

DETERMINANT FACTORS OF ANEMIA DURING PREGNANCY

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ABSTRAK

Latar Belakang: Anemia merupakan masalah kesehatan yang sering terjadi selama kehamilan. Anemia dapat meningkatkan risiko IUGR, prematuritas, penyakit infeksi, perdarahan pascapersalinan, bahkan kematian ibu dan bayi.

Tujuan: Tujuan penelitian ini adalah untuk mengetahui faktor-faktor yang mempengaruhi kejadian anemia pada ibu hamil.

Metode: Penelitian ini merupakan penelitian cross-sectional di Puskesmas Brondong. Sampel penelitian sebanyak 46 ibu hamil trimester III yang diambil secara simple random sampling. Kriteria inklusi adalah ibu hamil trimester III, sedangkan kriteria eksklusi adalah ibu hamil yang menolak menjadi responden dan sudah pernah melahirkan sebelum pengambilan data. Pengumpulan data dilakukan pada bulan Oktober 2022 sampai dengan Januari 2023. Analisis statistik dilakukan dengan uji chi square dengan tingkat signifikansi $\alpha = 0,05$.

Hasil: Hasil penelitian menunjukkan bahwa faktor risiko kejadian anemia adalah jarak kehamilan (nilai $p = 0,002$, OR 0,12) dan konsumsi suplemen zat besi secara teratur (nilai $p = 0,001$, OR 0,86). Tidak terdapat pengaruh paritas terhadap kejadian anemia (nilai $p = 0,31$).

Kesimpulan: Terdapat pengaruh jarak kehamilan dan keteraturan konsumsi zat besi terhadap kejadian anemia.

Saran: Bagi petugas kesehatan dan kader kesehatan agar memberikan promosi kesehatan untuk mencegah anemia, seperti memberikan pendidikan kesehatan tentang jarak kehamilan, keluarga berencana, dan manfaat pentingnya mengkonsumsi suplemen zat besi pada ibu hamil.

Kata kunci: anemia, jarak kehamilan, paritas, suplemen zat besi

ABSTRACT

Background: Anemia is a health problem that often occurs during pregnancy. It can increase the risk of IUGR, prematurity, infectious diseases, postpartum hemorrhage, and even maternal and infant mortality.

Objective: The aim of this study was to identify determine the factors on incidence of anemia in pregnant women.

Methods: A cross-sectional study was carried out at Brondong Community Health Care. 46 third trimester pregnant women taken by simple random sampling. Inclusion criteria was third trimester pregnant women, exclusion criteria were they refused to be respondents and already had given birth prior data collection. Data collection was took place from October 2022 to January 2023. Statistical analyses carried out by chi square test with significant level of $\alpha = 0.05$.

Results: The results showed that risk factors on incidence of anemia were pregnancies space (p value = 0.002, OR 0,12) and regular consumption of ferrous supplements (p value = 0.001, OR 0.86). There wasn't effect of parity on incidence of anemia (p value = 0,31).

Conclusions: There was effect of pregnancy space and regular consumption of ferrous on incidence of anemia.

Suggestion: Health provider, health workers, and cadres would provide health promotion to prevent anemia, such as providing health education about pregnancy spacing, family planning, and the aventages of consuming ferrous supplements in pregnant women.

Keywords : anemia, ferrous supplements, parity, pregnancy space

INTRODUCTION

Anemia is defined as decrease in hemoglobin or red blood cell mass (Jevitt et al., 2019). This condition is characterized by low hemoglobin levels, namely <11 gr/dl. Low hemoglobin in pregnancy often occurs as a result of physiological changes during pregnancy which are exacerbated by nutritional deficiencies, vitamin B 12, folic acid and vitamin C. Anemia in pregnant women is called "*potential danger to mother and child*" (potentially harmful to mother and child) (Gusnidarsih, 2020). That's why anemia requires serious attention from all parties involved in health services (Bakri et al., 2021).

Anemia during pregnancy can increase the risk of complications for the mother and fetus. The risks of complications that can occur to the mother are postpartum hemorrhage and infectious diseases (Kemenkes, 2018). While the risks of complications that occur in the fetus are abortion, intra uterine growth restriction, prematurity, low birth weight, increased perinatal mortality (Pratiwi, 2021) and autistic spectrum disorders (Farhan & Dhanny, 2021).

The prevalence of anemia in pregnancy in Indonesia is still relatively high. According to Riskesdas data for 2013-2018, the proportion of anemia in pregnant women increased from 37.1% to 48.9%, while the 2019 RPJMN target was 28% (Kemenkes, 2018). The average prevalence of anemia in East Java Province is 5.8%. The average prevalence of anemia in East Java is still below the national target of 28. The number of pregnant women with anemia in the Brondong Health Center work area in 2021 was 38.6% and in January to September 2022 the number of anemia in pregnant women was 37.4%

The determinant factors that cause an increase in the incidence of anemia in pregnancy include: the age of pregnant women, education level, gestational age, parity, gestational age, nutritional status, consumption of Fe tablets, and ANC (Tara & Ciptono, 2022). Meanwhile, the determinants of anemia according to research conducted by Irawati et al. are the distance between pregnancies, nutritional status, and mother's knowledge (Irawati et al., 2021). Another study conducted by Asyaul Wasiah at the Kembangbahu Lamongan Health Center, found that some respondents who consumed Fe tablets less regularly experienced mild anemia of 25.4% and respondents who did not regularly consume Fe tablets experienced severe anemia of 3.3% (Wasiah, 2020).

