

Effectiveness of Frequency of Pregnancy Exercise on the Anxiety Levels of Pregnant Women in the Second and Third Trimesters

Yuliati¹, Nur Siti Yaroh², Bunga Romadhona Haque³

¹Nursing, STIKes Abdi Nusantara Jakarta, Indonesia

^{2,3}Midwifery, STIKes Abdi Nusantara Jakarta, Indonesia

Article Info	Abstract
<i>Article History:</i> Received Junl 7, 2024 Revised Junl 30, 2024 Accepted Jul 10, 2024	Background Based on the results of initial observations made by the author on pregnant women who underwent pregnancy checks at the Cinangka Community Health Center, there were 8 out of 20 pregnant women who had done pregnancy exercises, feeling that their physical and mental condition was more relaxed compared to not doing pregnancy exercises. The aim of this research is to determine the effectiveness of the frequency of pregnancy exercise on the anxiety levels of pregnant women in the second and third trimesters at the Cinangka Health Center UPT, Serang Regency in 2022.
<i>Keywords:</i> Pregnancy, excercise, anxiety level, pregnant women	Purpose of Writing: The method in this research uses Quasy Experiment with a pre and post test research design. The sample in this study was all pregnant women in the second and third trimesters who had their pregnancies checked at the Cinangka Community Health Center during the ultrasound schedule on June 29 2022, namely 15 people using a purposive sampling technique. Data analysis used the Paired samples T-Test..Research Results: Of the 81 respondents, none had an underweight BMI. And . The research results showed that the average anxiety level of pregnant women in the second and third trimesters before pregnancy exercise was 1.8 and after pregnancy exercise was 1.2. There is an influence of pregnancy exercise on the anxiety level of pregnant women as seen from the post-test sig value of 1.01 > 0.05. Suggestion So it is hoped that this research will be able to provide information and education in reducing the anxiety level of pregnant women by using the pregnancy exercise method.
<i>Corresponding Author:</i> Yuliati	This is an open access article under the CC BY-SA license.
STIKes Abdi Nusantara, Jakarta, Indonesia Email:yuliati@gmail.com	

1. Introduction

Pregnancy is a very amazing time in a woman's life. This is also a tense time when a mysterious new life grows and develops in the womb (Dewi & Sunarsih, 2012).

Pregnancy is defined as fertilization or union by spermatozoa and ovum and followed by nidation or implantation (Ludmila, 2018).

2. Pregnancy can also produce physiological and psychological changes in a woman (Gebreweld A, 2018). These psychological and emotional changes seem to be related to the biological changes experienced by the mother during pregnancy. The emotions of pregnant women tend to be unstable, so that the reactions shown to pregnancy can be excessive and change easily (Rukiah, et al., 2013). Psychological changes in pregnant women are divided into three periods, the first in the first trimester, usually a mother easily experiences depression, feelings of disappointment, anxiety, rejection of her pregnancy, and feelings of sadness or changes experienced during pregnancy, while psychological changes in the trimester period secondly, the mother's psychological state appears calmer and begins to adapt to the changes that accompany her during pregnancy, and finally, the psychological changes in the third trimester, the mother's psychological changes are not more complex and increase again compared to the psychological state in the previous trimester, this is because the mother increasingly aware of the presence of a fetus in her womb which is getting bigger and bigger over time so that the amount of anxiety begins to increase, the mother feels increasingly anxious about the condition of the baby and even the condition of the mother herself (Rinata & Andayani, 2018).

Based on data from the World Health Organization (WHO), the maternal mortality rate (MMR) is 500,000 people per year. In Indonesia, the MMR is 305 per 100,000 population. And the IMR is 24 per 1000 live births. This is not in line with the 5th Global MDG (Millennium Development Goal) target, namely reducing the maternal mortality rate (MMR) to 102 per 100,000 live births by 2016 (Ministry of Health, 2019). The large number of deaths of pregnant women causes anxiety, anxiety and psychological disorders in mothers experiencing pregnancy, whether they are pregnant for the first time (Primigravida) or those who have already been pregnant once or also called Multigravida (Hasim & Sulastri, 2018).

