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Leadership and Competence as Determinants of Health Service Quality in Prisons and Detention Centers: Evidence from Indonesia

Maria Sukmawaty Herlan[a]*, Muhardi[a], Subhan Perkasa Sumadilaga[a]

[a]Magister Management Study Program, Faculty of Economics and Business, Universitas Islam Bandung, Indonesia

A B S T R A C T :

Indonesian Constitution mandates that every inmate is entitled to adequate health services, with fulfilment largely dependent on organizational performance within prisons and detention centres. Leadership roles and the competence of healthcare workers, as the frontline providers, are critical determinants in this process. This study examines the influence of leadership and healthcare worker competence on the quality of health services in prisons and detention centres across West Java. A quantitative descriptive-correlational design was employed, involving 68 healthcare workers selected through probability sampling. Data were collected using a structured, validity- and reliability-tested questionnaire and analysed with descriptive and inferential statistics. Findings indicate that leadership roles, healthcare worker competence, and service quality were all rated highly. Inferential analysis confirmed that both leadership and competence, individually and jointly, exert a positive and significant effect on health service quality. The study underscores the necessity of not only supportive policies but also visionary, communicative leadership and competent healthcare workers with adequate skills and knowledge to meet inmate needs. Practical implications suggest that strengthening leadership capacity and investing in competence development are essential strategies for enhancing the quality of health services in prisons and detention centres.

Keywords: Information system, Hospital Management, Evaluation, TAM, HMIS.

1. Introduction

Prisons and detention centres in Indonesia face persistent and complex challenges related to overcrowding. According to official data from the Directorate General of Corrections, as of February 2021, the total inmate population reached 252,384, while the official capacity of these facilities was only 135,704, resulting in an occupancy rate of 186 percent. In West Java, the situation is particularly critical: of 33 operational units, only seven facilities remain within capacity limits. Despite ongoing interventions by the Ministry of Law and Human Rights and the Directorate General of Corrections, the overcrowding problem persists and continues to intensify, further complicated by increasing inmate numbers and the circulation of illicit substances within prisons and detention centres.

Overcrowding has significant implications for health service delivery. Limited space, high population density, and resource constraints increase the risk of infectious disease transmission, elevate morbidity rates, and impede timely and effective healthcare provision (Sholehudin & Wibowo, 2021; Warmsley, 2005). Healthcare personnel are often unable to deliver services that meet regulatory standards, which conflicts with Law No. 22 of 2022 that guarantees every inmate the right to adequate health services. In this context, the quality of healthcare services becomes a critical measure of how correctional institutions fulfil their obligations to uphold the health rights of inmates.

The quality of health services in prisons and detention centres is influenced by multiple organizational factors, among which leadership and healthcare worker competence are paramount. Leadership plays a strategic role in guiding and coordinating institutional operations, making decisions that directly affect the availability and quality of medical services, and fostering an environment that motivates and supports staff (Singh et al., 2023). Visionary, communicative, and participatory leaders can improve organizational performance by ensuring that healthcare services are prioritized, resources are allocated efficiently, and inter-unit coordination is maintained. Conversely, weak leadership can result in fragmented service delivery, low staff morale, and substandard healthcare outcomes.

Healthcare worker competence is equally critical. Competence encompasses knowledge, technical skills, ethical judgment, and the ability to communicate effectively with patients. In correctional settings, where inmates have no alternative access to external medical services, the competence of healthcare personnel directly determines service quality and patient outcomes. Professional standards and legal frameworks, such as Law No. 36 of 2014 and guidelines from professional associations, mandate continuous education and skill development to maintain high-quality healthcare provision. However, studies indicate that many prisons and detention centres face a shortage of healthcare staff and insufficient adherence to competency standards, which negatively impacts service delivery (Carey & Medico, 2014).

