RELATIONSHIP BETWEEN PREGNANT WOMEN’S PERCEPTION OF THE INTEGRATED ANC PROGRAM WITH PREGNANT WOMEN’S BEHAVIOR IN THE INTEGRATED ANC PROGRAM

Urip Tugiyarti, Santoso, Muhammad Akhyar, Sapja Anantanyu
Universitas Sebelas Maret Surakarta

ABSTRACT

Maternal Mortality Ratio (MMR) is very high in the world; recorded 800 women die every day due to complications of pregnancy and childbirth. The causes of maternal mortality in Indonesia are very diverse, both medical and non-medical. For this reason, efforts to accelerate the reduction of MMR and accelerate the SDGs achievement must be carried out comprehensively by involving cross-programs in the Health Office, across sectors, DPRD in local government, professional, religious/community organizations, private sector, NGOs and donor institutions. This is relevant as a reference, because maternal health conditions, especially pregnant women, in Indonesia are still far from expectations. Ensuring maternal health efforts is not limited to curative treatment, but must be balanced with preventive efforts. Preventive efforts are very important, because health status cannot be obtained instantly. The preventive effort aims to prevent the occurrence of maternal deaths and fulfill the rights of every pregnant woman to obtain quality health services so that she is able to undergo a healthy pregnancy, deliver safely and give birth to a healthy and quality baby, and pregnant women must understand and carry out integrated antenatal care (ANC). The purpose of this study was to determine the relationship between perceptions of pregnant women about the integrated ANC program with the behavior of pregnant women in the integrated ANC program. This study uses a quantitative research method with a cross sectional approach carried out in Bantul Regency. 175 respondents were selected using the cluster proportional random sampling technique. The criteria of respondents are pregnant women with more than 12 weeks gestational age in second and third Trimester. The instruments of data collection used were questionnaires. Data were analyzed with path analysis method and SEM to test the correctness of the structural models available on the lisrel program. The results of the analysis show that there is a relationship between the perception of pregnant women about the integrated ANC program with the mother behavior in the integrated ANC program (0.42, t value = 8.70). There is a positive and significant relationship between the perceptions of pregnant women about the integrated ANC program with the mother behavior in the integrated ANC program.

INTRODUCTION

Maternal Mortality Ratio (MMR) is very high in the world; recorded 800 women die every day due to complications of pregnancy and childbirth. MMR in Indonesia according to the 2015 IDHS is 359/100,000 KH. In 2015 more than 359,000 women died during and after
pregnancy and childbirth (WHO 2015). Healthy Indonesia Program is one of the programs for the 5th agenda of Nawa Cita, which is to improve the quality of human life in Indonesia. This program is supported by other sectoral program, namely Smart Indonesia Program, Indonesia Kerja Program, dan Prosperous Indonesia Program. Healthy Indonesia Program subsequently became the main Health Development program which was then planned to be achieved through the Ministry of Health’s Strategic Plan for 2015-2019, which was determined through the Decree of the Minister of Health R.I. Number HK.02.02/Menkes/52/2015 (Kemenkes RI, 2015).

The causes of maternal deaths in Indonesia are very diverse, both directly and indirectly. Data from the Indonesian Ministry of Health (2009) states that 90% of maternal deaths occur during labor and according to the time a lot of them occur during labor. In addition to the direct causes of pregnant women and mothers giving birth health problems there are also indirect causes. The following are indirect causes of maternal health problems: (1) Maternal education, especially in rural areas is still low. There are still many mothers who think that pregnancy and childbirth are natural, which means they do not require examination and treatment; (2) Socio-economic and socio-culture in Indonesia which prioritizes fathers rather than mothers. For example in terms of eating, the fathers eat nutritious food, the rest is then for mothers, so the rate of anemia in pregnant women is quite high, reaching 40%;(3) There are “4 too” in childbirth, namely: too young, too old, too often and too much; (4) The existence of “3 late”, namely: late in making a decision, late to be sent to a health service place and late in getting health services (Prasetyawati, 2012).

Many behavioral perceptions of research have been done, but research that links perceptions about integrated ANC with the behavior of pregnant women in integrated ANC programs is still rare. The importance of this research is supported by Minister of Health Regulation RI No. 97 of 2014 government policy on integrated ANC services. Maternal health services aim to fulfill the right of every pregnant woman to obtain quality health services so that she is able to undergo a healthy pregnancy, deliver safely and give birth to a healthy and quality baby. The purpose of this study was to determine the relationship between perceptions of pregnant women about the integrated ANC program with the behavior of pregnant women in the integrated ANC program.

