



PRECONCEPTION EDUCATION TO INCREASE KNOWLEDGE AND ATTITUDE REGARDING HEALTHY PREGNANCY PLANNING IN WOMEN OF CHILDBEARING AGE

Titi Legiati PS^{1}, Diyan Indrayan², Yulia Nurniawati³*

¹Poltekkes Kemenkes Bandung

²Poltekkes Kemenkes Bandung

³Poltekkes Kemenkes Bandung

*Email: titilegiati@staff.poltekkesbandung.ac.id

Abstract Background: Behaviors and risk factors that occur in the preconception period can increase the likelihood of maternal and child morbidity and mortality. More evidences suggests that preconception care provided before pregnancy can improve the health and well-being of women and couples and can improve outcomes for pregnancy and child health. Many women in developing countries do not have sufficient information and access to preconception care. Women's lack of access to preconception care is partly due to a lack of knowledge about preconception care. Preconception education is one way to improve knowledge to prepare for a healthy pregnancy.

Objectives: The goal of the community partnership program is to improve knowledge and attitudes about healthy pregnancy planning in women of childbearing age.

Method: The community partnership program was implemented in Kelurahan Cipedes, Kecamatan Sukajadi, at working area of Puskesmas Sukajadi Kota Bandung from January to December 2024. Partners are women of childbearing age in the healthy reproductive age at kelurahan Cipedes as many as 19 people. The community partnership program was implemented in seven activities. Women of childbearing age received health education about pregnancy planning (preconception) and measured knowledge and attitudes before and after health education. Measurement of knowledge and attitudes using a questionnaire.

Conclusion: The results of the community partnership program showed an increase in knowledge and attitudes of women of childbearing age about pregnancy planning after being given preconception education and increasing awareness of women of childbearing age with the desire to screen for anemia, HIV and syphilis as a form of pregnancy preparation behavior.

Keywords: education, preconception, knowledge, attitude, healthy pregnancy planning, woman fertilizing age.

BACKGROUND

Maternal and child health remains a global problem. Behaviors and risk factors that occur in the preconception period can increase the likelihood of maternal and child morbidity and mortality. According to WHO globally as many as 4 out of 10 women reported that their pregnancies were unplanned, perinatal mortality is 50% higher in babies born to teenage mothers, as many as 10% of pregnant women with untreated gonococcus infection cause perinatal death, malnutrition and iron deficiency anemia account for 20% of maternal deaths, about half of girls at 15-19 years old are underweight and anemia, most risk factors for tobacco use begin at 11-15 years old and 75% of mental disorders have occurred before 24 years old(1)

The health situation and challenges of mothers and neonates in Indonesia are that as many as 3 out of 10 (28%) pregnant women experience anemia, and 2 out of 10 (17%) have the risk of Chronic Energy Deficiency (CED). This condition can cause low birth weight babies and premature birth, which is the highest cause of death or contributes to 63.5% of neonatal deaths. (2)Anemia will have an impact on complications for mothers and babies such as miscarriage, bleeding, fetal growth restriction, low birth weight, premature, and even risk of maternal and infant death.(3) Babies with low birth weight and Intrauterine Growth Restriction (IUGR) will causes slower growth and development and it caused stunting. These problems can contribute to morbidity and death of mother and child.(4) Hypertension and diabetes in Indonesia found that 30.8% of the population at 18 years old and over were diagnosed with hypertension based on blood pressure measurements. Meanwhile, in diabetes cases, 11.7% of the population is known to have sugar levels above normal.

