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**The Role of Pregnant Women's Perception and Social Support on the Utilization of VCT Services**

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Voluntary Counseling and Testing (VCT) is an HIV/AIDS prevention program that has high evidence effectiveness, especially for individuals who have HIV/AIDS risk behaviors. The behavior of using VCT services can be seen from the influence of perceptions and social support. This study has the purpose to analyze the correlation between perceptions and social support of pregnant women with the behavior of using VCT services in Banyuwangi. The method used in this study is an analytical observational with a cross-sectional research design. The population of this study was pregnant women in the Kembiritan, Sobo, Genteng Kulon, Kertosari, Singojuruh, and Singotrunan in the range in May - November 2018. The sampling technique used was proportional random sampling. Most of the respondents have a bad perception that is 51. 6%. The majority of respondents have poor social support, namely 84.1%. The percentage of respondents who have good perceptions and behaviors in utilizing VCT services is 62.4%. Meanwhile, 60.1% of respondents who have social support and good behavior use VCT.

*Keywords: voluntary counseling test (VCT), perception, social support,*

**Introduction**

*Human Immunodeficiency Virus*(HIV) is the virus that attacks the immune system, where the patient will lose immunity and cause Acquired Immunodeficiency Syndrome (AIDS) (World Health Organization, 2021). Globally, in the world 37.7 million people are living with HIV and with an estimated increase of more than 36%, make Indonesia is the fastest growing country in the number of HIV-AIDS cases, in Southeast Asia (UNAIDS, 2015). in Asia, Indonesia ranks 5th of the countries most at risk of HIV/AIDS (Ministry of Health RI, 2018). From year to year, the trend of death and viral infection due to HIV/AIDS in Indonesia has shown a rapid increase since it was first reported (1987). The highest increase in cases was reported in 2016 as many as 10,315 cases. Reports of HIV/AIDS cases based on age were mostly reported at the age of 25-49 years from 2010-2017 (Ministry of Health RI, 2018).

HIV/AIDS is a deadly virus and is either infectious disease that cause maternal and child mortality (Ministry of Health RI, 2018). Reports of cases of HIV/AIDS in Indonesia in 2013 recorded 29,037 new cases with 12,279 patients being women. Cases of HIV/AIDS in infants transmitted by mothers increased in 2016 along with the increasing number of positive cases in women (Ministry of Health RI, 2018). Data on HIV/AIDS cases by province shows that the province with the highest HIV/AIDS cases is Java. Until 2017, the highest cause of HIV/AIDS cases in Banyuwangi was housewives, especially pregnant women (Ministry of Health RI, 2018). More than 90% of HIV-infected infants have infected infants of HIV-positive mothers (Ministry of Health RI, 2015). This risk of transmission can be prevented by detection attempts one of them is the Voluntary Counseling and Testing (VCT) program. Concrete evidence that HIV/AIDS is a case that has a significant increase makes the Indonesian government through the Ministry of Health seek preventive action by holding a VCT program. The VCT program has the aim of knowing health status related to HIV/AIDS so that the results obtained from this program are useful in the basis of preventing and transmitting HIV/AIDS (UNICEF Indonesia, 2013). The Minister of Health Regulation Number 74 of 2014, explained that to prevent transmission HIV for child from mother, pregnant women are required to perform VCT (Setiawan et al., 2020).

VCT is an effective program for HIV/AIDS prevention, especially for individuals who have risky behavior. Through this program, the individual's status is whether HIV or not is known through an HIV test, which then if the individual is declared to have HIV status, they can immediately take treatment actions (Q. Zhang et al., 2020). In the behavioral change theory model, Lawrence Green explains that predisposing factors and reinforcing factors influenced behavior, and supporting factors in which individual perception factors and social support are part of it (Finegood et al., 2014). The role of perception in behavior change is hard to ignore (Berlyne, 1951). While the meaning of social support is the acceptance of a group of individuals towards other individuals who can create a positive perception that he has received attention and support. The existence of social support also makes an effective contribution to health behavior change (Karen Glanz, Barbara K Rimer, 2015). Based the explanation, it is important to examine the correlation between perceptions and social support with the use of Voluntary Counseling and Testing (VCT) to reduce the number of HIV/AIDS cases.

**Methods**

***Research design***

This study used an analytic observational research with a cross-sectional design which was held to assess the correlation between perceptions and social support with the behavior of pregnant women in using VCT services in three sub-districts in Banyuwangi Regency which are shaded by the Puskesmas in the working area of ​​the related Primary Health Care such as Kembiritan, Sobo, Genteng Kulon, Kertosari, Singojuruh, and Singotrunan in May - November 2018. Analytical observational research was conducted by observing or measuring variables but the researcher did not intervene on these variables so that information about the phenomena that occurred, then analyzed how far the correlation and interaction between risk factors with certain effects or occurrences (Notoatmodjo, 2012).