Anxiety that occurs in pregnant women can also be caused by age. Individuals who are younger or older can influence who experiences anxiety (Prasetyo, D, 2015). In the 20-35 year period, women's physical condition is in prime condition. The uterus is able to provide protection, mentally ready to care for and look after the pregnancy carefully. Meanwhile, maternal age less than 20 years can cause problems because the physical condition is not ready, the uterine cells are still immature, this can cause the threat of abortion, prematurity, and even maternal death (Nila Marwiyah, 2018). This is in line with research conducted by Shodiqoh and Fahriani (2014) which stated that third trimester pregnant women with an age range of <20 years experienced moderate levels of anxiety in 3 people (50%) and 3 people experienced severe levels of anxiety (50%).

And low education also causes a person to easily experience anxiety. This is due to a lack of information about childbirth either from those closest to you, family, health workers, or from various media such as magazines and others. Married couples who are highly educated and attend classes for pregnant women and read lots of books about birth are calmer and more prepared for the birthing process (Bobak, 2012). In accordance with research by Asri Wanda (2014), the

majority of respondents at the PT education level with a mild level of anxiety were 3 respondents, at the high school education level with moderate and severe anxiety levels, namely 8 respondents, and at the junior high school education level with panic anxiety levels, namely 7 respondents.

Yuliana's research (2008), regarding anxiety in third trimester pregnant women, where the anxiety experienced was divided into categories of pregnancy type, gravidity, age, and level of education. Of the 51 respondents studied, it was found that 49% did not experience anxiety (normal), 47.1% had mild anxiety, 3.9% had moderate anxiety, and none experienced severe anxiety.

There are several ways to relieve anxiety, for example by providing information or knowledge to pregnant women through consultations with midwives or seeking information through print and audiovisual media, namely by watching videos about the birth process (Fazdria & Harahap, 2016). Meanwhile, according to Mardjan (2016), there are four efforts to relieve anxiety, namely, husband's support, counseling, emotional freedom techniques, and pregnancy exercises. Pregnancy exercise is exercise that has many benefits and is specifically intended for pregnant women. Apart from that, pregnancy exercise is also a method that is quite effective and is widely applied in government and private health services. When taking part in pregnancy exercises, it is best to be guided by a trained instructor so that mothers can easily follow them. This pregnancy exercise activity can be followed after the pregnancy is more than three months until just before delivery (Mardjan, 2016).

Apart from the purpose of pregnancy exercise, pregnancy exercise also has benefits. The benefits of pregnancy exercise according to Mardjan (2016), namely, it can reduce stress and anxiety during pregnancy or in the postpartum period, increase fetal and placental growth in the first and second trimesters, reduce the incidence of complications related to pregnancy such as pre-eclampsia and gestational diabetes, facilitate the process. childbirth, reduces back pain during the third trimester. Apart from that, the benefits of pregnancy exercise can also reduce stress and anxiety, reduce the occurrence of urinary incontinence, and reduce the growth and well-being of the baby (Irianti, 2015).

Pregnancy exercise can reduce anxiety, this is in accordance with research conducted by Suryani, Mose, Tarawan, Husin and Prasetyo (2015) that doing pregnancy exercise regularly, namely > 8 times in 6 weeks, has an effect on reducing anxiety in pregnant women.

Pregnancy exercise done with a certain frequency can also reduce anxiety levels in pregnant women. This is in accordance with previous research conducted by (Marwiyah & Sari, 2018) that regular pregnancy exercise, namely more than 8 times in 6 weeks, has an effect in reducing anxiety in pregnant women.

