Factors Influencing The Use Of The MPDN Application By Midwives At RSU Boven Digoel Regency, Papua Province In 2023

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Abstract.

Background:Maternal Perinatal Death Notification (MPDN) is a fast and structured maternal death reporting application, utilizing the latest information technology and has been used for 15 years in Indonesia. Purpose of Writing: to determine the factors that influence the use of the MPDN application by midwives. Research Methods: This type of quantitative research uses a cross sectional study design, the sample in this study is 35 people, test the chi square analysis. Research Results: There is a relationship between knowledge (p value=0.012) and training (p value=0.002) with the use of the MPDN application by midwives, there is no relationship between attitude (p value=0.849) and the availability of smart phones and internet connection (p value=0.656) with the use of the MPDN application by midwives. Conclusions and Suggestions: It is hoped that the results of this study will serve as material for consideration and evaluation of improving the quality of human resources and quality of hospital services, one of which is by using the latest informatics technology for reporting maternal and infant mortality / Maternal Perinatal Death Notification.

Keywords: *Use of the MPDN application, Knowledge, Attitude, Availability of smartphone and internet connection and training.*

I. INTRODUCTION

The Maternal Mortality Rate is an indicator of health development throughout the world. The Maternal Mortality Rate (MMR) is the number of women who die during pregnancy or within 42 days of termination of pregnancy, regardless of the duration and place of delivery, which are caused by the pregnancy or its management and not due to other causes, per 100,000 live births (Ministry of Health RI, 2022).Surveillance to obtain data on the Maternal Mortality Rate can be done through two mechanisms. Survey and or reporting. In Indonesia, data on maternal mortality rates are obtained through a survey mechanism only. The calculation process is carried out on survey data using samples. The data does not come from the total population, because until 2017 there was no accurate and fast reporting mechanism to obtain data on maternal deaths throughout Indonesia (RI Ministry of Health, 2022).Reducing the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) is a national and global priority to achieve the SDGs target in 2030.

Data on maternal and newborn mortality is needed as a basis for policy makers and strategies in efforts to reduce MMR and IMR. Based on this, the Indonesian Obstetrics and Gynecology Association (POGI) has developed a new innovation for reporting mechanisms that are accurate, fast and can be used for decision making. The innovation is in the form of an MPDN application which was later adapted by the Indonesian Ministry of Health.Maternal Perinatal Death Notification (MPDN) is a fast and structured application for reporting maternal deaths, utilizing the latest information technology and has been used for 15 years in Indonesia. The MPDN application is currently the only application based on FHIR (Fast Healthcare Interoperability Resources) and will be part of the Indonesia Health Services (IHS) platform, Satu Sehat and has been prepared for interoperability with other systems. The MPDN application was originally used only by obstetricians and gynecologists in hospitals, but now its use has been extended to the national level, all health workers at the Puskesmas level, from the Bikor level to the referral level. The limited research on the use of the MPDN application made researchers interested in conducting research with the title "Factors influencing the use of the MPDN application by midwives at RSU Boven Digoel Regency, Papua Province in 2023".

II. METHODS

This study uses a type of quantitative research using a descriptive design with a cross sectional study approach, where data on independent variables and dependent variables are collected at the same time. The population of this study were all midwives at RSU Boven Digoel Regency, Papua Province, consisting of 35 people. Statistical data analysis using the chi square test.

III. RESULT AND DISCUSSION

Table 1. Factors Influencing the Use of the MPDN Application by Midwives Based on Knowledge, Attitudes, Availability of Telephone Smart and Internet Connection, Training

Variable	F	%
MPDN application		
Yes	3	8.6
No	32	91.4
Knowledge		
Good	23	65.7
Not Enough	12	34.3
Attitude		
Positive	25	71.4
Negative	10	28.6
Availability of smart phone and internet connection		
Adequate	33	94.3
Inadequate	2	5.7
Training		
Adequate	4	11.4
Inadequate	31	88.6

Based on the data in Table 1, the distribution of respondents shows that the majority did not use the MPDN application as many as 32 people (91.4%), the majority had good knowledge of 23 people (65.7%), the most positive attitude was 25 people (71.4%), the availability of smart phones and the majority of them had adequate internet connection for 33 people (94.3%) and the majority had inadequate training for 31 people (88.6%).