***Population and Sampling***

This research was conducted with a population of all pregnant women in 2018 who live in the working area of Primary Health Care in ​​Kembiritan, Sobo, Genteng Kulon, Kertosari, Singojuruh, and Singotrunan. In this study, the researchers narrowed the population of pregnant women into samples with inclusion criteria, namely pregnant women in good health (not sick), willingness become respondents and did pregnancy tests during pregnancy in the working area of Primary Health Care in Kembiritan, Sobo, Genteng Kulon, Kertosari, Singojuruh, and Singotrunan.

Definition of the minimum quantity of samples in cross-sectional research is projected from this formula :

(Z² 1-️/ 2) . (P) . (Q)

n =

(d)²

Explanation:

n : sample size of cross sectional study

Z1-️/2 : Z statistic on standard normal distribution at level 0.05 = 1.96

P : 0.5

Q : 0.5

D : the size of the error that can be admitted, usually use 0.05

Based on this formula, the results of the calculation are:

(1.962).(0,5).(0,5)

n =

(0.05)²

(3.8416).(0.25)

=

(0.0025)

0.9604

=

0.0025

=

384.16🡪384 people

The calculation results show that the minimum sample size for this study is 384 people.

This study use proportional random sampling. Proportional sampling is carried out by picking samples from every stratum determined in balance with the number of samples in every stratum/region (Arikunto, 2013). The next step is to do a sampling technique is carried out, namely, simple random sampling which divisible into two methods is from drawing lots (lottery technique) or utilizing a table of numbers and random numbers (Notoatmodjo, 2012). utilizing proportional random sampling technique, the sample size in every Primary Health Center can be determined according to Sugiyono (2007), that is Sobo and Singojuruh 72 people, Singotrunan 60 people, Kertosari 41 people, Genteng Kulon 70 people and 69 people in Kembiritan.

***Data collection***

In this research, sources of data were used as primary data and secondary data. Primary data is data get directly by research subjects collected directly by researchers using instruments that have been prepared by the researchers themselves (Arikunto, 2013). The primary data in this study came from direct interviews with respondents (pregnant women) based on a questionnaire instrument that had been prepared by the researcher. Data collection was carried out in one month, namely in October 2018. Every respondent have a duration of 10-20 minutes to answer the questionnaire.

Secondary data is data obtained by researchers from various sources which are then processed so that they can be used as additional information (Arikunto, 2013). The secondary data get from related agencies with needed data, namely the list of names of pregnant women who live in the related kelurahan, health profiles of the Primary Health Center, and morbidity data at the related Primary Health Center.

***Validity and Reliability***

If the data that comes from the researcher and the data that actually occurs in the research object is "no different" then it can be stated that the instrument is valid (Ghozali, 2012). This research make a questionnaire for getting data. The questionnaire that has been prepared must be checked to confirm the validity. The instrument was verified on selected samples whose characteristics same as the population. The instrument is declared valid if r arithmetic > r table at df = n-2 and = 0.05. Reliability is an index that indicates the level instrument/questionnaire is declared reliable (index the instrument trusted as a data collection tool). Cronbach's alpha was used for the reliability test with the condition that if the alpha value is more than 0.6 then the instrument is declared reliable.

***Data analysis***

The data get were processed through the computer program, that is SPSS Statistics 23 by going through several stages as data editing, coding tabulation, and data entry. Data were analyzed using two types, namely univariate analysis, and bivariate analysis. Univariate analysis was performed by displaying a frequency table. Univariate analysis was held to depict the sample from the characteristics therm. The sample is selected from a wider population so that the results of the univariate analysis can represent the characteristics of the population. Clarify correlation one variable with another variable using the bivariate statistical analysis. At the start of the test, the data need normality test using Kolmogorov Smirnov which aims to know the type of data that get are normal or abnormal. The chi-square test is used for data that are not normally distributed.

***Ethical Considerations***

Ethical was got approval from the Health Research Ethics Committee, Faculty of Public Health, Universitas Airlangga with ethical approval number: 524-KEPK. In addition, the research has also obtained a data collection permit at the Puskesmas from Universitas Airlangga Kampus Banyuwangi with the number: 1338/UN.3.1.16/LT/2018. All informants who agreed to participate in this research fill in sign a voluntary informed consent statement, in which informed consent has guaranteed anonymity, and confidentiality of every informant.

**Result**

***Characteristics of Respondents***

1. Distribution of Respondents According to Perception

Respondents' perceptions were divisible into two types, namely bad and good. Most of the respondents' perceptions are bad. The details are in table 1.

