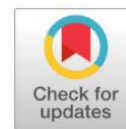


Determining factors of pregnant women's interest in utilizing the provider-initiated testing and counseling (PITC) services



Almira Gitta Novika¹, Lenna Maydianasari²

¹Faculty of Health Science, Universitas Respati Yogyakarta, Indonesia, almiragittanovika@gmail.com

²Faculty of Health Science, Universitas Respati Yogyakarta, Indonesia, lenna@respati.ac.id

ARTICLE INFO

Article history:

Received: Feb, 12th 2020

Revised : July 29th 2020

Accepted: July 30th 2020

Keyword:

Interest
Pregnant Women
PITC

ABSTRACT

HIV infection has become one of the complications of pregnancy that often occurs. Efforts to minimize this risk are HIV testing and counseling services on the initiative of health workers or Provider Initiated Testing and Counseling (PITC). This study analyzes the determinant factors of pregnant women's interest in utilizing PITC services. This research used a quantitative approach combined with a qualitative approach (Mixed Method). The research conducted in Depok II Public Health Center (PHC), Sleman Regency. Data analysis techniques were using Chi-Square, multiple logistic regression, and content analysis. This study shows that there is no correlation between the level of knowledge ($p=0.214$), stigma and discrimination against HIV/AIDS ($p=0.536$), the support of husband ($p=0.092$), and the support of health workers ($p=0.161$) with the interest of pregnant women in utilizing PITC services. There is a relationship between attitude ($p=0.000$), needs ($p=0.002$), and belief ($p=0.004$) with the interest of pregnant women in utilizing PITC services. The result of multiple logistic tests stated that attitude was the determines ($p= 0.000$, 95% CI= 0.036-0.393). The results of the quantitative data analysis showed that most of the husband support was in a good category (56.6, and the majority of health workforce support was in a good category (77.1%). The attitude was the most determining factor of the interest of pregnant women in utilizing PITC services.

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Corresponding Author:

Lenna Maydianasari

Faculty of Health Science, Universitas Respati Yogyakarta, Indonesia

Laksda Adisucipto Street KM 6.3, Depok, Sleman, Yogyakarta. Telp: (0274) 488781

Email : lenna@respati.ac.id

INTRODUCTION

Transmission of HIV/AIDS from mothers infected with HIV/AIDS to their babies tends to increase along with the increasing number of HIV/AIDS positive women who are infected from both partners and due to risky behavior. One form of service for HIV/AIDS patients is HIV counseling and testing. The coverage of HIV testing and counseling services is still low to reach at-risk populations and find out their HIV status.¹ The number of people with HIV/AIDS in Indonesia in 2016 amounted to 40,575, in which the number of HIV positive



pregnant women who needed national guidelines for preventing mother to child HIV transmission (PPIA) was 278 pregnant women. Similarly, the number of children under the age of 15 who contracted HIV from their mothers at birth or while breastfeeding was 2,607 children. It means an increase in child mortality due to AIDS.²

The national HIV/AIDS Control program aims to increase the number of people who know their HIV status so that HIV positive people get health care earlier. These efforts are HIV testing and counseling services on the initiative of health workers (Provider Initiated Testing and Counseling/PITC) in addition to strengthening voluntary HIV counseling and testing services (KTS/VCT).³

The health profile of the Special Region of Yogyakarta (DIY) in 2016 showed that DIY ranked 9th as the province with the most HIV-AIDS survivors. The total number of HIV survivors in DIY in 2013 was 1,323 people and AIDS survivors were 965 people. The HIV/AIDS Prevention Commission of DIY showed that the highest number of HIV/AIDS cases in 2016 was in Sleman Regency, namely 868 people with HIV and 352 people with AIDS. Cases of HIV/AIDS were still found in infants younger than 1 year. These findings indicate that transmission of HIV/AIDS from mother to baby still occurs in DIY.⁴

The Sleman Regency Health Office said that the lowest number of pregnant women undergoing PITC examinations and those reported in the Health Service was in Depok II Community Health Center with a total of (2.4%). Data obtained directly from Depok II Community Health Center, Sleman, Yogyakarta, during the last 6 months from July 28th to December 29th, 2017, showed that there were 119 pregnant women undergoing PITC examination (7.7%) out of 1,542 pregnant women. The data shows that the interest of pregnant women in Depok II Community Health Center is still very low for HIV testing. Until now there has been no strategic step to increase the interest of pregnant women at Depok II Community Health Center to conduct PITC examination. Therefore it is very important to analyze the determinant factors of pregnant women interest to do PITC in Depok II Community Health Center, Sleman Regency. This study analyzes the determinant factors of pregnant women interest in utilizing PITC services in Depok II Community Health Center, Sleman Regency.