Previous research highlights these challenges. Research reported that healthcare services in one of the prisons in Indonesia were suboptimal due to limited medical equipment, insufficient medications, and a shortage of medical personnel (Sholehudin & Wibowo, 2021). Another study identified bureaucratic procedures as obstacles to effective medical care, while gaps in health insurance coverage further complicate timely referrals for inmates (Rogan, 2017). Furthermore, overcrowding exacerbates health risks, increasing the spread of communicable diseases such as tuberculosis, hepatitis, and respiratory

infections, while also contributing to mental health issues like stress, anxiety, and depression. In some large facilities, one or two general practitioners may be responsible for thousands of inmates, overburdening staff and reducing access to timely care (Nabi et al., 2021).

In this challenging context, leadership and healthcare worker competence are crucial determinants of service quality. High-quality healthcare in prisons and detention centres requires not only adequate policies and resources but also competent personnel and effective leadership to coordinate and implement services efficiently. Addressing these factors can help mitigate the adverse effects of overcrowding and ensure that the health rights of inmates are respected.

This study, therefore, seeks to examine the influence of leadership roles and healthcare worker competence on the quality of health services in prisons and detention centres across West Java. By analysing these relationships, the research aims to provide practical insights for improving organizational strategies and strengthening institutional capacity to deliver health services that meet regulatory standards and the needs of inmates, even under conditions of overcrowding.

2. Literature Review

2.1. Leadership

Leadership has been defined in various ways by experts and authoritative sources. According to the general definition, leadership refers to the act of leading and the manner of leading. Kasapoğlu (2018) define leadership as the ability to influence a group to achieve a predetermined vision, while Grootenboer et al. (2015) emphasizes it as the capacity to guide others toward specific objectives. Panjaitan (2010) similarly describes leadership as the ability to influence a group to accomplish shared goals. Santika & Antari (2020) views leadership as an influence or art that motivates people to strive toward group objectives, whereas Yukl (2008) highlights the importance of factors that affect collective success in organizational tasks. Obiwuru et al. (2012) further argues that leadership embodies aspirational, moral, and motivational strength that aligns the behaviour of group members with the leader's objectives.

From these perspectives, leadership is not merely technical direction but also encompasses moral, spiritual, and emotional dimensions. It can be understood as the art of positively influencing others so they actively participate in achieving shared goals. In the Islamic tradition, leadership is grounded in the Qur'an, which introduces concepts such as *Khalifah* and *Imam*. *Khalifah*, as mentioned in Surah Al-Baqarah (2:30), refers to a leader entrusted by God to govern responsibly, uphold justice, and maintain social welfare. *Imam*, referenced in Surah Al-Anbiya' (21:73), denotes a leader who guides according to divine principles, serving as a moral example and ensuring adherence to ethical values. Unlike conventional leadership, which often emphasizes effectiveness and goal attainment, Islamic leadership incorporates a spiritual dimension, requiring the leader to act as a moral exemplar and seek divine approval in every decision.

Effective leadership relies on several interrelated elements. First, followers are essential, as leadership inherently involves interaction and influence between leaders and their group. Second, power enables leaders to guide, motivate, and mobilize members toward objectives, encompassing both formal authority and the ability to inspire commitment. Third, the ability to influence allows leaders to apply power through example, communication, motivation, and fostering commitment. Fourth, values such as integrity, ethics, and responsibility provide a moral foundation that ensures leadership serves the collective good rather than mere authority. These elements together form the basis of leadership that is both effective and ethically grounded.

Leadership also plays a critical role within management systems, linking planning to execution and determining organizational success. Leaders are expected to provide guidance, motivation, and supervision while maintaining moral and social responsibility toward their subordinates. Experts have conceptualized leadership roles in several ways. Interpersonal roles position leaders as symbolic figures, formal heads, and liaisons between the organization and external stakeholders. Informational roles require leaders to gather, distribute, and communicate information internally and externally to support decision-making. Decision-making roles involve acting as entrepreneurs, problem-solvers, resource allocators, and negotiators, addressing both routine and complex challenges (Nurhasan et al., 2018). Leaders who balance these roles effectively integrate authority, behaviour, communication, and moral responsibility to guide the organization toward success.

