



RESEARCH ARTICLE

ANALYSIS OF VILLAGE MIDWIFE PERFORMANCE IN HANDLING NEONATAL ASPHYXIA

^{1,*}Hermani Triredjeki and ²Hery Sumasto

¹Poltekkes Kemenkes Semarang, Prodi Keperawatan, Magelang

²Poltekkes Kemenkes Surabaya

ARTICLE INFO

Article History:

Received 25th December, 2019
Received in revised form
19th January, 2020
Accepted 07th February, 2020
Published online 28th March, 2020

Keywords:

Factor Analysis, Village Midwife
Performance, Asfiksia Neonatorum.

ABSTRACT

Background: The village midwife is a midwife profession that is placed in all villages in Indonesia as government health workers. The aim is to help reduce maternal and infant mortality. But in reality, infant and maternal mortality rates are still high. Infant deaths in 2010 were mostly due to asphyxia neonatorum 27%. Thus, the role of village midwives is very important in managing neonatal asphyxia and reducing infant mortality. This study aims to analyze the performance factors of village midwives, in the management of neonatal asphyxia. The research design is quantitative research, analytic observational research with cross sectional approach. Data collection was carried out using a structured questionnaire. The questionnaire was tested for validity and reliability. **Population:** village midwife in a Regency, totaling 65 respondents. Samples were selected by purposive random sampling. The analysis used was the Chi Square test and multiple logistic regression. **Results:** The average age of respondents was 35 years old, Diploma 3 education: 96.9%; Less knowledge: 72.3%; less attitude: 55.4%; have less motivation: 50.8%. Support of resources (funds, facilities, infrastructure) 80% good. Multivariate analysis showed a joint relationship between knowledge (Exp. (B) 7,723) and motivation (Exp. (B) 8,324) with the performance of village midwives in the management of neonatal asphyxia. **Conclusion:** Need continuous technical guidance, in the management of neonatal asphyxia. It is necessary to provide and increase the motivation of village midwives through rewards, especially for those who work well in handling neonatal asphyxia.

Copyright © 2020, Hermani Triredjeki and Hery Sumasto. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Newborns and mothers are a vulnerable group and need intensive nursing care (Sumasto, Wisnu, & Surtinah, 2018). Many factors cause neonates to die. One of them is because of asphyxia neonatorum. Asphyxia neonatorum is an emergency in newborns, characterized by respiratory depression and can cause many complications (Solevåg, Schmölzer, & Cheung, 2019). Newborns must receive special protection and must avoid accidents, shortness of breath, and the risk of disaster (Sumasto et al., 2018). Babies with asphyxia require immediate, intensive treatment to reduce mortality and morbidity. Therefore safe delivery must be performed by a health worker or midwife. Those who have knowledge, abilities and skills in asphyxia management in newborns (Schweitzer & Thali, 2019). Data in a district mentioned the cause of infant death due to asphyxia neonatorum in 2010 as much as 27%. This condition illustrates the problem in health services, namely about the performance of village midwives in handling neonatal asphyxia.

Many factors contribute to the performance of midwives in the management of asphyxia neonatorum. The village midwife is a professional health worker who is placed in all villages in Indonesia as an agent of the government. The aim of the Village Midwife is to help reduce maternal and infant mortality rates, which are still high. So, the role of village midwives is actually very important in handling neonatal asphyxia and reducing infant mortality. This study aims to analyze the performance factors of village midwives, in the management of neonatal asphyxia. Preliminary study in the form of interviews with 10 village midwives, obtained some data as follows: 1) management of asphyxia neonatorum has not been done well; 2) Refreshment about asphyxia management; 3) all midwives must attend asphyxia management training; 4) limited equipment; 5) evaluation and monitoring of neonatal asphyxia has not been maximized; 6) requires technical guidance and supervision; 7) motivation from village midwives to provide more advanced and better services. The good performance of village midwives will have an impact on reducing infant mortality with asphyxia so that it can grow optimally (Abubakari, Taabia, & Ali, 2019). Performance is a performance that is influenced by many factors (Djunawan & Haksama, 2015). Factors affecting performance are: individual variables, organizational variables, and psychological

*Corresponding author: Hermani Triredjeki,
Poltekkes Kemenkes Semarang, Prodi Keperawatan, Magelang.

variables. Three groups of variables affect work behavior which ultimately affects personal performance (Olson et al., 2015). Based on the description above, research has been carried out to analyze factors related to midwife performance in the management of asphyxia neonatorum.