Table 2. The relationship between knowledge and the use of the MPDN application by midwives At the Boven Digoel Regency General Hospital in 2023

Knowledge	MPDN application						*Asymp.sign (2 – sided)*
	Yes		No		Total		
	f	%	f	%	f	%	
Good	0	0	23	65.7	23	65.7	0.012
Not Enough	3	8.6	9	25.7	12	34.3	
Total	3	8.6	32	91.4	35	100%	

Based on table 2 that of the 23 respondents (65.7%) who had good knowledge, the majority did not use the MPDN application as many as 23 people (65.7%). Of the 12 respondents (34.3%) who lacked knowledge, the majority did not use the MPDN application as many as 9 people (25.7%). The results of statistical tests using the chi square test, obtained the results of calculating a p-value of 0.012 <0.05, so it can be concluded that there is a relationship between knowledge and the use of the MPDN application by midwives at RSU Boven Digoel Regency in 2023.

Table 3. The relationship between attitude and use of the MPDN application by midwives At the Boven Digoel Regency General Hospital in 2023

Attitude	MPDN application						*Asymp.sign (2 – sided)*
	Yes		No		Total		
	f	%	f	%	f	%	
Positive	2	5.7	23	65.7	25	71.4	0.849
Negative	1	2.9	9	25.7	10	28.6	
Total	3	8.6	32	91.4	35	100%	

Based on table 5.3 that of the 25 respondents (71.4%) with a positive attitude, the majority did not use the MPDN application as many as 23 people (65.7%). Of the 10 respondents (28.6%) with a negative attitude, the majority did not use the MPDN application as many as 9 people (25.7%). The results of

statistical tests using the chi square test, obtained the results of calculating a p-value of 0.849> 0.05, so it can be concluded that there is no relationship between attitudes and the use of the MPDN application by midwives at the Boven Digoel District General Hospital in 2023.

Table 4. The relationship between smartphone availability and internet connection with the use of the MPDN application by midwives at Boven Digoel District Public Hospital in 2023

Availability of Smart Phone and Internet Connection	MPDN application						*Asymp.sign (2 – sided)*
	Yes		No		Total		
	f	%	f	%	f	%	
Adequate	3	8.6	30	85.7	33	94.3	0.656
Inadequate	0	0	2	25.7	2	5.7	
Total	3	8.6	32	91.4	35	100%	

Based on table 5.4, out of 33 respondents (94.3%) with adequate smartphone availability and internet connection, the majority did not use the MPDN application as many as 33 people (94.3%). Of the 2 respondents (5.7%) with inadequate smartphone availability and internet connection, the majority did not use the MPDN application as many as 2 people (25.7%). The results of statistical tests using the chi square test, obtained the results of calculating a p-value of 0.656> 0.05, so it can be concluded that there is no relationship between the availability of smart phones and internet connection with the use of the MPDN application by midwives at the Boven Digoel District General Hospital in 2023.

Table 5. The Relationship between Training and the Use of the MPDN Application by Midwives At the Boven Digoel Regency General Hospital in 2023

Training	MPDN application						*Asymp.sign (2 – sided)*
	Yes		No		Total		
	f	%	f	%	f	%	
Adequate	2	5.7	2	5.7	4	11.4	0.002
Inadequate	1	2.9	30	85.7	31	88.6	
Total	3	8.6	32	91.4	35	100%	

Based on table 5.5, out of 4 respondents (11.4%) in the adequate training category, 2 people (5.7%) used the MPDN application and 2 people (5.7%) did not use the MPDN application. Of the 31 respondents (88.6%) in the inadequate training category, the majority did not use the MPDN application, as many as 30 people (85.7%). The results of statistical tests using the chi square test, obtained the results of calculating a p-value of 0.002 <0.05, so it can be concluded that there is a relationship between training and the use of the MPDN application by midwives at the Boven Digoel District General Hospital in 2023.

Discussion

The relationship between knowledge and the use of the MPDN application by midwives

The results of the analysis in this study indicate that there is a significant relationship between knowledge and the use of the MPDN application by midwives (p value = 0.012). This shows that knowledge influences the use of the MPDN application. Knowledge is defined as the result of human sensing through the senses they have (ears, eyes, nose, taste and touch). Providing information will increase one's knowledge. Knowledge can make a person have awareness so that someone will behave according to the knowledge they have. Changes in behavior based on knowledge, awareness and positive attitudes are lasting because they are based on their own awareness and not coercion (Notoatmodjo, 2018).Every human being has a different level of knowledge. The level of knowledge starts from knowing, understanding, application, analysis, synthesis and evaluation. The higher a person's level of knowledge, the higher also the ability of the individual in conducting the assessment. This assessment will be the basis for someone to act (Notoatmodjo, 2018).According to the researcher's assumption that the level of knowledge is one of the factors influencing the use of the MPDN application, so it is very important to provide in-depth information to improve the ability of midwives to use the latest innovative reporting mechanisms that are accurate, fast and can be used for tactical decision making in the form of the Maternal Death Notification system and baby/ Maternal Perinatal Death Notification (MPDN).

