ENHANCING COMMUNITY HEALTH CENTER PERFORMANCE THROUGH PUBLIC SERVICE INNOVATION AND DIGITAL TRANSFORMATION STRATEGIES

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ABSTRACT

The performance of the Community Health Center (Puskesmas) has been in the spotlight of all parties concerned with its ability to adopt the right innovation strategy and implement appropriate digital transformation. This research aims to uncover (1) how public service innovation strategies impact digital transformation implementation; (2) their effect on Puskesmas performance; (3) the impact of digital transformation implementation on Puskesmas performance; and (4) the mediating role of digital transformation in this relationship within West Java, viewed from a strategic management perspective. This quantitative study was conducted across 285 from 1,098 Puskesmas in West Java Province, utilizing proportional random sampling. The sample consisted of Puskesmas distributed across cities and districts in the region, ensuring representation from each area. A questionnaire with a 5-point rating scale was the primary research instrument, validated for accuracy and reliability. Data analysis included descriptive categorization and inferential analysis using Partial Least Square (PLS) via SmartPLS. The study found that public service innovation strategies positively impacted digital transformation implementation and Puskesmas performance. Additionally, digital transformation implementation positively influenced Puskesmas performance, with digital transformation partially mediating the relationship between innovation strategies and performance.

Introduction

Health is a state of physical, mental, and social well-being that allows a person to live a productive and beneficial life for a human and the surrounding environment (Cahyani, 2022; Diener, 2012).. This concept includes not only the absence of disease or disability but also balance in various aspects of life, such as nutrition, physical activity, social relationships, and a healthy

environment. In this sense, health is a human right that must be protected and fought for by all parties, including individuals, families, communities, and the state.

The health sector is a part of public services that focuses on efforts to prevent, treat, and rehabilitate diseases or health disorders in individuals or society (Leal Rocha et al., 2015). The health sector includes various types of services, ranging from primary health, which is preventive and promotive, to specialist health services, which are curative and rehabilitative (Suparman et al., 2019). The health sector includes various institutions, such as health centers, hospitals, clinics, laboratories, and pharmacies. It involves various health professions, such as doctors, nurses, pharmacists, nutritionists, and medical and other supporting personnel (Alsaleem et al., 2018). The health sector has a strategic role in strengthening society's quality of life and welfare. It also encourages sustainable social and economic development (Artiga & Hinton, 2019).

Health is closely related to the Sustainable Development Goals (SDGs). Goal 3 of the SDGs is "Ensuring Healthy Lives and Improving Well-Being for All Ages", which focuses on efforts to improve the health and well-being of people globally (Morton et al., 2017; World Health Organization., 2016). The goals refer to equitable and sustainable health at every level, from the global community to local communities. The goal is to end poverty, protect the planet, and ensure that everyone enjoys peace and prosperity, now and in the future.

To achieve these goals and targets, various health organizations and governments in each country face significant and complex challenges to ensure that health services continue running and are accessible to the public. The challenges require health organizations to continuously change, develop, and improve performance (Krijgsheld et al., 2022). This improvement includes individual health workers and the performance of health institutions. One such institution is the Community Health Center, or *Pusat Kesehatan Masyarakat* (Puskesmas), which is widespread in Indonesia. Puskesmas is a primary health facility managed by the government in Indonesia. Puskesmas aims to provide affordable and quality health services to communities in the local area. The main function of the Puskesmas is as a primary health service center that provides essential health services to the community, such as health checks, light treatment, immunizations, and health promotion (Tinambunan, 2021).

The performance and quality of health services at Puskesmas vary in each region and depend on many factors, such as the available health staff's resources, facilities, and qualifications (Yandrizal, 2022). The Indonesian government has made various efforts to improve the quality of health services at Puskesmas. The quality of Puskesmas' performance needs to go hand in hand with its quantity. The number of Puskesmas in Indonesia is stated to continue to increase every year. In 2022 (Mahdi, 2022), the number was recorded to have reached 10,260 units, and the most significant number of Puskesmas in Indonesia is in West Java Province, with 1,098 units. In terms of quantity, the number of Puskesmas in West Java is sufficient to increase access to primary health services for the community. However, in terms of quality, the performance of these Puskesmas is always questioned.