Table 1 Distribution of Respondents by Perception

|  |  |  |
| --- | --- | --- |
| **Perception** | **Frequency** | **Percentage (%)** |
| Bad | 198 | 51.6 |
| Good | 186 | 48.4 |
| **Total** | **384** | **100.00** |

Based on table 1, it is found that among 384 people, most of the 198 (51.6%) respondents have bad perceptions and 186 (48.4%) respondents have good perceptions.

1. Distribution of Respondents by Social Support

Respondent’s social support were divisible into two types, namely bad and good. The social support of most of the respondents is classified as poor. The details are in table 2.

Table 2: Distribution of Respondents by Social Support

|  |  |  |
| --- | --- | --- |
| **Social support** | **Frequency** | **Percentage (%)** |
| Bad | 61 | 15.9 |
| Good | 323 | 84.1 |
| **Total** | **384** | **100.00** |

Based on table 2, it is found that 323 (84.1%) of 384 respondents have good social support and 61 (15.9%) have poor social support.

***Correlation between Perception and Behavior in Utilizing VCT***

From the analysis of data, discovered that 50% of respondents are have bad perceptions and behaviors use VCT, and 50% do not use VCT. While respondents who have good perception and behavior use VCT as much as 62.4%, while those who do not use VCT as much as 37.6%. To analyze the correlation between perception and behavior of  VCT utilization, the details are in table 3.

Table 3 Correlation between Perception and Behavior in Utilizing VCT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Perception** | **Behavior in Utilizing VCT** | | | | **Total** | |
| **Not Utilizing** | | **Utilise** | |
| **Frequency** | **Percentage (%)** | **Frequency** | **Percentage (%)** | **Frequency** | **Percentage (%)** |
| Bad | 99 | 50.0 | 99 | 50.0 | 198 | 100.00 |
| Good | 70 | 37.6 | 116 | 62.4 | 173 | 100.00 |
| **Total** | **169** | **44.0** | **215** | **56.0** | **384** | **100.00** |

After being analyzed applied the chi-square test, the outcome get p-value = 0.019 <0.05, which indicates that correlation between perception and behavior in using VCT.

***Correlation of Social Support with VCT Utilization Behavior***

From the analysis of data, discovered that respondents who have social support and have bad behavior use VCT as much as 34.4%, and 65.6% do not use VCT. Meanwhile, 60.1% of respondents who have social support and good behavior use VCT, while those who do not use VCT are 39.9%. To analyze the correlation between perception and behavior of VCT utilization, the details are in table 4.

Table 4 Correlation of Social Support with VCT Utilization Behavior

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Social support** | **Behavior in Utilizing VCT** | | | | **Total** | |
| **Not Utilizing** | | **Utilise** | |
| **Frequency** | **Percentage(%)** | **Frequency** | **Percentage(%)** | **Frequency** | **Percentage(%)** |
| Bad | 40 | 65.6 | 21 | 34.4 | 61 | 100.00 |
| Good | 129 | 39.9 | 194 | 60.1 | 215 | 100.00 |
| **Total** | **169** | **44.0** | **215** | **56.0** | **384** | **100.00** |

After being analyzed applied the chi-square test, the outcome get p-value = 0.000 <0.05, which indicates that correlation between social support and VCT utilization behavior.

The results showed that the majority of pregnant women respondents had a bad perception of VCT services. Perception is one of the factors within the individual that have important role in shaping behavior related to individual health (Yue et al., 2021). Several factors can affect the perception of pregnant women so that it can result in an increase or decrease in the impression of a difficulty in behavior for pregnant women. Perceptions of pregnant women are influenced by knowledge and beliefs that have an impact on the behavior of pregnant women in utilizing VCT services. Perception is a certain attitude, situational, and can change (Tugiyarti et al., 2020). Therefore, the initial bad perception is important to change little by little. Other research shows that the bader perception of pregnant women, the higher the extent of anxiety experienced by pregnant women (Bayrampour et al., 2013). The results also show that most of the respondents who are pregnant women have good support. This support comes from several factors, namely from husbands, parents/relatives, neighbors, and the health workers themselves. Social support is the behavior of providing material and spiritual support between individuals. In addition, social support can be in the form of exchanging material and spiritual resources between individuals and other individuals, so that each individual can obtain the satisfaction of their respective social needs (H. Zhang et al., 2020). Social support consists of subjective support and objective support. Previous research has suggested that high social support plays a protective role against anxiety in pregnant women (Kiataphiwasu & Kaewkiattikun, 2018) (Putri Handini et al., 2020) (Gümüşsoy et al., 2021).

