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Comparison Partograf Based on Computer System and Partograf Conventional on Monitoring Record Report Progress of Labor

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Abstract : Partograf is a tool that can help health workers to perform recording and reporting in the process of childbirth, recording reporting the use of partograf is still low that is below 70%. This study aims to determine partograf-based comparison of computer systems and conventional partograf. The method used in this research is using quasy experiment with comparative descriptive design, sampling technique that is purposive sample, the number of subjects examined as many as 40 mothers inpartu divided into group one (1) is recording reporting using partograf based on computer system and group two (2) is recording reporting using conventional partograf. The data analysis used univariate analysis by looking at median value and bivariate analysis by using Mann-Whitney Test. The results obtained partograf-based computer system namely; partographic filling 20 (100%), partographic correctness 20 (100%), partographic length 2 (10%), time velocity 8.6 hours, with median aspect value of convenience 24, while conventional partograf ie; completeness 16 (80%), truth 16 (80%), filling duration 3 (15%), 11.6 hours time velocity, with median aspect of ease 23. Statistical test result got p value of 0.004, 0.001, 0.000, dan 0.005 ($\alpha = 0.05$) means that there are differences in partograf based on computer system and conventional partograf. Thus it can be concluded that computer-based partograph can be used as a monitoring tool for recording the reporting of progress of labor, and better than conventional partograf. Recording of partographic reporting based on computer systems needs to be applied in documenting midwifery care, and being developed to be web-based so as to link to referral sites.

Keywords : Computer-based partograf, conventional.

1.Introduction

Partograf is a graph or a proper system to monitor the State of mother and fetus in labor over time. Partograf is used to detect any irregularities or problems related to childbirth and help health care personnel in monitoring the progress of labor so that it can be used as indicators of success in an action Labor's help.

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Partograf as a tool that can help health workers to do the record keeping and reporting process in birth ^[4,20,1,13] Record keeping and reporting within labor became important to do as the documentation of actions taken, it is in accordance with the results of the research says 74% reported the importance of the use of partograf as a management labor ^[21,1,3,15,11].

Utilization and knowledge of partograf components in managing labor, reportedly in the hospital is better than a midwife who does not work at home ill, the knowledge and attitudes of a midwife is an important factor in the utilization of partograf, obstacles in the utilization of partograf is also found among other things because of the level of knowledge is lacking detail on partograf, the unavailability of sheet partograf, there is no training on a regular basis, conventional still partograf this will raises the obedience and compliance within the thoroughness of filling partograf.

Record keeping and reporting process in birth during this time reported in the form of a conventional partograf, so that in the process of evaluation of associated maternal health and infant often becomes a bottleneck. Partograf is an effective tool when used adequately and timely in making interventions. The Partograf in accordance with WHO guidelines (World Health Organization) reported only 25.6%, when partograf can be used with appropriate then it can reduce the incidence of lost blood and Apgar rating (Appearance, Pulse, Grimace, Activity, Respiration) in the baby, the case of caesarea in the control group 44% to 21% for the Group of cases, labor not more 12 hours absent, neonatal intensive care in the control group of 17% to 6%. In 68% Indonesia partograf charging is not complete and 2% complete, the officer or midwife fill partograf incomplete is lazy ^[19,17,12,9,10]

One of the system's record-keeping and reporting in the delivery documentation used is partograf, this is in accordance with the regulation of the Minister of health the number 369/MENKES/SK/III/2007 about the standards of the profession of midwife that one of the basic skills of midwives in the competence is monitoring the progress of labor using the partograf. When the midwife didn't fill partograf with complete, then there is no written record that indicates that a midwife had been monitoring the progress of labor and the condition of the mother and the fetus can be used as further information if should make the decision of the clinic. In practice, a midwife's registration obligatory obstetrics and services more systematically, doing the recording and reporting of the Organization of the practice of midwifery include reporting of births and deaths regulations it is appropriate Minister of health of the Republic of Indonesia number 1464/MENKES/PER/X/2010 about permits and conducting the practice of midwives ^[14]

A preliminary study conducted at the maternity Clinics Bara – Baraya in the year 2017 get problems among them in the form of low archiving documents partograf, incomplete charging partograf, and completeness partograf is just the filing as a condition for health insurance, the data shows one factor that can cause problems on the health of mother and baby.