METHOD

This type of research is explanatory research with a cross-sectional design. This research used a quantitative approach combined with qualitative approach (Mixed Method). The population in this study was all pregnant women undergoing antenatal care (ANC) at Depok II Community Health Center. The total number of samples was 83 pregnant women with the sampling technique used was accidental sampling. In this research, triangulation of sources with qualitative method was conducted. Samples were sampled using purposive sampling with a total of 11 informants consisting of 5 residents around Depok II Community Health Center, 2 husbands of pregnant women who examined their pregnancy at Depok II Community Health Center, 2 midwives at Depok II Community Health Center and 2 staffs of the Sleman Regency Health Office. Quantitative data collection technique was carried out using questionnaires includes data on respondent characteristics (age, education level, occupation, number of pregnancy, participation in HIV testing), level of knowledge, attitude, needs belief, interest in utilizing PITC services, support of husband, support of health workers, stigma and discrimination against HIV/AIDS while qualitative data collection was done by in-depth interviews. Data analysis techniques were Chi-Square, multiple logistic regression, and content analysis.

RESULTS

Table 1. Distribution of Characteristics of Pregnant Women in Depok II Community Health Center in 2019

Characteristics	Frequency	Percentage
Age		
Healthy Reproduction	70	84.3%
Non-Healthy Reproduction	13	15.7%
Education Level		
Elementary Level Education	8	9.6%
Intermediate Level Education	36	43.4%
High Level Education	39	47%
Occupation		
Working	39	47%
Not Working	44	53%
Number of Pregnancy		
Primigravida	45	54.2%
Multigravida	35	42.2%
Grandmultigravida	3	3.6%
Participation in HIV Testing		
Ever	47	56.6%
Never	36	43.4%

Table 1 shows that most of the respondents in this study were at healthy reproductive age (84.3%), had a high level of education (47%) and did not work (53%). The majority of respondents in this study was primigravida (first child pregnancy), as many as 54.2%, and had already taken an HIV test (56.6%). The results of the univariate analysis are presented in table 2 below:

Table 2. Distribution of Respondents Based on Research Variables in Depok II Community Health Center in 2019

Variable	Frequency	Percentage
Level of Knowledge		
Good	53	63.9%
Enough	29	34.9%
Poor	1	1.2%
Attitude		
Positive	41	49.4%
Negative	42	50.6%
Needs		
Good	44	53%
Poor	39	47%
Belief		
Good	42	50.6%
Poor	41	49.4%
Stigma and discrimination against HIV/AIDS		
Low	68	81.9%
High	15	18.1%
Support of Husband		
Good	47	56.6%
Poor	36	43.4%
Support of Health Workers		
Good	64	77.1%
Poor	19	22.9%
Interest in Utilizing PITC Services		
Moderate	59	71.1%
Low	24	28.9%

Based on table 2 it can be seen that the level of knowledge of respondents about HIV/AIDS was mostly good (63.9%). The majority of respondents' attitude towards

HIV/AIDS were negative (50.6%). Respondents in Depok II Community Health Center mostly had good needs (53%). Most respondents had good belief (50.6%). Most of the respondents had low stigma and discrimination against HIV/AIDS (81.9%), most of the husband support in Depok II Community Health Center was in the good category (56.6%). The majority of health worker support at Depok II Community Health Center was in the good category (77.1%) while the respondents' interest in using PITC services at Depok II Community Health Center was mostly in the moderate category (71.1%).