METHOD
This research uses quantitative with cross sectional approach. The study was conducted in October–December 2018 in Bantul, DIY Yogyakarta.

The study population was pregnant women with a gestational age of more than 12 weeks or in the second and third Trimester. 175 respondents were selected using the cluster proportional random sampling technique.

The independent variable of the study was the perception of pregnant women about an integrated ANC program. The dependent variable of the study is the behavior of pregnant women in an integrated ANC program.

The perception of pregnant women about the integrated ANC program is the
response or acceptance of stimulus by pregnant women directly from the integrated ANC program or the process of someone knowing the integrated ANC program with the five senses.

The behavior of pregnant women in an integrated ANC program is an individual response to observable stimuli or actions that have a specific frequency of duration and goals both realized or not realized in this case the behavior of pregnant women in integrated ANC implementation.

Statistical Analysis

The data collection instrument used was a questionnaire in Bantul district. Data were analyzed using Path Analysis and SEM methods provided by the Lisrel program.

RESULTS

Based on the results of the study there is a significant relationship between the perceptions of pregnant women about the integrated ANC program with the behavior of mothers in the integrated ANC program (standard solution 0.42). Based on the standardized solution, it can be compared the relationship with a predetermined standard (the relationship is significant if the value of the relationship between two variables is greater than the predetermined standard solution value of 0.5) value of 0.42 <0.5 also t value of 8.70> 1.96 (5%) which means there is a significant relationship.

Perception about attitudes, the process of forming individual attitudes and group attitudes regarding the process of changing attitudes is very useful in handling social problems.

A person’s health is influenced by behavioral factors; behavior is determined by predisposing factors manifested in knowledge, attitudes, beliefs, conviction and values. This study was supported by Ajzein (1988) who stated that health behavior is a function of one’s intentions, social support from the surrounding community, the presence or absence of health information, the personal autonomy concerned in making decisions and situations that allow them to act or not act. The value of subjective social norms is more basic and stable as part of personality traits while perceptions are attitudes that are more specific and very situational and can change. Behavior theory stated that attitudes influence behavior through a decision-making process, also stated that the key to behavior is intention. This research is supported by the theory of planned behavior (Ajzein, 1988) stating that beliefs that ultimately find intention are beliefs about whether or not opportunities and resources used are available or not. Beliefs can come from experience with the behavior in question in the past, can be influenced by information, perceptions can be influenced by other factors that reduce or increase the impression of difficulty in performing behavior. Human behavior is not simple to understand and predict. Behavior as a basis for understanding group behavior, individual attitudes as group members is very important.

Table 1. Summary of the results of the relationship test between latent variable

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Relations coefficient</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception – behavior</td>
<td>0.42</td>
<td>8.70&gt;1.96 (5%)</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: Lisrel 8.80 output

The relationship between mother’s perceptual response about integrated ANC program and mother’s behavior in
integrated ANC program is quite high as 0.42, which means that the mother’s perception of the integrated ANC program has a 42% influence on the behavior of pregnant women in the integrated ANC program. This is supported by a t-value of 8.70 and the relationship is said to be significant if t-value is greater than 1.96.

Variable of pregnant women’s perception on integrated ANC program
An analysis of empirical models related to the measurement model of pregnant women’s perceptions is presented in the following table:

Table 2. Summary of the test results for the variable of pregnant women’s perception about integrated ANC programs

<table>
<thead>
<tr>
<th>No</th>
<th>Manifold variable</th>
<th>Relationship coefficient</th>
<th>Measurement error</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>/</td>
<td>0.91</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>norms</td>
<td>0.98</td>
<td>0.04</td>
<td>25</td>
<td>Interp</td>
</tr>
<tr>
<td>3</td>
<td>Knowledge</td>
<td>0.95</td>
<td>0.10</td>
<td>23</td>
<td>Valid</td>
</tr>
<tr>
<td>4</td>
<td>Attention</td>
<td>0.92</td>
<td>0.15</td>
<td>20</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Expectation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Lisrel 8.80 output
The table above shows that social values/norms, knowledge, attention and expectations are determinants of pregnant women’s perceptions about integrated ANC programs declared valid. This is indicated by the t-count value of all indicators> 1.96. Determination of validity or not the indicator of the pregnant women’s perception about integrated ANC programs is done by interpolation, which is compared with the t-count value of other indicators.