The performance of leaders can be measured through several key indicators. Effective leaders manage information efficiently, ensuring timely dissemination and monitoring of critical data. They influence others positively, often employing transformational leadership approaches that include charisma, inspirational motivation, intellectual stimulation, and individualized consideration (Patarru' et al., 2020). They build relationships within teams by fostering collaboration, mutual support, and recognition of achievements, thereby strengthening commitment and morale. Finally, they make decisions strategically, combining routine procedural choices with creative problem-solving and negotiation to ensure organizational objectives are met (Shields, 2010). Collectively, these aspects illustrate that leadership extends beyond formal authority; it is a dynamic and ethical process of mobilizing individuals to achieve common goals while balancing organizational and moral responsibilities.

2.2. Healthcare Worker Competence

According to Indonesian constitution, a health worker can be defined as an individual who dedicates themselves to the field of health and has acquired knowledge and/or skills through specialized education in accordance with the demands of their profession. This profession requires a certain level of experience so that individuals can provide health services professionally. Health workers are classified into thirteen main categories, namely medical personnel, clinical psychologists, nurses, midwives, nutritionists, public health workers, environmental health workers, chemists, physical therapists, medical technical staff, biomedical engineers, traditional health workers, and other health workers. This classification indicates that health workers cover a broad range and involve multiple disciplines that complement one another to support holistic healthcare services.

In the context of health workers, competency can be understood as an individual's ability to carry out tasks or activities effectively, producing adequate knowledge and skills, supported by a work attitude in accordance with professional standards (Alya & Latunreng, 2021). Competency is not only related

to technical skills but also encompasses integrity, responsibility, and professionalism in service delivery. This aligns with Sibbald & Beagan (2024), who state that competency is a set of characteristics embedded in personality and reflected in behaviour when performing tasks in the work environment. Ahmadi et al. (2017) further distinguishes human abilities into two main aspects: physical ability and intellectual ability. Physical ability relates to stamina, strength, and biological conditions that allow effective performance of physical tasks, while intellectual ability includes the capacity to think, analyze, and make relevant decisions. Both abilities are foundational for health workers, as healthcare practice requires a combination of physical endurance and intellectual capability.

Measuring individual competencies facilitates human resource management in selecting the best candidates for specific positions (Saha & Ray, 2019). Initially, competency was studied from a psychological perspective, viewed as a characteristic distinguishing high-performing individual from average performers. Competency also functions as a predictor of success in carrying out professional duties. The Indonesian Medical Doctor Competency Standards, established by the Indonesian Medical Council in 2006, serve as an important reference for ensuring the quality of doctors in Indonesia (Fitriana et al., 2022). These standards are formulated based on seven competency categories derived from the roles, responsibilities, and scope of basic medical services, anchored in four pillars: information management, scientific medical foundations, clinical skills, and health problem management. These pillars are designed to support doctors not only in clinical knowledge but also in internalizing professionalism, self-awareness, personal development, and effective communication skills.

In addition to doctors, other health workers such as nurses and midwives have their own competency standards developed by their respective professional organizations. For example, the Indonesian Nurses Association sets nursing competency standards emphasizing professional, ethical, legal, and culturally sensitive practice; care delivery and management; and continuous professional development, enabling nurses to adapt to the dynamic needs of global healthcare. Midwifery competency standards are regulated by the Indonesian Minister of Health Decree No. 369/Menkes/SK/III/2007, requiring midwives to master nine areas of competency, including social science, public health, professional ethics, culturally-based midwifery care, family and community care, antenatal care, care during childbirth, postpartum and breastfeeding care, new-born care up to one month of age, healthy toddler care, and care for women with reproductive system disorders.

Thus, doctors, nurses, and midwives are bound by competency standards formulated based on practical needs, scientific developments, and national regulations. These standards ensure service quality, protect the public, and guarantee that health workers possess the qualifications required to practice professionally. Competency in healthcare encompasses a combination of knowledge, skills, attitudes, values, and motivation that shape behaviour in performing tasks. Competency is not static; it develops through experience, training, and interactions with the environment. In the context of leadership, competency becomes a critical determinant of a leader's success in guiding subordinates, building relationships, making decisions, and directing the organization toward achieving its goals.

