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Analysis of Nurses Knowledge and Motivation for the Implementation of Cardiopulmonary Resuscitation at Kaimana Hospital

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ABSTRACT

Background: In carrying out cardiopulmonary resuscitation actions, compression accuracy and compression speed are required to be correct and appropriate in order to create a quality cardiopulmonary resuscitation series. Therefore, nurses' knowledge and motivation are needed in carrying out cardiopulmonary resuscitation.

Purpose: This research aims to determine the relationship between knowledge, motivation and accuracy in carrying out cardiopulmonary resuscitation.

Method: This research uses a descriptive correlation research design with a cross sectional approach. With a purposive sampling technique, a sample of 49 respondents was obtained, the independent variables were knowledge and motivation, the dependent variable was cardiopulmonary resuscitation, using a questionnaire and observation sheet. The chi-square test was used to determine the relationship between the two variables.

Results: The results of research from 49 respondents showed that the majority of respondents had moderate knowledge of 73.5%, moderate motivation of 59.2% and inappropriate RJP actions of 85.7%. Analysis using the chi-square statistical test on knowledge and motivation towards the implementation of cardiopulmonary resuscitation resulted in $p = 0.000 < 0.05$, which means there is a relationship between knowledge and motivation towards the implementation of cardiopulmonary resuscitation measures.

Conclusion: Knowledge has more influence on the implementation of RJP when compared to motivation, but in reality the level of knowledge is mostly in the medium category so it has an impact on the quality of RJP actions. The results will greatly influence health services to patients. Therefore, it must be supported by continuous learning or training in RJP techniques.

Keywords: cardiopulmonary resuscitation, knowledge, motivation

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BACKGROUND

Half of deaths due to disease are caused by cardiac arrest, making it the leading cause of death among other causes in the world (Wong et al., 2019). Cardiac arrest is a condition where cardiac activity suddenly stops functioning which causes a person to become unconscious accompanied by loss of signs of normal breathing and circulation. If you do not receive help quickly, cardiac arrest will cause sudden death in the person who experiences it (Patel & Hipskind, 2022).

In the United States, there were 290,000 cases of cardiac arrest or sudden cardiac arrest that occurred in hospitals (Mir et al., 2022). Data from the World Health Organization (WHO, 2023) states that more than 17.8 million people in the world have died due to cardiac arrest and in Indonesia this has reached 650,000 incidents (MINISTRY OF HEALTH, 2023). In West Papua province, data was found of 13,656 cases with an increase of 1.19% since the last 5 years (RISKESDA 2018).

Cardiac arrest will remain the leading cause of premature death, and small improvements in rescue efforts will be the right action to save many lives every year (Gadar Medik Indonesia, 2016). Cardiac arrest events that are not treated quickly by health workers or nurses will cause death, evidence shows that the death rate in hospitals is 80%, while only 20% of those who survive are given good treatment (Vancini, et al, 2016).

When cardiac arrest and respiratory arrest occur, what is needed is cardiopulmonary resuscitation. Cardiopulmonary Resuscitation (CPR) is a series of emergency actions carried out to restore blood circulation and heart function in someone who has experienced cardiac arrest (AHA, 2020).

The success of cardiopulmonary resuscitation (CPR) is very dependent on fast and appropriate treatment as well as the knowledge and motivation of the individuals involved in the situation. The individual referred to here is a nurse. Nurses have a very important role in successfully carrying out cardiopulmonary resuscitation. Therefore, nurses are required to have high skills so that their performance is effective.

As a nurse, you must have good knowledge about cardiopulmonary resuscitation so that it can be implemented properly according to procedures. Nurses must really know the steps that must be taken when carrying out resuscitation. But before that, nurses must also know the signs and symptoms of cardiac arrest. No less important are the resuscitation techniques that must be mastered, for example whether the nurse knows how long the response time is, the depth of compressions and the accuracy of how to calculate compressions, the use of assistive devices such as AED (automated external defibrillation), and also knowledge about freeing techniques. airway in injured and non-injured patients.

Apart from good knowledge to carry out RJP, it must also be accompanied by motivation to carry out this action. Motivation plays an important role in carrying out cardiopulmonary resuscitation. If you only have knowledge without motivation, nurses will definitely be reluctant to take this action. Meanwhile, high motivation for carrying out cardiopulmonary resuscitation includes the courage to take action, self-confidence in the ability to carry out resuscitation, and most importantly awareness of the importance of this action to save lives.