The efforts to reduce maternal and child morbidity and mortality require sustainable care starting from pregnancy, childbirth, infants, children, adolescents and adults. More evidence shows that preconception care provided before pregnancy can improve the health and well-being of women and partners and can improve pregnancy and child health outcomes.(5) Preconception care provides a variety of effective interventions, especially for the health of women of reproductive age and partners, before or between pregnancies, which promotes safe labor and the birth of a healthy baby (1)The goal of preconception care is ensuring that the woman and her partner have optimal physical and emotional health status at the onset of pregnancy(6,7) Many women in developing countries do not have enough information and access to care preconception.(8) Women's attitudes and awareness have a role in the success of preconception care. There is an opinion that pregnancy is a natural so there is no need to prepare for it. Research by Tehsome et al showed that the majority of women come to health facilities when they knew that they were pregnant. Women also do not try to collect information about this because they do not have awareness(9) The results of Wiwin's research showed that knowledge and attitudes regarding preconception care for women of childbearing age were still in the moderate category (10)

One of the effort to maintain and improve health is through promotive effort. One way to carry out promotional efforts is through health education. Health education ensures that people are aware and know how to maintain health, avoid and prevent things that are detrimental to health so that public awareness continues until they achieve healthy behavior and practice it in everyday life (healthy lifestyle) (11) Preconception education is one effort to prepare for a healthy pregnancy.

Women of childbearing age at Kelurahan Cipedes were partners in the community partnership program. Kelurahan Cipedes has a fairly dense population and a higher number of women at 15-49 years old. Every woman of childbearing age has the possibility of experiencing pregnancy. Pregnancy is a condition that must be prepared both physically and psychologically so that the mother and baby are healthy. Preconception care is not yet a mandatory program at Puskesmas Sukajadi, so

preconception services including education for planning a healthy pregnancy do not yet exist at Puskesmas Sukajadi, which is a referral community health center for people living at Kelurahan Cipedes. Almost all women come to Puskesmas Sukajadi already pregnant

METHODS

The community partnership program was implemented at Kelurahan Cipedes Kecamatan Sukajadi, at working area Puskesmas Sukajadi Kota Bandung. from January to December 2024. The partners were 19 women of childbearing age within the healthy reproductive age. The community partnership program was implemented in seven activities. Women of childbearing age received health education regarding planning or preparation before pregnancy (preconception) and their knowledge and attitudes are measured before and after the health education. Measuring knowledge and attitudes used a questionnaire

RESULT AND DISCUSSION

The community partnership program was implemented at Kelurahan Cipedes with 19 women of childbearing age as partner.. The target of this activity was increasing the knowledge and attitudes of women of childbearing age regarding healthy pregnancy planning as measured by a knowledge and attitude questionnaire before and after being given health education. The activities were carried out in seven times. Health education is carried out using lecture and discussion methods using the booklet guide "Persiapan Kehamilan", which is the outcome of this program and booklet is given to participants . The first activity starts with proposal preparation, reviewing the proposal, revising the proposal and licensing. Next, the second activity was instrument preparation. The third activity was socialization program to midwives and cadres. The results of the socialization that were cadres registering women of childbearing age who are planning to get pregnant and who will get married, Puskesmas Sukajadi will provide test for Haemoglobin, HIV and syphilis. The fourth activity was to collect data on women of childbearing age who were planning to get pregnant, as many as 19 participants. The fifth to seventh activities were the implementation of health education about preparing or planning a healthy pregnancy which includes pre-tests, providing material about the definition and benefits of pregnancy preparation/preconception, physical and psychological preparation, nutrition and a healthy lifestyle, immunizations and diseases to be wary of, examinations before pregnancy/preconception screening, material review and post test.

The following are the results of the analysis of knowledge and attitude before and after health education:

1) Characteristic Participants

Figure 1. Characteristic Partisipans

Variabel	Jumlah	%
Usia		
<20	0	0
20-35	15	79
>35	4	21
Total	19	100
Pendidikan Terakhir		
Elementary school	1	5
Junior high school	3	16
Senior High School	11	58
College	4	21
Total	19	100
Pekerjaan		
Self-employed	3	16
Employee	1	5
Housewife	15	76
Total	19	100
Status Menikah		
Not married yet	2	11
Married	17	89
Total	19	100
Jumlah Anak		
Don't have children yet	6	32
Have 1 child	10	52
Have more than 1 child	3	16
Total	19	100
Jenis Kontrasepsi		
Not using contraception	3	16
Oral contraception	6	32
Injection contraception	9	47
IUD	1	5
Total	19	100

