# Midwife Enjoyment When Implementing Maternal and Child Health Information Systems

**Klanting Kasiati**
*(School of Midwifery, Health Polytechnic of Surabaya, Indonesia)*

*Abstract*
*The purpose of this research was to analyze the indicators of midwife enjoyment suspected as one of the problem in implementation of Maternal and Child Health System (MCHIS). The subject of this cross-sectional study was the village midwifes at the Health Office of Ngawi Regency, East Java Province, Indonesia, in 2015. They were asked to fill questionnaire about their enjoyment when implementing MCHIS, then analyzed by using confirmatory factor analysis. The results indicate that passion, pleasure, and adaptability were valid and reliable indicators of the midwife enjoyment when implementing MCHIS.*

*Keywords: Adaptability, MCHIS, Midwife Enjoyment, Passion*

## I.    INTRODUCTION

In the information era, health information systems based on information and communication technology has been widely implemented. Many hospitals, health office, and public health centers have used information and communication technology to support the processes in organization, public health centers information systems, such as hospital information systems, as well as the health office information system, etc. (Sanjaya, 2011). Since the decentralization era in Indonesia in 2014, most of the health information system does not refer to standardized guidelines or still using their own version. These conditions lead to difficulties in data merging at the provincial level (Kemenkes RI, 2012). District Health Office of Ngawi Regency is one of the institution that have implemented MCHIS. The results of a preliminary study with managers of MCHIS shows that in the last five years there has been a downward trend in the activity of midwives in implementing the system at the primary care level. These conditions indicate the occurrence of user resistance against MCHIS. The resistance will cause a decrease in midwife enjoyment in implementing MCHIS. Therefore, it is necessary to analyze the indicators of the midwife enjoyment in implementing MCHIS.

## II.    METHODS

Population of this cross-sectional research was the 217 village midwife in Health Office of Ngawi Regency in 2015. All of people included as a research subject (total sampling). Data were collected through questionnaires about midwife enjoyment, which consists of three factors are: 1) passion to implement MCHIS, enjoyment in implementing MCHIS, and user adaptability to MCHIS. The collected data were analyzed by using confirmatory factor analysis.
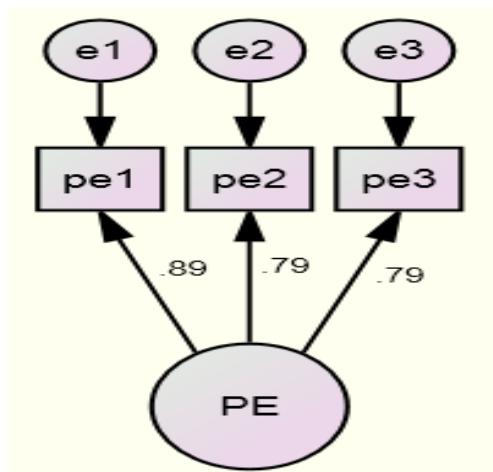
## III.    RESULTS

Based on test of data normality had been known that critical ratio = -0.005 (<1.96), so it can be concluded that the data distribution was normal, so that confirmatory factor analysis can be continued. Table 1 shows the result of test of data normality.

*Table 1. Results of test of data normality*

| Variable | Min | Max | Skewness | Critical Ratio | Kurtosis | Critical Ratio |
|---|---|---|---|---|---|---|
| Passion | 2 | 16 | -0.391 | -2.349 | -0.421 | -1.266 |
| Enjoyment | 2 | 16 | -0.503 | -3.025 | -0.066 | -0.198 |
| Adaptability | 2 | 16 | -0.081 | -0.484 | -0.459 | -1.380 |
| Multivariate | | | | | -0.004 | **-0.005** |

Figure 1 displays the result of confirmatory factor analysis. Standardized regression weight and the P-value for each of the indicators were: 1) the passion to implement MCHIS = 0892 and <0.001, 2) the enjoyment in implementing MCHIS = 0787 and <0.001, 3) the adaptability to MCHIS = 0793 and <0.001. All of p-value was <0.05 so it concluded that passion, enjoyment, and adaptability were the valid measure of midwife enjoyment. Variance error and P-value for each of the indicators were: 1) the passion to implement MCHIS = 1.000 and <0.001, 2) the enjoyment in implementing MCHIS = 0.451 and <0.001, 3) the adaptability to MCHIS = 0.925 and <0.001. All of p-value <0.05, then conclude that passion, enjoyment, and adaptability were the reliable indicator of midwife enjoyment.



*Figure 1. Results of confirmatory factor analysis*

### IV. DISCUSSION

The passion to implement MCHIS, the enjoyment in implementing MCHIS, and the adaptability to MCHIS have been analyzed as indicators of midwife enjoyment when implementing MCHIS. The results showed that all of indicators are valid and reliable as a measure of midwife enjoyment in the implementation of MCHIS.

In previous studies, the passion to implement information systems been proven as a significant indicator of user enjoyment, although this factor was called in various names, such as: interesting (Dias & Beinat, 2009; Shen & Eder, 2013), exiting (Sun & Zhang, 2006; Dias & Beinat, 2009), positive (Sun & Zhang, 2006), and wise (Sun & Zhang, 2006). Although this indicator have called in different names, but basically they have the internal forces that generate the user to implement the system.

In other words, exiting, interesting, postive, and wise are the types of emotional state that can build strength for a person to perform the actions, including actions to implement MCHIS. The enjoyment (the second indicator) has also been shown to be valid and reliable indicator of the midwife enjoyment when implementing MCHIS. It has also been studied with various names, such as: amusing (Dias & Beinat, 2009), enjoyable (Sun & Zhang, 2006; Dias & Beinat 2009), and a fun / delightful (Sun & Zhang, 2006; Dias & Beinat, 2009; Shen & Eder, 2013). It should be remembered that these indicators pointing to a meaning that "the state of enjoying". In other words, amusing, enjoyable, and fun / delighful are the signal of presence of a feeling of enjoying the use of information systems.

The adaptability to MCHIS (third indicator) have also been proven to be a valid and reliable indicator of midwife enjoyment. This indicator has also been studied with various names such as: pleasurable and pleasant (Sun & Zhang, 2006). Pleasurable and pleasant leads to the meaning of "the agreeable". The level of midwife enjoyment indicates the level of resistance to MCHIS. The low midwife enjoyment is a sign of the resistance. Because of midwife enjoyment can be measured by using the passion, enjoyment, and adaptability; then the resistance can be recognized from the low passion, enjoyment, and adaptability to MCHIS.

## V. CONCLUSION

Based on the results of research, it can be concluded that the significant indicator of midwife enjoyment in the implementation of MCHIS in Health Office of Ngawi Regency are passion, enjoyment, and adaptability to system.

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