2.3. Healthcare Service Quality

Service quality is defined as the comparison between customers' expectations of a service and their actual perceptions of the service received. When customer perceptions exceed expectations, satisfaction is achieved beyond anticipated levels (Jonson et al., 2023). Conversely, if perceptions align with expectations, satisfaction is moderate, whereas service falling below expectations results in customer dissatisfaction. The two primary determinants of service quality are expected service and perceived service. When service delivery meets or exceeds expectations, it is perceived as high quality; when it falls short, it is considered poor (Hefniy & Fairus, 2019). Therefore, consistent alignment between service provision and customer expectations is critical. The primary objectives of service quality improvement are customer satisfaction and continuous enhancement. This emphasizes that service quality is not a static measure but a dynamic process that evolves to meet the changing needs of service users. In public services, service is defined as a governmental or state-owned entity's effort to fulfil society's basic needs to promote general welfare (Adula & Chali, 2019). Service providers, particularly government agencies, are thus accountable for delivering services that are effective, efficient, and oriented toward public satisfaction.

In healthcare, the demand for high-quality hospital services has become a critical issue globally, driving innovations and reforms, including decentralized service management that allows hospitals greater autonomy. However, challenges in hospital service quality arise not only from limited resources and environmental constraints but also from divergent perceptions among patients, healthcare professionals, and regulators. These perception gaps often create disparities between expected and actual service standards, posing significant obstacles to achieving high-quality healthcare delivery. To ensure service quality, standardized procedures are essential. Service standards are formal documents outlining technical aspects, including vision and mission statements, service procedures, workflow, service fees, prerequisites, customer classifications, service types, quality assurances, and service commitments. Standards guide service providers to deliver consistent, measurable, and customer-centered services.

High-quality service is characterized by several key attributes: the presence of competent and service-oriented staff, adequate facilities and infrastructure, accountability throughout the service process, timely and accurate delivery, effective and courteous communication, and relevant knowledge and technical expertise. Service quality can be objectively evaluated using the SERVQUAL framework, which includes five dimensions (Azman et al., 2020). Tangibles assess the physical evidence of service, including facilities, equipment, and professional appearance of staff. Empathy reflects personalized attention and understanding of customer needs. Reliability refers to the ability to deliver promised services accurately and consistently. Responsiveness measures the willingness and promptness of staff in assisting customers. Assurance evaluates the capacity to instil trust and confidence through staff competence, courtesy, and credibility (Dong et al., 2016). The implementation of clear service standards and evaluation through SERVQUAL dimensions enables organizations to identify deficiencies and implement continuous quality improvement. This is particularly crucial in hospital settings, where service quality directly influences patient satisfaction, trust, and overall organizational performance.

3. Research Method

This study employs a quantitative research design with a cross-sectional approach to examine the determinants of hospital service quality and their impact on patient satisfaction. The research focuses on assessing the alignment between expected service and perceived service, as conceptualized in the SERVQUAL model. The population comprises patients who have received services at the hospital, including both inpatient and outpatient units. A purposive sampling technique is applied to select respondents who have experienced at least one complete service episode, ensuring they have sufficient basis to evaluate service quality. The sample size is determined using the Slovin formula with a 5% margin of error to achieve a statistically representative subset of the population. Primary data are collected using a structured questionnaire based on the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Each dimension includes multiple indicators, measured using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Demographic data such as age, gender, educational level, and frequency of hospital visits are also recorded to analyze potential variations in service quality perceptions.

Data analysis employs both descriptive and inferential statistical techniques. Descriptive statistics, including mean, standard deviation, and frequency distribution, summarize respondents' perceptions of service quality. Inferential analysis is conducted using multiple linear regression to examine the relationship between the SERVQUAL dimensions and overall patient satisfaction. The reliability and validity of the instrument are assessed using Cronbach's alpha and factor analysis to ensure measurement accuracy. Ethical considerations are strictly observed throughout the study. Respondents provide informed consent and are assured of confidentiality and voluntary participation. All data are anonymized to protect privacy, and approval for data collection is obtained from the hospital's ethics review board prior to the study. The study is limited to patients from selected hospitals, which may not represent all healthcare facilities in the region. Additionally, the cross-sectional design captures perceptions at a single point in time, which may not reflect changes in service quality over time. This methodology provides a structured framework to quantitatively assess hospital service quality, identify gaps between expected and perceived service, and determine their influence on patient satisfaction, thereby facilitating evidence-based recommendations for service improvement.