Based on figure 1 above, it showed that the most of participants (79%) are in the 20-35 years old, most of participants (58%) have a high school education, the most of participants (76%) are housewives, the most of participants (89%) are married, most of of participants (52%) have 1 child, most of participants (47%) use injection contraception

2) The Average Knowledge Before and After Health Education

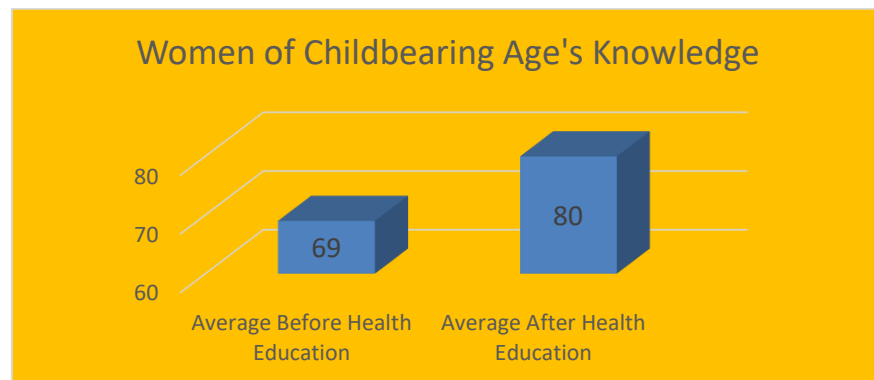


Figure 2. The Average Knowledge Before and After Health education

Based on the figure 2 above, it showed the average of knowledge before health education was 69 poin and the average after health education was 80 poin, so the increase average of knowledge after health education was 15.9%

3) The Average Attitude Before and After Health education

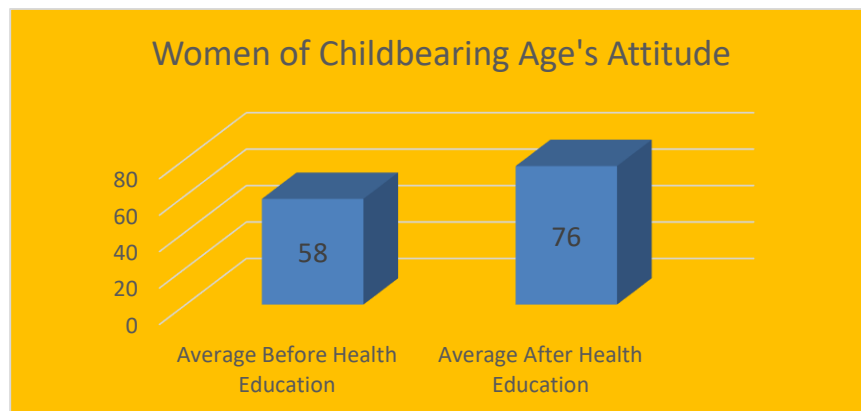


Figure 3. The Average Attitude Before and After Health education

Based on the figure 3 above, it showed the average attitude before health education was 58 poin and the average after health education is 76 poin, so the increaseaverage of attitude after health education is 31%