Cinangka District is a strategic area because it is a coastal area that connects Serang and Pandeglang districts. The large population in the Cinangka area requires good health facilities for the community, including pregnant women. Cinangka Community Health Center is the only community health facility in the Cinangka area which is managed by the government. This has resulted in an influx of pregnant women wanting to check themselves and their pregnancies at the Cinangka Community Health Center. Due to the lack of health facilities and

education from the Health Service and the government, many pregnant women lack early pregnancy education, which results in frequent anxiety disorders in pregnant women. This also has the impact of increasing cases of AKI and IMR. Based on the results of initial observations made by the author on several pregnant women who underwent pregnancy checks at the Cinangka Community Health Center in December 2021, there were 20 pregnant women who underwent examinations. Of the 20 pregnant women, there were 8 pregnant women who had done pregnancy exercises. These pregnant women have a physical condition that is much more relaxed and relaxed than pregnant women who do not exercise. This is based on observations and asking questions to several pregnant women when carrying out examinations. In accordance with a quote from a short interview with a multigravida pregnant mother who explained that pregnancy exercise had an impact on her physical condition which was better than in previous pregnancies. "Yes, when I had my first and second child, I didn't take part in pregnancy exercise because there weren't any around here, if I wanted to take part in exercise it was far from my house. "Now, during my third pregnancy, I took part in pregnancy exercises at the Community Health Center here. The result was that my body was much more relaxed, it was easier to move, the stiffness in my body and back also decreased somewhat (Anggaraeni, 2021)."

Based on the above background, it is necessary to conduct more in-depth research, so the author took up a thesis with the title "Effectiveness of Pregnancy Exercise Frequency on the Anxiety Levels of Pregnant Women in the Second and Third Trimester at the Cinangka Health Center UPT, Serang Regency".

Methods

The method in this research uses a quasi-experiment with a pre and post test research design. in pregnant women who do pregnancy exercise.

The population in this study were all second and third trimester pregnant women who had their pregnancies checked at the Cinangka Community Health Center. The sample in this study was all pregnant women in the second and third trimesters who had their pregnancies checked at the Cinangka Community Health Center during the ultrasound schedule on June 29 2022, namely 15 people. Then accompanied by inclusion criteria, namely pregnant women who are willing to be respondents, pregnant women who are in good health, pregnant women who live in the Cinangka sub-district area. Meanwhile, the exclusion criteria are pregnant women who are experiencing mental disorders and pathological pregnant women. This research uses verbal and numerical scales to determine the level of anxiety in pregnant women. The researcher filled out the observation sheet twice, namely before and after carrying out pregnancy exercises. Then the researcher used a data collection method by interviewing respondents after getting consent from the respondent to become a research respondent. After getting the results from the respondents in filling in the observation sheet, the researcher carried out data processing and data analysis.

Data on the frequency and average level of anxiety before and after pregnancy exercise were processed using univariate analysis, while to test whether the pre-test and post-test data were normally distributed or not using the Normality Test.

If the data has a normal distribution, p value > 0.05 , the researcher uses the Paired T-Test to carry out bivariate analysis.

Results

Table 1 Frequency Distribution of Respondents by Age, Pregnant Women at Cinangka District Health Center

Kategori	Frekuensi (F)	Presentase (%)
Kurang dari 20 tahun	1	6.7
20-35 tahun	12	80
36 tahun ke atas	2	13.3
Total	15	100

Research results based on Table 1 show that the majority of respondents were aged 20 - 35 years, namely 12 out of 15 people (80%)

Table 2 Frequency distribution of respondents based on education of pregnant women at the Cinangka District Health Center

Tingkat Pendidikan	Frekuensi (F)	Presentase (%)
SD, SMP	7	46.7
SMA	7	46.7
D3, Sarjana	1	6.7
Total	15	100.0

Research results based on Table 2 show that the number of respondents with elementary, middle school and high school education is the same, namely 7 out of 15 people (46.7%)

Table 3 Frequency distribution of respondents based on the gravity of pregnant women at the Cinangka District Health Center

Kehamilan	Frekuensi (F)	Presentase (%)
Primigravida	4	26.7
Multigravida	11	73.3
Total	15	100.0

Research results based on Table 3 show that the majority of respondents are multigravida, namely 11 out of 15 people (73.3%)

Table 4 Frequency distribution of respondents based on pre-test results for pregnant women at the Cinangka District Health Center

Tingkat Kecemasan	Frekuensi (F)	Presentase (%)
Tidak ada Kecemasan	6	40.0
Kecemasan Ringan	6	40.0
Kecemasan Sedang	3	20.0
Total	15	100.0

Research results based on table 4 above show pre-test results in accordance with HARS (Hamilton Anxiety Rating Scale) that of the 15 respondents from pregnant women, 6 respondents or 40% did not experience anxiety, 6 respondents or 40%

experienced mild anxiety and 3 other respondents or as many as 20% experienced moderate anxiety.