The performance of an institution in this century, indeed, must be integrated with the existence of digital technology, which is integrated into all operational aspects of an organization, called ***digital transformation*** (Wijaya & Cahyawati, 2022). Digital transformation can have a significant impact on the performance of Puskesmas in Indonesia. With digital technology, Puskesmas can speed up and improve the quality of health services provided to the community. Digital transformation can have a positive impact on the performance of Puskesmas, especially concerning the efficiency of the services provided. One example of this service efficiency is the use of electronic health information systems (e-Health) to speed up registration, patient data collection,

and health reporting (Kruszyńska-Fischbach et al., 2022). However, digital transformation can also pose challenges and risks that Puskesmas must consider, such as data privacy and information security issues (Holzinger et al., 2021). Implementation of digital transformation in the health sector and achievement of Puskesmas' performance will depend on the ***public service innovation strategy***. Innovation strategies in public services, especially in the health sector, can bring significant improvements to performance, service quality, patient health outcomes, and cost-effectiveness (Omachonu & Einspruch, 2010), and of course, currently to the implementation of digital transformation in the public health sector.

The study of these various phenomena leads to a model related to the influence of public service innovation strategies and digital transformation implementation on the performance of Puskesmas in West Java. This model was built based on *research gaps* related to the study of Puskesmas' performance, the implementation of digital transformation in Puskesmas, and innovation strategies. The *empirical gap* here refers to the need for more empirical evidence to support a particular theory or hypothesis due to population limitations, which impacts the generalization of research results. Many studies have been related to this topic in various community health centers throughout Indonesia, but only a few have involved one provincial-level area. From the *theoretical gap*, it can be observed that studies regarding the performance of Puskesmas, influenced by innovation strategies and the implementation of digital transformation, have theoretical characteristics that are different from general theories because most of these theories have entered the realm of applied research, such as theory and measurements used in Puskesmas performance.

The aim of this research is to reveal (1) the influence of public service innovation strategies on the implementation of digital transformation; (2) the influence of public service innovation strategies on performance of Puskesmas; (3) the influence of the implementation of digital transformation on the performance of Puskesmas; and (4) the mediating effect of the implementation of digital transformation in the relationship between public service innovation strategies and the performance of Puskesmas in West Java, seeing from a strategic management point of view.

Methods

Research objects refer to information regarding the variables studied, research subjects (analysis units and observation units), location, and period for conducting research. The variables modeled in this research consist of one exogenous variable (public service innovation strategy), one mediating or intervening variable (implementation of digital transformation), and one endogenous variable (performance of the Puskesmas). This study's research subjects or units of analysis are all community health centers located in city or district areas in West Java Province, totaling 1,098 Puskesmas. The observation unit (respondents) were the heads of Puskesmas or those who represent them. The research was carried out at the Puskesmas, the research sample. The overall implementation time for this research starts from March to June 2023. The research design used was a survey method to collect data from respondents through offline and online questionnaires (Google Form). The research approach refers to the overall framework or philosophy that supports the implementation of research, namely the quantitative approach, used to test hypotheses and answer research questions related to causal relationships between variables.

Table 1 presents the operationalization of variables (including dimensions and indicators) related to public service innovation strategies, implementation of digital transformation, and Puskesmas performance in West Java.

Table 1. Operationalization of Variables

Variables	Dimensions	Indicators	Items No.
Public Service Innovation Strategy	Product Innovation Strategy	• New Product Introduction • Existing Product Improvement • Benchmarking Products from Other Community Health Centers	1-3
	Process Innovation Strategy	• Increased Service Time Efficiency • Increased Resource Allocation Efficiency • Increased Patient Recovery Ratio	4-6
	Service Innovation Strategy	• New Service Introduction • Existing Service Improvement • Benchmarking Services from Other Community Health Centers	7-9
Digital Transformation Implementation	Digital Applications	• Availability of Digital Applications • Digital Application Compatibility • Effectiveness of Using Digital Applications	1-3
	Digital Human Resources (HR)	• Digital HR Capabilities • Adequacy of Digital Human Resources • Digital HR development	4-6
	Digital Education	• Digital Education Planning • Intensity of Implementation of Digital Education • Effectiveness of Digital Education	7-9
	Digital Infrastructure	• Intranet/Internet Connectivity • Ease of Access • Digital Infrastructure Flexibility	10-12
Performance of Puskesmas	Community Health Center Performance Assessment	• Health services • Implementation of Community Health Center Management • Quality of Community Health Center Services	1-3
	Community Health Center Accreditation	• Service Quality Accreditation • Health Human Resources Accreditation • Governance Accreditation • Government Program Accreditation	4-7
	Community Satisfaction Index	• Satisfaction with the Service Process • Satisfaction with Health Workers/Officers • Satisfaction with Service Costs • Satisfaction with the Service Environment	8-11

