The Role of Individual Readiness as the Mediator Between Communication's Quality and Performance Expectancy on Championing Behaviour

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Abstract: - The study aims to (1) determine the influence of readiness for change towards championing behaviour to implement the Community Health Centre Information System (CHCIS) and (2) determine the factors of developing readiness for change. The study used a cross-sectional survey design to collect data among 254 health workers with the responsibility to report the CHCIS. The data were analysed using Structural Equation Modelling (SEM) and the Smart Partial Least Squares (SmartPLS) software. Resultantly, performance expectancy and communication's quality significantly influenced readiness for change, while readiness for change mediated championing behaviour and its components. The results presented the importance of using the new CHCIS that facilitates and increases health workers' work productivity, which affects their behaviour to fight for the new system implementation. The study enhances understanding of championing behaviour while emphasizing the interrelationships between factors of the change process and technological elements.

Key-Words: - Championing; change; communication; expectancy; organization; performance

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1 Introduction

1.1 Study backgrounds

Implementation of changes on a programmed integration creates a challenge that entails combining different priorities, unique processes, and information systems, eliminating duplicate activities in various reporting units, and changing organizational members' roles (Wedel et al. 2007; Valaitis et al. 2018). Readiness for change (RfC) performed by community health centres may face obstacles, which complicates the implementation of CHCIS. RfC is a crucial factor for the success of changes by organizations (Armenakis & Bedeian 1999). It describes individuals as well as groups participating in the change process (Holt et al. 2010). Many studies on RfC highlighted various factors that contribute to RfC, such as communication, leadership, and performance expectancy (PE) [Kwahk & Kim 2008; Vakola 2014]. RfC and technological characteristics positively influence the information system use (Kwahk & Kim 2008).

Assessing the readiness level facilitates the organization to determine individuals' motivation in delivering and implementing changes, measure capabilities within the organization, improve organizational capabilities, and enrich the organization (Vaishnavi & Suresh 2020). A readiness assessment also identifies gaps between the individual and others' expectations in the organization regarding the change initiative. Identifying the gaps enables actions to overcome employees' resistance that threatens the initiation of change (Holt et al. 2007). Individual-level readiness is crucial considering that the organization is a complex human system where no individual holds

complete information about everything happening in the organization, thus readiness varies depending on the individual perception (Holt et al. 2007).

Individual readiness arises from the type of organizational change as it will be implemented by the individual (Eby et al. 2000). Moreover, complex organizational change depends on the employee's willingness to anticipate and adapt to uncertainty during the organizational change process (Morin et al. 2016). Successful change depends on individuals' proper execution in the organization (Choi & Ruona 2011). Hence, RfC is measured by assessing the individual's attitudes. Nonetheless, the biggest obstacle to individual readiness is negative beliefs, attitudes, and behaviours arising from the change implementation (Khalifa 2013).

The study emphasizes the importance of a fundamental understanding of the complexity of individual reactions during individual change (Bakari et al. 2017; Rafferty & Minbashian 2019) to increase the success of the organizational change (Adil 2016). Therefore, further research is needed to enhance the role of individual RfC and to fill the gaps by modelling the role of RfC. The study highlights the CHCIS integration which provides information for the decision-making process in implementing the CHCIS management in achieving the activity targets.

The community health centres were selected as the research locations must implement the changes to new information systems. Furthermore, community health centres are sources for Indonesian data at the regional level. Changes promote better coordination in providing patients with better services and integrate programmes to eliminate health workers' dual activity (Al-Hussami et al. 2018; Austin et al. 2020). The Regulation of the Minister of Health number 31 of 2019 regulates the reporting standards while the Ministry of Health regulates the recording standards to accommodate national-level data needs following the strategic plan, Minimum Service Standards (MSS), Activity Performance Indicators (APIs), and Key Performance Indicators (KPIs). The guidelines regulate the mechanism for adding report content through the district-level health office.

The study determined the role of RfC as a mediator between communication's quality (CQ) and PE towards championing behaviour (CB) to implement the CHCIS. The study objectives are (1) to determine the influence of readiness for change towards championing behaviour to implement the CHCIS and (2) to determine the factors to enhance readiness for change.

The study includes two antecedent variables (CQ and PE), one outcome variable (CB), and one mediating variable (RfC). The study predicted a direct and indirect association between CQ and performance expectancy with CB mediated by RfC.

