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The Relationship Between Case Manager Competence and Nurse Burnout in Indonesia

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Abstract

This study aims to identify the relationship between case manager competency and nurse burnout in Indonesia. A cross-sectional survey was conducted with 235 nurses in three hospitals located in Jakarta and Tangerang. The questionnaire used in this study comprise of: demographic data; General Self Efficacy Scale; Nurse Manager Competency Scale; and Oldenburg Burnout Inventory. Most respondents experienced emotional exhaustion and disengagement. The case manager's competence reported low. Analysis showed that the case manager's competence in actuating, communication, and problem-solving associated with nurse burnout. Direction, communication competency, and problem-solving competency of the case manager may reduce the burnout of nurse executor. Improving the competence of nurse manager is very important in order to reduce nurse burnout.

Keywords: burnout, case manager, managerial competencies, work environment

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1. Introduction

Nurses as frontline health care providers were at risk of burnout during work. Burnout is known as a syndrome of psychological disorders due to work pressure in the form of depersonalization, negative self-achievement, and emotional exhaustion [1-4]. Working pressures that emerge are non-supportive work environment and scheduling/staffing systems that are not by the nurse's specifications [5, 6]. This situation exacerbated by predisposing factors such as age, sex, marital status, type of health service, and health care area [1]. Nurse burnout statistic numbers gradually increased significantly. Burnout rate in Thailand has reached 41% [7] and 44% in Greece [8]. Different from a foreign country, burnout rate in Indonesia has a variable percentage of 56% in Samarinda [9], 26.67% in Kediri [10], 19, 8% in Bali [11], 3% in Purwokerto [12].

Burnout symptoms that can not resolved effectively can harm patients and nurses. Impacts include physical and mental health complaints can lead to medical and non-medical negligence during the treatment process [4, 5, 8]. Health complaints are also at risk of increasing the workload of other nurses, causing a desire to move to another place (turnover) [13, 14].

Burnout rate assessment becomes very important in nursing resource management. Most researchers used the Maschlah Burnout Inventory-Human Service System (MBI-HSS) instrument in measuring nurse burnout [3, 15], but some researchers are currently using the latest instrument of Oldenburg Burnout Inventory (OLBI) that more effectively measures burnout [16, 17]. The OLBI instrument complexly measures the two main dimensions of burnout, the dimensions of emotional exhaustion and disengagement [18]. The OLBI instruments becomes more meaningful when used with other supporting instruments, one of which is the assessment of the risk of turnover on nurses [19, 20].

Case manager as coordinator of nursing service collaborates with head nurse in applying optimal service [21, 22] Case manager responsibility primarily related to coordination of patient care among nurses with other healthcare professionals. The case manager is a nurse manager who has authority in the implementation of nursing services in rooms that fit the clinical pathway [23-25] Effective strategies for lowering burnout are limited. Unfortunately, there still a lack of research related to the implementation of the managerial function of the case manager in Indonesia. Also, research on case managers using quantitative methods is still rare in Indonesia. Therefore, identify relationship between case manager competency with nurse burnout in Indonesia.

2. Methods

2.1. Design

This research is descriptive research using questionnaires with cross-sectional correlation design. This study focuses on managerial case manager's competency analysis that influences nurse burnout.

2.2. Sample

Two hospitals located in Jakarta and Tangerang, Indonesia. In this study only nurses who interact with the case manager who can be a respondent. A total of 235 nurses from a total of three hospitals participated in the study.

2.3. Instrument

This study used four questionnaires that were filled based on nurse's perception. The demographic survey consists of respondents' demographic information such as gender, age, education level, career ladder, working experiences, and self-efficacy. The Nurse Manager Competencies questionnaire measures the competence of managerial case managers. The nurse's burnout is measured using the Oldenburg Burnout Inventory (OLBI) instrument. Self-efficacy is described using the General Self Efficacy Scale (GSES).