The population in this study was 1,098 community health centers spread across cities and districts in the West Java Province region. The sampling technique used proportional random sampling according to the proportion of the number of community health centers in each city and district. Minimal sampling can refer to calculations using specific formulas (Isaac & Michael, 1981). Based on the formulation above, the minimum sample (*s*) drawn is 285 respondents.

The main instrument used in this research was a questionnaire using a 5-point rating scale. A validity and reliability test of the instrument was also carried out to ensure the accuracy and reliability of the research instrument. All responses from the online questionnaire were processed using Spreadsheet software (MS Excel) to carry out data scanning and descriptive analysis. The categorization of descriptive analysis was based on the average values of each indicator, dimension, and variable (extremely low, low, high, extremely high). For inferential analysis, Partial Least Square (PLS) was used with the help of the SmartPLS application program.

Results and Discussion

Results

The Puskesmas in West Java is the unit of analysis in this research. The number of Puskesmas in West Java currently is 1,098 units, spread across 27 districts/cities. All Puskesmas in West Java serve people from various socio-economic backgrounds. The health center provides various health services, including general health services, dental and oral health services, maternal and child health services, family planning health services, and other health services. All Puskesmas in West Java also carry out various promotive and preventive activities, such as health education, immunization, and integrated service posts. The current number of Community Health Centers in West Java could be better for all residents. West Java has a population of 48.7 million people. With the current number of Community Health Centers, 1,098 units, on average, each Community Health Center serves 45,700 residents. This figure still needs to be added to the standards set by the Ministry of Health, namely one Puskesmas serving 25,000 residents.

The lack of Community Health Centers causes several problems, namely that it is difficult for people to access health services. People also have to wait long to get health services from the Community Health Center. Moreover, due to distance problems, some people must pay expensive transportation costs to access health services. With these various problems, the community is not yet fully receiving quality health services (Ramadhan et al., 2021). To overcome this problem, the government needs to increase the number of Puskesmas in West Java. The government has also made efforts to improve the quality of health services at the Puskesmas.

The respondents in this study were heads of Community Health Centers (Puskesmas) or those who represented them. Table 2 describes the respondents' characteristics.

Table 2. Respondents' Characteristics

Gender	Frequency	Percentage
Male	105	36,8
Female	180	63,2
Education	**Frequency**	**Percentage**
Diploma-III	6	2,1
Bachelor	235	82,5

Post-graduate	44	15,4

Age	Frequency	Percentage
Under 30 year	0	0,0
Between 30 - 40 year	44	15,4
Between 41 - 50 year	135	47,4
Above 50 year	106	37,2

Work experience	Frequency	Percentage
Under 10 year	30	10,5
Between 11 - 20 year	117	41,1
Above 20 year	138	48,4
Total	285	100,0

Most respondents were female (63.2%), while the male respondents comprised 36.8% of the total. This composition could be attributed to the higher percentage of women working in the health sector. Additionally, the majority of respondents had completed their undergraduate education (82.5%), with only a small percentage holding Diploma-III degrees (2.1%) or postgraduate degrees (15.4%). This finding suggests that the head of the Puskesmas possesses the necessary level of education. Furthermore, nearly half of the respondents fell within the age range of 41-50 years (47.4%), indicating that the head of the Puskesmas has ample experience in leading and managing the Puskesmas. Lastly, most respondents had worked at the Puskesmas for 11-20 years (41.1%), which speaks to the high level of commitment demonstrated by the head of the Puskesmas and their team. All these characteristics show that the head of the Puskesmas in West Java is qualified to lead the community health center and provide quality health services to the community.