1.2 Theoretical frameworks

RfC is a predictor of CB (Zayim and Kondakci 2015; Rafferty and Minbashian 2019). The important role of individual behavioural choices is a description of the individual's psychological readiness to face changes based on a positive point of view regarding the need for change and the degree of a person believes in the positive impact of transformation for himself and the organization (Armenakis et al. 1993). In general, commitment and readiness are described as positive precursors towards CB (Armenakis and Bedeian 1999).

RfC is a critical aspect of a successful change in an organization (Matthysen and Harris 2018). It is a useful mediating construct for understanding how antecedents influence change supportive behaviour (Rafferty et al. 2013; Faupel and Süß 2018; Rafferty and Minbashian 2019; Islam et al. 2020). In this study, the antecedent of research is the CQ which explains how a change made by the organization is communicated clearly, openly, and regularly (Bouckenooghe et al. 2009), and PE which explains an individual's belief in the use of the new system that will provide benefits for improving his performance (Venkatesh 2003). In the context of this research, CQ and PE can create RfC (Kwahk and Kim 2008; Soumyaja et al. 2018), which is expected to provide benefits for organizations that are making changes so that they can encourage behaviour that supports changes conducted by the organization.

Research conducted by Rafferty and Minbashian (2019) showed that RfC has a direct effect on change supportive behaviour, following the model developed by social psychological models which assess attitudes towards behavioural consistency. RfC is a factor influencing discretionary support rather than focal support on change supportive behaviour (Rafferty and Minbashian 2019). Championing is the highest level of discretionary effort, so it is the highest level of change supportive behaviour. The research conducted by Herscovitch and Meyer (2002) showed that commitment to change has an influence on change supportive behaviour and championing has the strongest influence. At the beginning of the changes made by the organization, commitment to change and RfC were in the same phase (Stevens 2013). Therefore, this study proposes the following hypothesis:

H1: Readiness for change positively affects championing behavior.

Armenakis et al. (1993) and Armenakis and Harris (2002) then stated that clear communication is one of the factors needed to create RfC. Readiness will help individuals to face the fears that arise as a result of changes made by the organization. Many studies have found that high levels of information adequacy and quality are associated with positive job-related attitudes, such as job satisfaction and openness to change. Research on readiness for change and communication has been carried out by Armenakis and Harris (2002). They stated that communication is the main means for creating readiness for change. Several studies have proven that the problems that arise among organizational members are communication problems (Christensen 2014; Murdoch et al. 2018). Communication is part of the daily life of an organization. After all, it can produce openness and a positive attitude towards change because it can reduce the process of uncertainty (Hameed et al. 2017). According to Rafferty et al. (2013), good communication quality will increase acceptance, openness, and commitment towards change. So far, communication has only been used to convey change so that it can affect readiness for change (Eby et al. 2000; Hameed et al. 2017). Although research on individual readiness and communication has been carried out by several studies such as McKay et al. (2013), Soumyaja et al. (2015), and Soumyaja et al. (2018), very few studies have examined the quality of communication for change influencing policymakers of CHCIS in the change process. Besides, there is no deep belief to be able to prove how the CQ for change can form RfC (Hameed et al., 2017), so the hypothesis proposed is as follows:

H2: Quality of communication positively affects readiness for change.

Armenakis, Harris and Mossholder (1993) state that clear communication is one of the factors needed to create RfC. Readiness will help individuals face the fears that arise as a result of changes made by the organization. Many studies have found that high information adequacy and quality levels are associated with positive job-related attitudes, such as job satisfaction and openness to change. Armenakis and Harris (2002) stated that communication is the principal means for creating RfC. Several studies have proven that the problems among organizational members are communication problems (Christensen 2014; Murdoch et al. 2018). Communication is part of the daily life of an organization. After all, it can produce openness and a positive attitude towards change because it can reduce the process of uncertainty (Hameed et al. 2017). According to Rafferty et al. (2013), good CQ will increase acceptance, openness, and commitment towards change. So far, communication has only been used to convey change to affect RfC (Eby et al. 2000; Hameed et al. 2017). Very few studies have examined the CQ for RfC that influences policymakers in the change process. Besides, there is no deep belief to be able to prove how CQ can form RfC (Hameed et al. 2017), so the hypothesis proposed is as follows:

H3: Communication quality positively affects championing behavior

The success of organizational change requires effective communication because communication can make employees provide support for organizational change (Neill et al. 2019). The main purpose of communication during times of organizational change is to ensure that the change message about the vision, strategic goals, and value of the change is conveyed; to motivate employees to provide support for organizational change; to encourage higher performance; to avoid misunderstandings that can undermine productivity; to align employees for increasing productivity (Barrett 2002). The CQ for change has a high influence on change supporting behavior (Cunningham et al. 2002; Herscovitch and Meyer 2002; Neill et al. 2019). Theoretical contributions related to communication and change supportive behavior are very limited (Cheney 1983; Johansson and Heide 2008). Therefore, this study proposes the following hypothesis:

H4: Performance expectancy positively affects readiness for change

Based on the concept of UTAUT (Unified Theory of Acceptance and Use of Technology) developed by Venkatesh et al. (2003), Performance Expectancy (PE) has a direct influence on behavior. PE is defined as “the extent to which individuals believe that the use of the system will provide benefits to improve job performance (Venkatesh et al. 2003). In general, it can be said that PE is related to external rewards or benefits expected from the use of a system. Many studies that examine the

effect of PE on behavior including Al-Gahtani et al. (2007) and Abushanab et al. (2010) but some of the research results show that there is no influence between PE on behavior (Al- Shafi & Weerakkody 2010; Al-Sobhi et al. 2011). The more useful a system is to get the job done, the more it will be used. Therefore, this study proposes the following hypothesis:

H5: Performance expectancy positively affects championing behavior.

RfC is an important element for the success of change in an organization (Matthysen and Harris 2018). It is a useful mediating construct for understanding how antecedents influence change supportive behavior (Rafferty et al. 2013; Faupel and Süß 2018; Rafferty and Minbashian 2019; Islam et al. 2020). In this study, the antecedent of research is the CQ which explains how a change made by the organization is communicated clearly, openly, and regularly (Bouckenooghe et al. 2009), and PE which explains an individual's belief in the use of the new system that will provide benefits for improving his performance (Venkatesh 2003). In the context of this research, CQ and PE can create RfC (Kwahk and Kim 2008; Soumyaja et al. 2018), which is expected to provide benefits for organizations that are making changes so that they can encourage behavior that supports changes carried out by the organization.

In summary, it has been identified that RfC is a mediator between the CQ and PE that encourage people to behaviorally support change. Thus, it is proposed that:

H6: Readiness for change mediates the effect of quality of communication and championing behavior.

H7: Readiness for change mediates the effect between performance expectancy and championing behavior.

Fig. 1 then illustrates the association between the CB and its predictors.

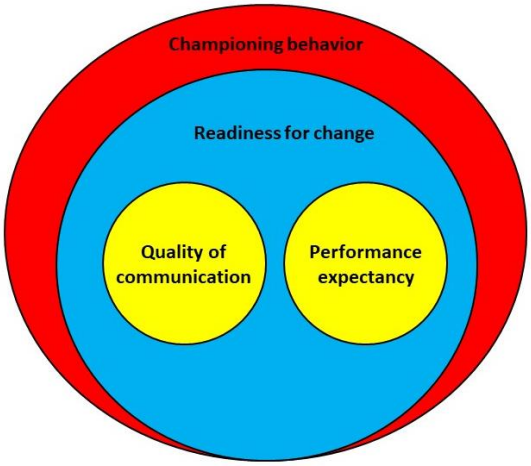

Fig. 1. Theoretical Model of CB

2 Methodology

2.1 Sampling and data collection

The data collection method was survey research using a questionnaire to collect data from community health centres in the Kediri regency. The study used Multistage cluster sampling determined from four types of accreditations owned by the community health centre and randomly selected 15 community health centres. The study involved 254 health workers, including the workers responsible for essential community health efforts and community health nursing, development community and individual health efforts, pharmacists, and laboratory personnel.

The communication's quality items for change by Bouckenooghe et al. (2009) was used to determine whether individuals clearly understood how to implement change. The study used five-point Likert scales statement denoting (1) strongly disagree to (5) strongly agree. Meanwhile, the PE included four statement items by Kwahk and Kim (2008). Nonetheless, the study included only two PE items due to the outer loading value > 0.50 (Hair et al. 2017). The study also employed seven-point Likert scales with (1) strongly disagree to (7) strongly agree to rate the PE. Ten items of RfC were based on Kwahk and Kim (2008) but only six items were used due to the outer loading value > 0.50. The ten items used a five-point Likert scale with (1) strongly disagree to (5) strongly agree to evaluate individual readiness not specific to one particular change but generally measure RfC (Kwahk & Kim 2008; Rafferty & Minbashian 2019). Finally, CB included six items by Herscovitch and Meyer (2002) but only four items were used as the outer loading value > 0.50.