The relationship between attitude and the use of the MPDN application by midwives

The results of the analysis in this study showed that there was no significant relationship between attitudes and the use of the MPDN application by midwives (p value = 0.849). This shows that attitudes do

not affect midwives in using the MPDN application. Based on Winardi (2004) that attitudes are determinants of behavior, because they are related to perception, personality, and motivation. An attitude is a state of mental attitude, which is learned and organized according to experience, and which causes a special influence on a person's reaction to the people, objects and situations with which he is associated.Based on the researcher's analysis regarding the attitudes of midwives with the use of the MPDN application, the results of the study showed that most of the midwives had a positive attitude but did not use the MPDN application. This was because the midwives had no experience. The midwife's working period also determines the experience she has. The results of discussions with several midwives with long work experience (10-20 years) and midwives who had only been on duty for 5 months, it turned out that those on duty had been more active in explaining the program of activities and supporting facilities owned by the General Hospital in Boven Digoel Regency, Papua Province.

Connection of smartphone availability and internet connection with the MPDN application

The results of the analysis in this study showed that there was no significant relationship between the availability of smart phones and internet connection and the use of the MPDN application by midwives (p value = 0.656). This shows that the availability of smart phones and internet connections does not affect midwives in using the MPDN application.Smart phones which are often referred to as smartphones are one example of the development of information technology. Smartphones bring together high-speed computing and communications for data, voice, and video. While the smartphone itself can be interpreted as a phone that has computer-like capabilities, usually has a large screen and its operating system is capable of running common application purposes (Oxfort Online Dictionary, 2013). Maternal Perinatal Death Notification (MPDN) is an application for notification of maternal deaths, stillbirths and newborns via smartphones or the web in real time by name by address and place of death (Ministry of Health Republic of Indonesia, 2021).

An internet network connection is something that is needed to access websites, websites, or social media. Typically, this internet network is a connection between networks in all parts of the world, consisting of Personal Area Networks (PAN), Local Area Networks (LAN), Metropolitan Area Networks (MAN), Campus Area Networks (CAN), to Wide Area Networks. Network (WAN) (detikpedia, 2022).MDN applications automatically adapt how data delivery is available in a location. The fastest, cheapest and most feasible. The order of priority used is Internet (fiberoptic, cable, wireless), GSM 4G (WiBro, CDMA), GSM 3G (GPRS/EDGE) and GSM 2G (SMS). If at any point there is a failure to send data to the server due to connectivity issues, the data is stored in the gadget's memory until there is a connection at the first opportunity (RI Ministry of Health, 2021).Based on the researcher's analysis, it is known that the availability of smart phones and internet networks is adequate, but most midwives do not use the MPDN application due to an integrated hospital information system so that midwives are only focused on carrying out service duties in outpatient and inpatient obstetrics departments. Recording and reporting is carried out by the midwife using the available format which the coordinator will recap and then submit it to the medical record department.

Relationship of training with the MPDN application

The results of the analysis in this study indicate that there is a significant relationship between training and the use of the MPDN application by midwives (p value = 0.002). This shows that training influences midwives in using the MPDN application. Based on the theory, the term training cannot be separated from practice because the two have a close relationship, training is an activity or work of training to gain proficiency or skills. While the purpose of training activities is to increase one's knowledge and skills so that those who are trained gain knowledge and skills in dealing with the problems faced according to the expectations and goals desired to participate in training activities (Fazrina, 2016).Based on the researcher's analysis regarding training on MPDN using the MPDN application, the results showed that most of the training was inadequate. From the observations, the researchers found that most midwives did not use the application to report cases of maternal and infant deaths but instead used a verbal autopsy format which was then submitted to the medical record department. Recording and reporting of illness, death or various other cases using the hospital management information system.

IV. CONCLUSION

1. The majority of midwives have a good knowledge level of 23 people (65.7%), the most positive attitudes are 25 people (71.4%), the availability of smart phones and internet connections is adequate for the majority of 33 people (94.3%) and the majority of training is inadequate as many as 31 people (88.6%).
2. The majority of midwives did not use the MPDN application as many as 32 people (91.4%).
3. There is a relationship between knowledge and the use of the MPDN application by midwives at RSU Boven Digoel Regency, Papua Province with p value = 0.012.
4. There is no relationship between attitude and the use of the MPDN application by midwives at RSU Boven Digoel Regency, Papua Province with p value = 0.849
5. There is no relationship between the availability of smart phones and internet connection with the use of the MPDN application by midwives at RSU Boven Digoel Regency, Papua Province with p value = 0.656
6. There is a relationship between training and the use of the MPDN application by midwives at RSU Boven Digoel Regency, Papua Province with p value = 0.002

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