The results of chi square analysis showed expected value of < 5 so that the merging of cells in the level of knowledge variable became good and sufficient. Next, the significance of the variables was tested using the Fisher Exact Test. The results of the bivariate analysis with fisher exact are presented in table 3 below:

Table 3. Chi Square Analysis of independent variables (level of knowledge, attitude, needs, belief, stigma and discrimination against HIV/AIDS, support of husband and support of health workers) with the dependent variable (Interest in Utilizing PITC Services) in Depok II Community Health Center in 2019

Variable	Interest				Total		p-value
	Moderate		Low		f	%	
	F	%	f	%			
Level of Knowledge							
Good	35	42.2	18	21.7	53	63.9	0.214*
Enough	24	28.9	6	7.2	30	36.1	
Attitude							
Positive	37	44.6	4	4.8	41	49.4	0.000
Negative	22	26.5	20	24.1	42	50.6	
Needs							
Good	38	45.8	6	7.2	44	53.0	0.002
Poor	21	25.3	18	21.7	39	47.0	
Belief							
Good	36	43.4	6	7.2	42	50.6	0.004
Poor	23	27.7	18	21.7	41	49.4	
Stigma and discrimination against HIV/AIDS							0.536
Low	47	56.6	21	25.3	68	81.9	
High	12	14.5	3	3.6	15	18.1	
Support of Husband							
Good	37	44.6	10	12	47	56.6	0.092
Poor	22	26.5	14	16.9	36	43.4	
Support of Health Workers							
Good	48	57.8	16	19.3	64	77.1	0.161
Poor	11	13.3	8	9.6	19	22.9	

*Fisher exact

Table 3 shows that there is no correlation between the level of knowledge, stigma and discrimination against HIV/AIDS, support of husband and support of health workers to the interest of pregnant women in utilizing PITC services at Depok II Community Health Center ($p\text{-value} > \alpha (0.05)$). The results of the bivariate analysis showed that the variables related to the interest of pregnant women in using PITC services in Depok II Community Health Center were attitude, needs and belief ($p\text{-value} < \alpha (0.05)$).

Multivariate analysis was performed on the independent variables that have a significant relationship with the dependent variable to determine the joint effect of the independent variables, namely attitude, needs and belief, on the interest of pregnant women in utilizing PITC services. Multivariate analysis using the Forward multiple logistic regression statistical test method can be seen in table 4 below:

Table 4. Analysis of the Forward Multiple Logistic Regression Test Method

	B	S.E	Wald	df	Sig.	Exp (B)	95,0% C.I.for EXP(B)	
							Lower	Upper
Attitude	-2.129	0.610	12.172	1	0.000	0.119	0,036	0,393
Constant	-0.095	0.309	0.095	1	0.758	0.909		

Table 4 shows that attitude has an influence on interest with Exp (B) of 0.119. This means that a negative attitude is a determinant factor of respondents' interest which is less by 0.119 times greater than the positive attitude.

Triangulation of sources with qualitative data was carried out after quantitative data analysis results were obtained, through in-depth interviews. The characteristics of the triangulation informants are presented in table 5 as follows:

Table 5. Characteristics of Triangulation Informants

Name	Jabatan/Pekerjaan
Mr. AK	Resident/Private
Mr.BP	Resident/Entrepreneur
Mrs.LS	Resident/ Housewife
Mrs.SS	Resident/ Housewife
Ms.RA	Resident/Student
Mr. CS	Husband of pregnant mother/Private
Mr.H	Husband of pregnant mother/Private
Mrs.B	Coordinating Midwife of Depok II Community Health Center
Mrs.K	Executing Midwife of Depok II Community Health Center
Mr.A	Nurse/Staff of Sleman Regency Health Office in P2PL [Disease Prevention and Control] Section
Mrs.F	Midwife/Staff of Sleman Regency Health Office in Kesga [Family Health] Section

The results of quantitative data analysis showed that most respondents had low stigma and discrimination against HIV/AIDS (81.9%), but 18.1% of respondents still had high stigma. Therefore, triangulation of sources about HIV/AIDS stigma and discrimination from 5 members of the community around Puskesmas Depok II was done. Society tended to judge that people with HIV/AIDS (PLWHA) deserve to suffer because of their behavior. The results of in-depth interviews about the judgement against PLWHA delivered by residents around Depok II Community Health Center are as follows:

Well, it's a pity if they are sick and ostracized

(Mr.AK, October 2019)

No ... they do not deserve to be treated like that ... any healthy people can get sick like that as well

(Mr.BP, October 2019)

Judgements delivered by the informants tended to be positive. They gave empathy to the suffering experienced by PLWHA. However, there were also informants who see the past behavior of PLWHA to form a stigma and discrimination against PLWHA, if the cause of the disease was due to their bad behavior, they tended to give bad judgement.