Measurement instruments for nurse managers competencies are developed by [25], who divides managerial competence into six sub-variables, namely planning competency, actuating, staffing, problem-solving, finance, and communication [25]. The six sub-variables have six, six, eight, six, nine six statements. These six sub-variables have a rating scale of 1-10 with a range of 1 (low) to 10 (high). The composite scores of managerial competence are positively related to the degrees in these six domains, which means higher scores, higher remains as well as competencies. Cut off the point of this research is based on previous research which set minimum 8/10 including high competence. In this study, the overall Cronbach α for managerial competence was 0.97; α has a range of 0.853 - 0.869 indicating acceptable consistency. GSES developed by Schwarzer and Aristi, measures self-efficacy nurses using ten statements with 4 rating scales: 1 "never," 2 "rare," 3 "often," 4" always." Score categorized into two categories, with a standard grade of 3.26 based on the previous study. In general, the self-efficacy scale has an α Cronbach 0.912 with a range of 0.885 - 0.923 [26].

Nurse manager was measured by the Oldenburg Burnout Inventory (OLBI) which has 18 items and two subscales: emotional exhaustion and disengagement. Analysis separated by two subscale with a cut of point of the previous study [16]. Cut off point score of emotional exhaustion was 2.10, and nurse disengagement as 2.25[27]. OLBI developed by Baker measures the nurse burnout rate using a 4 rating scale: 1 "never," 2 "rare," 3 "often," 4 "always." Score categorized into two categories, with a raw 2.96 standard based on previous research. Burnout scores are less than the cut of point score considered low burnout and scores exceed cut of point score considered high burnout. In general, OLBI scale in this study has α Cronbach 0.867 with range of 0.853 - 0.869.

2.4. Procedures and Ethical Consideration

This research begins with the process of ethics submission at nursing faculty, Universitas Indonesia, and continued with the process of submitted ethics in the research location. The researcher also contacted the nursing department of the three hospitals and obtained a research permit. Participants received notice from the head nurse and were asked to participate in the study, and they were free to resign at any time without any negative sanctions from the hospital. The researcher also ensures the anonymity and confidentiality of the respondents. The data collection took place from 18 April to 25 May. Before the research, the respondents had obtained the research information and signed the approval sheet contained in the questionnaire. Each respondent got a one set questionnaire and got a simple souvenir from the researcher.

2.5. Data Analysis

We processed all explanatory statistical data variables using computer software with the two-tailed significant test. The level of significance is at 0.05. The use of logistic regression analysis because the dependent variable of nurse burnout is not normally distributed. Therefore, we categorize the burnout value into two, i.e. the value 0 = high burnout and 1 = low burnout. Also, we perform dichotomies of independent variables based on the standard value of previous research. We analyze data in three stages. Stage 1, the chi-square test is used to assess the relationship between the managerial sub-competence of the case manager with the nurse's burnout. Variables that enter into the logistic regression modeling process is a variable that has a value that is less than 0.25. Phase 2 is a multicollinearity assessment stage using a correlation matrix. The multicollinearity test results showed no strong correlation between independent variables. In stage 3 we entered the logistic regression model to identify the relationship between the managerial competence of the case manager and the characteristics with nurse burnout.

3. Results

3.1. Characteristics of the Nurse Sample

Most of the nurses who participated in the study were female nurse 183 (77.9%) people majority <35 years old 133 (56.6%) people. Background of study respondents is still

dominated by diploma (77.0%), nurse with level II (41.7%). The work duration of respondents mostly in the working period <10 years as much as 137 (58.3%), with a high self-efficacy level of 186 (79.1%) people (Table 1).

TABLE 1: Demographic Characteristics of the Nurses in Indonesia (n=235)

Demographic Characteristics	n (%)
Age	
< 35 year	133 (56.6)
≥ 35 year	102 (43.4)
Sex	
Female	183 (77.9)
Male	52 (22.1)
Education Level	
Vocational high school	10 (4.3)
Diploma	181 (77.0)
Ners	44 (18.7)
Working Experiences	
< 10 year	137 (58.3)
≥ 10 year	98 (41.7)
Career Ladder	
No level	8 (3.4)
Level I	62 (26.4)
Level II	98 (41.7)
Level III	62 (26.4)
Level IV	5 (2.1)
Self Efficacy	
Low	49 (20.9)
High	186 (79.1)

3.2. Case Manager Competencies and Nurse Burnout

Most of the managerial competence of case managers based on the perception of 235 nurses are still in low level, ie planning competence as much as 201 people (85.5%), the competence of guidance as much as 139 people (59.1%), staffing competence of 207 persons (88.1%), financial management competence of 208 people (88.5%), management of problem solving competencies as many as 148 people (63%), and communication competence of 145 people (61.7%) (Table 2).