Table 5 Frequency distribution of respondents based on post-test results for pregnant women at the Cinangka District Health Center

Tingkat Kecemasan	Frequency	Percent (%)
Tidak ada Kecemasan	12	80.0
Kecemasan Ringan	3	20.0
Total	15	100.0

From the post-test results, it was found that out of 15 respondents, 12 pregnant women or 80% had no anxiety and 3 pregnant women or 20% had mild anxiety. This concludes that of the 15 respondents the majority of pregnant women do not have any.

Tabel 6 Perbandingan Nilai Distribusi Frekuensi Pretest dan Post-test

Tingkat kecemasan ibu hamil	Pretest	Posttest
Tidak ada Kecemasan		
Kecemasan Ringan		
Kecemasan Sedang		
Total	)	)

It can be seen in table 6 above that there is a significant difference in results seen from the moderate level of anxiety, from when the pretest had a percentage value of 20% or 3 people to no pregnant women whose anxiety level was in the medium category. Meanwhile, the score for mild anxiety, when the pretest presentation was 40% or 6 people, became 20% or only 3 people.

Discussion

Identified description of respondents' characteristics based on age, gravity and education at the Cinangka Community Health Center, Serang Regency.

Based on the results of research conducted on pregnant women in the Cinangka Community Health Center area, Serang district, the results showed that the characteristics of respondents based on age from 15 respondents were that the average number of pregnant women was aged 20 - 35 years, namely 12 out of 15 respondents (80%). These results indicate that the mental age of a mother is quite stable and represents an ideal pregnancy. This is because when pregnant women are 20 years old and under, the reproductive organs in women are still immature and imperfect, which can result in obstetric complications which can increase maternal and perinatal mortality rates. Meanwhile, pregnant women aged 35 years and over will be at higher risk of experiencing obstetric complications such as health problems, namely hypertension, diabetes, premature birth, stillbirth. Because at the age of 35 years and over women's fertility begins to decline. These results are in accordance with the theory expressed by Badudu (2012), women aged 20-35 years are physically ready to get pregnant because their reproductive organs are fully formed, compared to women aged <20 years, their reproductive organs are still in the development stage, so the level of anxiety is greater. , while some women aged >35 years are classified as having a high risk of congenital abnormalities and birth complications.

Meanwhile, for the gravidity of the 15 respondents, there were primigravidas totaling 4 out of 15 respondents (26.7%) and multigravidas 11 out of 15 respondents (73.3%). This indicates that pregnant women at the Cinangka Community Health Center are pregnant women who have already been pregnant and given birth and are not their first child. These results indicate that pregnant women who have had experience in pregnancy and giving birth are calmer in facing labor and during pregnancy. The results of this research are in line with research conducted by Bobak (2012) that mothers who are pregnant or giving birth (multigravida) have experience in dealing with childbirth, so they will understand better and will be calmer.

Furthermore, for the results of pregnant women respondents who were identified based on education, it was found that of the 15 respondents there were pregnant women who had the most educational background, namely in high school with 7 respondents, elementary school (SD) and junior high school (SMP) totaling 7. Apart from that, there was 1 respondent for pregnant women with Diploma and Bachelor's degrees. This indicates that the educational level of pregnant women is still relatively low. These results identify that the education that pregnant women have taken has an impact on pregnancy and childbirth because of the low level of education that pregnant women have taken. These results are in accordance with research conducted by Bobak (2012) which explains that education influences the development of self-potential in the intelligence of pregnant women. Education is one aspect that plays a role in improving intelligence and thinking patterns, good enough knowledge has an impact on the knowledge abilities possessed and adequate thinking patterns. This low level of education occurs due to the economic conditions experienced by pregnant women who are still classified as lower middle class. This results in the level of education obtained by pregnant women at school being relatively low due to poor economic factors.