Variable of pregnant women’s behavior on integrated ANC program
Analysis of empirical models related to the measuring model of the pregnant women’s behavior in the integrated ANC program is presented in the following table:

Table 3. Summary of the results of testing the variables of pregnant women’s behavior in the integrated ANC program

<table>
<thead>
<tr>
<th>No</th>
<th>Manifold variable</th>
<th>Relationship coefficient</th>
<th>Measurement error</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Service utilization</td>
<td>0.96</td>
<td>0.07</td>
<td></td>
<td>Valid (interp)</td>
</tr>
<tr>
<td>2</td>
<td>Early detection of complications</td>
<td>0.17</td>
<td>0.97</td>
<td>2.99</td>
<td>Valid</td>
</tr>
<tr>
<td>3</td>
<td>Complication intervention</td>
<td>0.15</td>
<td>0.98</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>4</td>
<td>Preparation of referrals</td>
<td>0.26</td>
<td>0.93</td>
<td>2.58</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Source: Lisrel 8.80 output
Demonstrate that service utilization, early detection of complications, complication interventions and preparation of referral are determinants of the pregnant women’s behavior in integrated ANC programs are declared valid. This is indicated by the value of t-count> 1.96. In determining whether or not the measurement indicator
the pregnant women’s behavior are valid for the integrated ANC program, interpolation was conducted, which is compared with the t-count value of other indicators.

Summary of the measurement equation of pregnant women’s perception about integrated ANC program includes: social value/norms, knowledge, attention and expectation can be seen in Table below.

Table 4. Summary of measurement equation of the perceptions of pregnant women about integrated ANC programs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Error Variance</th>
<th>Total Variance</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of pregnant women about integrated ANC programs</td>
<td>Value/norms</td>
<td>0.48</td>
<td>0.86</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>0.25</td>
<td>1.43</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Attention</td>
<td>0.51</td>
<td>2.27</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Expectation</td>
<td>0.9</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.86</td>
<td>7.11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>R²</td>
<td>0.83</td>
<td>0.96</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Source: Lisrel 8.80 output

**Determinants of pregnant women’s perception about integrated ANC program**

The results of the study show that the mother’s perception of the integrated ANC program has four indicators, namely social values/norms, knowledge, attention and expectations. The contribution of the mother’s perception factor about the integrated ANC program to the indicator can be seen in the measurement equation and the covariance matrix.

The parameter values in the measurement equation for each indicator are as follows:

**Social value/norms indicator**

The value of error variance 0.48 shows that the perception of pregnant women about integrated ANC programs can explain the variance in values/norms about integrated ANC programs. This is evidenced by the value of \( R^2 = 0.82 \) which means that the perception of pregnant women about integrated ANC can contribute to the value by 82%. This contribution is said to be high so it can support the mother’s perception of the integrated ANC program. This research is supported by Walgito 2010, perception is organizing, interpreting the sensory stimulus so that it is meaningful and is an integrated response in individuals, whereas according to Slameto 2010 perception is a process related to the entry of messages or information into the human brain continuously keeps in touch with the environment.

**Knowledge indicator**

The value of error variance 0.43 shows that the mother’s perception of the integrated ANC program can explain the variance of knowledge. This is evidenced by the value of \( R^2 = 0.96 \), which means that the perception of pregnant women about the integrated ANC program can contribute by 96%. This contribution is said to be high so knowledge is needed to improve the perception of pregnant women about integrated ANC programs. This research was supported by Notoatmodjo 2010 who stated that knowledge is the result of knowing and this happens after people make sensing. Knowledge itself is influenced by educational factors, where it is expected that with higher education, the person will be more knowledgeable.

**Attention indicator**

The value of error variance 0.25 shows that the mother’s perception of the
integrated ANC program can explain the variance of attention. This is evidenced by the value of $R^2 = 0.90$, which means that the perception of pregnant women about the integrated ANC program can contribute to attention by 90%. This contribution is said to be high so attention is needed to improve the perception of pregnant women about integrated ANC programs.