Results showed 171 nurses (72.8%) had low burnout in the subscale emotional exhaustion, and 161 nurses (68.5%) had low burnout in the subscale of disengagement (Table 3).

TABLE 2: Competencies of Case Manager based on Nurse Perception in Indonesia (n=235)

Competency	n (%)
Planning	
Low	205 (85.5)
High	34 (14.5)
Directing	
Low	139 (59.1)
High	96 (40.9)
Staffing	
Low	207 (88.1)
High	28 (11.9)
Financial	
Low	208 (88.5)
High	27 (11.5)
Problem Solving	
Low	148 (63.0)
High	87 (37.0)
Communication	
Low	145 (61.7)
High	90 (38.3)

TABLE 3: Nurse Burnout in Indonesia (n=235)

Burnout Level	n (%)
Emotional Exhaustion	
Low	171 (72.8)
High	64 (27.2)
Disenggement	
Low	161 (68.5)
High	74 (31.5)

3.3. The relationship between the characteristics and competencies of the case manager with nurse burnout

Table 4 shows the results of the relationship between managerial competence case manager with emotional exhaustion and disengagement. Results from the sub-variable emotional exhaustion of the analysis showed that only three sub-competencies have a significant relationship with emotional exhaustion. The three sub-competencies are actuating competency (p-value = 0.001), problem solving competency (p-value = 0.001), and communication competency (p-value = 0.007). While on the characteristics of nurses, only high self-efficacy has a significant relationship (p-value = 0.001) with emotional exhaustion.

TABLE 4: Relationship between Case Manager Competencies with Nurse Burnout in Indonesia (n=235)

Competencies	Burnout		Emotional Exhaustion		Disenggement	
	Low n (%)	High n (%)	Low n (%)	High n (%)	Low n (%)	High n (%)
Planing						
Low	105 (52.2)	96 (47.8)	50 (24.9)	151 (75.1)	60 (29.9)	141 (70.1)
High	29 (85.3)	5 (14.7)	14 (41.2)	20 (58.8)	14 (41.2)	20 (58.8)
p-value	0.001*		0.770		0.265	
Directing						
Low	60 (43.2)	79 (56.8)	26 (18.7)	113 (81.3)	32 (23.0)	107 (77.0)
High	74 (77.1)	22 (22.9)	38 (39.6)	58 (60.4)	42 (43.8)	54 (56.3)
p-value	0.001*		0.001*		0.001*	
Staffing						
Low	110 (53.1)	97 (46.9)	52 (25.1)	155 (74.1)	61 (29.5)	146 (70.5)
High	24 (85.7)	4 (14.3)	12 (42.9)	16 (57.1)	13 (46.4)	15 (53.6)
p-value	0.002*		0.080		0.110	
Financial						
Low	113 (54.3)	95 (45.7)	52 (25.0)	156 (75.0)	64 (30.8)	144 (69.2)
High	21 (77.8)	6 (22.2)	12 (44.4)	15 (55.6)	10 (37.0)	17 (63.0)
p-value	0.035*		0.057		0.660	
Problem Solving						
Low	68 (45.9)	80 (54.1)	29 (19.6)	119 (80.4)	39 (26.4)	109 (73.6)
High	66 (75.9)	21 (24.1)	35 (40.2)	52 (59.8)	35 (40.2)	52 (59.8)
p-value	0.001*		0.001*		0.039*	
Communication						
Low	69 (47.6)	76 (52.4)	30 (20.7)	115 (79.3)	35 (24.1)	110 (75.9)
High	65 (72.7)	25 (27.8)	34 (37.8)	56 (62.2)	39 (43.3)	51 (56.7)
p-value	0.001*		0.007*		0.003*	

*$\alpha < 0.05$, CI 95%

The relationship of managerial sub-competence of case manager with the nurse's disengagement indicates that there are three competencies with the significant relationship. The three competencies are actuating competency (p-value = 0.001), problem solving competency (p-value = 0.039), and communication competency (p-value = 0.003). While on the characteristics of nurses, only age (p-value = 0.003) and self efficacy (p-value = 0.001) has a significant relationship with nurse disengagement.