Based on the results of descriptive statistical analysis, respondents perceived the dimensions of Service Innovation Strategy and Product Innovation Strategy in the Public Service Innovation Strategy variable better than Process Innovation Strategy. In the Digital Transformation implementation variable, the achievements of the Digital Application dimension and Digital Infrastructure dimension are perceived to be higher than those of other dimensions, namely the Digital HR dimension and the Digital Education dimension. In general, the achievements of the Digital Transformation Implementation variable at Puskesmas in West Java have shown a reasonable level, although, of course, it could have been more optimal. Regarding the Puskesmas Performance variable, information was obtained that the Puskesmas Performance Assessment dimension was perceived as the highest by respondents, followed by the Community Satisfaction Index dimension. In contrast, the Puskesmas Accreditation dimension was rated the lowest.

The measurement model is the first step in PLS-SEM analysis, followed by structural model evaluation and, finally, the overall model fit. In the measurement model, we explained the factor loadings for reflective indicators, indicator reliability, convergent validity, and discriminant validity.

Table 3. Measurement Model

Variables	**Dimensions**	**Factor Loadings**	**Construct Reliability and Validity**
	Product Innovation Strategy	0.897	CA = 0.849

Variables	Dimensions	Factor Loadings	Construct Reliability and Validity
Public Service Innovation Strategy	Process Innovation Strategy	0.871	CR = 0.908 AVE = 0.768
	Service Innovation Strategy	0.861	
Digital Transformation Implementation	Digital Applications	0.849	CA = 0.858 CR = 0.904 AVE = 0.701
	Digital Human Resources (HR)	0.823	
	Digital Education	0.837	
	Digital Infrastructure	0.842	
Performance of Puskesmas	Community Health Center Performance Assessment	0.868	CA = 0.837 CR = 0.902 AVE = 0.754
	Community Health Center Accreditation	0.881	
	Community Satisfaction Index	0.855	

Notes: CA = Cronbach's Alpha; CR = Composite Reliability, AVE = Average Variance Extracted

Based on information from Table 3, all factor loadings are above 0.7, indicating that the variables are strongly related to their constructs. The CA and CR values are above 0.7, indicating that the constructs are reliable. All AVE values are above 0.5, indicating that the constructs have good convergent validity. Based on the Fornell-Larcker Criterion table provided (see Table 4), the constructs exhibit good convergent validity (AVE values on the diagonal) and discriminant validity (off-diagonal correlations smaller than the diagonal AVE values), indicating that they are distinct and adequately measured by their respective indicators.

Table 4. Discriminant Validity (using Fornell-Larcker Criterion)

Construct	X1	X2	Y
X1	0.876		
X2	0.732	0.838	
Y	0.755	0.751	0.868

Notes: X1 = Public Service Innovation Strategy; X2 = Digital Transformation Implementation; Y = Performance of Puskesmas

Using the bootstrapping procedure, we explained path coefficients (beta weights) and their significance levels in the structural model (see Table 5). Then, we interpreted the relationships between latent variables and calculated R-squared values for endogenous latent variables (see Table 6).

Table 5. Structural Model

Path	Beta	Standard Deviation	t-statistics	p-values	hypotheses	f-square	effect
X1 -> X2	0.732	0.030	24.453	0.000	Not rejected	1.153	
X1 -> Y	0.442	0.063	7.067	0.000	Not rejected	0.264	
X2 -> Y	0.428	0.058	7.337	0.000	Not rejected	0.246	
X1 -> X2 -> Y	0.313	0.042	7.373	0.000	Not rejected		mediates

Table 5 informs that the effect of the Public Service Innovation Strategy on Digital Transformation Implementation is positive and significant ($p<0.05$). It also shows that the Public Service Innovation Strategy positively affects the performance of Puskesmas. It is found that Digital Transformation Implementation also positively affects the Performance of Puskesmas. Finally, the results prove that Digital Transformation Implementation can mediate the effect of Public Service Innovation Strategy on the Performance of Puskesmas. In short, all hypotheses are accepted (not rejected).