Based on the results of observations by researchers within one month in the inpatient room, ICU and emergency room at Kaimana Regional Hospital, it is not uncommon for response times to be less responsive to the implementation of cardiopulmonary resuscitation in cardiac arrest patients. Most nurses always wait for instructions from the doctor before starting cardiopulmonary resuscitation measures.

Resuscitation knowledge for nurses can be obtained from attending training related to basic life support. One example is by taking Basic Trauma and Cardiac Life Support (BTCLS), but in reality what happened at Kaimana Regional Hospital, this training has not been carried out continuously so that the majority of nurses at Kaimana Regional Hospital have never attended this training. Of the total nurses on duty in the ICU, Emergency Room and adult inpatient wards, data was found that only 14 nurses had undergone BTCLS training, out of a total of 64 nurses. Meanwhile, all nurses are required to know and be able to apply cardiopulmonary resuscitation measures appropriately and with quality to all patients who experience cardiac arrest.

METHOD

This research uses a descriptive correlation research design with a cross sectional approach. Using a purposive sampling technique, a sample of 49 respondents was obtained, the independent variable was nurse knowledge and nurse motivation using a questionnaire and the dependent variable was cardiopulmonary resuscitation using observation. The Chi-Square statistical test was used to determine the relationship between the two variables. Analysis using the Chi-Square statistical test resulted in $p = 0.000 < 0.05$, so H0 was rejected and H1 was accepted, which means there is a relationship between knowledge and motivation of nurses towards the implementation of cardiopulmonary resuscitation measures at Kaimana District Hospital.

RESULTS

Table 1. Frequency distribution of respondent characteristics and research variables

Hasil Penelitian	**Frekuensi (f)**	**Persen (%)**
Gender of nurse		
Male	19	38,8
Female	30	61,2
Room		
IGD	10	20,4
ICU	9	18,8
R. Pria Dewasa	9	18,4
R. Wanita Dewasa	13	26,5
R. VIP	8	16,3
Knowledge		
High	5	10,2
Medium	36	73,5
Low	8	16,3
Motivasion		
Strong	12	24,5
Middle	29	59,2
Weak	8	16,3
CPR		
True	7	14,3
Fals	42	85,7
Amount	**49**	**100**

Source : Quetioner of the Research , 9 Fabruary 2024

Tablel 2. Croos tabulation

			CPR		Total
			True	Fals	
Knowledge	High	Frekuensi	4	1	5
		%	8,2%	2,0%	10,2%
	Middle	Frekuensi	3	33	36
		%	6,1%	67,3%	73,4%
	Low	Frekuensi	0%	8	8
		%	0,0	16,3%	16,3%
Total		Frekuensi	7	42	49
		%	14,3%	85,7%	100%
Motivasion	Strong	Frekuensi	6	6	12
		%	12,2%	12,2%	24,4%
	Middle	Frekuensi	1	28	29
		%	2,0%	57,1%	59,1%
	Low	Frekuensi	0	8	8
		%	0,0%	16,3%	16,3%
Total		Frekuensi	7	42	49
		%	14,3%	85,7%	100%

Source : Quetioner of the Research , 9 Fabruary 2024

Based on table 2 above, it is known that there are 33 respondents (67.3%) in the category of moderate and inappropriate knowledge regarding RJP actions, and 28 respondents (57.1%) in the moderate motivation category for RJP actions.

Analysis Result

		Value	Approx. Sig.
Interval by Interval	Pearson's R	,505	,000
Ordinal by Ordinal	Spearman Correlation	,493	.000
N of Valid Cases		49	

The results of the research analysis regarding the analysis of nurses' knowledge of the implementation of cardiac resuscitation measures based on statistical tests using the Chi-Square test showed that p = 0.000 < 0.05, so H0 was rejected and H1 was accepted, which means there is a significant relationship between nurses' knowledge of the implementation of cardiopulmonary resuscitation measures in Kaimana hospitals.

		Value	Approx. Sig.
Interval by Interval	Pearson's R	,500	,000
Ordinal by Ordinal	Spearman Correlation	,511	.000
N of Valid Cases		49	

The results of the research analysis regarding the analysis of nurses' motivation for the implementation of cardiac resuscitation measures based on statistical tests using the Chi-Square test showed that p = 0.000 < 0.05, so H0 was rejected and H1 was accepted, which means there is a significant relationship between nurses' motivation towards the implementation of cardiopulmonary resuscitation measures in Kaimana hospitals.