Based on the result of bivariate, using pvalue> 0.025 standard, five variables included in the logistic regression model from emotional exhaustion. Variables included in the logistic regression model are actuating competency, problem-solving competency, financial management competency, communication competency, and self-efficacy. While the variable nurse disengagement, the variables that included in the logistic

regression modeling are the competence of direction, staffing competency, problem-solving competency, communication competency, age, working experiences, and self-efficacy.

Furthermore, analysis of the relationship between the managerial sub-competence of the case manager and the nurse burnout in general showed different results with both analysis of nurses' emotional exhaustion and disengagement. All managerial sub-competencies of the case manager appear to have significant relationships with nurse burnout, planning competency, actuating competency, problem-solving competency, and communication competency that all have p-value = 0.001. While staffing compe-tence has p-value = 0.002 and financial competence with p-value = 0.035.

Table 5 shows relationship of demographic characteristics with nurse burnout was age (p-value = 0.001) and self efficacy (p-value = 0.001). This result is slightly different from the emotional exhaustion factor that is only related to self-efficacy (p-value = 0.001). However, statistical results show that all demographic characteristics have an emotional exhaustion percentage greater than 50%. The same result occurred in the relation of demographic characteristics with the nurse's disengagement, which also showed most of the nurses had a disengagement.

3.4. Multivariate Analysis Nurse Burnout

Table 6 shows a negative relationship between nurse burnout with the four variables included in multiple logistic regression modeling. The clearly visible variables have significant association and positively related to emotional nurse's exhaustion, which is directing competency with OR = 1.840, 95% CI [0.877 - 3.861], communication compe-tency with OR = 1.345, 95% CI [0.666-2.715], and problem solving competency with OR = 1.715, 95% CI [0.824-3.570]. On the contrary, staffing competency, financial compe-tency and demographic characteristics of nurses did not provide a strong influence on nurse's emotional exhaustion. Factor that gives the strongest influence is the direction competency with OR = 1.840. This modeling also proved to have the goodness of fit results that can be accepted in Hosmer and Lemeshow test (P = 0.768).

Multivariate analysis of the nurse's disengagement variable resulted in two indepen-dent variables and two confounding variables that influenced and had positive values for the nurse burnout factor. Sub-variables managerial competence case manager who has a significant relationship to the nurse disengagement that is directive competence with OR = 1.282, 95% CI [0.655 - 2.053], communication competence with OR = 1.606, 95% CI [0.810-3.184]. Confounding variables that also influence the nurse's disengagement

TABLE 5: Relationship between Demographic Characteristics with Nurse Burnout in Indonesia (n=235)

Demographic Characteristics	Burnout		Emotional Exhaustion		Disenggement	
	Low n (%)	High n (%)	Low n (%)	High n (%)	Low n (%)	High n (%)
Sex						
Woman	102 (55.7)	81 (44.3)	52 (28.4)	131 (71.6)	55 (30.1)	128 (69.9)
Man	32 (61.5)	20 (38.5)	12 (23.1)	40 (76.9)	19 (36.5)	33 (63.5)
Pvalue	0.557		0.557		0.472	
Age						
< 35 year	89 (66.9)	44 (33.1)	37 (27.8)	96 (72.2)	53 (39.8)	80 (60.2)
≥ 35 year	45 (44.1)	57 (55.9)	27 (26.5)	75 (73.5)	21 (20.6)	81 (79.4)
p-value	0.001*		0.934		0.003*	
Education Level						
Vokasional	106 (56.1)	83 (43.9)	49 (25.9)	140 (74.1)	59 (31.2)	130 (68.8)
Profesional	28 (60.9)	18 (39.1)	15 (32.6)	31 (67.4)	15 (32.6)	31 (67.4)
p-value	0.673		0.466		0.996	
Working Experiences						
< 10 year	85 (62.0)	52 (38.0)	35 (25.5)	102 (74.5)	49 (35.8)	88 (64.2)
≥ 10 year	49 (50.0)	49 (50.0)	29 (29.6)	69 (70.4)	25 (25.5)	73 (74.5)
p-value	0.088		0.492		0.127	
Career Ladder						
Low	47 (67.1)	23 (32.9)	22 (31.4)	48 (68.6)	25 (35.7)	45 (64.3)
High	87 (52.7)	78 (47.3)	42 (25.5)	123 (74.5)	49 (29.7)	116 (70.3)
p-value	0.058		0.435		0.450	
Self Efficacy						
Low	1 (2.0)	48 (98.0)	0 (0.0)	49 (100)	1 (2.0)	48 (98.0)
High	133 (71.5)	53 (28.5)	64 (27.2)	122 (65.6)	73 (39.2)	113 (60.8)
p-value	0.001*		0.001*		0.001*	