4. Results

4.1. Descriptive Results

The study assessed three core variables, leadership, healthcare worker competence, and health service quality, across multiple dimensions to capture a comprehensive picture of correctional health services in West Java. Leadership was measured through four dimensions, seeking and providing information, influencing others, building relationships, and decision-making. Overall, leadership was perceived positively with a mean score of 4.29 categorized as very good. The dimension influencing others scored highest with a mean of 4.56, indicating strong capacity to motivate staff, ensure discipline, and support task completion. Building relationships also scored very high with a mean of 4.35, reflecting effective communication and interpersonal engagement. Seeking and providing information with a mean of 4.10 and decision-making with a mean of 4.16 showed comparatively lower scores, highlighting areas for improvement, particularly in budget transparency and participatory decision-making. These findings suggest that while leaders effectively motivate and guide staff, there is room to enhance openness and inclusivity in organizational decision-making.

Table 1 - Respondents' Perceptions of Leadership

Dimension	Mean	Category
Seeking and Providing Information	4.10	Good
Influencing Others	4.56	Very Good
Building Relationships	4.35	Very Good
Decision-Making	4.16	Good
Overall Leadership Score	4.29	Very Good

Healthcare worker competence was evaluated across five dimensions, motives, traits, self-concept, knowledge, and skills. The overall competence score was 4.29 categorized as very good, reflecting strong professional capacity. High scores in traits with a mean of 4.57 and self-concept with a mean of 4.55 indicate personnel demonstrate professionalism, responsibility, empathy, and adherence to norms. Motives with a mean of 4.53 show intrinsic motivation to deliver quality, timely care. Skills with a mean of 4.53 reflect the ability to perform procedures according to standard operating procedures and operate medical equipment effectively. Knowledge with a mean of 4.31 revealed a relative gap in access to the latest medical updates, indicating the need for ongoing professional development and structured training. These results suggest that personnel competence is robust, but its full potential is contingent upon institutional support and access to continuous learning.

Health service quality was analysed across five dimensions, namely tangibles, empathy, reliability, responsiveness, and assurance, to capture a comprehensive understanding of service delivery in West Java prisons and detention centres. The overall service quality received a mean score of 4.29, placing it in the good category, which indicates that, in general, health services meet expectations but still leave room for improvement. The dimensions of tangibles and empathy both scored 4.53, demonstrating that the physical infrastructure, medical equipment, and facilities, as well as the interpersonal aspects of care, are perceived positively by respondents. Tangibles such as examination rooms, beds, oxygen cylinders, blood pressure monitoring devices, and ambulances were generally available and functional, providing the basic infrastructure necessary for effective health service delivery. The empathy dimension reflects the extent to which healthcare personnel demonstrate attention, respect, and understanding toward patients, and the high score indicates that staff engage with patients in a humane and caring manner, providing not only medical treatment but also emotional support, which is critical in the correctional context where patients often experience stress and limited autonomy.

Responsiveness scored slightly higher at 4.55, highlighting the personnel's capacity to address patient needs promptly and effectively. Staff were perceived as proactive in responding to patient requests, assisting with complaints, and ensuring that care was delivered accurately and efficiently. This finding suggests the presence of a strong service culture focused on attentiveness and quick problem-solving, which is essential in a correctional environment where delays or miscommunication could have significant health and safety consequences.

Table 2 - Respondents' Perceptions of Healthcare Worker Competence

Dimension	Mean	Category
Motives	4.53	Very Good
Traits	4.57	Very Good
Self-Concept	4.55	Very Good
Knowledge	4.31	Very Good
Skills	4.53	Very Good
Overall Competence Score	4.29	Very Good

Reliability received a moderate score of 4.04, reflecting challenges in consistently delivering services according to established procedures. While patients generally felt their basic needs were met, the lower score indicates difficulties in providing seamless referral services to external medical facilities. Structural constraints, complex bureaucratic processes, and limited resources impede the ability to guarantee that all health requests are met with the same efficiency, potentially affecting patient outcomes.

