



THE INFLUENCE OF BOOKLET MEDIA ON KNOWLEDGE AND ATTITUDES ON STRESS FACTORS DURING PREGNANCY

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Abstract

Anemia in pregnancy is a condition of pregnant women with significant hemoglobin levels below 12 grams. Anemia of pregnancy can result in various complications that contribute to increased maternal and perinatal morbidity and mortality. The aim of this research is to determine the effect of providing nutritional counseling using booklet media on knowledge and attitudes about stress factors in pregnant women. The sample was anemic pregnant women in the work area of the Pedes Karawang Community Health Center in Payungsari Village and Karangjaya Village, totaling 30 respondents. The intervention is in the form of nutrition education using counseling methods. Knowledge and attitudes were measured using a questionnaire and data analysis using the Wilcoxon Test. The statistical results show that there are significant results between knowledge and attitudes using booklet media with a p.value of 000. The conclusion of this research is that there is an effect of providing nutritional counseling using booklet media on knowledge and attitudes about stress factors in pregnant women.

Keywords: Anemia, Attitude, Knowledge, Stress Factors

Introduction

Anemia in pregnancy is a condition of pregnant women with significant hemoglobin levels below 12 gram%. Anemia requires special attention from health workers and everything necessary because pregnancy disease can cause damage to the mother and child or "potential danger to mother and child" (Astuti, 2019). Pregnancy anemia can result in various complications that contribute to increased maternal and perinatal morbidity and mortality (Lestari & Saputro, 2022).

Maternal age, parity, pregnancy spacing, nutritional status/chronic energy deficiency, maternal knowledge about anemia, compliance with taking Fe tablets, and frequency of ANC are risk factors for anemia (Proverawati, 2021). Research on anemia in pregnant women at the Referral Hospital, Bale Zone, Southwest Ethiopia shows that the frequent occurrence of iron deficiency in pregnant women is caused by not consuming Fe tablets and vegetables, in addition to a history of miscarriage (Girma et al., 2020). The impact of anemia on pregnant women is abortion, increased risk of BBL, premature birth, premature rupture of membranes, and antepartum bleeding (Nugraha et al, 2019).

Based on global reports in 2022, WHO estimates that 40% of children aged 6 – 59 months, 37% of pregnant women, and 30% of women aged 15 – 49 years overall experience anemia (WHO, 2022). According to Riskesdas 2018, as many as 48.9% of pregnant women in Indonesia experience anemia. According to the Indonesian Ministry of Health, between the ages of 15 and 24 years, 84.6% of pregnant women experience anemia. Based on the findings of Riskesdas 2018, 48.9% of pregnant women in Indonesia experience anemia, with 84.6% of anemia occurring in pregnant women aged 15-24 years (Indonesian Ministry of Health, 2020). According to the performance accountability report of the West

Java Health Service in 2021 in the West Java Province region, the incidence of anemia in pregnant women is 37.1%, and is still relatively high (West Java Health Service, 2021). In 2019, the Karawang Health Service reported that the prevalence of anemia in Karawang Regency was 45% (District Health Service Karawang, 2019). Based on routine nutrition report data in 2023, there were 472 pregnant women at the Pedes Health Center and the number of pregnant women who experienced anemia was 72 people. From August to September 7, there were 35 pregnant women in the Pedes Health Center working area who experienced anemia. This happens because most pregnant women do not realize that they have anemia.

Method

This research is *quasi-experimental* with a *One Group Pre-test – Post-test Design*. The research was conducted in September 2023. The research location was in the work area of the Pedes Karawang Community Health Center, namely in Karangjaya Village and Payungsari Village.

The population in this study were pregnant women who had low hemoglobin levels in Karangjaya Village and Payungsari Village with a sample of 30 respondents. This research method uses the *total sampling method*.

Results

One of the causes of anemia in pregnant women is the mother's knowledge about stress factors during pregnancy and the mother's attitude about the importance of managing stress during pregnancy. The results of pregnant women's knowledge regarding stress factors can be seen in table 1 and the results of pregnant women's attitudes towards compliance in managing stress can be seen in table 2.