*α < 0.05, 95% CI

are age with OR = 3,236, 95% CI [1,697-6,172] and self efficacy with OR = 25.238, 95% CI [3.275-194.518]. Multivariate modeling of disengagement also has a goodness of fit result that is acceptable in the Hosmer and Lemeshow test (p-value = 0.632).

4. Discussion

This study is the first study investigating case manager managerial competencies about nursing burnout in Jakarta and Tangerang hospitals. After controlling for nurse characteristics, results showed an association between sub-competencies of case manager with all two dimensions of burnout (emotional exhaustion and disengagement). Most nurses have low burnout rates. Research shows that most nurses experience a low

TABLE 6: Logistic Regression of case manager competencies with nurse burnout after controlling demographic characteristic (n=235)

	Emotional Exhaution (constanta = -1.469)			Disenggement (constanta = -4.719)		
	B	pvalue	OR [95% CI]	B	p-value	OR [95% CI]
Actuating Competency	0.610	0.107	1.840 [0.877 – 3.861]	0.247	0.470	1.282 [0.655- 2.503]
Communication Competency	0.296	0.409	1.345 [0.666-2.715]	0.474	0.175	1.606 [0.810-3.184]
Problem Solving Competency	0.540	0.149	1.715 [0.824-3.570]	-	-	-
Age	-	-	-	1.174	0.001	3.236 [1.697-6.172]
Self Efficacy	-	-	-	3.228	0.002	25.238 [3.275-194.518]

OR: Odds Ratio, CI: Confidence Interval; Variable included in logistic regression model, had pvalue <0.25 in bivariat analysis. Multiple regression logistic using enter method.

burnout of 57,% in three hospitals. These results are similar to studies conducted by some of the earlier researchers [1, 6]. The low level of nurse burnout still has to get attention because the negative impact of burnout is very difficult to see but has a major impact on nursing care [7, 15]. Some of the causes of burnout that should get the main focus are high workload and demand, monotonous work environment, less reward but not supported by the management [4, 6, 17, 28]. This causes the nurses to feel unappreciated and tend to feel tired due to the same job.

High workloads risk increasing fatigue. Burnout is strongly influenced by the workload in the working unit [4, 6] The clear division of tasks by the skills and skills of the nurse becomes a real application to address the increased workload in the work unit. The high level of nurse burnout was due to the lack of optimal role and function of the case manager. Implementation of case manager function especially on case management involving collaboration with the nurse and another health team [29, 30]. The executing nurse becomes the main partner of the case manager in maintaining the continuity of nursing care for 24 hours. The managing nurse consulted more with the head nurse and with other health teams than with the case manager [31, 32].

Some demographic characteristics have a significant relationship to nursing burnout. Self-efficacy affects emotional exhaustion and nurse disengagement [4,33-34]. Burnout and self-efficacy have a negative relationship so that high self-efficacy will reduce the burnout on the nurse. Age also affects the nurse's disengagement. The relationship between age and nurse disengagement has a negative direction. The results of this study are by research [9, 34, 35]. Higher age is included in the advanced adult category. This increased age will increase emotional intelligence so that they are more able to accept problems in the work unit.

Our results show that the managerial competence of the case manager has a significant effect on the burnout rate of hospital nurses, although the main function of case-case management is entirely patient and family focus [29, 30]. The results of this study indicate that the managerial sub-competence of case manager can reduce the nurse burnout, especially through improvement of the actuating competency, communication competency, and problem-solving competency.In contrast, in this study, staffing competencies of nurse managers had a significant impact on nurse burnout, particularly emotional exhaustion and nurse disengagement [36]. This may be due to staffing competence requiring interaction with other managerial competencies in creating a conducive working environment [36, 37].