MATERIALS AND METHODS

The research design was quantitative research, a type of observational analytic study with a cross sectional approach (Byard, 2020). Data is collected at the same time for the independent variable and the dependent variable. The independent variable consisted of knowledge, attitudes, motivation, resource support and perception of supervision, while the dependent variable was the performance of village midwives in handling neonatal asphyxia. Data collection was carried out using a structured questionnaire. The questionnaire was tested for validity and reliability. Population: village midwife in a Regency, totaling 65 (Sixty-five) respondents. Samples were selected by purposive random sampling. The analysis used was the Chi Square test and multiple logistic regression..

RESEARCH RESULT

Descriptive Data: In Table 1. shows the respondents have less categories in the variables of knowledge, attitude, motivation that is 72.3%, 55.4% and 50.8% and the performance of midwives 60.0%. Whereas respondents with good categories are 80% of resource support and 52.3% perception of supervision. For knowledge, the results are supported by respondents who answered incorrectly about the cause of asphyxia neonatorum 70.8%, the initial steps undertaken by midwives before resuscitation 87.7%, for the attitude of midwives generated in the midwife's statement that handling asphyxia neonatorum was not easy to carry out 35.9% , for the motivation generated on the statement of not being eager to work if the coordinating midwife does not facilitate 15.4%. The support of resources is supported by observations with a checklist of 65 respondents who have more than 70% infrastructure and meet the established standards, for the perception of supervision resulting from the midwife's statement that the coordinating midwife does not conduct routine evaluations (6.2%), whereas for the performance of village midwives resulting from the statement of midwives who respond sometimes to the act of cutting the umbilical cord quickly (not tied / affixed anything) in infants with asphyxia 30.8% and 9.2% never prepare a resuscitation device at each delivery.

Logistic Regression Analysis: Logistic Regression Test is performed with the bivariate test stages all independent variables have a relationship with the dependent variable, which is the value of $p \leq 0.25$ (table 2). Then logistic regression test is performed to determine the amount of contribution of independent variables to the dependent variable with a limit of $p < 0.05$ (table 3).

DISCUSSION

Relationship with knowledge and motivation with the performance of village midwives: Table 3 shows that only the knowledge and motivation variables have a p-value < 0.05 , namely knowledge with a p-value of 0.004, an Exp value of

(B) 7.723 and a motivation of p-value of 0.001, an Exp value of (B) 8,324. The results showed a simultaneous relationship of knowledge and motivation with midwife performance in neonatal asphyxia handling services. Based on the value of Exp. (B) which has the biggest relationship is the motivation variable which is then followed by the knowledge variable. This shows that to improve the performance of midwives in handling neonatal asphyxia, good midwife knowledge and motivation are needed. In accordance with the results of research which states that the level of knowledge is thought to strongly influence performance (Solevåg et al., 2019). Knowledge is a collection of information that is understood, obtained from the learning process during life and can be used at any time as a means of adjustment both to oneself and the environment. After someone knows the stimulus or object, then conducts an assessment or opinion of what is known, the next process is expected to carry out or practice what is known. Through actions and learning, a person will gain trust and attitude towards something which in turn will influence behavior (Estadual, Estadual, & Estadual, 2012).

Also based on the results of research to improve performance in handling neonatal asphyxia in need of a motivational motivation from midwives. Motivation is a condition in a person's self that drives an individual's desire to carry out certain activities, in order to achieve a goal (Djunawan & Haksama, 2015). Work motivation is something that raises morale or work motivation. Existing motivation in a person will realize a behavior directed at the goal of achieving the satisfaction target (Ristrini, 2014). The coordinating midwife must consider a different motivation for a group of people, which in many cases could not be foreseen. Because this diversity causes differences in behavior patterns which in some cases are always related to meeting needs. Knowledge is needed in completing work so that the village midwife's knowledge of neonatal asphyxia and its handling must be mastered.