	Coefficients				
	B	Std. error	Beta	t	sig
(constant)	,904	,168		5,390	,000
Penetahuan	,337	,089	,492	3,769	,000
Motivasi	,135	,072	,244	1,868	,068

The results of the multivariate analysis regarding the knowledge and motivation of nurses regarding the implementation of cardiopulmonary resuscitation measures based on the results of multiple linear regression tests showed that p = 0.000 for the knowledge variable and p = 0.068 for the motivation variable, which means that knowledge has more influence on the implementation of cardiopulmonary resuscitation measures at Kaimana Hospital.

DISCUSSION

Identification of Nurses' Knowledge of Cardiac Pulmonary Resuscitation Measures in Kaimana Hospital

Based on the research results, it shows that the majority of respondents in the medium knowledge category were 36 (73.5%), in the low knowledge category were 8 (16.3%) and in the high knowledge category were 5 (10.2%). Knowledge is an important point in determining the treatment to be carried out. Knowledge is obtained from experience and previous research, because based on previous experience it can prove that behavior is based on knowledge. Notoatmodjo, 2014 Knowledge is the result of human sensing or the result of someone knowing about objects through their senses. Most of a person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes).

Individual knowledge about an object contains two aspects, namely positive aspects and negative aspects. The existence of positive and negative aspects can determine an individual's attitude in behavior and if more positive aspects and objects are known it can lead to positive behavior towards certain objects (Sinaga, 2021). According to researchers, the more often we interact with things that support us in the development of knowledge or things that provide positive value for us, our level of knowledge will definitely increase, which will have an impact on the quality of our work.

According to the researchers, the moderate knowledge category in this study shows that there is still a lack of respondents exposed to resuscitation techniques because resuscitation knowledge does not only extend to skills but must be aligned with an understanding of the physiological anatomy of the heart and also awareness to be able to assess emergency situations that require immediate resuscitation assistance. , as well as appropriate experience. If the respondent has good technical/skills and in-depth knowledge, it may have more influence on the results of higher quality RJP actions.

Identification of Nurses' Motivation Towards Cardiac Pulmonary Resuscitation Actions in Kaimana Hospital

Based on the research results, it shows that the highest score for the motivation category is in the moderate motivation category, 29 (59.2%), 12 (24.5%) in the strong motivation category, 8 (16.3%) in the weak motivation category. Motivation is encouragement from within and outside which are better known, intrinsic motivation and extrinsic motivation. Intrinsic motivation is motivation that arises from within the individual himself without any coercion or encouragement from other people, but on the basis of his own will (Porter and Lawler in Gagne and Deci, 2005). Indicators in measuring intrinsic motivation are interest, positive attitudes and needs (Herzberg in Nawawi, 2011). Meanwhile, extrinsic motivation is a work driver that originates from outside the worker as an individual in the form of a condition that requires him to carry out work optimally (Nawawi, 2011). The

indicators used to measure extrinsic motivation are job security, company policy, quality of supervision, relationships with colleagues. colleagues and the relationship between superiors and subordinates (Herzberg in Nawawi, 2011).

According to the researcher's assumption, in accordance with the research results above, the motivation level of the majority of respondents is moderate due to a lack of responsibility for their duties and responsibilities as a nurse, in line with the results of the questionnaire data on positive statements regarding the duties of a nurse carrying out cardiopulmonary resuscitation. The majority of respondents answered that they disagreed as much as 78%. We all know that cardiopulmonary resuscitation is now not only the duty of a health worker but the whole community must know and be able to do it, especially if we are nurses.

Motivation is the main key that determines the performance of nurses, in this case the implementation of nursing actions. In its implementation, nurses must have a strong drive and will that comes from within the nurse herself. If nurses do not have good motivation then the implementation of nursing actions will not be achieved and this could affect the quality of health services.

Identification of the Implementation of Cardiac Pulmonary Resuscitation Measures in Kaimana Hospital

Based on the research, it was found that data on the implementation of appropriate resuscitation measures was 7 respondents (14.3%) and 42 respondents (85.7%) were incorrect. Cardiopulmonary resuscitation is a first aid measure given to victims in respiratory or cardiac arrest, called basic life support. The actions carried out in basic life support include providing artificial respiration and Cardiopulmonary Resuscitation (CPR) to patients (Wiliastuti, Anna, & Mirwanti, 2018). If treatment is not carried out immediately, patients with cardiac arrest can experience death in a very short time. Quality cardiopulmonary resuscitation is carried out using 2 value indicators, namely accuracy and speed.