Based on the explanation on the background of the above, the researcher intends to know the comparison of partograf-based partograf computer systems and conventional logging monitoring reporting progress against labor. It is expected that partograf will simplify, accelerate logging and reporting in the monitor progress of Labor (labor monitoring).

2. Research Methods

Design Research

The design used in this study i.e. the comparative descriptive design, to find out if there are differences partograf-based computer systems and conventional partograf. The methods used in this research is the quasy alphabets experiment, this method of giving preferential treatment to the subject in the form of socialization for using partograf and then given the posttest questionnaires in the form of related aspects of ease, speed, and security the relevance of the data with the approach of cross sectional. The subject is only observed once and measured variables was done at the time of the study in a time.

Location and Time Research

This research was conducted at the maternity Clinics Bara-Baraya Makassar. Time Research was done in October – December 2017.

Populations and Samples

The population in this study i.e. the whole primary level health care establishments in the region of Makassar. The population in this research using population, researchers have already set the target population to be a subject that will be directly examined i.e. health institutions Clinics Bara-Baraya Makassar. The sample is part of the number and characteristics of which are owned by the population, which is the sample in this research is involved in a system (a set of technical or organizations that have a particular purpose), so the sample is calculated from the unity of the system elements comprising environment; the birthing room, electrical appliance elements, namely; software, hardware, delivery and inspection results data elements of the resource; midwife, mother and maternity.

Techniques Data collection and Data Analysis

Data collection is done with the study of literature, interviews, questionnaires, and observation. While the analysis of the data using analysis of univariate analysis and bivariate analysis.

3. Results

Univariate Analysis

Table 1 shows in performing recordkeeping reporting by using partograf-based computer system from the aspect of the ease value of the median i.e. 24 with a standard deviation of ± 2.2 , median values for the speed aspect i.e. 21 with standard deviation ± 1.2 , aspect median value relevance i.e. 15 with standard deviation ± 1.3 while the median value of the security aspects of 10 with a standard deviation of ± 0.9 .

Table 1. Comparison of the effectiveness of aspects picture of the ease, security, speed, and relevance of the data with computer-based partograf

Variable	N	Mean	Median	SD	Min-Max
Aspects Of Convenience	20	22.7	24	2.2	20-25
Security Aspects	20	9.3	10	0.9	8-10
Aspects velocity	20	21.6	21	1.2	20-24
Aspects Of Relevance The Data	20	14	15	1.3	12-15

Sources : Data primer, Non Parametric Test Frequency Distribution

Table 2 shows in performing recordkeeping reporting using the conventional partograf of the median value i.e. ease of 23 with a standard deviation of ± 0.6 , the median value of velocity i.e. 20 with standard deviation of ± 0.4 , aspects of relevance median value i.e. 13 with standard deviation ± 0.8 while the median value of the security aspects of 8 with a standard deviation of ± 0.4 .

Table 2. An overview of comparative effectiveness from the aspect of convenience, security, speed, and relevance of the data with a conventional partograf

Variable	N	Mean	Median	SD	Min-Max
Aspects Of Convenience	20	23	23	0.6	22-24
Security Aspects	20	8.3	8	0.4	8-9
Velocity Aspects	20	20.3	20	0.4	20-21
DataRelevance Aspects	20	12.8	13	0.8	12-15

Sources : Data primer, Non Parametric Test Frequency Distribution

Bivariate analysis

Table 3 shows data analysis using the Mann-Whitney Test, get the value of the p value i.e. 0.004, 0.001, 0.000, and 0,005 ($\alpha = 0.05 <$) means that there is a difference-based partograf computer systems and monitoring against conventional partograf reporting from the recording aspect of the ease, speed, safety, and relevance of the data.

Table 3. The difference of partograf-based partograf computer systems and conventional logging monitoring reporting progress against labor.