**Expectation indicator**

The value of error variance 0.51 shows that the mother’s perception of the integrated ANC program can explain the variance of expectation. This is evidenced by the value of $R^2 = 0.85$, which means that the perception of pregnant women about the integrated ANC program can contribute 85% of expectations. This contribution is said to be high so expectation is needed to improve the perception of pregnant women about integrated ANC programs. This research is supported by cognitive social theory Bandura, 1997 states that behavior is determined by expectations about environmental response (trust) and intensive, i.e. the value of a goal, can be a health status and a better appearance.

Summary of the measurement equation of pregnant women’s behavior on integrated ANC program includes: service utilization, early detection of complication, complication interventions and preparation of referrals can be seen in table below.

Table 5. Summary of the measurement equation of pregnant women’s behavior on integrated ANC program

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Error Variance</th>
<th>Total Variance</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior of</td>
<td>Service utilization</td>
<td>0.11</td>
<td>0.63</td>
<td>0.9</td>
</tr>
<tr>
<td>pregnant</td>
<td>Early detection of women in an</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women</td>
<td>integrated ANC program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANC program</td>
<td>Complication on intervention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preparation of referrals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sumber: *output* Lisrel 8.80

**Indicator of pregnant women’s behavior in an integrated ANC program**

The research results showed that the behavior of pregnant women in an integrated ANC program had four indicators, namely: 1) service utilization, 2) early detection of pregnancy complications, 3) pregnancy complication interventions, and 4) preparation of referrals. A summary of the results of the analysis is in the table above.

The parameter values in the measurement equation for each indicator are as follows:

**Service utilization indicator**

The value of error variance 0.11 shows that the mother’s behavior in the integrated ANC program can explain the variance of service utilization. This is evidenced by the value of $R^2 = 0.93$, which means that the utilization of services for pregnant women on integrated ANC programs can contribute to service utilization of 93%. This contribution is said to be high so it is very necessary to help carry out antenatal care services. This
study was supported by Notoatmodjo 2010 stating that health behavior is a person’s response to stimulation or objects related to illness and disease, health care systems, physical and environmental.

The results of Susenas 2014, some risky behaviors for maternal and child health need to be observed. Because these behaviors are closely related to maternal and infant mortality due to pregnancy and childbirth, healthy behaviors related to maternal and child health include pregnancy care behavior, labor delivery behavior, neonatal visit behavior, birth control/family planning and immunization behavior of children under five.

**Indikator deteksi dini komplikasi**

The value of error variance 0.87 shows that the behavior of mothers in integrated ANC programs can explain the variant of early detection of complications. This is evidenced by the value of $R^2 = 0.030$, which means that early detection of complications for pregnant women about integrated ANC programs can contribute 3%. Although this contribution is said to be low but it is very needed by the community especially pregnant women in early detection of complications in pregnancy. This study was supported by Sulaeman 2012 that examines and analyzes factors related to the ability to identify health problems. The results of the study show that the factors associated with the ability to identify health problems support empowerment in influencing efforts to identify health problems.

**Complication intervention indicator**

The value of error variance 1.93 shows that the behavior of mothers in an integrated ANC program can explain the variant of intervention complications. This is evidenced by the value of $R^2 = 0.022$, which means complication intervention for pregnant women in the integrated ANC program can contribute to the intersection treatment of 2.2%. This contribution is said to be low but is very necessary in the intervention of complications by pregnant women. This research was supported by the Kemenkes 2012, in the guidance of integrated antenatal care services that are comprehensive and quality services carried out through: a) Providing health services and counseling including stimulation and nutrition so that the pregnancy is healthy and the fetus is born healthy and intelligent, b) Early detection of diseases and complications of pregnancy, and c) Preparation for labor. If complications occur in pregnancy immediately followed up by professional officers in a more complete health care facility.

**Preparation of referral indicator**

The value of error variance 0.83 shows that the behavior of the mother in the integrated ANC program can explain the variance in the preparation of the referral. This is evidenced by the value of $R^2 = 0.065$, which means that the preparation for referral of pregnant women about the integrated ANC program can provide contribution of expectation of 6.5%. This contribution is said to be low but it is very necessary to provide motivation to the mother and family to make referrals immediately if there is a serious pregnancy complaint. This research was supported by Priyoto 2014 which stated that health behaviors are used to show desires related to actions that are often carried out in health language intentions to have an important position in one’s decision to change all unhealthy behaviors especially decision by mothers and families in implementing referrals.
CONCLUSION

There is a positive and significant relationship between the perceptions of pregnant women about the integrated ANC program with the mother behavior in the integrated ANC program.

REFERENCES