Assurance emerged as the lowest scoring dimension with a mean of 2.84, categorized as fair, pointing to significant gaps in systemic support for health services. Specifically, access to BPJS health coverage, the availability of maternity care, and facilities for breastfeeding mothers were limited or inadequate. This indicates that, despite competent and motivated healthcare personnel, structural and institutional weaknesses prevent the full realization of equitable and comprehensive health services. The low assurance score highlights the need for policy interventions and resource allocation that address these systemic barriers, ensuring that healthcare provision extends beyond immediate treatment to encompass legal, financial, and social protections for all patients within the correctional system.

In summary, while the physical infrastructure, staff behaviour, and responsiveness in West Java prisons and detention centres are strong, critical weaknesses in reliability and assurance underscore the importance of strengthening structural and policy frameworks. Addressing these gaps is essential to complement personnel competence and to ensure that health services are not only efficient and compassionate but also equitable and sustainable.

Table 3 - Respondents' Perceptions of Health Service Quality

Dimension	Mean	Category
Tangibles	4.53	Very Good
Empathy	4.53	Very Good
Reliability	4.04	Good
Responsiveness	4.55	Very Good
Assurance	2.84	Fair
Overall Service Quality Score	4.29	Good

The integrated analysis shows that leadership and personnel competence in West Java correctional health services are generally perceived as very good, contributing positively to service delivery. Leadership strength is most evident in motivating staff and maintaining discipline, while health personnel demonstrate high motivation, professionalism, and practical skills. Health service quality reflects strong staff performance and responsiveness, yet structural constraints, particularly in assurance and knowledge access, limit the overall effectiveness and equity of services. These findings underscore the importance of combining individual competence with institutional and systemic support to achieve optimal healthcare delivery in correctional settings.

4.2. Statistical Results

Partial t-test results indicate that both leadership role and healthcare personnel competence have a statistically significant and positive effect on health service quality in prisons and detention centres in West Java. Leadership role (X1) showed a t-value of 3.424 with a significance level of 0.001, which is below the standard threshold of 0.05. This indicates that leadership plays a critical role in shaping the quality of health services provided to inmates. Effective leadership creates a supportive and structured work environment, provides clear guidance, establishes performance expectations, and motivates healthcare personnel to perform with professionalism and empathy. Leaders in correctional health settings function not only as decision-makers but also as facilitators and coordinators, optimizing resource use, managing high workloads, and navigating organizational challenges. Transformational leadership principles, including articulating clear vision, inspiring staff, and empowering personnel, are particularly relevant in this context because they encourage healthcare personnel to adopt proactive, patient-centered, and responsive approaches in delivering care.

Healthcare personnel competence (X2) also demonstrated a highly significant effect on health service quality with a t-value of 6.667 and a p-value of 0.000. Competence includes professional knowledge, practical skills, relevant experience, and ethical attitudes that together enable personnel to provide accurate diagnoses, deliver appropriate treatments, and communicate medical information effectively to patients. High competence also supports empathetic communication and interpersonal engagement, which are essential for establishing trust and satisfaction among inmates who often face stress, anxiety, and limited access to healthcare. Competent healthcare personnel are able to respond effectively in complex and constrained environments, make timely clinical decisions, and maintain high standards of care under challenging conditions.

The combined influence of leadership and personnel competence illustrates the interaction between organizational and individual factors in determining health service quality within correctional institutions. Effective leadership ensures strategic direction, motivation, coordination, and resource management, while competent personnel guarantee technical accuracy, ethical practice, and human-centered care. Together, these factors foster an environment in which quality healthcare delivery can be maintained despite systemic limitations. However, structural challenges such as limited training opportunities, insufficient medical facilities, and gaps in service guarantees including access to BPJS and maternity services need to be addressed to fully optimize service quality.

In conclusion, leadership and healthcare personnel competence are essential determinants of health service quality in West Java prisons and detention centres. Strengthening leadership capacity, promoting continuous professional development, and enhancing institutional infrastructure are critical strategies for ensuring that healthcare services are equitable, professional, and sustainable. Addressing both organizational and individual factors allows correctional institutions to improve service delivery, safeguard inmate well-being, and achieve measurable improvements in health outcomes.