Table 6. R-Square Values

Model	R Square	R Square Adjusted
Digital Transformation Implementation (X2)	0.535	0.534
Performance of Puskesmas (Y)	0.655	0.653

In the Digital Transformation Implementation (X2) model, 53.3% of the variance is explained by the included Public Service Innovation Strategy (X1). It means that approximately 46.5% of the variance in X2 is not accounted for by X1 in the model. In the Performance of Puskesmas (Y) model, about 65.5% of the variance is explained by X1 and X2, and the independent variables in the model do not explain 34.5% of the variance in Y.

The last step is to evaluate the overall model fit using several goodness-of-fit measures, as explained in Table 7.

Table 7. Overall Model Fit

Index	Estimated Model
SRMR	0.058
d_ULS	0.187
d_G	0.138
Chi-Square	229.89
NFI	0.87
rms Theta	0.23

SRMR (0.058) is below the commonly accepted threshold of 0.08, suggesting a good model fit. Both d_ULS (0.187) and d_G (0.138) are relatively small, indicating acceptable model fit. The Chi-Square value (229.89) is relatively small compared to the sample size (283 respondents). NFI (0.87) is slightly below the acceptable threshold of 0.90 but still relatively close, suggesting a reasonably good fit. The value of rms Theta (0.23) is relatively small, indicating an acceptable fit. Based on these fit indices, the model is a reasonably good fit. This model's observed data indeed support the hypothesized relationships and conceptual framework. The output of the overall model can be depicted in Figure 1.

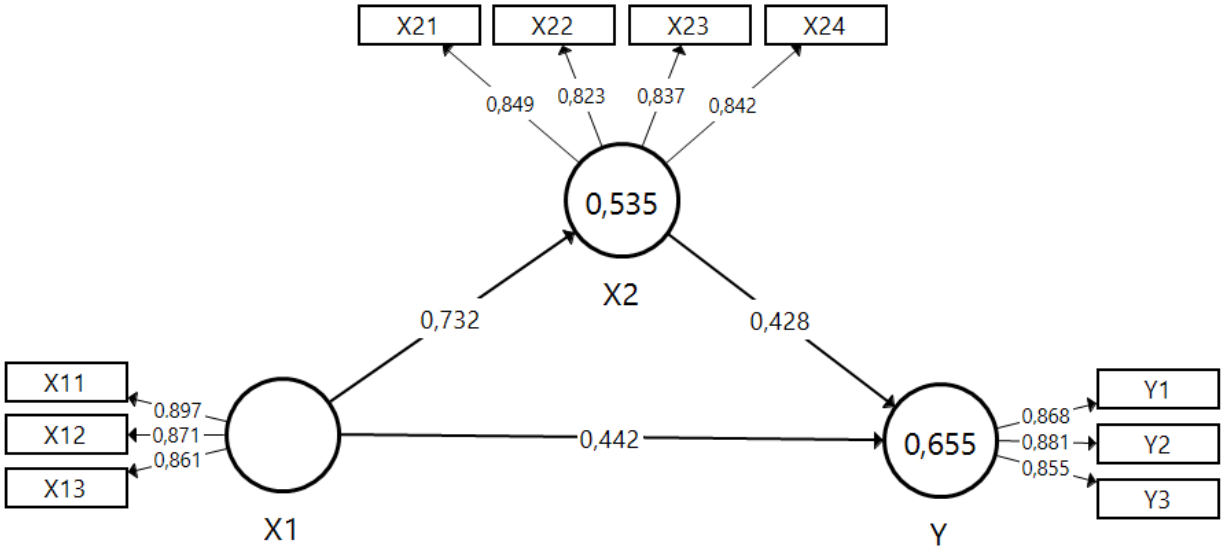

Figure 1. Output of Overall Model

Discussion

Based on descriptive analysis, it was found that each dimension of each latent variable had reached an adequate average value, although not optimal. Based on Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis, it is known that all constructs (dimensions and variables) are valid and reliable. Hypothesis testing shows that all hypotheses can be accepted. All paths are positive and significant, including the mediation effect.