2.2 Analysis of data

Hypothesis testing of the conceptual model including associations between RfC (mediating variable), CQ, and PE (independent variables) with change supportive behaviour (dependent variable) was emphasized in the study. The PLS modelling with the SmartPLS software was used for the analysis of data. The first step involved testing the common method bias problem by performing a full collinearity test (Kock and Lynn 2012; Kock 2015). All variables are regressed if the VIF value is less than 3.30 indicating no collinearity as depicted in Table 1.

Table 1. Full Collinearity Testing

Construct	Championing behaviour	Readiness for change
Communication's quality	1.40	1.04
Performance expectancy	1.16	1.04
Readiness for change	1.56	

The measurement model was evaluated by evaluating convergent validity, outer loading, composite reliability (CR), Cronbach's alpha, and Average Variance Extracted (AVE), and discriminant validity. Construct validity assesses the degree to which a measurement precisely checks the selected variable (O'Leary-Kelly & Vokurka 1998). Outer loading tested the indicator reliability, AVE assessed differences in every construct in the model, and CR and Cronbach's alpha evaluated the core reliability and the relationship of each construct (Hair et al. 2019).

The first step involved performing a convergent validity analysis by eliminating the items with a high level of residual variance (Gefen et al. 2000). Convergent validity involves three conditions, first the outer loading value must exceed 0.50, CR and Cronbach's alpha value must exceed 0.70, and the AVE value must exceed 0.50 (Gefen et al. 2000; Hair et al. 2014).

Discriminant validity was applied to determine the measurement variables with no relationship or only a small correlation (Taherdoost 2016). The discriminant validity method used in the study is the statistical analysis of the heterotrait-monotrait ratio of correlation (HTMT) [Henseler et al. 2015]. The HTMT value should not exceed 0.90 to denote good discriminant validity. Meanwhile, a value greater than 0.90 does not denote sufficient discriminant validity.

The hypothesis was confirmed by assessing the interaction effect (t-value) (Ravand and Purya 2016). The t-value should exceed 1.645 (t-value > 1.645) for the hypothesis to be accepted (Hair et al. 2016).

The coefficient of determination (R^2) was then conducted to analyse the endogenous variable variance. The R^2 values are measured based on the scale of 0.26 (strong), 0.13 (moderate), and 0.02 (weak) [Chin 1998]. Additionally, the evaluation of effect size (f^2 value) then implies the influence level of an independent variable to a dependent variable. The f^2 values are then measured based on the 0.02 (small), 0.15 (medium), and 0.35 (large) scales (Gefen & Rigdon 2011; Wong 2013). Finally, the predictive relevance value (Q^2) detects whether the data points of the indicators in the reflective measurement model can be projected accurately (Wong 2013). The relative measurement for Q^2 is 0.02 (small), 0.15 (medium), and 0.35 (large) [Hair et al., 2017).

3 Results

3.1 Socio-demographic profile

The results in Table 2 suggest that most respondents were female (77.60%) aged between 31 to 40 years old (43.30%) and held a D3 level of education (50.00%). More than half of the respondents worked for one to 12 years (77.20%) as a midwife (25.60%). Most respondents worked as civil servants (66.50%).

Table 2. Respondents' Demographic Characteristics

Variable	Category	Amount	Percentage (%)
Gender	Male	57	22.40
	Female	197	77.60
Marital status	Married	217	85.40
	Single, divorcee or widow (er)	37	14.60
Age	20 to 30 years old	60	23.60
	31 to 40 years old	110	43.30
	41 to 50 years old	64	25.20
	51 to 60 years old	20	7.90
Education	Senior high school	36	14.20
	Diploma	127	50.00
	Bachelor	88	34.60
	Postgraduate	2	1.20
Profession	General practitioners	18	7.10
	Dentist	25	9.80

	Nurse	58	22.80
	Midwife	65	25.60
	Administration	22	8.70
	Other	66	26.00
Working period	One to 12 years	196	77.20
	13 to 24 years	41	10.10
	25 to 36 years	17	6.70
Employment status	State officer	169	66.50
	Contract	67	26.40
	Internship	12	4.70
	Nusantara Sehat	6	2.40

3.2 Convergent validity and reliability of items

Table 3 presents that the loading factor value exceeded 0.50, the CR value was more than 0.70, and the AVE value was more than 0.50, thus indicating convergent validities in the statement items.