4) Hemoglobin Test Results

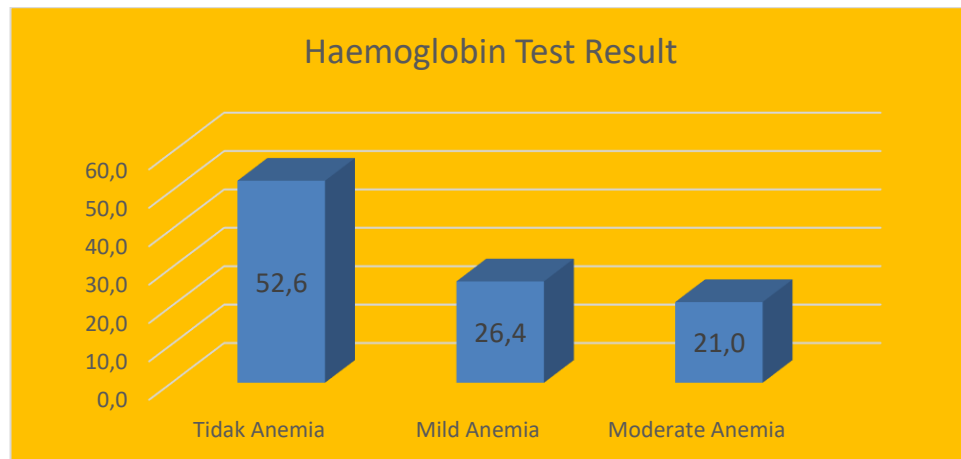


Figure 3. Haemoglobin Test Result

Based on above, there are 10 people (52.6%) respondents who are not anemic, 5 people (26.4%) have mild anemia and 4 people (21%) have moderate anemia

5) HIV and Sifilis Test Result

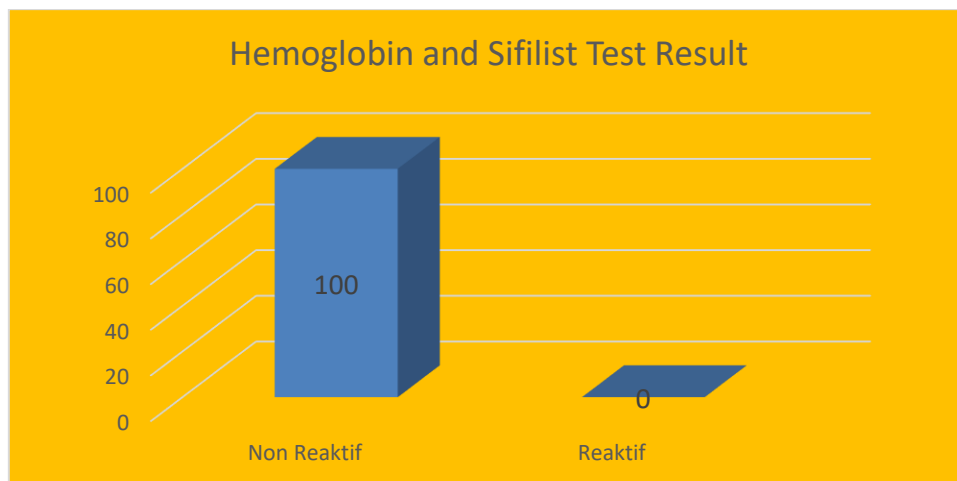


Figure 4. HIV dan Sifilis Test Result

Based on figure 4 above, all 19 respondents (100%) had non-reactive HIV and syphilis test results

Health education is an effort to increase knowledge and awareness to implement healthy living behavior. Based on the results of the community partnership program, there was an increase in knowledge and attitudes towards preparing or planning a healthy pregnancy after being given health education about preconception. And also women of childbearing age willing to be screened for anemia, HIV and syphilis. The results of the screening showed that the HIV and syphilis status of all participants were non-reactive, but there were participants who have haemoglobin level under normal category (anemia) and they were remained how to overcome it. Lela Hartini et al research said that there was an influence of health education on knowledge about healthy pregnancy in women who will get married. (12) Another study by Dina Sri et al said that health education on planning a healthy pregnancy through video increased knowledge and attitudes of women who will get married. (13) Likewise, research by Atikah et al said that preconception health education with animation media was effective in increasing catin's knowledge about preparing for a healthy pregnancy. (14) The results of community service by Aldina Ayunda et al said that there was an increase in preconception women's knowledge regarding pregnancy preparation after being given the booklet. (15)