Table 1. Results of the Influence of Anemic Pregnant Women's Knowledge Regarding Stress Factors

Responden	Mean	SD	Minimum-Maximum	P-Value
Pre-test	52,00	18,644	20-80	0,000
Post-test	78,67	14,794	60-100	

From the results of data processing regarding providing counseling on stress knowledge to pregnant women using booklets, before being given the media, several respondents already had good knowledge in managing stress, namely with an average of 52.00 and after being given education with an average of 78.67. Based on the results of statistical tests using Wilcoxon, there is an influence of booklet media on knowledge of stress management in pregnant women (<0.005). These results are in line with research by Mei Winarni (2022) which states that there is a difference between before being given education and after being given education (Winarni et al., 2022).

Table 2. Results of the Influence of Anemic Pregnant Women's Attitudes Regarding Stress Factors

Responden	Mean	SD	Minimum-Maximum	P-Value
Pre-test	45,33	15,698	20-60	0,000
Post-test	77,33	12,576	60-100	

From the results of data processing regarding providing counseling on stress management to pregnant women using booklets, several respondents were obedient in managing stress before being given media, with an average of 45.33 and after being given education an average of 77.33. There are pregnant women who do not understand how to manage stress caused by economic problems to family support. Based on the results of statistical tests using Wilcoxon, there is an influence of booklet media

on knowledge of stress management in pregnant women (<0.005). These results are in line with research by Dewi Aisyah (2018) which stated that before being given education, respondents had less knowledge than after being given education, this was due to a lack of exposure to information in managing stress well (Aisyah et al., 2018).

Discussion

Pregnancy is a natural thing that happens to fertile women and in general pregnant women will experience changes both physically and psychologically. Due to the imbalance of progesterone and estrogen, namely the female hormones that exist in the mother's body since the pregnancy process begins, the mother experiences physical and psychological changes throughout pregnancy. Therefore, pregnant women must prepare themselves physically and mentally during pregnancy and childbirth so that everything can go according to plan.

Stress in pregnant women is related to the safety and health of the baby to be born. One of the impacts of excessive stress on pregnant women is having children who have excessive emotional/cognitive disorders, attention problems and hyperactivity, and language delays. Symptoms of stress include chest pain, headaches, nausea, palpitations, fatigue and difficulty sleeping. The results of the intervention carried out on pregnant women showed that 90% had a positive response to knowledge, while 83.3% had a good attitude in managing stress. Meanwhile, there are 10% of pregnant women who lack knowledge in managing stress and 16.7% of pregnant women who have a disobedient attitude in managing stress.

Triggers of stress in pregnant women are economic problems, inadequate economic conditions cause pregnant women to be unable to meet their nutritional intake needs during pregnancy, which will have an impact on the development of the baby and are at risk of experiencing iron inhibition so that anemia can occur. These results are in line with research by Yeti Septiasari (2019) which states that economic status is related to the incidence of anemia, this is because a person's behavior regarding health is related to their socio-economic background (Septiasari, 2019). Lack of family support given to pregnant women, especially husband support. Husband's support is important in controlling stress in pregnant women. Husband's support can provide a feeling of calm, comfort, joy, and have a positive attitude in maintaining his health. These results are in line with research by Ria Harlissa (2023) which states that family support can make pregnant women feel loved and cared for by those around them, and pregnant women have a sense of dependency, especially regarding the health of the mother and her child (Harlissa, 2023).

Apart from that, information about trauma in pregnant women is a trigger that can disturb the psychology of pregnant women. For first-time pregnant women, of course they have no idea about the birth process and will find out various information about childbirth. Hearing frightening information will cause the pregnant mother to have excessive levels of stress and this will result in feelings of trauma for the pregnant mother.

These results are in line with research by Yazzla Velga (2022) which states that feelings of fear about the birth process and worries about the baby being born abnormally are triggers for stress in pregnant women (Velga & Suryani, 2022). Apart from that, these results agree with research by Sulistiyaningsih, Kasanah, U, & Sholikhah, S, (2019) which states that the level of stress in pregnant women in the form of trauma can cause excessive emotional disturbances in pregnant women. Excessive trauma in pregnant women will cause the pregnant woman's immune system to decline and will cause pregnant women to experience food intake disorders resulting in iron deficiency in the body (Septiasari, 2019).

Conclusion

There was an increase in knowledge, attitudes and influence after providing education to respondents between before the intervention was given and after the intervention was given with booklet media related to stress factors in pregnant women.