Multiple role and function decrease managerial competence case manager. A case manager who served in the hospital generally has additional administrative duties. This dualism leads to a lack of optimal time for the case manager in performing its managerial functions [21]. Eventually, case managers will find it difficult to collaborate, interact, and perform nursing care with nurse practitioners and other health teams [29]. There needs to be a clear division of tasks without additional tasks so that case managers can focus more on implementing holistic case management.

The ability to collaborate becomes an important part of the direction competence. The existence of a relationship between the managerial competence of the case manager and the executor nurse burnout, possibly due to direct interaction and collaboration between the case manager and the executing nurse [38], [39]. Implementation of the process of implementation of nursing care is a direct application of the workload modification process and a conducive working environment for nurses implementing [6]. Cooperation between the case manager and the executing nurse aims to improve self-care and knowledge to the patient.

Actuating competency has a significant influence to decrease burnout. Empowerment becomes one of the real forms of implementation of the case manager's briefing competence. The purpose of empowerment application on the nurse is to maximize the role of nurses in the room as an extension of the case manager. The inability of the case manager to monitor the implementation of individual nursing care or 24-hour monitoring, forcing the case manager to delegate the case manager task to the nurse [22].

The effective application of communication is evident in the case manager's ability to coordinate with nurses in evaluating holistic implementation [22, 29]. Two-way communication through appropriate methods will increase the nurse's sense of involvement

[22]. Communication becomes important as an effort in controlling quality and controlling costs during the process of nursing care. Effective communication will be able to build a good relationship is very important for the case manager. Case Management Society of America (2010, p.6) states that case management is a collaborative process consisting of assessment, planning, facilitation and advocacy processes to select and meet individual health needs through communication and available resources [29]. These process will eventually improve quality outcomes and cost-effective.

Problem-solving competencies are an important function of the case manager in addition to the direction and communication competencies. The results of this study are in line, which states that problem-solving or conflict resolution management consists of conflict prevention, conflict management, and conflict resolution [39]. Case managers must be able to detect any risky deviations before it becomes a serious problem. The accuracy and speed of the case manager in detecting irregularities and problems are the main focus [25]. Possible and emerging problems during the implementation process of nursing care should be immediately coordinated with all health teams to obtain a wide range of optimal perspectives and inputs. The obligation to apply case manager in KARS accreditation assessment is still new. Implementation without the socialization of the role of a case manager to nurses and other health personnel led to the impression that the case manager has not performed its role and function properly. Case managers can work with a team of professional carers. The need for a positive relationship to ensure effective and efficient communication [30].

This study has several limitations. First, the difficulty of obtaining nurse burnout data because most hospitals do not conduct regular nurse satisfaction surveys. So, burnout levels will not be monitored regularly. Second, cross-sectional research design does not have a strong ability to predict significance of relationships and the impact of research variables. Third, the need for secondary data on nurse health problem as supporting data of nurse burnout. Fourth, the method of data collection in this study is based on the perception of the nurse of the implementer, so that the risk of causing bias.

5. Conclusion

This study is the first study to analyze the relationship between managerial competence case manager with nurse burnout using the quantitative method. We found that most of the nurse's perception about competency level of case manager was in low grade. This result is very surprising because of the importance of the role of case managers

in implementing nursing care in hospitals and has become a necessity in the assessment of KARS accreditation. The necessity of management support in internalizing the managerial function of a case manager. To enhancing quality of case management implementation.

We also found that most of the implementing nurses experience emotional fatigue and disagree with a percentage of more than half. This figure deserves special attention, because of the magnitude of the negative impact that will occur if the nurse burnout is not quickly overcome and prevented. The actuating, communication, and problem-solving competencies of the case manager along with the head nurse become one of the alternative strategies in reducing nurse burnout. The real form of implementation of this competence is optimizing and establishing consultation systems and scientific meetings between case manager with the nurse, selection of patient cases that suitable with nurse qualifications.

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Conflict of Interest

The authors have no conflict of interest to declare.

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