Good knowledge and attitudes about healthy pregnancy preparation and planning can increase access for women and their partners to preconception care. The willingness of participants to be screened showed that health education that has been carried out can also increase their awareness as one of pregnancy preparation behavior

In the community partnership program, booklets are used as educational media because of the advantages of booklet, there are the information provided is more complete, the design is attractive, the price is affordable, it is more detailed and clear and educational. (16) The effectiveness of booklets as educational media in several studies, such as the results of Lia Artika's research, states that booklet media is more effective than leaflet media in increasing teenagers' knowledge about the impact of teenage pregnancy in high school. (17) Likewise, Elsa Noftalina's research states that booklet media is effective in increasing knowledge and attitudes of young women about the impact of early marriage. (18) The research results of Rema Putri et al. also stated that there was an influence of booklet media health education on premenopausal anxiety levels. (19)

CONCLUSION

Preconception education can increase the knowledge and attitudes regarding healthy pregnancy planning in women of childbearing age and increase their awareness to carry out screening for anemia, HIV and syphilis as one of pregnancy preparation behavior

AUTHOR'S CONTRIBUTION

Titi Legiati contribute in data analysis, and writing manuscript; Diyan Indrayani and Yulia Nurniawati was contribute in data collection and analysis.

REFERENCES

1. WHO Regional Office for South East Asia. Preconception Care [Internet]. WHO; 2014 [cited 2023 May 28]. Available from: <https://apps.who.int/iris/handle/10665/205637>
2. Kementerian Kesehatan Indonesia. Survey Kesehatan Indonesia (SKI) 2023 Dalam Angka [Internet]. 2023 [cited 2024 Nov 27]. Available from: <https://www.badankebijakan.kemkes.go.id/ski-2023-dalam-angka/>
3. Kementrian Kesehatan RI. Riset Kesehatan Dasar 2018 [Internet]. 2018 [cited 2023 May 28]. Available from: https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-risikesdas-2018_1274.pdf
4. Atikah Rahayu, Fahrini Y, Andini O, Fauzi R. Riwayat BBLR dengan Kejadian