Well, it depends on the person itself... were they infected by HIV/AIDS because of their bad behavior ... or because of other things. Since there are people infected due to blood donation, etc.... So, I don't directly judge that person.

(Mrs.LS, October 2019)

Well, that is the punishment from God, is it because of their bad behavior?

(Mrs.SS, October 2019)

If he intentionally did something bad, that's not good, right?

(Nr.RA, October 2019)

The stigma against PLWHA can be occur at work, school or social interaction, such as chatting, sitting side by side, shaking hands, using shared toilets, eating together and the treatment of family members at home.

Before they get worse, they do not need to be dismissed... because the disease has several phases... normal and abnormal phases. In my opinion, they should be treated appropriately, they don't need to be ostracized because of the disease... yes...they deserve it... they have the rights too.

(Mr.AK, October 2019)

No ... I don't agree ... because they need to support themselves by working ... They are just like other healthy friends. They still deserve a job.

(Mr.BP, October 2019)

Yes... the termination depends on the policy of the respective employer... because as far as I know, people with HIV/AIDS are getting weaker ... so, they may be a bit difficult to lift heavy stuffs... it's just that sometimes those who have been infected will definitely be ostracized. Well, I will be shocked, disappointed and feel sorry if someone at my workplace or a close friend is infected... I will be so confused in that position... on the one hand I don't want to stay away, but sometimes I'm afraid of contracting... Although I know that we won't get infected if we don't eat and drink together... Well, that's the dilemma.

(Mrs.LS, October 2019)

Well, it depends on the other children in the school. Do they fell okay if the infected one plays with them or not.

(Mrs.SS, October 2019)

Well, they deserve to go to school with other healthy children ... because they have to be supported

(Ms.RA, October 2019)

Mr. AK, Mr. BP and Ms. RA considered that PLWHA have the right to live properly including at work and school like other healthy people, they do not need to be laid off from their jobs and still deserve to get decent jobs. However, the stigma of PLWHA still exists in the workplace and school environment, such as the judgement of Mrs. LS who felt afraid of having PLWHA friends because of the risk of contracting or the statement of Mrs. SST who told that the treatment of PLWHA children in school depending on their friends. The statement did not explicitly state that PLWHA children are eligible to go to school with other healthy children.

Stigma and discrimination against PLWHA are very evident in the use of shared facilities such as public toilets, use of cutlery, conversing and even touching. Fear of the risk of contracting being a determinant of high stigma against PLWHA.

Well ... the bathroom has a water tub too ... I'm afraid if it will be contracted through the water ... maybe the bathroom should be cleaned first. It is okay if we only eat together... as long as the glass and spoon are cleaned or washed.

(Mr.AK, October 2019)

It is okay if we eat together ... but it's better to have separate plates ..

(Mr.BP, October 2019)

Yeah, I think I won't be contracted if just touching, but I don't know about the saliva or something ... maybe they should wash their hands first before touching other people... while we don't need to touch, it is better to not touch, but if it is urgent, we should wash our hands after that.

(Mrs.LS, October 2019)

The community still believes that HIV/AIDS can be transmitted through the use of shared toilets and eating utensils used by PLWHA. They tend to fear contracting when conversing or shaking hands with PLWHA. These things make stigma and discrimination against PLWHA are still high, as in this study found 18.1% of pregnant women had a high stigma against PLWHA.

The results of the quantitative data analysis showed that the majority of husband support at Depok II Community Health Center was in the good category (56.6%), but 43.4% of respondents rated their husband's support as poor. Husband's support for his wife during pregnancy includes informational, emotional, instrumental, and judgement supports.