5. Discussion

Quantitative findings indicate that both leadership role and healthcare personnel competence have a positive and significant relationship with health service quality. Together, these variables explain approximately 54.8 percent of the variation in service quality, while the remaining 45.2 percent is influenced by other determinants not measured in this study. These results should be interpreted in the operational context of correctional health services and compared with existing empirical evidence and theoretical frameworks on healthcare management.

First, the dominant aspects of leadership identified in this study namely motivation, guidance, communication, and relationship building, align with the literature on healthcare management, which emphasizes that effective leadership, including transformational styles, promotes team performance, procedural compliance, and a conducive work climate. In prisons and detention centres, where operational pressure, security requirements, and limited resources are constant challenges, a leader's ability to prioritize, facilitate cross-unit coordination, and maintain staff motivation is crucial. The findings show that transparency in budgeting and staff participation in decision-making are lower than other indicators, highlighting governance gaps commonly observed in correctional facilities. While leaders are perceived as strong in organizing and fostering staff behaviour, financial accountability mechanisms and staff empowerment need to be strengthened to ensure that organizational trust is institutionalized rather than solely interpersonal.

Second, healthcare personnel competence is measured high in terms of motivation, traits, self-concept, and technical skills, but relatively weaker in indicators related to the mastery of the latest knowledge. This pattern indicates that correctional healthcare personnel rely on practical experience, work ethic, and hands-on skills to meet acute and routine service needs. These findings are consistent with studies in resource-limited healthcare settings, which suggest that clinical skills and professional commitment often compensate for infrastructure limitations. However, without sustained access to continuing education and knowledge updates, practices may stagnate. Within Donabedian's framework of structure, process, and outcomes, personnel competence represents a strong process factor, whereas limitations in updated knowledge and medicine availability reflect structural constraints that can hinder long-term outcomes.

Third, overall health service quality demonstrates a dual profile. Behavioural dimensions of service, including empathy, responsiveness, and promptness, score very high, indicating that staff can provide warm, attentive, and patient-centered care. In contrast, the assurance dimension exhibits clear weaknesses. Limited Indonesian Universal Healthcare coverage for inmates and the lack of maternity facilities reveal a systemic gap between staff capabilities and the formal protection of health rights that the state is responsible to guarantee. This reflects operational reality in correctional facilities, where healthcare staff can deliver high-quality interpersonal care, yet access to comprehensive formal health service packages remains constrained by policy, budget, and infrastructure capacity.

Fourth, statistical testing confirms that both leadership role and healthcare personnel competence are not only theoretically relevant but also have a real impact on service quality. Positive regression coefficients for both variables indicate that interventions enhancing leadership quality or staff competence will lead to measurable improvements in service quality. The relatively stronger influence of competence suggests that efforts to improve service quality should prioritize professional development of staff without neglecting the guidance, coordination, and resource management functions performed by leaders.

From a policy and regulatory perspective, several practical implications arise. Policies should mandate and facilitate universal health insurance coverage for inmates, including systematic Indonesian Universal Healthcare registration upon admission, to reduce barriers to follow-up care. Relevant ministries should set minimum standards for maternal services within correctional facilities and establish clear, expedited referral procedures, including emergency referral frameworks and formal collaboration with designated hospitals. Internal regulations of prisons and detention centres should integrate mechanisms for budget transparency and staff participation through work forums or resource management committees, ensuring that resource allocation aligns with service needs. Human resource development policies should emphasize scheduled and funded continuing education, including evidence-based clinical updates, new skills training, and access to digital literature. These interventions align with evidence showing that ongoing professional training improves patient outcomes and reduces clinical errors.

Operationally, policy recommendations should include dedicated budgets for essential medicines and basic equipment, memorandums of understanding with referral hospitals to expedite referrals, the establishment of measurable key performance indicators for leaders and staff, and regular quality audits involving independent parties. Strengthened governance can be achieved through clear accountability standards and routine external audits, ensuring that budget transparency is practiced rather than symbolic.