Table 3. Convergent Validity and Reliability

Con.	Item	Measurement item	OL	CA	CR	AVE
CQ	1	I am regularly informed about how changes in the implementation of the CHCIS are taking place.	0.51	0.66	0.80	0.50
	2	There is good communication between the leadership of the community health centre and the staff regarding the community health centre policy on changes to the CHCIS implementation.	0.78			
	3	Changes to the implementation of the CHCIS.	0.75			
	4	There is good communication between the leadership of the community health centre and the staff regarding the CHCIS policy.	0.76			
PE	1	The use of the CHCIS is useful for my work.	0.92	0.93	0.95	0.82
	2	Using the CHCIS at work allows me to earn additional income.	0.92			
RfC	1	I find most of the changes at the community health centre pleasant.	0.72	0.82	0.92	0.85
	2	Changes that occur will benefit the community health centre.	0.73			
	3	Changes at the community health centre often help me to achieve better performance.	0.79			
	4	Colleagues think that I support change at the community health centre.	0.71			
	5	Change usually helps me to overcome dissatisfaction at the community health centre.	0.74			
	6	I often suggest new approaches to things.	0.58			
CB	1	I encourage the participation of others in the implementation of the CHCIS.	0.91	0.81	0.86	0.51
	2	I speak positively about the CHCIS to outsiders.	0.91			
	3	I am sticking with changes to support the programme goals.	0.91			
	4	I try to overcome the resistance that arises from co-workers towards the CHCIS implementation.	0.88			

*CHCIS: Community Health Centre Information System, CQ: Communication's quality, PE: Performance expectancy, RfC: Readiness for change, CB: Championing behaviour, OL: Outer loading, CA: Cronbach's alpha, CR: Composite reliability, AVE: Average Variance Extracted

The results in Table 4 indicated that only H1 is rejected due to no association between CQ and CB

(β = -0.08, t = 1.04). CQ implied a positive association with RfC due to the CHCIS implementation (β = -0.48, t = 7.40)]. Hence, H2 is accepted. The results presented a positive association between PE and health workers' CB at the community health centre due to the CHCIS implementation (β = -0.28, t = 4.06). Therefore, H3 is accepted. Additionally, H4 is accepted due to the positive association between PE and RfC (β = 0.28, t = 5.12). Meanwhile, H5 is accepted due to the positive association between RfC and CB (β = 0.31, t = 4.28). The results indicated that RfC positively mediated the association between CQ and CB (β = 0.15, t = 4.11) and the association between PE and CB (β = 0.09, t = 2.90); thus, H6 and H7 are accepted.

Table 4. The Effect of Rfc Towards CB

	Path	SB	SE	t	Bias	CI 5.00 %	CI 95.00 %	Decisions
H1	CQ > CB	-0.08	0.08	1.04	0.15	0.01	-0.20	Not Supported
H2	CQ > RfC	0.48	0.06	7.40	0.00	0.01	0.35	Supported
H3	PE > CB	0.28	0.07	4.06	0.00	0.00	0.16	Supported
H4	PE > RfC	0.28	0.05	5.12	0.00	0.00	0.19	Supported
H5	RfC > CB	0.31	0.07	4.28	0.00	0.00	0.18	Supported
H6	COM > RfC > CB	0.15	0.04	4.11	0.00	0.00	0.09	Supported
H7	PE > RfC > CB	0.09	0.03	2.90	0.00	0.00	0.04	Supported

Note: $p \leq 0.05$ (one-tailed test).
Note: CQ: Communication's quality, PE: Performance expectancy, RfC: Readiness for change, CB: Championing behaviour, SB: Std.Beta, SE: Std.Error, CI: Confidence interval

The results of the PLS-path analysis suggested an indirect effect of RfC, CQ, and CB (Figure 2). The path coefficient results indicated a direct influence on RfC and CB. The results suggested a direct and indirect positive influence, hence RfC significantly impacts the CB of health workers involved in the programme to implement the CHCIS.