*Never thought about providing information about HIV / AIDS.
I often hear complaints from my wife ... but because of my tired condition after work ... I don't want to be hypocritical ... but I don't want to listen.
Alhamdulillah, my workplace is not too strict ... so I am still free, I just need to ask permission from my boss ... I can still accompany her in attending pregnancy check.
Well, we don't have any special preparation. Just buying baby clothes, such as blankets and mattresses....
I rarely praise my wife ... It is normal.*

(Mr.CS, October 2019)

*For information on HIV/AIDS, my wife understands better.
I am quite attentive because this is the first child. I often listen to her complaints... It is usually about dizziness.
Well ... maybe after work, I directly help my wife.
Still learning...Since it is the first child, so there is no experience.
For me, I don't praise my wife for her routine pregnancy check.*

(Mr.H, October 2019)

Pregnant women in Depok II Community Health Center considered that the majority of health workforce support at Depok II Community Health Center was in the good category (77.1%). Support of health workers at Puskesmas Depok II for PITC examinations has been provided since pregnant women check the first visit. Information support is always provided to all pregnant women.

DISCUSSION

The results showed that most pregnant women in Depok II Community Health Center were of healthy reproductive age (20-35) years as many as 42 pregnant women (84.3%). However, in this study still found pregnant women who do antenatal care at the Depok II Community Health Center non-reproductive age healthy (15.7%). As you know, pregnant women with age <20 years and > 35 years can have a risk in pregnancy because in pregnancy <20 years biologically the emotions are not optimal, which tends to be unstable, mentally immature so that it is easy to experience tendencies that result in lack of attention to pregnancy while at age > 35 years associated with setbacks and decreased endurance as well as various diseases that often afflict this age, so pregnant women aged <20 years and > 35 years should check their pregnancy regularly to health professionals to detect early

complications that might occur because it can endanger the health of the mother and fetus, at risk of bleeding and can cause miscarriage.⁵

The results showed that most mothers were highly educated (47%). A person's education will affect the knowledge and attitudes possessed by that person.⁶ This is consistent with the theory that the higher the level of one's education, the easier it is to receive information so the more knowledge possessed, conversely a lack of education will hinder the development of one's attitude towards newly introduced values.⁷

Most respondents do not work or as Housewives (IRT) as much as 53%. Basically, knowledge is influenced by many factors, one of which is information. Respondents who do not work or IRT will have more free time to socialize with other groups and will have more opportunities to get information. It also allows respondents to have free time to look for information, especially about HIV / AIDS testing which is very important to do during pregnancy. The work environment can make someone gain experience and knowledge, both directly and indirectly.⁸ This is also supported by the theory that work is a time-consuming activity, working someone will have an influence on family life as well as the information and experience obtained.⁹

Research shows that most pregnant women are primigravids (54.2%). Thus, pregnant women with the number of first pregnancies do not have the experience of getting counseling HIV / AIDS testing by health workers in previous pregnancies. However, most pregnant women have taken an HIV / AIDS test (56.6%). This is reinforced from the results of in-depth interviews that PITC is required for all pregnant women who come to the Depok II Community Health Center integrated into the 10T services in the integrated ANC program. Research by Halim et al (2016) at the Halmahera Health Center in Semarang City also showed nearly the same results, namely 61.1% of pregnant women undergoing HIV tests.⁹

Based on the results of the study 63.9% of pregnant women at the Depok II Community Health Center are well-informed about HIV / AIDS. This is due to most respondents having a higher education background (47%), where the higher the education level of the respondent, the easier it is to receive information about knowledge about HIV / AIDS. These results are like the research of Kridawati et al (2015) in Denpasar II Community Health Center with the respondents' knowledge level mostly high (60.7%).¹⁰

In addition to the level of education that affects the knowledge of mothers about HIV / AIDS is also due to the age factor, which in this study note that most respondents aged 20-35 years. The theory states that the more age, maturity, and strength of a person will be more mature in thinking and working in terms of the Belief of society, a more mature person is Beliefed from people who have not yet matured.¹¹

The attitude of pregnant women in Depok II Community Health Center is mostly negative (50.6%). This result is supported by the research of Abhinaja and Astuti (2013) in the Sanur Village, Denpasar, which showed that most of the attitudes of pregnant women in the moderate category were 67.8%.¹² Likewise, Kridawati's study (2015) showed that the attitudes of pregnant women at the Denpasar II Health Center were mostly negative (60.7%).¹⁰

Most of the needs of pregnant women in Depok II Community Health Center are in the good category (53%) but there are still those who have poor needs (47%). This is reinforced by the results of qualitative research that the PITC examination is required, so it is not from the needs of the mother, but because it is required from the Depok II Health Center. Likewise, most pregnant women in Puskesmas Depok II have good faith (50.6%). This result is supported by the results of in-depth interviews that every pregnant woman gets information about integrated ANC since the first visit of trimester 1.