2. Frequency distribution of respondents based on pre-test and post-test results for pregnant women in the second and third trimesters at the Cinangka Community Health Center

Based on the results of the research above, the results of the calculations. From the results of the table above, it was found that the value before the pregnancy exercise treatment or pre-test was carried out, the percentage of 20% or 3 people's anxiety level was in the medium category. Meanwhile, the value of no anxiety was 40% or as many as 6 pregnant women.

In the post-test results, the anxiety value was reduced from those who previously had anxiety, but now they are at "mild anxiety" which has a value of 20% or only 3 people and "don't have anxiety" for 12 pregnant women or 80%. This indicates that the pregnancy exercise that has been carried out has an influence on pregnant women regarding their level of anxiety. This can be seen from the majority of pregnant women being in the "no anxiety" category after the pregnancy exercise treatment.

These results are in line with the results of previous research conducted by (Marwiyah & Sari, 2018) that regular pregnancy exercise, namely more than 8 times in 6 weeks, has an effect in reducing anxiety in pregnant women. Pregnancy exercise can reduce anxiety levels in pregnant women. Cooling movements are

useful for dealing with pressure or tension felt during pregnancy. Physical exercise can reduce anxiety.

And in accordance with research conducted by Nurlaelah in 2020, of the 73 respondents who had taken part in pregnancy exercise or post-test, regularly 3 times a week, that is, 46 people (63%) experienced smooth labor and 27 people (37%) did not take part in pregnancy exercise. or not routinely < 3 times a week participating in pregnancy exercises experiencing uneventful labor.

3. Effectiveness of Pregnancy Exercises on the Anxiety Levels of Pregnant Women in the Second and Third Trimester at the Cinangka Health Center UPT, Serang Regency

Based on the results of the research that has been carried out, the results of the calculation of significant values are to find out to what extent anxiety in pregnant women has and whether there is no influence on the effectiveness of pregnancy exercises carried out as treatment at the Cinangka Community Health Center. From the results of calculating the value data before the pregnancy exercise treatment was carried out and after the pregnancy exercise treatment was carried out, the mean value data for the variables above was 0.400, which shows a positive value. This indicates that after the pregnancy exercise treatment was carried out 3 times a week, there was a decrease in the level of anxiety for pregnant women, with an average decrease in anxiety of 0.400. The correlation value between the pre-test and post-test variables in this research is 0.875, which means there is a strong relationship and has a positive impact. For the t test results in the results above, the calculated t value is 3.055 where the t table value is 0.69242. These results show that $t_{count} > t_{table}$, namely $3.055 > 0.69242$, which indicates that the results are significant.

The results above are in line with research conducted by Nila Marwiyah (2018) which showed that the average difference between the anxiety levels of pregnant women from 14 pregnant women before and after carrying out pregnancy exercise was obtained, the average value was 7.429 with a standard deviation of 3.180. The results of statistical tests using the dependent t test showed a p value of 0.000, meaning $p < \alpha$ (0.05), so it can be concluded that H_0 is rejected. This proves that there is a significant influence between providing pregnancy exercise on the anxiety level of mothers in the 2nd and 3rd trimester in Margaluyu Village, Kasemen Health Center Working Area. Regular pregnancy exercise can reduce maternal discomfort and complaints during childbirth, such as back pain, nausea, leg spasms, constipation, shortness of breath and anxiety (Kusmiyati, et al, 2017).

4. Correlation of Anxiety with Age, Education and Gravida Variables in Pregnant Women in the Second and Third Trimester at the Cinangka Health Center, Serang Regency

From the results of the data calculations that have been carried out and explained in the research results, it was found that the significance value of the influence of pregnancy exercise on the predisposing factor of age anxiety is the calculated sig value of 0.003, where this value is < the standard sig value, namely 0.05. This indicates that H_a is rejected and H_0 is accepted, which means that the predisposing factor, the age variable, has no influence on the anxiety of pregnant women. These

results explain that pregnancy exercise that has been carried out as treatment does not have a significant influence on the anxiety factor, namely age.

