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The Influence of Leadership Commitment on the Quality of Health Data at Community Health Centers (HC) in Kendari City.

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ABSTRACT

Accurate, complete, timely and consistent health data is an essential foundation for a modern health system. In the era of digital health transformation towards the National Health System (SKN) based on the SatuSehat platform, the need for reliable and integrated data is increasingly urgent. While technical and resource factors are critical, there is growing evidence that management and leadership at the health center level play a central and strategic role that often receives less attention. This type of research is quantitative research, and is explanatory research, which tries to explain existing phenomena. Respondents consisted of the head of the health center and the HIS/IT coordinator, and the administration department. The number of health centers in Kendari City was 15, so that the number of samples/respondents was 45 respondents. The Result is that the original sample value and p-value show that the commitment of the HC leadership has a positive and significant influence on the quality of HC health data because it has a positive original sample value and a p-value of 0.000 < 0.05. Conclussion is Leadership commitment has an influence on the quality of health data in health centers.

Keyword: health centers, quality of health data, leadership priority and policy, resource allocation, supervision and monitoring, staff support and empowerment, Indonesia

INTRODUCTION

Accurate, complete, timely and consistent health data is an essential foundation for a modern health system(1). Regarding primary health facilities such as Puskesmas, data is a reflection of service performance, basic program planning, disease monitoring tools, controlling outbreaks, effective resources and public accountability. Poor data quality can lead to poor decisions(2,3), ineffective in budget utilization, to detect failures and manage public health problems early. The application of advanced data integration technologies will be critical to achieving optimal patient outcomes and operational efficiency(4). In the era of digital health transformation towards the National Health System (SKN) based on the SatuSehat platform, the need for reliable and integrated data is increasingly urgent(5).

Various studies and reports show that the quality of health data at the Puskesmas level in Indonesia, including in Southeast Sulawesi Province, still faces significant challenges. Factors such as limited human resources (HR)(6), information technology (IT) infrastructure that is not evenly distributed(7), High administrative workload, complexity of reporting systems, and geographical conditions are often cited as the root of the problem. Kendari City, as the capital of Southeast Sulawesi Province, although relatively more advanced in terms of infrastructure compared to other districts in the province, is not free from these challenges. There are still incomplete reports, inaccurate disease coding, delays in data delivery, and inconsistencies between manually and electronically recorded data.

While technical and resource factors are critical, there is growing evidence that management and leadership at the health center level play a central and strategic role that often receives less attention. The head of the health center and his/her management team are at the forefront of creating a working environment conducive to good data management.

Although the role of management and leadership is conceptually recognized, empirical research that specifically examines the extent and how these management and leadership factors affect the quality of health data at the operational level of Puskesmas, especially in urban areas such as Kendari City, is still limited. Previous studies often focus on technical or human resource factors in general, without delving into the dynamics of leadership and specific management practices that can be drivers or inhibitors of data quality.

Kendari City, with its characteristics as a rapidly developing urban area but still has challenges typical of eastern Indonesia, is an interesting and relevant context to test this relationship. A deep understanding of the influence of leadership and management is essential because these factors are potential levers for intervention to improve data quality, even in conditions of limited other resources.

METHOD

This type of research is quantitative research, and is explanatory research, which tries to explain existing phenomena. Explanatory research is a research method that aims to explain the position of the variables studied and the influence between one variable and another(8,9). The variables studied are presented in the following conceptual framework:

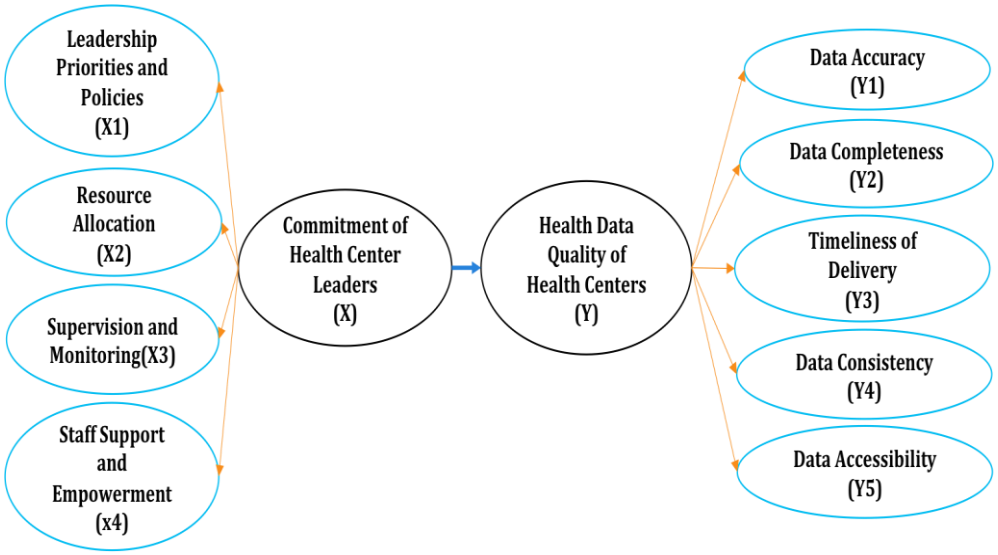

Figure 1. Conceptual Framework

The method of sampling/respondents at the research location used purposive sampling technique. Respondents consisted of the head of the health center and the HIS/IT coordinator, and the administration department. The number of health centers in Kendari City was 15, so that the number of samples/respondents was 45 respondents. In this study, two stages of testing were carried out, namely the outer model test followed by the inner model test. The outer model test was carried out to determine the validity and reliability of the data used in the study. Convergent validity testing was carried out using the Average Variance Extracted (AVE) value or the outer loading value or both. The expected AVE value in the convergent validity test is greater than 0.5.

In the convergent validity test with outer loading, the expected value is greater than 0.7 in confirmatory research and greater than 0.5 in development research and can use a scale of 0.5 – 0.6(10,11), where if there is an outer loading factor value that is smaller than 0.4 then it must be removed from the model(12)(13). After all variables and indicators meet the minimum test criteria, the next step is testing the inner model. The inner model test is used to see the relationship between latent variables. In the inner model test, hypothesis testing is carried out which includes testing the P-Value, T-Statistic and Original Sample values(10). The statistical application used is Smart-PLS.3.

RESULTS AND DISCUSSION

Validity and Reliability

In the convergent validity test by looking at the outer loading value, the expected value is greater than 0.7. If the value is greater than 0.7, the indicator and dimensions are declared valid. The results of the validity test are presented in the following figure:

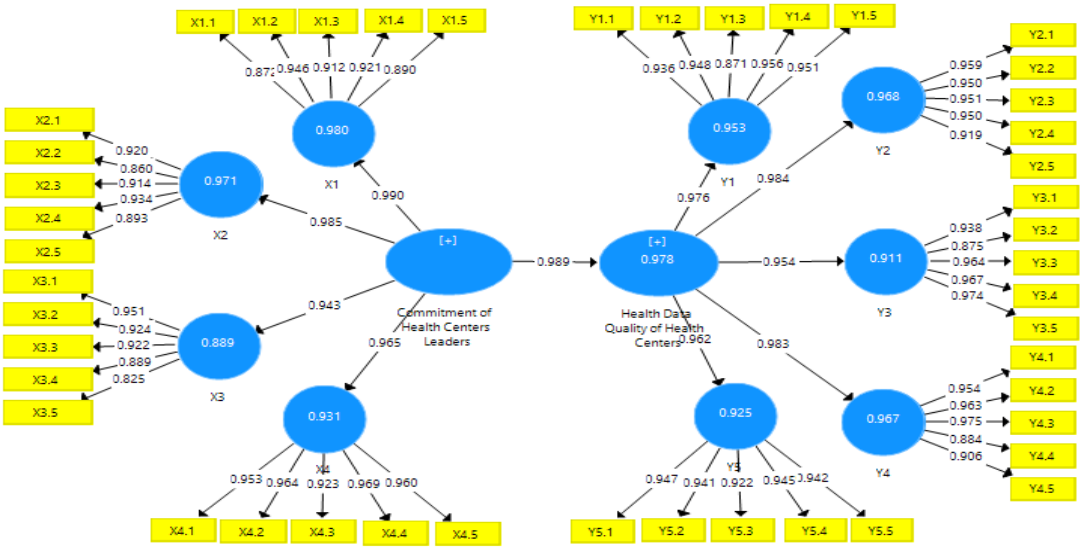

Figure 2. Outher Loading Value

The image above shows that all indicators and dimensions have an outer loading value of more than 0.7, so that the indicators and dimensions are declared valid. Furthermore, a reliability test is carried out using the Cronbach's alpha and composite reliability values, the results are presented in the following table:

Table 1. *Reliability Test Results with Cronbach's Alpha and Composite Reliability Values*

Variables and Dimensions	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Conclusion
Y5	0.967	0.967	0.974	0.883	Reliable
Y4	0.965	0.967	0.973	0.878	Reliable
Y3	0.969	0.973	0.976	0.892	Reliable
Y2	0.971	0.971	0.977	0.895	Reliable
Y1	0.962	0.963	0.971	0.870	Reliable
X4	0.975	0.976	0.981	0.910	Reliable
X3	0.943	0.952	0.957	0.816	Reliable
X2	0.944	0.945	0.957	0.818	Reliable
X1	0.947	0.949	0.959	0.825	Reliable
Y	0.992	0.992	0.992	0.834	Reliable
X	0.986	0.987	0.987	0.793	Reliable

The table above shows that all dimensions and variables studied have Cronbach's alpha and composite reliability values of more than 0.7, so they are declared reliable.

Inner Model Test

Hypothesis testing is carried out which includes testing the Original Sample value, T-Statistic and P-Value. The test results are presented in the following table:

Table 2. *Original Sample Value, T-Statistic and P-Value*

Influence between Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Commitment of_Health Centers Leaders -> Health Data Quality of Health Centers	0.989	0.989	0.004	271.551	0.000

The table above shows that the original sample value and p-value show that the commitment of the health centers leadership has a positive and significant influence on the quality of health centers health data because it has a positive original sample value and a p-value of 0.000 < 0.05. Leadership commitment has an influence on the quality of health data in health centers. The first dimension of leadership commitment is priority and policy. What a leader needs to pay attention to is explicitly conveying the importance of accurate data in staff meetings, the quality of health data must be included in the main performance targets of the Health Center, the leader prepares a written policy (SOP/circular) on data recording & reporting standards, allocates a special budget for data management (IT improvements, training, incentives), a leader must dare to reject reports/data that do not meet the eligibility standards.

The second dimension is related to resource allocation. A Health Center leader places special officers/coordinators who focus on data management, staff who handle data are given special time (not disturbed by clinical/other tasks), supporting facilities (computers, printers, internet) are adequate and function well, the leader ensures that there is a routine data backup mechanism (offline/cloud) to prevent data loss, Data collection staff receive access to routine training on information systems (SIKDA/SatuSehat/etc.).

The third dimension is supervision and monitoring. A Health Center leader conducts a routine review (at least monthly) of the completeness and timeliness of reports. The Health Center must also have a data verification/validation mechanism before being sent to the health office and the leader ensures that the data verification/validation is in accordance with the mechanism. A leader also provides constructive feedback to staff if there are data errors. The results of the data evaluation are discussed in a staff meeting for joint improvement and periodic spot checks are carried out on medical record data/program reports.

The fourth dimension is staff support and empowerment. The Puskesmas leadership encourages staff to identify data problems and propose solutions, if there are data errors, they will be used as learning materials, not just sanctions, staff who excel in data management receive appreciation (non-material/material). The Puskesmas leadership also ensures that staff understand the SOP and reporting flow well, and supports staff in participating in training/technical assistance from the Health Office/Center.

To address the obstacles and problems faced by HIS in developing countries, including formulating strategic plans and policies necessary for national HIS development(14). Developing a standardized health management information system implementation plan, providing advanced supervisory level training, supportive supervision, and coaching at the site level can be very effective in identifying and resolving data quality issues that hinder(15). Health care managers must understand the importance of data quality and accept responsibility for its improvement and maintenance. Interventions that only address inventory will not fully address data quality limitations. Staff motivation and recognition for outstanding performance can motivate others and can create cooperation among staff(15).

The process of administrative health data generation is complex and involves a diverse workforce. As such, there are several points in the process that present challenges to obtaining high-quality data. For coders, the main barriers to data quality occur around chart documentation, variability in chart information interpretation, and high quota expectations(16). Training, tool support, and standardization of data definitions emerge as immediate opportunities to improve data quality(17).

CONCLUSION

Leadership commitment has an influence on the quality of health data in health centers. what a health center leader does to obtain quality data is leadership commitment is priority and policy, related to resource allocation, supervision and monitoring and leaders must provide support to data managers/staff at health centers. Further research can examine other factors besides the commitment of health center leaders to analyze factors that influence the quality of health data, such as the availability of infrastructure and the ability/competence of digital-based data management officers.

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