Shaluhayah et al (2015) showed the results of her research in Grobogan District, Central Java where half of the respondents still gave a stigma against PLWHA.¹³ This is different from this study where most respondents have a low category of stigma and discrimination against HIV / AIDS (81.9%).

The majority of husband support for pregnant women at Puskesmas Depok II (56.6%). This is reinforced by qualitative data where the husband provides support in the form of accompanying pregnancy check-ups, listening to complaints and helping with homework and birth preparation. However, there was still poor husband support at (43.4%). This is explained by qualitative data which shows that in the second child pregnancy, the husband's attention is sufficient to differ from the pregnancy of the first child. This result is supported by Kridawati's study (2015) where 57.3% of husband's support was absent and 42.3% there was husband's support.¹⁰

Support of health workers in this study showed that most were in the good category (77.1%). This occurs because the obligation of health workers in Sleman Regency to provide minimum service standards in accordance with the statement made by the triangulation informant that since the first visit, all pregnant women received information about the integrated ANC. In addition, the existence of SIMPUS makes the flow of services in Depok II Health Center clearer.

Interest in utilizing PITC services in Depok II Community Health Center was mostly in the moderate category (71.1%). This happened because most pregnant women had taken an HIV / AIDS test (56.6%). However, there are still 28.9% of pregnant women who have low interest in utilizing PITC services. Of course, stigma and discrimination against HIV / AIDS also influence pregnant women to take advantage of this service. From the triangulation of qualitative data, information was obtained that the fear of fear because of the risk of causing pregnant women to utilize the PITC service. Likewise, the theory states that interest as a feeling of preference and a sense of attachment to a thing or activity, without being ordered.¹⁴

The results showed that there was no effect on the level of knowledge, stigma and discrimination in HIV / AIDS, husband support and support of health workers with the interest of pregnant women utilizing PITC services at Depok II Community Health Center. The results showed that the variables related to the interest of pregnant women using PITC services at Depok II Community Health Center were attitudes, needs and beliefs. These results are not in accordance with the study of Syafitri (2012) which shows that stigma and discrimination related to HIV / AIDS are closely related to the use of PITC services. Whereas belief in the benefits of PITC, family support and institutional needs for PITC services and knowledge about HIV / AIDS are related to the use of PITC services.¹⁵

Larasaty and Purwanti's research (2016) also shows that pregnant mothers' knowledge about HIV / AIDS is still low and negative public responses about HIV / AIDS are the reasons for pregnant women to not intend to use VCT examination services.¹⁶ Research Ejigu et al (2016) showed that out of a total of 2114 pregnant women surveyed, only 35.1% tested for HIV / AIDS.¹⁷ Whereas Larsson et al. (2012) mentioned the inhibiting factors for the success of PITC, namely the low level of knowledge of pregnant women, the lack of husband support, low socioeconomic conditions and the distance of residence to remote health facilities.¹⁸

This study shows that of the three variables, namely needs, beliefs and attitudes related to the interests of pregnant women in Depok II Community Health Center, attitude variables show a great influence on these interests. This is supported by the research of Halim et al (2016) proving that a factor related to the behavior of pregnant women in HIV testing is attitude.⁹ Similarly, Kridawati's study (2015) showed that the attitude of pregnant women affected the utilization of HIV testing services.¹⁰

CONCLUSION

There is no relationship between the level of knowledge, stigma and discrimination against HIV/AIDS, support of husband and support of health workers with the interest of pregnant women to use PITC services. There is a relationship between attitude, needs and belief with the interest of pregnant women in utilizing PITC services. Attitude factor

determines the interest of pregnant women in utilizing PITC services at Puskesmas Depok II.

ACKNOWLEDGEMENTS

We would like to thank the Director of Research and Community Service at the Ministry of Research and Technology and Higher Education as the grantor of beginner lecturer research fund in 2019.