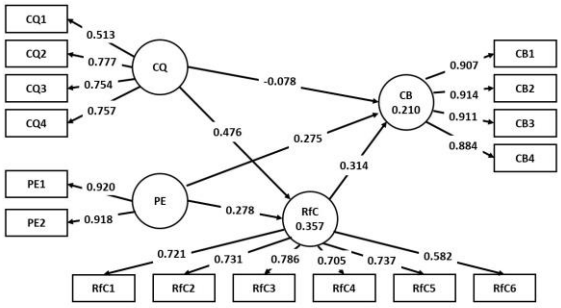

Figure 2. RfC Measurement Model

3.3 Factors to increase RfC

The result then found that the coefficient determination values were RfC (0.36), and CB (0.21) as shown in Table 5. The coefficient determination value for RfC was higher than 0.33, suggesting strong determination. Meanwhile, the coefficient determination value for CB was lower than 0.33, indicating moderate determination.

Table 5. Coefficient of Determination

	R^2
CB	0.21
RfC	0.36

*CB: Championing behaviour, RfC: Readiness for change

All variables suggested a small effect size towards CB and RfC except for CQ (0.35). The effect size value of CB indicates a large effect size (Table 6).

Table 6. Evaluation of Variables Effect Size Towards CB and Rfc

	CB	RfC
CQ	0.01	0.35
PE	0.12	0.11
RfC	0.08	

*CQ: Communication's quality, PE: Performance expectancy, RfC: Readiness for change, CB: Championing behaviour.

The Q2 value was 0.17 and 0.16 for RfC and CB, respectively (Table 7). The value of each variable was more than 0.35, suggesting a large predictive relevance with a desirable predictive relevance value.

Table 7. Predictive Relevance

	Q^2
RfC	0.17

CB	0.16

*RfC: Readiness for change, CB: Championing behaviour

3 Discussion and Conclusion

The two independent variables namely, CQ and PE were used to determine the change of supportive behaviour towards the CHCIS implementation, specifically CB. The study determined the role of RfC as a mediator between CQ and PE. The study referred to past studies for the two hypotheses of direct influence to evaluate the association between CQ, PE, and CB (Abushanab et al. 2010; Neill et al. 2019). The findings presented that only CQ directly and positively influenced CB (H3), while PE positively influenced CB (H5). Conversely, CQ negatively influenced CB (H1). Summarily, health workers holding the programme at the community health centre will fight for changes to implement the CHCIS if the workers feel that the system will facilitate their work.

The positive association between PE and CB aligns with Al-Gahtani et al. (2007) and Abushanab et al. (2010). Nevertheless, the results contradicted studies done by Al-Shafi and Weerakkody (2010) and Al-Sobhi et al. (2011). The association between CQ and CB suggested contradictory results with Neill et al. (2019). The findings indicated that health workers did not feel that they received regular information about changes in the reporting system and that no socialization was clear among the health workers responsible for the programme changes in the reporting activity of CHCIS implemented by the public health office.

The study examined the antecedent forming RfC including two independent variables: CQ (H2) and PE (H4). The findings confirmed past studies where CQ positively influenced RfC (Soumyaja et al. 2018) and PE positively influence RfC (Kwahk & Kim 2008).

Kwahk and Kim (2008) mentioned that implementing a particular information system is influenced by the information system characteristics and other factors, such as social and individual background. CQ is a social aspect, the RfC in an individual context, and PE is a technological context. The three antecedent constructs are interrelated and are unique aspects of the study.

The findings indicated that RfC mediates the association between CB and its components namely, CQ and CB (H6), and PE and CB (H7). Compared to Rafferty and Minbashian (2019), the findings suggested a positive association between RfC and CB. Conclusively, the health workers responsible for the programme involving the readiness of CHCIS implementation affects change supportive behaviour, particularly CB. The statement is more reliable when H6 and H7 are accepted. Thus, RfC mediates the association between CQ and CB (Soumyaja et al. 2018; Neill et al. 2019) and PE (Kwahk & Kim 2008; Rafferty & Minbashian 2019).

The study provided practical implications for organizations and human resource practitioners, specifically health workers in community health centres to create a work environment that provides the impetus for changes made by organizations. The results indicated the importance of the use of the new CHCIS that will provide convenience, increase health workers' work productivity, and affect their behaviour to fight for the CHCIS implementation. The public health officials as the orientation of the community health centre should design socialization by implementing the new information system. The system provides numerous benefits and prevents overlapping reporting, eliminates the notion that reporting burdens the community health centre, creates a standardized reporting system, and simplifies the reporting conducted by the community health centre for the stakeholders.

The study suggests that the organization should consider how to create individual readiness within the organization to support the new CHCIS implementation. Health workers with high readiness toward a new information system will eventually improve their behaviour. The results can be used by the public health office to revise or set up new policies to implement one Indonesian data.

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