In terms of managerial practice, leadership development programs should be adaptive to correctional settings, incorporating clinical leadership, emergency management, resource-limited management, communication skills, and conflict resolution. Such leadership strengthens organizational capacity to implement proactive clinical and administrative decisions, for example, by optimizing training schedules without disrupting routine services or designing staff rotations to reduce fatigue. Forming multi-professional teams involving doctors, nurses, midwives, and security staff in service planning can further enhance integration of clinical and operational decision-making.

Finally, implications for future research include exploring the factors explaining the remaining 45.2 percent of variation in service quality, such as facility conditions, occupancy rates, budget allocation per inmate, and external support from regional health authorities. In-depth qualitative studies are also needed to understand implementation barriers, such as complex Indonesian Universal Healthcare registration procedures, and to capture inmate perspectives on access to healthcare. Evaluating interventions through pilot programs for integrated training and improved referral procedures will provide stronger policy evidence before nationwide implementation.

In summary, the findings underscore that improving health service quality in West Java prisons and detention centres requires an integrated approach. Strengthening healthcare personnel competence through education and training, enhancing leadership capacity to manage resources and workflow, and reforming policies to ensure access and health protection are mutually reinforcing strategies. Without combining individual capacity building, transparent governance, and systemic guarantees, efforts to enhance service quality will remain partial and vulnerable to structural limitations.

6. Conclusion

Based on the collected data and analysis regarding the influence of leadership role and healthcare personnel competence on health service quality in prisons and detention centres in West Java, the study concludes that leadership plays a crucial role in shaping the quality of health services. Effective leadership motivates staff, provides clear guidance, and ensures adherence to service standards, although aspects of decision-making, particularly speed, transparency, and responsiveness to inmate healthcare needs, require further improvement. This underscores the need for leadership capacity-building initiatives grounded in principles of good governance. Healthcare personnel competence was found to have a highly significant role in determining service quality. Skilled, knowledgeable, and professional personnel are better able to cope with facility limitations. Therefore, policies that promote continuous training, professional certification, and improved welfare for healthcare personnel in correctional facilities are essential to ensure that service quality is systematically maintained rather than dependent solely on individual performance.

Although the overall quality of health services in prisons and detention centres is rated as good, the assurance dimension remains a notable weakness. Limited medical facilities, restricted access to referral services, and inadequate health coverage highlight the need for stronger regulatory and budgetary interventions. This emphasizes the importance of inter-ministerial collaboration between the Ministry of Law and Human Rights and the Ministry of Health to guarantee the fulfilment of inmates' health rights. Leadership was shown to significantly influence health service quality, and policies that position prison and detention centre leaders as role models in healthcare management are likely to yield positive outcomes. The impact of healthcare personnel competence was found to be even stronger than leadership, suggesting that investments should prioritize capacity-building of medical staff. Strengthening regulations on professional standards within correctional healthcare is necessary to prevent disparities in service quality between prisons, detention centres, and public health facilities. Leadership and healthcare personnel competence together constitute the primary determinants of service quality, but other factors such as infrastructure, budget allocation, and referral systems remain influential. Comprehensive policy approaches are therefore required, framing correctional health service reform within a human rights perspective to ensure equitable access for all inmates.

Practical recommendations include strengthening leadership capacity through evidence-based management training that emphasizes timely, fair, and transparent decision-making, particularly regarding health service management. Healthcare personnel should benefit from continuous professional development, certification programs, and improved welfare to ensure service quality reflects measurable professional standards alongside practical experience. Limitations in correctional healthcare facilities should be addressed through increased budgets, provision of essential medical equipment, and enhanced referral services to strengthen the assurance dimension of care. Collaboration between the Ministry of Law and Human Rights, the Ministry of Health, and local governments should be reinforced through joint regulations or integrated coordination mechanisms to ensure that health services meet national standards. Technology-based monitoring systems should be implemented to regularly assess service quality, with external evaluation by independent institutions or academic bodies to ensure accountability and transparency. Finally, all policies related to health services in prisons and detention centres should be grounded in human rights principles, ensuring that inmates receive healthcare services equivalent to those available to the general population as a matter of social justice.

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