The results of this study are certainly not in line with the results of research conducted by Shodiqoh and Fahriani (2014) which stated that third trimester pregnant women with an age range of <20 years experienced moderate levels of anxiety in 3 people (50%) and 3 people (50%) experienced severe levels of anxiety. (%). In this study, there was 1 pregnant woman aged <20 years. (Agustini, 2020).

Prasetyo (2015) also agrees with research conducted by Agustini (2020) which explains that age is one of the factors that influences anxiety. Individuals who are younger or older can have an influence on who experiences anxiety. This happens because age can have an impact on feelings of anxiety during pregnancy and childbirth. Mothers under 20 years of age are still mentally prepared so they are still not ready to face birth. Even though mothers over 35 years of age are physically at greater risk of complications, they are mentally better prepared. From the results of calculations that have been carried out, pregnancy exercise which has been carried out as a treatment to reduce the level of anxiety, it turns out that from the results of 15 respondents of pregnant women, the value of predisposing factors for anxiety seen from the level of education obtained by pregnant women has a sig value of 0.34, this result is > than The sig value is 0.05 which indicates that H_a is accepted and H_o is rejected. From these results it can be concluded that the level of education has a significant influence on the anxiety of pregnant women. These results are in line with research conducted by Agustini (2020) which explains that the higher the level of education, the higher the knowledge and mindset about the benefits of pregnancy exercise which can have an influence on sleep quality and anxiety. Education is one aspect that plays a role in improving intelligence and thinking patterns, good enough knowledge has an impact on the knowledge abilities possessed and adequate thinking patterns. Secondary education (SMA/SMK) is education provided with sufficient thinking skills when compared to basic education (SD, SMP) (Agustini, 2020).

In the results of research on the predisposing factors for anxiety, Gravida or Parity on the level of anxiety of pregnant women at the Cinangka Community Health Center, the sig for the predisposing factor variable for anxiety of pregnant women as seen from the Gravida of Pregnant Women is 0.03, this result is < than the sig value, which is 0.05, which indicates that H_a is rejected and H_o accepted. From these results it can be concluded that Gravida in pregnant women does not have a significant influence on anxiety in pregnant women.

These results are not in line with research conducted by Musbikin (2007) which explains that gravity or parity can also influence anxiety. Primigravidas feel anxious because they have no idea about what will happen during childbirth and hear scary stories from friends or relatives about experiences during childbirth such as the mother or baby dying and this can influence the mother's thoughts about the frightening process of childbirth. In multigravidas, feelings of anxiety arise, usually caused by the image of the pain they suffered during childbirth.

Conclusion

From the results of research conducted by researchers, namely the influence of pregnancy exercise on the anxiety level of pregnant women in the second and third

trimesters at the Cinangka Community Health Center, Serang Regency, it can be concluded as follows:

The average value of anxiety level before doing pregnancy exercises at the Cinangkan Health Center UPT is 1.80 where the majority of pregnant women's anxiety level is at the "mild anxiety" level as much as 40% or as many as 6 people while for the "moderate anxiety" category it is as much as 20% or as many as 3 pregnant women.

The average value of anxiety level after doing pregnancy exercises at the UPT Puskesmas Cinangka is 1.20 where the majority of pregnant women's anxiety level is at the "no anxiety" level as much as 80% or as many as 12 people, while for the "mild anxiety" category as much as 20% or as many as 3 pregnant women.

The anxiety factor in pregnant women as seen from "age" has a sig value of 0.003 <0.05 where there is no influence on the effectiveness of pregnancy exercise that has been carried out on the anxiety factor "age", while for the anxiety factor "level of education" 0.34 > 0.05 where exercise Pregnancy has a positive influence on reducing anxiety levels in the education level category which has a positive influence, namely 0.34.

