



**ANALYSIS OF READINESS FOR PRIMARY SERVICE INTEGRATION USING
THE HOT-FIT METHOD AT THE PUBLIC HEALTH CENTER**

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ABSTRACT

Strengthening primary health care services is essential to improve the achievement of minimum health service standards. Primary Care Integration aims to reorganize existing primary health care services, enabling them to serve the entire Indonesian population with comprehensive and quality services by coordinating primary health care services based on the life cycle and no longer on programs. This study aims to explore the readiness of human resources, organization and governance, and technology in health centers to implement PCI. This descriptive study was conducted using a qualitative approach with 15 respondents from various job backgrounds. The research was conducted at Ipuh Bangun Jaya Health Center from August to October 2024. In-depth interview results were processed and validated through field observations, resulting in 18 sub-themes. Sub-themes 1-3 are about understanding PCI; sub-themes 4-8 are about human resource readiness; sub-themes 9-14 are about organizational and governance readiness; and sub-themes 15-18 are about technology readiness. Data analysis involved data reduction, data presentation, and conclusion and verification. The research findings show that Human Resources at Ipuh Bangun Jaya Health Center have good efficacy and individual attributes to support the implementation of primary care integration at the Health Center. The organization and governance of Ipuh Bangun Jaya Health Center show the existence of management support as one form of good principal support to move towards the implementation of primary care integration at the Health Center. The information technology available at Ipuh Bangun Jaya Health Center is adequate for the implementation of primary care integration at the Health Center as one of the available principal supports. Although the valence of change is not yet very strong, the efficacy of change and the situation of change have been felt and expressed by employees in their daily activities. Things that need to be improved to encourage change include: widespread socialization to all employees according to clusters, structured socialization of policy products, and adequate internet access. The study concludes that Ipuh Bangun Jaya Health Center has strong human resources, governance, and IT support for primary care integration. However, improvements in socialization and internet access are needed for successful implementation.

Keywords: hot-fit; primary service integration; public health center; readiness

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INTRODUCTION

The Ministry of Health of the Republic of Indonesia has established a vision for health development "Achieving a Healthy, Productive, Independent, and Equitable Society towards an Advanced Indonesia that is Sovereign, Independent, and with Strong National Identity Based on Mutual Cooperation." To achieve this vision, a general policy has been set to enhance healthcare services toward universal health coverage, particularly by strengthening primary health care through promotive and preventive efforts, supported by innovation and technology utilization (Ministry of Health, 2020). However, an evaluation of the 2021 Minimum Service Standards in health services revealed that none of the 12 established standards reached 100% achievement. Some key indicators even showed a decline compared to 2020, including maternal health services (from 82.54% to 75.83%), newborn care (from 83.63% to 78.03%), and mental health services (from 76.55% to 72.94%). The low

achievement of these standards has prompted the transformation of Indonesia's healthcare system, particularly the transformation of primary health care services (Ministry of Health, 2023). Indonesia has 10,374 Community health centers, supported by 27,768 auxiliary health centers and various community-based health initiatives. However, the lack of integration between these initiatives at the village level and the absence of healthcare facilities in 18,193 villages highlight the need for structured primary care integration (Yuliandari, 2023).

The integration of primary health services at Community health centers is carried out by shifting from a program-based approach to a life-cycle-based service model. The head of Community health centers organizes staff into clusters, forming a structured organization as follows: 1) Cluster 1: Management; 2) Cluster 2: Maternal and Child Health; 3) Cluster 3: Adult and Elderly Health; 4) Cluster 4: Infectious Disease Control; and 5) Cross-Cluster Working Groups. A pilot study in nine Community health centers, covering urban, rural, remote, and very remote areas, demonstrated positive outcomes, proving that this approach is feasible. However, challenges remain, such as integrating community health volunteers into Community health centers services and ensuring real-time reporting of high-risk cases for immediate follow-up (Ministry of Health, 2023). By 2024, all Community health centers are expected to begin implementing primary health care integration (Directorate General of Public Health, 2024). One method for assessing information system readiness is the HOT-FIT framework, which evaluates: 1) Human factors: User readiness and competency; 2) Organizational factors: Governance and system management; and 3) Technology factors: System specifications and compatibility

Several studies (Septiyani & Sulistiadi, 2022; Faigayanti et al., 2022; Imani & Khasanah, 2022) have confirmed the HOT-FIT method's compatibility in evaluating hospital management information systems (SIM-RS). Puspitasari et al. (2021) also found it more effective than the EUCS model in assessing personnel management systems. Furthermore, studies by Cahyani et al. (2020) and Fitriani et al. (2022) demonstrated that HOT-FIT is applicable for evaluating Community health centers information systems (SIMPUS) and P-Care applications used for health insurance claims. A preliminary study at Ipuh Bangun Jaya Community health centers indicates that staff are accustomed to using health information systems, with designated personnel handling each application. However, with service integration, 31 out of 36 healthcare staff must now access and coordinate information based on their respective clusters. Support staff, such as drivers, customer service, security, and finance administrators, are exempt from system access requirements.