The existence of product, process, and service innovation strategies can form the Public Service Innovation Strategy. The Product Innovation Strategy is the dimension that makes the most significant contribution to the Public Service Innovation Strategy. Product introductions include developing new health services that meet patient needs, such as comprehensive health education programs. Improvements to existing products can take the form of improvements in existing services, for example, improving inspection and diagnostic facilities to provide more accurate and faster results (McCarthy et al., 2016). Product benchmarking involves comparing similar services from other community health centers to identify best practices and then implementing them (Mulyawati & Rochmah, 2021).

In the Process Innovation Strategy, the Puskesmas can strategically concentrate on enhancing several key areas to optimize healthcare delivery. Efforts to increase service time efficiency entail streamlining processes and workflows within Puskesmas to reduce patient wait times, expedite consultations, and minimize administrative delays. It can involve implementing appointment scheduling systems, optimizing staffing levels, and employing technology solutions to automate routine tasks, thereby enhancing overall operational efficiency and patient satisfaction. Focusing on increased resource allocation efficiency involves judiciously allocating resources such as medical equipment, supplies, and personnel to ensure optimal utilization and cost-effectiveness. Through effective resource management practices, Puskesmas can maximize the impact of available resources, minimize waste, and enhance the quality of patient care. Prioritizing an increased patient recovery ratio entails implementing evidence-based treatment protocols, preventive care measures, and patient education initiatives that aim to improve health outcomes and reduce hospital readmissions. Puskesmas can drive positive outcomes and better meet the

communities healthcare needs by fostering a culture of continuous improvement and innovation (Liu et al., 2022).

Product and service innovation strategies are often closely intertwined, especially in the healthcare sector. The end "product" often combines tangible goods (such as medications or medical devices) with intangible services (such as medical consultations or patient care). Puskesmas can offer holistic solutions by aligning product and service innovations that address patients' medical and emotional needs (Kruszyńska-Fischbach et al., 2022). his integration ensures that patients receive comprehensive care that leverages both innovative products and services. These innovations empower patients to actively participate in their own care and improve health outcomes. With those innovative strategies, the Puskesmas can achieve synergistic effects that drive greater efficiency and affordability in healthcare delivery.

Digital Transformation Implementation in Puskesmas depends on Digital Applications, Digital Human Resources (HR), Digital Education, and Digital Infrastructure working synergistically to harness the full potential of digital technologies and drive innovation in healthcare delivery (Haggerty, 2017; Kolakowski et al., 2021; Kruszyńska-Fischbach et al., 2022; Marques & Ferreira, 2020). Indeed, by leveraging digital applications, Puskesmas can enhance the quality and efficiency of healthcare delivery while improving patient outcomes and satisfaction. The Puskesmas needs to focus on a skilled workforce capable of effectively utilizing and adapting to new technologies. The Puskesmas can build competent and motivated digital human resources that are equipped to drive digital transformation initiatives forward (Gat et al., 2019). Digital education initiatives focus on promoting health literacy, patient empowerment, and preventive care through digital channels (Slight et al., 2015). Puskesmas can reach a wider audience, personalize health education interventions, and empower individuals to take control of their health and well-being. All of these needs the robust digital infrastructure. A resilient and secure digital infrastructure can help Puskesmas to create a reliable and scalable platform for implementing digital applications, supporting digital workflows, and safeguarding sensitive health information (Bansal et al., 2023).

Performance measurement in the Community Health Center (Puskesmas) context is different and unique compared to performance measurement in general. Performance assessment, accreditation status, and community satisfaction are three key aspects that can comprehensively measure the performance of Puskesmas. The performance assessment includes health services, management implementation, and quality of Puskesmas services (Usman et al., 2020). The accreditation status of Puskesmas is vital as it signifies compliance with established healthcare standards, ensuring service quality, safety, and effectiveness. Accreditation enhances public trust, fosters continuous improvement, and validates organizational commitment to delivering high-quality healthcare to the community (Trisna & Raharjo, 2019). Community satisfaction is paramount for the performance of Puskesmas, as it reflects the alignment of services with community needs and preferences. Positive satisfaction indicates effective communication, accessibility, and quality of care, fostering patient trust and loyalty. It also signifies the organization's responsiveness to feedback, enabling continuous improvement efforts that enhance healthcare delivery and overall community well-being.