References

- [1] Aminin, F., Wulandari, A., & Lestari, RP (2014). The Influence of Chronic Energy Deficiency (KEK) on the Incidence of Anemia in Pregnant Women. *Journal of Health*, 167–172.
- [2] Aisyah, RD, Suparni, S., & Fitriyani, F. (2018). Education in the Caring Package on Knowledge about Anxiety in Pregnant Women. *The 8th University Research Colloquium 2018 Muhammadiyah University Purwokerto*, 346–349.
- [3] Astuti, RY. (2019). Anemia In Pregnancy. In *Angewandte Chemie International Edition*, 6(11), 951–952.
- [4] Chifdillah, N.A., & Hazanah, S. (2021). Differences in the Influence of Health Education with Audiovisual Media and Visual Media on Students' Knowledge About Covid-19. *MMJ (Mahakam Midwifery Journal)*, 6(1), 14-27.
- [5] Darsini, D., Fahrurrozi, F., & Cahyono, EA (2019). Knowledge; Review Article. *Journal of Nursing*, 12(1), 13-13.
- [6] Karawang District Health Service. (2019). Number of Anemia Cases in Karawang Regency.
- [7] West Java Provincial Health Service. (2021). West Java Provincial Health Service. West Java Provincial Health Office.
- [8] Elvira, Nurvinanda, R., & Sagita, A. (2023). Factors Associated with the Incidence of Anemia in Pregnant Women. *Scientific Journal of STIKES Citra Delima Bangka Belitung*, 6(2), 2087–2240. <https://doi.org/10.33862/citradelima.v6i2.295>
- [9] Fitriyani, J., & Saputri, AI (2018). Iron deficiency anemia. *AVERROUS: Malikussaleh Journal of Medicine and Health*, 4(2), 1-14.
- [10] Girma, Sewnet, Tsion Teshome, Meseret Worku, Tinbit Solomon, Selam Kehulu, Reyana Aman, MitikuBonsa, Tesfaye Assefa, and Habtamu Gezahegn 2020 “Anemia and Associated Factors Among Pregnant Women Attending Antenatal Care at Madda Walabu University Goba Referral Hospital, Bale Zone, Southeast Ethiopia” *Journal of Blood Medicine* 11:479–85.
- [11] Harlissa, R. (2023). Relationship between Husband's Support, Nutritional Status, and Anemia in Pregnant Women with Low Incidence of Newborn Babies in Toboali Health Center, South Bangka Regency in 2021. *SIMFISIS Indonesian Midwifery Journal*, 2(3), 382–388. <https://doi.org/10.53801/sjki.v2i3.125>
- [12] Jerika., Fitri., Arsil. 2021. The relationship between knowledge and compliance with the consumption of Fe tablets on the incidence of anemia in pregnant women at the Pekanbaru City Health Center. *Journal of Nutrition*. 1(2).
- [13] Indonesian Ministry of Health. (2020). *Indonesia's health profile in 2019*. Jakarta: Indonesian Ministry of Health.
- [14] Mitra, M., Yanti, N., Nurlisa, N., Dewi, O., & Marllina, H. (2021). Standards for the Quantity of Antenatal Care and Social Culture and the Risk of Anemia in Pregnancy. *Journal of Reproductive Health*, 12(1), 51–63.
- [15] Meri Agritubella, S., & Delvira, W. (2020). Effectiveness of Diet Pattern Posters for the First 1000 Days of Life (HPK) on Pregnant Women's Knowledge about Nutrition in Preventing Stunting at the Rambah Community Health Center, Rokan Hulu Regency. *Endurance Journal*, 5(1), 168. <https://doi.org/10.22216/jen.v5i1.5027>