REFERENCES

1. Depkes RI. (2010). *Modul Pelatihan Konseling dan Tes Sukarela HIV (Voluntary Counselling and Testing=VCT) untuk Konselor Profesional Panduan Peserta*. Jakarta.
2. Kemenkes, RI. (2016). *Prosedur pengobatan pada Layanan Komprehensif HIV/AIDS Berkesinambungan (LKB) Yogyakarta-Semarang*. www.KemendesRI.go.id diakses pada 29 November 2017.
3. Kemenkes, RI. (2010). *Pedoman Pelayanan Antenatal Terpadu*. Jakarta: Kementerian Direktur Jenderal Bina Kesehatan Masyarakat.
4. Dinas Kesehatan DIY. (2016). *Distribusi kasus HIV/AIDS tahun 2016 di DIY*. Yogyakarta.
5. Effendi, F. (2010). *Keperawatan Kesehatan Komunitas*. Jakarta : Salemba Medika.
6. Mubarak, Wahid Iqbal. (2011). *Promosi Kesehatan*. Jogjakarta: Graha Ilmu.
7. Notoatmodjo. (2012). *Promosi Kesehatan dan Perilaku Kesehatan*. Jakarta: Rineka Cipta.
8. Nursalam. (2012). *Konsep Penerapan Metodologi Penelitian Ilmu Keperawatan: pedoman skripsi, tesis dan instrumen penelitian keperawatan*. Jakarta: Salemba Medika.
9. Halim Y, Syamsulhuda BM, Aditya Kusumawati. (2016). *Faktor-Faktor yang Berhubungan dengan Perilaku Ibu Hamil dalam Pemeriksaan HIV di Wilayah Kerja Puskesmas Halmahera Kota Semarang*. <http://ejournal-s1.undip.ac.id/index.php/jkm>. Diakses tanggal 2 Agustus 2018.
10. Kridawati A, JoceDesak Made Sriwitati, Windyaningsih Cicilia. (2015). Determinan yang berhubungan dengan pemanfaatan pelayanan tes HIV pada ibu hamil di BPM wilayah kerja Puskesmas II Denpasar. *Jurnal Bidang Ilmu Kesehatan* Vol. 6, No. 2, Desember 2015. Diakses tanggal 14 November 2019.
11. Wawan & Dewi. (2010). *Teori Pengukuran Pengetahuan, Sikap dan Perilaku Manusia*. Yogyakarta : Nuha Medika.
12. Abhinaja, I dan Astuti, P. (2013). Pengetahuan, Sikap Ibu Rumah Tangga Mengenai Infeksi Menular Seksual Termasuk HIV/AIDS Serta Perilaku Pencegahannya di Kelurahan Sanur, Kecamatan Denpasar Selatan, Kota Denpasar Tahun 2013. *Community Health*. Vol. 1. No. 3. Juli. 2013.
13. Shaluhyah Z, Antono Suryoputro, Any Setyawati. (2017). The Needs of Information Services on Reproductive Health, STIs and HIV in Middle Adolescence. *Kemas Jurnal Kesehatan Masyarakat* Vol 12, No 2 (2017). <https://journal.unnes.ac.id/nju/index.php/kemas/article/view/5366>. Diakses tanggal 31 Juli 2018.
14. Slameto. (2010). *Belajar dan Faktor – Faktor yang Mempengaruhinya*. Jakarta: Rineka Cipta.
15. Syafitri, Lili. (2012). *Faktor-Faktor Yang Berhubungan Dengan Pemanfaatan Pelayanan PITC Bagi Tahanan Dan Warga Binaan Pemasyarakatan (WBP) Beresiko Tinggi HIV/AIDS Di Poliklinik Rutan Klas I Cipinang Tahun 2012*. Depok : Universitas Indonesia, diakses tanggal 31 Juli 2018.
16. Larasaty, ND dan Purwanti, IA. (2016). *Kajian Niat Ibu Hamil Dalam Melakukan*

-
- Voluntary Counseling and Testing (VCT) di Puskesmas Kota Semarang.*
<http://ejournal.unimus.ac.id/index.php>. Diakses tanggal 4 Agustus 2018.
17. Ejigu, Y dkk. (2016). *HIV Testing During Pregnancy For Prevention of Mother-to-Child Transmission of HIV in Ethiopia.*
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6084970/>. Diakses tanggal 24 April 2019.
18. Larsson, E dkk. (2012). *Missed Opportunities: Barriers to HIV Testing during Pregnancy from a Population Based Cohort Study in Rural Uganda.*
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0037590>. Diakses tanggal 24 April 2019.