References

- Agustini, F. (2020). Gambaran Persiapan Persalinan Pada Ibu Hamil Desa Cikunir Kecamatan Singaparna Tahun 2020. *Jurnal Bidkesmas Respati*.
- Anggaraeni, E. (2021, 12 13). Senam Hamil. (N. Latipatunnisa, Interviewer).
- Bobak, L. J. (2012). *Buku Ajar Keperawatan Maternitas*. Jakarta: EGC.
- Dewi, V. N., & Sunarsih, T. (2012). *Asuhan Kebidanan pada Ibu Nifas*. Jakarta: Salemba.
- Evayanti, Y. (2015). Hubungan Pengetahuan Ibu Dan Dukungan Suami Pada Ibu Hamil Terhadap Keteraturan Kunjungan Antenatal Care (ANC) DI Puskesmas Wates Lampung Tengah Tahun 2014. *Jurnal Kebidanan*, 81-90.
- Fazdria, & Harahap, M. S. (2016). Gambaran Tingkat Kecemasan Pada Ibu Hamil Dalam Menghadapi Persalinan Di Desa Tualang Teungoh Kecamatan Langsa Kota Kabupaten Langsa Tahun 2014. *Jurnal Kedokteran Syiah Kuala*, 6-13.
- Gebreweld A, T. A. (2018). *Prevalence and factors associated with anemia among pregnant women attending antenatal clinic at St. Paul's Hospital Millennium Medical College*,. Addis Ababa: Adv Hematol.
- Hasim, R. P., & Sulastri. (2018). *Gambaran Kecemasan Ibu Hamil*. Surakarta: Universitas Muhammadiyah Surakarta.
- Intan, K., & Andhyantoro. (2014). *Kesehatan Reproduksi*. Jakarta: Salemba.
- Irianti. (2015). *Asuhan Kehamilan Berbasis Bukti*. Jakarta: Sagung Seto.
- Kemenkes. (2019). *Infodatin (Pusat Dta dan Informasi Kementrian Kesehatan RI)*. Jakarta: Kementrian Kesehatan Republik Indonesia.
- Ludmila, I. A. (2018). *Asuhan Kebidanan Continuity Of Care Pada Ny M Masa Hamil Sampai Dengan Keluarga Berencana Di BPM Muryati Sst.Keb Sukorejo Ponorogo*. Sukoharjo: Universitas Muhammadiyah Ponorogo.
- Mardjan. (2016). *Pengaruh Kecemasan Pada Kehamilan Primipara Remaja*. Pontianak: Abrori Institute.
- Marwiyah, N., & Sari, P. A. (2018). Efektifitas Senam Hamil Terhadap Tingkat Kecemasan Ibu Hamil Trimester 2 dan 3 Di Desa Margaluyu Wilayah Kerja Puskesmas Kasemen. *Jurnal Kesehatan*.
- Musbikin, I. (2007). *Misteri Shalat Berjama"ah Bagi Kesehatan Fisik dan Psikis*. Yogyakarta: Mitra Pustaka.

- N, S., & P, N. (2017). Asuhan Kebidanan. Komprehensif pada. Ny.Y. Jurnal Komunikasi Kesehatan. *Jurnal Komunikasi Kesehatan*.
- Prasetyo. (2015). *Pendidikan Anak Berkebutuhan Khusus*. Yogyakarta: Pustaka.
- Rahmawati, N. A., Rosyidah, T., & Marharani, A. (2016). Hubungan Pelaksanaan Senam Hamil Dengan Ketidaknyamanan Ibu Hamil Trimester III Di Bidan Praktek Mandiri Supadmi, Kunden Bulu, Sukoharjo. *Involusi Jurnal Ilmu Kebidanan*.
- Rinata, E., & Andayani, G. A. (2018). Karakteristik Ibu (Usia, Paritas, Pendidikan) dan Dukungan Keluarga dengan Kecemasan Ibu Hamil Trimester III. *Jurnal Ilmiah Ilmu-Ilmu Kesehatan*, 14-20.
- Rukiah, A. Y., Yulianti, L., Maemunah, & Susilawati, L. (2013). *Asuhan Kebidanan 4 Patologi Kebidanan*. Jakarta Timur: CV Trans Info Media.
- Shodiqoh, E. R., & Fahriani, S. (2014). Perbedaan Tingkat Kecemasan Dalam Menghadapi Persalinan Antara Primigravida Dan Multigravida. Surabaya: Fakultas Kesehatan Masyarakat Universitas Airlangga. *Jurnal Berkala Epidemiologi*.
- Yuliana. (2017). *Konsep Dasar Pengetahuan*. Surakarta: Cipta Graha