Ipuh Bangun Jaya represents a mid-level Community health center, geographically situated between advanced urban Community health centers with well-equipped facilities and remote Community health centers with limited accessibility and infrastructure. Although trained personnel are available to manage digital applications, the capacity of other staff in supporting service integration remains unclear. With the shift to a cluster-based model, a comprehensive assessment of staff competencies, organizational readiness, and technology infrastructure is required. Given these challenges, an in-depth analysis is needed to assess whether Ipuh Bangun Jaya Health Center is ready for primary care integration, particularly in terms of human resources, organizational structure, and technology support. Thus, this study aims to analyze the readiness for primary health care integration using the HOT-FIT method at Kotawaringin Barat Health Center.

METHOD

This study employs a descriptive qualitative approach. The study aims to describe the readiness for primary care integration at the Ipuh Bangun Jaya Health Center based on the HOT-FIT model from the perspectives of key stakeholders. The study was conducted at Ipuh Bangun Jaya Health Center, Kotawaringin Barat, between August and October 2024. The study subjects included all 34 employees of the health center. Participants were selected to provide relevant information, including health center leadership, staff from the main and auxiliary health centers.

The planned number of participants was 15, with possible additions until data saturation was reached. Data sources included participants, documents, and observations. Data collection methods comprised: 1) In-depth Interviews: Direct interactions with informants to obtain relevant insights; 2) Documentation: Collection of documents related to health center management and relevant local policies; AND 3) Triangulation: A multi-method approach involving focused discussions and probing techniques to validate findings. Data analysis involved: 1) Data Reduction: Refining and categorizing data for clarity and relevance; 2) Data Presentation: Organizing data into descriptions, charts, and tables to identify meaningful patterns; and 3) Conclusion and Verification: Drawing conclusions and validating results to establish risk priority in primary care integration. Ethical Considerations included Informed Consent which (Participants provided consent before data collection), Anonymity & Confidentiality (Identities were protected, and responses kept confidential), and Balancing Harm and Benefits (Ensuring research benefits while minimizing risks for participants). This study does not require ethical clearance because it does not involve human subjects, personal data, or confidential patient information. The research focuses on evaluating the readiness of primary service integration using the HOT-FIT method from a system, organizational, and technological perspective. Data used in this study are derived from institutional assessments, secondary data, and general observations, without collecting sensitive or personally identifiable information. Since no direct interaction with patients or ethically sensitive material is involved, ethical approval is not necessary.

RESULT

The respondents in this study consist of 15 key informants from various healthcare roles within the Community health centers. Their work experience ranges from 8 months to 26 years, with diverse responsibilities including administration, nursing, midwifery, nutrition, sanitation, pharmacy, medical records, and disease control. Most respondents are frontline healthcare providers, such as midwives and nurses, working in Community health centers, village health posts, and sub-health centers. Others manage specialized programs like mental health, occupational health, surveillance, and disease control. Administrative and technical staff, such as health administrators and medical records officers, also play a crucial role in healthcare operations. This diverse expertise ensures a comprehensive understanding of the readiness for primary healthcare service integration, particularly regarding human resources, organizational structure, and technological preparedness.

Table 1.
Respondent characteristics (n= 16)

ID	Initial	Work experience	Position	Remark
R1	P L	8 years	Head of Administration Subdivision	Key Informant
R2	N L	3 years	Mental Health, Occupational Health, and Sports Program Officer	Key Informant
R3	J	1 year	Village Midwife (Polindes)	Key Informant
R4	S P	7 years	Sub-health Center (Pustu) Nurse	Key Informant
R5	B I	8 years	Community health centers Midwife	Key Informant
R6	A S	5 years	Community health centers Midwife	Key Informant
R7	S S	2 years	Pustu Nurse	Key Informant
R8	K S	8 months	Health Administrator	Key Informant
R9	S P L	8 years	Nutritionist	Key Informant
R10	A	26 years	Community health centers Nurse	Key Informant
R11	G F	4 years	Environmental Sanitation Officer	Key Informant
R12	F Y	7 years	Pharmacist	Key Informant
R13	M F D	1 year 6 months	Environmental Sanitation Officer	Key Informant
R14	S G I	4 years	Surveillance and Disease Control Program Officer	Key Informant
R15	A O K D	4 years	Medical Records Officer	Key Informant
R16	P L	8 years	Head of Administration Subdivision	Key Informant

The thematic analysis using the HOT-Fit model provides insights into the readiness of primary healthcare service integration at the Community health centers level. Healthcare workers generally understand healthcare service integration as a government initiative to improve access, coverage, and quality of healthcare services through an integrated and continuous approach. The healthcare service integration model involves direct patient care, administrative processes, and community empowerment, structured around age-based clusters to ensure tailored services. The Community health centers workforce is generally sufficient to implement healthcare service integration, supported by community health volunteers. Staff members have a good understanding of healthcare service integration and their respective roles, although some remain uncertain. The structured approach, focused services, and integrated applications have made implementation easier, and both staff and the community perceive healthcare service integration as beneficial. However, challenges persist, including gaps in specialized human resources for specific clusters and uneven distribution of information among staff.