Variable	N	<i>P value</i>
Aspects of Conventional and Computer Ease	20	0.004
Aspects of computer security and conventional	20	0.001
Aspects of Conventional and Computer Speed	20	0.000
Aspects of computer Data Relevance and conventional	20	0.005

Sources : Data primer, note : test *Mann-Whitney*

4. Discussion

The results of this study showed that the use of the partograf-based computer system allows midwives to perform the process, partograf-based computer system will minimize the error rate and has a good level of truth, This is in line with research conducted by ^[5,6], who get that the use of electronic partograf more effectively and efficiently with limited human resources so that the impact on the completeness of on charging partograf, and reduce the error rate and the use of hardware and software as a tool to monitor progress of labor can be used as a tool to train health workers on how to use partograf.

Thus researchers assume that partograf-based computer systems help facilitate midwives in monitoring the progress of labor especially in the process of recording or documenting actions taken against against the subject.

The use of conventional partograf as record-keeping and reporting process in birth during this time reported in the form of a conventional partograf, so that in the process of evaluation of associated maternal health and infant often becomes a barrier, this is in line with research conducted by ^[13]

who gets the use of a conventional partograf found partograf completeness is still below 70% and was obtained by obstacles in its utilization among others a less detailed knowledge about partograf, the unavailability of sheet partograf, and lack of training on a regular basis. Thus researchers assume that charging the completeness of the documents in the partograf required the presence of a technology-based systems, in order to improve the quality of the recording and reporting of quality of service also obstetrics.

The use of partograf-based and conventional computer systems each have advantages and disadvantages in filling out the report format partograf. The advantages of using a computer-based system i.e. partograf of quality information needed more quickly retrieved by a midwife, the desired data relevance midwives in accordance with the intended purpose, and timeliness more quickly, while the conventional advantages i.e. partograf is easy to use because of the factor of the behavior or habits, and has long been used ^[8]

The results of research conducted by ^[2], getting the use of partogram as electronic instrument used in conducting logging labor labor progress reporting with the incoming data rate 82% with a level error 18%, it can be concluded that the use of partogram enables electronic data entry faster with a low error rate compared to conventional partogram. Thus researchers assume that the use of technology-based partograf are very helpful and make it easier to ban logging in the performance reporting, particularly can enhance the effectiveness and efficiency of human resources limited, emergency, reduce risk and improve the quality of the recording of reporting in the service of obstetrics.

Reporting logging using partograf-based computer system from the aspect of median values indicate highest convenience i.e. 24 with a standard deviation of ± 2.2 , median values for the speed aspect i.e. 21 with standard deviation ± 1.2 , the relevance of the value the median i.e. 15 with standard deviation ± 1.3 while the median value of the security aspects of 10 with a standard deviation of ± 0.9 . This means that the use of the partograf-based computer systems easier to use in the reporting process, and have an impact on the speed, relevance, security in obtaining needed information and secure in doing documentation of orphanage midwifery so it can improve the quality of obstetric services.

The use of computer-based partograf will facilitate the processing of the data since the inputted data will be obtained electronically, from the earlier data showed the median – median time spent doing reporting with logging using partograf-based computer system is shorter and faster IE 8.6 hours with various characteristics of subjects either logging in primipara and multipara, grandemultipara, so as to streamline the reporting process.

This research fits with research conducted by ^[16] which get partograf android-based applications can improve the partograf traditionally to take down the entire edifice of labor quickly. The computer is an electronic system used to manipulate the data inputted in a quick, precise and well organized and designed to automatically receive and store the input, process, and generate output in accordance with the instructions desired by the user and ease felt by the user when the relevant criteria, the completeness of data, easily understood well and true ^[7]

The use of partograf has the advantage among other Available enough time to do the references (4 hours) after the childbirth journey passes through the line of the alert, in the Centre of health services enough time to take action and reduce infection due to examinations in the a limited ^[18]. Thus researchers assume that the use of the traditional partograf still good enough can be used under certain conditions when factors enough resources, knowledge about charging partograf good, the existence of sufficient supervision, and training periodically.

5. Conclusions And Suggestions

Based on the results and discussion then it can be inferred that the computer-based partograf better than conventional partograf seen from the aspect of speed less time, aspects of the ease in filling partograf with a degree of truth a large, and data security. Recommended need to be developed and modified the display partograf the display so that it becomes a more attractive and easy to use.

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