- [16] Notoadmojo, Soekidjo. 2018. Health Research Methodology. Jakarta : Rineka Cipta. Nugraha, RN, Lalandos, JL, & Nurina, RL (2019). The Relationship between Pregnancy Distance and Number of Parities with the Incidence of Chronic Energy Deficiency (KEK) in Pregnant Women in Kupang City. *Cendana Medical Journal (CMJ)*, 7(2), 273-280.
- [17] Nugraha, RN, Lalandos, JL, & Nurina, RL (2019). The Relationship between Pregnancy Distance and Number of Parities with the Incidence of Chronic Energy Deficiency (KEK) in Pregnant Women in Kupang City. *Cendana Medical Journal (CMJ)*, 7(2), 273-280.
- [18] Nugroho, RF, & Wardani, EM (2022). Habit of Consumption of Tea, Coffee and Fe Tablets With The Incidence of Anemia In Pregnant Women in Sidoarjo. *Pancasakti Journal Of Public Health Science And Research*, 1(3), 198–203. <https://doi.org/10.47650/pjphsr.v1i3.321>
- [19] Proverawati, Atikah. 2021. Anemia and Anemia of Pregnancy. Yogyakarta: Nuha Medika.
- [20] Rahayu, LS, Suraya, I., & Maulida, NR (2022). Education and Practices to Fulfill Balanced Nutrition for Pregnant Women. *Shihatuna: Journal of Community Health Service*, 2(1), 7–12.
- [21] Rimawati, E., Kusumawati, E., Gamelia, E., Sumarah, S., & Nugraheni, SA (2018). Food Supplement Intervention to Increase Hemoglobin Levels in Pregnant Women. *Journal of Public Health Sciences*, 9(3), 161–170. <https://doi.org/10.26553/jikm.v9i3.307>
- [22] Kurnia Illahi, R. (2017). The Relationship between Family Income, Birth Weight and Birth Length with the Incidence of Stunting in Toddlers 24 - 59 Months in Bangkalan. 3(1), 1–14
- [23] Sari, H., Yarmaliza, & Zakiyuddin. (2022). Factors that Influence the Incidence of Anemia in Pregnant Women in the Samadua Community Health Center Working Area, Samadua District, South Aceh Regency. *Jurmakesmas*, 2(1), 133– 147.
- [24] Setiawati, E., Rahmayanti, D., & Astika, E. (2019). KNOWLEDGE AND ATTITUDE OF PREGNANT WOMEN REGARDING PREGNANCY EXERCISES. 1(1), 34-39.
- [25] Septiasari, Y. (2019). Economic Status Plays a Role in the Occurrence of Anemia in Pregnant Women at the Bernung Pesawaran Community Health Center Economic Status of Role in the Occurrence of Anemia in Pregnant Women At the Bernung Pesawaran Community Health Center. 14. *Journal of Health Sciences*, 8(1), 14–19.
- [26] Sri Iriani, O., & Ulfah, U. (2019). The Relationship between Tea and Coffee Drinking Habits and the Incidence of Anemia in Pregnant Women at BPM Midwives "E" Ciwangi Village, Balubur Limbangan District, Garut Regency. *Masada Healthy Journal*, 13(2), 68–71. <https://doi.org/10.38037/jsm.v13i2.108>
- [27] Suprayitno, E., Rahmawati, S., Ragayasa, A., & Pratama, MY (2020). Community knowledge and attitudes in preventing COVID-19. *Journal Of Health Science*, 5(2), 68-73.
- [28] Tampubolon, R., Panjntun, B., & Lasamahu, J.F. (2021). Identification of Factors in the Occurrence of Anemia in Pregnant Women in Amahai District, Central Maluku Regency. 3(4), 489-505.
- [29] Utami Sri. (2020). Level of Knowledge of Pregnant Women About Pregnancy Exercise at Happy Land Hospital Yogyakarta. Medan Health Polytechnic Velga, Y., & Suryani, U. (2022). Factors Associated with Stress Levels in Pregnant Women Facing Childbirth. JKJ: Indonesian National Nurses Association, 10(4), 837–856.
- [30] Wahtini, S. 2019. Factors that influence the incidence of anemia in babies. *Journal of Health of Studies*. 3(1).
- [31] WHO. (2022). Department of Nutrition and Food Safety.
- [32] Winarni, LM, Ariani, S., & Wulan, R. (2022). Education about Psychological Resilience to Reduce Stress for Pregnant Women During COVID-19 in RW 07 and RW 08 Margasari Karawaci Tangerang. *J-Dynamics: Journal of Community Service*, 7(3), 428–433. <https://doi.org/10.25047/jbisnis.v7i3.3305>

- [33] Yuliani, DR, & Aini, FN (2020). Anxiety of pregnant and postpartum women during the Covid-19 pandemic in Baturraden sub-district. *Journal of midwifery science*, 2(2), 11-14. Suprayitno, E., Rahmawati, S., Ragayasa, A., & Pratama, MY (2020). Community knowledge and attitudes in preventing COVID-19. *Journal Of Health Science*, 5(2), 68-73.