**Discussion**

***Correlation between Perception and Behavior in Utilizing VCT***

The following are the results of research findings regarding the correlation between perceptions and behavior in using VCT services. The data from this study stated that respondents who behaved using VCT services mostly had good perceptions (62.4%). This means that respondents have the will to behave using VCT services because they are supported by good perceptions. Most respondents thought that using VCT services would reduce the risk of contracting HIV/AIDS. Another opinion says that if going to VCT services can protect themselves and their pregnancy, some say that getting VCT services can reduce the risk of contracting HIV/AIDS. Another opinion also states that they can protect their families and those around them from HIV/AIDS transmission.

The feeling of those who feel that they are vulnerable to HIV/AIDS is a motivating factor in carrying out HIV tests because they need to be tested. The respondent's sense of vulnerability is that the transmission of HIV/AIDS will lower the body's resistance so that when infected with HIV/AIDS, the individual is easily attacked by various diseases. Meanwhile, the feeling of vulnerability felt by pregnant women is the risk of transmitting HIV/AIDS to the unborn baby, family history of dying from HIV, the risk of contracting HIV/AIDS by anyone, and the risk of having a job related to a hospital that has various sources of infectious diseases. Vulnerability is a big perception to encourage individuals to carry out healthy behavior. The perceived risk is directly proportional to the likelihood of risk reduction behavior.

The respondent's perception of seriousness is that HIV/AIDS is a serious problem and has a risk of transmitting it to the closest people if it is declared positive for HIV. Health services are established to gain access to adequate public health services so that when people visit the Puskesmas they do not have to be sick, it can mean counseling or control or testing. Instilling an understanding about each individual having a high risk of contracting HIV/AIDS needs to be carried out optimally in order to encourage the behavior of pregnant women to carry out HIV tests. This perception is owned by each respondent so that respondents have a feeling that HIV/AIDS is a serious disease and can have a negative impact on their lives.

***Correlation of Social Support with Behavior in Utilizing VCT***

The analysis in the research stated that the majority of respondents had poor social support so they did not take advantage of VCT services as many as 40 people (65.6%), with p-value = 0.000 which mean social support is correlated with the use of VCT services. Legiati's research (2012) explained that of 193 pregnant women using ANC services, as many as 76 people (51.1%) took an HIV test, with the most influential factor in the behavior of pregnant women to undergo HIV testing, namely husband's support (Ps et al., 2012). In Arniti's research (2014) with the title of factors related to pregnant women who do HIV tests, one result is that husband and family support that is intended for pregnant women who do HIV tests is OR 8.71 (Arniti et al., 2014). Witari (2013) explained that there is correlation the family acceptability variable with the using of reproductive health services at the Tegalalang Gianyar Health Center with p=0.042, OR=3.481 (95%CI:1.21-10.24) (Witari et al., 2014).

One of family support is the husband's support. This support is a reinforcing factor that motivates pregnant women's behavior to use VCT services. Play role of husband and family has great meaning for pregnant women in decision-making. Another fact shows that this condition can still be felt in the community. In this study, the role of the husband in question is to support pregnant women in undergoing HIV testing, one of which is to bring them to ANC services at the nearest Primary Health Care. This also includes assisting during HIV testing at ANC services. Other studies have shown that husband and family support’s emotional and practical assistance in accessing services have a major influence on pregnant women. The bivariate data analysis stated to get a p-value of 0.000 which family support correlated with the using VCT's behavior services. These analyses are in stripe with Sumarlin's research (2013) in Banyumas (Sumarlin, 2013).

In this case, social support includes health workers. In this study, the support of health workers was aimed at supporting pregnant women to take an HIV test, providing explanations about HIV, recommending examinations, and providing post-examination referrals. Health workers has role big influence because it is the officers who often interact so that health workers who know the physical and psychological conditions well and interactions that have been built for a long time will have a great influence on trust and acceptance of the existence of officers towards themselves. Education and counseling carried out by officers have great meaning for pregnant women to take ANC services.

If through the view of WHO by analyzing and adding to Green's argument that the cause of a person's special behavior is due to four main factors. One of them is that every individual needs a reference. If an individual feels that another individual is important to him, as a result, whatever the words or behavior of the individual referenced tends to be imitated, such as clerics, parents, doctors, midwives. In an effort to optimally utilize VCT services, midwives have a role to provide references so that what is said by the midwife is expected to be carried out by pregnant women. Respondents will behave utilizing the VCT program if they receive high support.

**Conclusion**

Based on the study most of the distribution of respondents according to bad perceptions. The bad perception of women who pregnant respondents in Banyuwangi correlate with the use VCT program. The results of the research show perception correlated with behavior in utilizing the VCT program. This means that if pregnant women in Banyuwangi have a good perception, they can influence the behavior of women who are pregnant in Banyuwangi to take advantage of the VCT program. In addition, the results of the study also showed that the distribution of most of the respondents according to social support was good. Based on the research, it is known social support correlated behavior in utilizing the VCT program. This means that if the social support of pregnant women is good, it can affect behavior in using VCT services.

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