Knowledge is influenced by the ability of attention, intensity and perception of objects (Aldika Akbar et al., 2018). The theory states that cognitive knowledge is a very important domain for the formation of one's actions (Ariff, LEE, Lawn, & Bhutta, 2016). The government needs to increase the knowledge of village midwives through training and seminars on handling neonatal asphyxia. So that midwives' knowledge is better, so they can carry out neonatal asphyxia management well. The quality of human resources to be more qualified it is necessary to be supported by education and training to improve the knowledge, attitudes and skills of midwives to carry out work properly and effectively (Astuti, Nursalam, Devy, & Ethics, 2019).

This training was conducted to improve the effectiveness of performance in achieving maximum work results, with the aim of increasing the knowledge, skills and techniques of work implementation (Berkelhamer, Kamath-Rayne, & Niermeyer, 2016). Behavior and attitude are closely related to one's tendency to act. Performance shown by employees is actually a picture or reflection of one's attitude, if the attitude is positive from the start, then the work behavior that arises is good, with positive work behavior that will manifest high performance (Ristrini, 2014). The results showed a lack of motivation by village midwives in managing neonatal asphyxia.

Table 1. Distribution of Respondents based on Research Variables

Research variable	Category	N	%
Knowledge	Good Less	18 47	27.7 72.3
Attitude	Good Less	29 36	44.6 55.4
Motivation	Good Less	32 33	49.2 50.8
Supervision Support	Good Less	52 13	80.0 20.0
Perception of supervision	Good Less	34 31	52.3 47.7
Midwife Performance	Good Less	26 39	40.0 60.0

Table 2. Summary of Bivariate Analysis of the Relationship of Free Variables and Bound Variables (Village Midwife Performance).

Variable	B	SE	Wald	Df	p-value	Exp	Exp Lower Upper
Knowledge	1,917	.619	9,588	1	.002	6,800	2,021 22,881
Attitude	2,063	.574	12,901	1	.000	7,871	2,553 24,267
Motivation	2015	.581	12,046	1	.001	7,500	2,404 23,401
Perception of supervision	2,128	.602	12,477	1	.000	8,400	2,579 27,361

Table 3 . Results of Multivariate Statistical Analysis of the Relationship of Free Variables and Bound Variables with Multiple Logistic Regression Test at α 5%.

Variable	B	SE	Wald	Df	p-value	Exp	Exp Lower Upper
Knowledge	2,044	.715	8,173	1	.004	7,723	1,902 31,364
Motivation	2,119	.653	10,543	1	.001	8,324	2,316 29,916
Constant	-6,320	1,589	15,822	1	.000	.002	

Motivation is the desire of a midwife that encourages him to act, is the energy that moves towards efforts to achieve organizational goals (Djunawan & Haksama, 2015). The motivation of the village midwife strongly supports its performance in the management of asphyxia neonatorum so that it can run well. Motivation is an impulse that is reflected in behavior. Encouragement caused by incentives (stimuli) or encouragement from within as a target to be achieved by someone (Fallis, 2013). Most village midwives are of the opinion that the support of resources is good (Schweitzer & Thali, 2019)

CONCLUSION

- There is a relationship between knowledge, attitudes, motivation and perception of supervision with the performance of midwives in handling neonatal asphyxia.
- Multivariate analysis shows simultaneously, motivation variables have a greater contribution (Exp. (B) 8,324) than knowledge knowledge variables (Exp. (B) 7,723). Strategic efforts from the government are needed to increase the motivation of midwives in handling asphyxia neonatorum.
- The government needs to provide regular technical guidance in handling neonatal asphyxia and increase motivation by giving awards to midwives who work well in the service of neonatal asphyxia handling.

