a role important in build *team cohesion* or compactness team. In the environment House sick , work The same cross profession is very much needed Because service health No can run by one profession only . Doctors, nurses , analysts laboratory and manpower pharmacy must coordinate in a way effective so that the services provided are optimal. Leader transformational capable create atmosphere dialogic and respectful contribution every member team will strengthen the sense of togetherness said . When the power health feel appreciated , they will pushed For Work with more enthusiasm high , mutual support and innovate For reach common (Budiyanto, 2021)goals .

Appreciation given leader to achievement his subordinates be one of element important in strengthen cohesion team. In many case , power health confess motivated No only Because factor financial , but Because awards and recognition on dedication they . Leaders who are routine give praise , appreciation symbolic , or just saying accept sincere love capable build atmosphere positive work environment such work No only improve work morale , but also create cycle sustainable motivation , where performance Good get appreciation , and appreciation the push better performance Good Again (Sulistiany et al., 2022).

In addition to strengthening cohesion team , style leadership transformational also encourages development innovation *mindset* among power health . In the world of health that continues to changed — good from side technology , policy , and need patient — ability adapt and innovate become crucial thing . Leader transformational give room for subordinate For experimenting and putting forward new ideas , for example in management time service , use technology information medical , or implementation method new in handling By providing trust and support for innovation, leaders create a work environment that is dynamic, creative, and adaptive to changes in the external environment.

Innovations arising from this transformational leadership style also have a positive impact on work efficiency and improved service quality. For example, in a case study at a regional hospital, a team of nurses led by a ward head with a transformational style successfully developed a simple *digital shift reporting system* to speed up communication between nurses. This initiative increased service efficiency without compromising accuracy or professional responsibility. This success is inextricably linked to the leadership's encouragement, trust, support, and provision of the necessary resources to implement the new idea.

Furthermore, transformational leadership not only develops technically competent healthcare workers but also emotionally and morally mature ones. Transformational leaders instill the values of integrity, empathy, and a sense of social responsibility in every professional action. In the context of professional ethics, these values serve as the primary foundation for healthcare professionals. They not only carry out their duties according to procedures but also with a conscience that upholds humanity. Thus, transformational leadership becomes a moral instrument that fosters an ethical work culture in healthcare environments.

Ultimately, the effectiveness of transformational leadership in healthcare lies not only in managerial skills, but also in the moral and emotional strength a leader possesses in inspiring their subordinates. This type of leadership creates a healthy, collaborative work environment oriented toward holistic human development. When healthcare workers work under transformational leaders, they become more than just task implementers, but also part of a

larger vision to create more humane, professional, and equitable healthcare services.

Effective Communication as a Pillar of Professionalism

The research confirms that communication plays a crucial role in building the professionalism of healthcare workers. Leaders who convey clear direction, provide emotional support, and value the contributions of each team member create an environment conducive to professional growth. Open, two-way communication strengthens mutual trust between leaders and subordinates and reduces the risk of misunderstandings that can impact the quality of patient care.

Conversely, leadership that is authoritative, closed, and doesn't allow for dialogue often lowers morale and causes psychological stress among healthcare workers. Some respondents even mentioned that rigid leadership can lead to *burnout* and reduced empathy for patients. This confirms that poor communication is not only an organizational issue but can also threaten the overall quality of healthcare services.

A leader's strong communication skills will foster a work culture based on empathy and openness. Leaders who communicate with respect, listen, and provide feedback build team trust. As a result, healthcare workers feel supported in carrying out their duties and are motivated to maintain professionalism in all medical and administrative procedures.

Reward and Training System as a Support for Professionalism

Research also shows that healthcare professionalism will thrive if organizations implement a fair reward system, ongoing training, and educational supervision. Effective leadership is not only about the ability to organize or direct, but also about the extent to which leaders recognize the hard work of their subordinates.

Leaders who recognize individual or team achievements create a positive work environment and foster a spirit of healthy competition. A performance-based reward system encourages healthcare workers to continuously improve their skills, both in terms of technical skills and work ethic. Furthermore, training and professional development serve as a means to update knowledge and skills to reflect the latest developments in medical science and health policy.

Supervision of a nature educational also becomes component important in effective leadership . Leaders who do supervision No just look for error , but give constructive guidance and direction , helping power health overcome weakness them , and grow trust self . With Thus , the supervision process become a sustainable learning medium in form professionalism power health .

Leadership as Example (*Leadership by Example* **)**

From the perspective managerial , leadership principles by example or leadership through exemplary behavior become a key strategy in build professionalism . When a leader show attitude disciplined , ethical , and committed to service public , members team will pushed For copy behavior said . Health workers tend follow values and norms work carried out by the leader in a way direct .

As for example , a head installation emergency constant emergency present appropriate time , attitude polite to patients , and work The same with all over staff without discriminate position will grow culture Work professional in the unit . Attitude example like This create strong moral standards in organization and strengthen the sense of responsibility answer social power health .

Leadership with role models also create trust between member team. In the system complex health , trust become important capital For ensure collaboration walk fluent . Leaders who show honesty , transparency and responsibility answer will strengthen legitimacy morals in the eyes As a result , health workers are more receptive to direction and work with a high level of professional awareness.

Implications for the Development of Health Organizations

The findings of this study have strategic implications for the development of healthcare organizations. First, structured leadership training is needed for managers and heads of healthcare units to enable them to implement transformational and participatory leadership styles. Second, organizations need to restructure their human resource management systems to better value individual contributions and provide equitable professional development opportunities.

Third, it is crucial for every healthcare institution to build an organizational culture based on ethical values, integrity, and excellent service. A strong work culture will strengthen the professionalism of healthcare workers and reduce internal conflict. Fourth, a professional performance-based leadership evaluation system is needed so that the effectiveness of leadership styles can be measured and continuously improved.

By implementing these principles, healthcare organizations not only produce technically competent healthcare workers, but also morally and socially professional ones. Effective leadership ultimately serves as a bridge between the organization's vision and the professional practices of healthcare workers in the field.

CONCLUSIONS

The results of the discussion indicate that Management Information Systems (MIS) play a crucial role in improving the quality of education

management in today's digital era. The presence of MIS makes the educational administration process much more organized because it is able to integrate various types of data, ranging from academic information, student attendance, teacher activities, financial management, and school facilities in one structured and easily accessible system. With an automated mechanism, various obstacles that often arise in manual administration such as delays, overlapping information, and recording errors can be significantly minimized. In addition to increasing efficiency, MIS also strengthens the transparency of educational services. Parents, teachers, and schools can obtain clearer, faster, and more accurate information, thereby increasing trust in the institution. Furthermore, MIS also facilitates the decision-making process because the available data is more comprehensive and can be analyzed comprehensively. Overall, MIS functions not only as an administrative tool, but also serves as a strategic foundation for the transformation of educational management towards a more modern, adaptive, and sustainable system, so that institutions are able to optimally face the demands of technological developments.

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