Healthcare service integration's objectives are well-communicated and accepted by staff due to clear role distribution, competency-based job assignments, and integrated work processes. The local government has allocated funding, conducted training, and provided mentoring support through the Health Office. Internal regulations, such as guidelines and SOPs, have been prepared, but their dissemination remains incomplete, leading to varying levels of understanding among staff. Additionally, monitoring and evaluation mechanisms need further structuring and improvement. Continuous mentoring and training are seen as key solutions to these challenges. Essential technological infrastructure—including computers, internet access, and healthcare service integration-related applications—is available and actively used. However, frequent internet disruptions, limited IT skills among staff, non-user-friendly applications, inefficient workflows, and outdated software pose challenges. Some staff members remain hesitant to fully engage with digital systems. Developing customized

applications and providing targeted IT training could enhance the adoption and efficiency of healthcare service integration technology.

DISCUSSION

Based on the research findings, a general description of human resource readiness at Community Health Centers Ipuh Bangun Jaya for implementing Primary Healthcare Service Integration has been developed. Referring to the Decree of the Minister of Health of the Republic of Indonesia No. HK.01.07/Menkes/2015/2023 on Technical Guidelines for Primary Service Integration (2023), the Community Health Centers Ipuh Bangun Jaya has qualified and competent human resources based on specific clusters, namely: 1) Community Health Centers Management; 2) Maternal, Child, and Adolescent Health; 3) Productive Age and Elderly Health; and 4) Infectious Disease Management.

Thus, from a technical healthcare service perspective, the only shortage is a dental practitioner. Based on their educational background, Community Health Centers staff are capable of data assessment and collection, analysis, and reporting within each cluster. According to Holt, Armenakis, Feild, and Harris (2007) in Novitasari & Asbari (2020), individual readiness for change collectively reflects the extent to which individuals or groups tend to agree with, accept, and adopt a specific plan aimed at changing the current state. Similarly, Desplaces (2005) in Yulistiani et al. (2020) argues that readiness for change serves as a driving force that enables the change to yield positive results. Employees who are ready for change believe that the organization will progress if it implements changes. Additionally, they exhibit a positive attitude toward organizational change and a willingness to participate in its implementation (Liana et al., 2021). Readiness for change is built on two main factors: 1) Belief in management support for change (management support); 2) Perceived personal benefits from the change (personal valence) (Holt & Vardaman, 2013 in Liana et al., 2021). The presence of policy documents, guidelines, and SOPs indicates that management support for healthcare service integration is adequate.

According to Weiner (2009) in Widaningtyas (2018), organizational readiness for change is not only a multi-level construct but also multi-faceted. Specifically, organizational readiness refers to the commitment of members to implementing change. Similarly, Armenakis and Harris (2009) emphasize that principal support reflects the perception that an organization provides support and commitment to ensure the success of change initiatives. The study findings indicate that key technological infrastructure—including computers, laptops, internet access, and applications related to healthcare service integration—is adequately available and actively used in daily operations. However, several technological challenges remain, such as: 1) Frequent internet disruptions; 2) Limited IT competency among staff; 3) Lack of familiarity with the application; 4) non-user-friendly application interface; 5) Inefficient workflow; and 6) Outdated software on laptops and computers. Referring to the Minister of Health Decree No. HK.01.07/Menkes/2015/2023, from a technological perspective, internet access at the Community Health Centers is still suboptimal, even though the available IT infrastructure is technically sufficient for operations across all clusters. The implementation of healthcare service integration not only transforms the organizational structure of Community Health Centers but also alters existing business processes (change content) while simultaneously managing the change itself (change process). Fortunately, Community Health Centers staff are somewhat familiar with information technology, even though their expertise is not highly technical (individual attribute). Therefore, three out of four key factors influencing change readiness, as identified by Holt and Weiner in Liana et al. (2021), are already present at Community Health Centers Ipuh Bangun Jaya.

According to Weiner (2009) in Widaningtyas (2018), the valence for change at Community Health Centers Ipuh Bangun Jaya may not be particularly strong in this case, as healthcare service integration is a mandatory task that must be implemented. However, change efficacy is evident and expressed by most employees. The fact that healthcare service integration is being implemented nationwide has also facilitated the transition. Weiner (2009) asserts that organizational readiness for change does not guarantee the success of complex change implementation in terms of improving quality, safety, efficiency, or other anticipated outcomes. However, when organizational change is well-designed, consistently applied, and implemented with high quality, its benefits can be realized.

CONCLUSION

Overall, the Community health centers is progressing well in healthcare service integration implementation, with strong acceptance among staff, adequate workforce capacity, and supportive organizational structures. However, human resource gaps, uneven information dissemination, organizational coordination, and technological barriers must be addressed to fully optimize primary healthcare integration. Continuous mentorship, structured monitoring, and targeted technological improvements are essential for sustainable healthcare service integration execution.

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