REFERENCES

Abubakari, A., Taabia, F. Z., & Ali, Z. 2019. Maternal determinants of low birth weight and neonatal asphyxia in the Upper West region of Ghana. *Midwifery*, 73, 1–7. <https://doi.org/10.1016/j.midw.2019.02.012>

- Aldika Akbar, M. I., Bachnas, M. A., Mose, J. C., Dachlan, E. G., Ernawati, E., Dekker, G. A., Kristanto, H. 2018. 28. The massive problem of preeclampsia in indonesia: In need of a redesigned national health care system. *Pregnancy Hypertension*, 13, S16. <https://doi.org/10.1016/j.pregphy.2018.08.051>
- Ariff, S., LEE, A. C., Lawn, J., & Bhutta, Z. A. 2016. Global Burden, Epidemiologic Trends, and Prevention of Intrapartum-Related Deaths in Low-Resource Settings. *Clinics in Perinatology*, 43(3), 593–608. <https://doi.org/10.1016/j.clp.2016.05.001>
- Astuti, E. S., Nursalam, N., Devy, S. R., & Etika, R. 2019. Mother's independence model within caring for low birth weight babies at home after hospital care based on mother factors, family support, and social support. *Indian Journal of Public Health Research and Development*, 10(10), 1685–1690. <https://doi.org/10.5958/0976-5506.2019.03085.7>
- Berkelhamer, S. K., Kamath-Rayne, B. D., & Niermeyer, S. 2016. Neonatal Resuscitation in Low-Resource Settings. *Clinics in Perinatology*, 43(3), 573–591. <https://doi.org/10.1016/j.clp.2016.04.013>
- Byard, R. W. 2020. The relationship between positional asphyxia and increasing body mass index. *Legal Medicine*, 43 (December 2019), 101678. <https://doi.org/10.1016/j.legalmed.2020.101678>
- Djunawan, A., & Haksama, S. 2015. Hubungan Kerjasama, Motivasi, Sikap, dan Kinerja Bidan Dalam Pelayanan Antenatal. *Jurnal Administrasi Kesehatan Indonesia*, 3(1), 11. <https://doi.org/10.20473/jaki.v3i1.2015.11-20>
- Estadual, U., Estadual, U., & Estadual, U. 2012. *Pengaruh Karakteristik Ibu Hamil Dan Pengetahuan Terhadap Sikap Ibu Tentang Kehamilan Risiko Tinggi Di Wilayah Kerja Puskesmas Tanjung Beringin Kecamatan Hinai Kabupaten Langkat*. 1–7.
- Fallis, A. 2013. *aktor-Faktor Yang Mempengaruhi Kelengkapan Pengisian Buku KIA Oleh Bidan Dalam*

- Deteksi Dini Risiko Tinggi Kehamilan Di Puskesmas Kabupaten Banyumas Tahun 2012* No Title No Title. 53(9), 1689–1699. <https://doi.org/10.1017/CBO9781107415324.004>
- Olson, K. R., Caldwell, A., Sihombing, M., Guarino, A. J., Nelson, B. D., & Petersen, R. 2015. Assessing self-efficacy of frontline providers to perform newborn resuscitation in a low-resource setting. *Resuscitation*, 89(C), 58–63. <https://doi.org/10.1016/j.resuscitati on. 2015.01.008>
- Ristrini, O. 2014. *Effort to Enhance Early Detection for Vulnerable Pregnancy by Midwives Through Complete Fulfillment of Maternal and Child Health (MCH) Bookin Bangkalan East*. 2013(17), 215–225.
- Schweitzer, W., & Thali, M. 2019. Fatal obstructive asphyxia: Trans-pulmonary density gradient characteristic as relevant identifier in postmortem CT. *Journal of Forensic Radiology and Imaging*, 19(August), 100337. <https://doi.org/10.1016/j.jofri.2019.100337>
- Solevåg, A. L., Schmölzer, G. M., & Cheung, P. Y. 2019. Novel interventions to reduce oxidative-stress related brain injury in neonatal asphyxia. *Free Radical Biology and Medicine*, 142(April), 113–122. <https://doi.org/10.1016/j.freeradbiomed.2019.04.028>
- Sumasto, H., Wisnu, N. T., & Surtinah, N. 2018. Development of Instruments to Detect Disaster Risk in Children Under Five Hery. *Health Notions*, 2(2), 279–283.