- Stunting pada Anak Usia Bawah 2 Tahun. *Jurnal Kesehatan Masyarakat* [Internet]. 2015 Nov [cited 2023 May 31];2. Available from: <https://journal.fkm.ui.ac.id/kesmas/article/view/882>
5. Christiansen V, Chandra-Mouli, L. Ogbaselassie, J. Willumsen. Preconception Care to Reduce Maternal and Childhood Mortality and Morbidity [Internet]. WHO; 2013 [cited 2023 May 28]. Available from: <https://www.who.int/publications/i/item/9789241505000>
 6. Karoshi M, Newbold S, B-Lynch C. A Textbook of Preconceptional Medicine and Management. Sapiens Publishing; 2024.
 7. WHO. Preconception Care to Reduce Maternal and Childhood Mortality and Morbidity. 2012.
 8. Yitayal Ayalew, Amlaku Mulat, Mulugeta Dile, Amare Simegn. Women's Knowledge and Associated Factor in Preconception Care in Adet, West Gojjam, Northwest Ethiopia: a community based cross sectional study. . *Reprod Health* [Internet]. 2017 [cited 2023 May 31];15. Available from: <https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-017-0279-4>
 9. Tehsome F KYAFBZ, Kebede Y, Abamecha F, Birhanu Z. Why Do Woman Not Prepare For Pregnancy? Exploring Women's and Health Care Provider's View on Barrier to Uptake of Preconception Care in Mana District South West Ethiopia: a qualitative study. *BMC Pregnancy Childbirth* [Internet]. 2020 Sep [cited 2023 May 31];20. Available from: <https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-020-03208-z>
 10. Wiwin Widayani KU. Pengetahuan, Sikap dan Efikasi Diri Wanita Usia Subur Terkait Asuhan Prakonsepsi. *Jurnal Riset Kesehatan Poltekkes Depkes Bandung* [Internet]. 2021 May [cited 2023 May 31];13. Available from: <https://jurikes.com/index.php/jrk/article/view/1906>
 11. Notoatmodjo. Ilmu Perilaku Kesehatan. Jakarta: Rineka Cipta; 2010.
 12. Lela Hartini, Vemmy Zelpita, Dina Anggraini. Pengaruh Edukasi Kesehatan Calon Pengantin Tentang Kehamilan Sehat Di Kantor Urusan Agama Kota Bengkulu. *Jurnal of Nursing and Public Health* [Internet]. 2024 Apr [cited 2024 Nov 27];12. Available from: <https://jurnal.unived.ac.id/index.php/jnph/article/view/6372>
 13. Dina Sri Mawadah, M Alamsyah Azis, Hadi Susiarno. The Effect Of Reproductive Health Education Using Video Media On Knowledge And Attitude Of Candidates Bride In Healthy Pregnancy Planning At "Kua" Cibadak Lebak Banten. *Jurnal Media Informasi kesehatan* [Internet]. 2023 Nov [cited 2024 Nov 27];10. Available from: [https://eresources.poltekkes-smg.ac.id/storage/jurnal/Jurnal-Medikes-\(Media-Informasi-Kesehatan\)/November/c7a7373c321806866625546aebfcf4b8.pdf](https://eresources.poltekkes-smg.ac.id/storage/jurnal/Jurnal-Medikes-(Media-Informasi-Kesehatan)/November/c7a7373c321806866625546aebfcf4b8.pdf)
 14. Atikah Sulastri, Megayana Yessy Maretta, Erlyn Hapsari. Pengaruh edukasikesehatan Prakonsepsidengan Animasiterhadap Pengetahuancatin Tentang Persiapankehamilan Sehat. *Jurnal Ilmu Kebidanan* [Internet]. 2022 [cited 2024 Nov 27];2. Available from: <https://www.ejournal.akbidyo.ac.id/index.php/JIK/article/view/202/181>
 15. Aldina Ayunda Insani Ayunda, Feni Andriani, Vaulinne Basyir, Asri Rahmayelita, Fira Rahmaditha, Jasnidar Ariva, et al. Pemberian KIE dengan Media Booklet Terkait Persiapan Kehamilan pada Wanita Calon Pengantin di Kota Padang. *Jurnal Pengabdian Inovasi dan Teknologi Kepada Masyarakat* [Internet]. 292AD [cited 2024 Nov 27];3. Available from: <https://rumahjurnal.or.id/index.php/JUDISTIRA/article/view/426>
 16. Nasrullah, Muhammad basri, Hartati, Bahtiar, Masdiana, Sudirman, et al. Media Dan Metode Promosi Kesehatan Dalam Perubahan Perilaku Kesehatan. Nas Media Pustaka; 2024.

17. Lia Artika Sari. Efektivitas Media Booklet Dan Leaflet Terhadap Pengetahuan Remaja Putri Tentang Dampak Kehamilan Remaja. *Journal of Health Sciences and Research* [Internet]. 2019 [cited 2024 Nov 27];1. Available from: <https://ejurnal.ung.ac.id/index.php/jjhsr/article/view/2388/0>
18. Elsa Noftalina, Rini Sulistiawati. Efektivitas Booklet Terhadap Pengetahuan Dan Sikap Remaja Putri Tentang Dampak Pernikahan Dini Di Kecamatan Jawai Kabupaten Sambas. *Jurnal Ilmiah Bidan*. 2023 Nov 21;7.
19. Rema Putri Anganthi, Rinda Intan Sari, Vivi Sovianti. Pengaruh Pendidikan Kesehatan Media Booklet terhadap Tingkat Kecemasan Premenopause di Kelurahan Karangayu Semarang . *Jurnal Ilmu Keperawatan dan Kebidanan* . 2024 Oct 4;2.