According to researchers, 85.7% of respondents who carried out resuscitation actions incorrectly could be due to a lack of knowledge, lack of motivation or a lack of technique/skills possessed by a nurse. However, this can also be influenced by self-confidence, if in an emergency situation that requires immediate resuscitation action then as a nurse you must immediately without hesitation carry out CPR. With adequate knowledge, a strong level of motivation and self-confidence during emergency situations that support a good resuscitation series will also be created.

Indicators of motivation or encouragement to do something influence the success of what is done, for example cardiopulmonary resuscitation if the motivation value is low it is very certain that the success rate of cardiopulmonary resuscitation is also low. This weak motivation certainly greatly influences the success rate of cardiopulmonary resuscitation measures which has an impact on increasing the death rate due to cardiac arrest, affects the quality of hospital services and affects the patient's family's trust in health workers.

Analysis of Knowledge And Motivation of Nurses Towards the Implementation of Cardiac Pulmonary Resuscitation in Kaimana Hospital

Based on the results of the correlation test between the knowledge variable (independent) and the cardiopulmonary resuscitation variable (dependent), it shows that 2% of respondents with good knowledge performed CPR incorrectly, and 67.3% of respondents with moderate knowledge performed CPR incorrectly, and 67.3% of respondents with moderate knowledge performed CPR incorrectly. with the results of statistical tests using chi-square between the knowledge and resuscitation variables, a p-value of 0.000 (α=0.05) was obtained, so that H0 was rejected and H1 was accepted, in other words there is a very

significant relationship between knowledge and RJP actions. Knowledge is an important domain in the formation of open behavior (Donsu, 2017). The relationship between knowledge and resuscitation has a very significant influence because the level of knowledge definitely influences what actions we will take or what behavior we will carry out. According to researchers, the relationship between weak knowledge and inaccurate cardiopulmonary resuscitation measures is a lack of self-awareness of nurses and a lack of hospital attention to the value of health services provided to the community. Multivariate test results also show that the knowledge variable influences the accuracy of cardiopulmonary resuscitation actions more than the motivation variable. According to Meilina & Innocentius Bernardo (2021) the knowledge variable has a positive effect on patient satisfaction because the coefficient value is +0.233 and the t count is 2.024 (>1.645), supported. The standard path coefficient value is positive, which means that the higher the level of knowledge, the higher the level of satisfaction and vice versa.

Based on research results related to motivation variables and cardiopulmonary resuscitation variables, it shows that respondents with a weak and inappropriate level of motivation in carrying out CPR were 16.3% with a p-value of 0.000. ($\alpha<0.05$) using the chi-square test, which means there is a relationship between motivation and the implementation of cardiopulmonary resuscitation measures. According to researchers, there is a relationship between motivation and the implementation of cardiopulmonary resuscitation at Kaimana District Hospital, proving that the success of cardiopulmonary resuscitation is influenced by positive interest in work, a sense of responsibility and the existence of good relationships between fellow nurses or doctors. According to Flipo (2006), responsibility is an obligation someone to carry out their duties to the best of their ability. Not only for good work, but also responsibility in the form of trust given to people who have abilities.

Inaccuracy in carrying out cardiopulmonary resuscitation measures and lack of motivation is a form of health service that is not good or not in accordance with the hospital's mission. This can be detrimental to many parties, namely the hospital itself, the nursing profession and most importantly the patient and the patient's family. As a result, the public lacks trust in hospitals and nurses.

CONCLUSION

1. The majority of respondents in the moderate knowledge category were 36 respondents (73.5%).
2. The majority of respondents in the moderate motivation category were 29 respondents (59.2%).
3. The majority of respondents in the inappropriate category in carrying out cardiopulmonary resuscitation measures were 42 respondents (85.7%).
4. There is a relationship between knowledge and motivation towards the implementation of cardiopulmonary resuscitation measures at Kaimana Hospital with a p-value of 0.000 for the knowledge variable and a p-value of 0.000 for the motivation variable
5. The knowledge variable has more influence on pulmonary heart resuscitation actions compared to the motivation variable with a significant value of 0.000 for the knowledge variable and a significant value of 0.068 for the motivation variable

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CONFLICTS OF INTEREST

This study want to know how the relationship between knowledge and motivation towards the implementation of cardiopulmonary resuscitation measures at Kaimana Hospital. Hopefully this result can be using for improving the skill of the health worker to doing the CPR.

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