The model suggests that the adoption of a public service innovation strategy within Puskesmas positively influences the implementation of digital transformation initiatives. This relationship underscores the significance of innovative approaches in driving the integration and utilization of digital technologies within healthcare settings, facilitating improved service delivery, efficiency, and patient outcomes. The innovation strategy within Puskesmas fosters a culture of creativity and change. It aligns initiatives with organizational goals and effectively allocates resources. This

strategy influences digital transformation by facilitating the purposeful integration of digital technologies. It promotes stakeholder engagement, ensuring that digital solutions meet the needs of staff and patients. Additionally, it facilitates risk management, addressing challenges associated with technology adoption and implementation. The findings of this research confirm the results of previous studies regarding the influence of public service innovation strategy on the implementation of digital transformation (Barrane et al., 2020; Bellantuono et al., 2021; Herrmann et al., 2018; Margiono, 2020).

The influence of the public service innovation strategy on the Performance of Puskesmas is also positive and significant. The finding explores the pivotal role of innovation in enhancing healthcare delivery. It underscores the importance of adopting innovative approaches to address the evolving needs of patients and communities. Fostering a culture of innovation and implementing novel strategies enables Puskesmas to achieve better outcomes, improve efficiency, and enhance the overall quality of healthcare services provided to the community. The results of this study validate previous research findings regarding the impact of public service innovation strategy on Puskesmas performance (Hidayati, 2018; Krijgsheld et al., 2022; Misnaniarti & Destari, 2018; Usman et al., 2020).

The implementation of digital transformation has a particular impact on Puskesmas performance. The influence is positive and significant. The positive and significant influence of digital transformation underscores its pivotal role in driving advancements in healthcare delivery and ultimately improving outcomes for patients and communities served by Puskesmas. Digital technologies in Puskesmas can improve efficiency in service delivery, enhance patient care quality, and foster greater accessibility to healthcare services. The outcomes of this study corroborate earlier research conclusions regarding the influence of digital transformation on the performance of Puskesmas (Herrmann et al., 2018; Iljashenko et al., 2019).

The mediation effect of digital transformation implementation in the influence of public service innovation strategy on the performance of Puskesmas suggests that digital transformation acts as an intermediary mechanism through which the effects of innovative strategies are realized. In this model, the public service innovation strategy serves as the initial driver, prompting the adoption of digital transformation initiatives within Puskesmas. As digital transformation is implemented, it enhances various aspects of healthcare delivery, such as efficiency, accessibility, and quality of care, ultimately contributing to improved performance outcomes. Thus, digital transformation mediates the relationship between public service innovation strategy and Puskesmas performance by translating innovative strategies into tangible improvements in healthcare delivery. This model supports the previous research findings about the interconnectivity of those variables (Betto et al., 2022; Herrmann et al., 2018; Kim & Kim, 2018).

Conclusion

The study's findings underscore the critical role of public service innovation strategies in driving digital transformation implementation and enhancing Puskesmas performance. Puskesmas can effectively leverage digital technologies to improve healthcare delivery and outcomes by fostering innovation and embracing novel approaches. The positive influence of public service innovation strategies on digital transformation underscores the importance of proactive organizational strategies in adapting to evolving healthcare landscapes. Moreover, the direct impact of digital transformation implementation on Puskesmas performance highlights the transformative potential of digital technologies in optimizing healthcare operations and service delivery. Furthermore, the identification of digital transformation as a partial mediator suggests

that while innovation strategies play a crucial role, the successful integration and utilization of digital technologies are essential drivers of improved performance outcomes. These findings emphasize the importance of strategic planning, investment, and collaboration in promoting innovation and digitalization within Puskesmas, ultimately contributing to enhanced healthcare quality and accessibility for communities in West Java Province.

To enhance all variables, Puskesmas should prioritize several strategies. Firstly, fostering a culture of innovation and providing training on digital technologies can facilitate the effective implementation of digital transformation initiatives. Secondly, continuous monitoring and evaluation of public service innovation strategies and digital transformation efforts are essential to identify areas for improvement. Additionally, strengthening collaboration with stakeholders and leveraging external expertise can provide valuable insights and resources to support innovation and digitalization efforts. Lastly, investing in robust digital infrastructure and ensuring adequate resource allocation are crucial to sustain long-term improvements in Puskesmas performance and healthcare delivery.

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