As one of the efforts to prevent and treat anemia, that is by carrying out initial screening during

antenatal care by measuring hemoglobin levels and administering ferrous supplement tablets, which are given to young women and pregnant women. Through a Ministry of Health program, ferrous supplementation tablets are carried out to meet nutritional intake for pregnant women, prevent anemia during pregnancy and overcome anemia experienced by pregnant women (Paridah et al., 2021). Balanced nutrition and administration of Ferrous tablets are given to all pregnant women from early pregnancy to before delivery. This effort is made to prepare for a healthy pregnancy, prevent postpartum hemorrhage, and prepare the fetus for a healthy, intelligent and free from stunting condition (Dewi & Mardiana, 2021; Lasamahu, 2021). Based on this background, this study aimed to determine the determinant factors (parity, pregnancy space, and regular consumption of ferrous supplements) on the incidence of anemia in pregnant women at the Public Health Center of Brondong, Lamongan Regency

RESEARCH METHODS

This research was conducted through observational with cross-sectional approach. The population of this research were pregnant women at third trimester in Public Health Center of Brondong Lamongan. There were 46 third trimester pregnant women chosen as samples taken by simple random sampling. Inclusion criteria was third trimester pregnant women, exclusion criteria were that who refused to be respondents and already had given birth prior data collection. Data collection was took place from October 2022 to January 2023.

Instruments

The demographic data questionnaire identified respondents' characteristic data including age, education, and occupation. The determinant questionnaire identified respondents' parity, pregnancy space, and consumption of ferrous supplements. Hemoglobin measurement was used to identify the incidence of anemia and the result were recorded on the observation sheet. The data collected by questionnaire consisting of characteristic data and determinant factors; and observation sheet. Hemoglobin level measured from capillary blood. Cadres assisted data collection during antenatal care at public health center of Brondong. Data were analyzed by chi square test with significant level of $\alpha = 0.05$. The study protocol was reviewed by the Research Ethics Commission of the Majapahit College of Health Sciences.

RESEARCH RESULTS

Most of the pregnant women who were respondents were aged 17-34 years. Healthy reproductive age will affect one's health and mindset.

Most have high school education and most do not work or are housewives. Education will affect one's way of thinking and the ability to receive information and knowledge.

Table 1
Characteristic of Pregnant women

Characteristics	n	%
Age (years)		
≤ 16	1	2,2
17-34	40	87,0
≥ 35	5	10,8
Religiosity		
Moslem	46	100
Chatolic	0	0
Christian	0	0
Education		
Elementary and Junior high school	13	28,3
Senior high school	24	52,2
Higher education	9	19,6
Occupation		
Housewife	37	80,4
Farmer	1	2,2
Entrepreneur	3	6,5
Teacher	3	6,5
Government employee	2	4,3

Source : Primary Data

Table 2
Determinant factor on anemia

Variable	Incidence of Anemia				Total	Chi Square
	Normal		Anemia			
	n	%	n	%		
Parity						P=0,31
Nullipara	12	26,1	4	8,7	16	
Multipara	18	39,1	12	26,1	30	
Pregnancy space						P=0,002 OR 0,12
< 2 years	4	8,7	9	19,6	13	
≥ 2 years	26	56,5	7	15,2	33	
Consumtion of Ferrous supplements						P=0,001 OR 0,86
Irregular	3	6,5	9	19,6	12	
Regular	27	58.7	7	15.2	34	

The results of bivariate statistical analysis parity and incidence of anemia obtained $p = 0.31$ which means no effect of parity on incidence of anemia. The results of bivariate statistical analysis pregnancy space and incidence of anemia obtained $p = 0.002$ which means there was an effect of pregnancy space on incidence of anemia. The results of bivariate statistical analysis consumption of ferrous supplements and incidence of anemia obtained $p = 0.001$ which means there was an effect

of consumption of ferrous supplements on incidence of anemia.

DISCUSSION

The results showed that there was no effect between parity and the incidence of anemia in pregnancy. The research data showed that the proportion of anemia in the nullipara and multipara groups was the same. This finding is different from the results of a study conducted by Apriliana,

Tampubolon, and Manganik in 2022 which stated that parity is a determinant of the occurrence of anemia in pregnant women (Lasamahu, 2021). However, another study conducted in Ampenan in 2017 showed that there was no significant effect between parity and the incidence of anemia in pregnant women (Adawiyah & Wijayanti, 2021; Teja et al., 2021).

Parity is the number of children who live or the number of pregnancies that produce fetuses that survive outside the uterus (Sue Macdonald & Julia Magill-Cuerden, 2011). Parity 2-3 is the safest parity in terms of maternal mortality (maternal death) (Manuaba, 2012). Based on this theory, the results of most mothers with parity 1-3 are still included in the parity that tends to be safe for pregnancy and childbirth. The risk of experiencing disorders in pregnancy and childbirth at higher parities is related to the health of the reproductive organs that have decreased due to the previous pregnancy and childbirth process, the higher the parity, the greater the risk of experiencing complications related to the condition of the reproductive organs (Efendi et al., 2024). Related to anemia, a mother who often gives birth has a risk of experiencing anemia in the next pregnancy if she does not pay attention to nutritional needs, because during pregnancy nutrients will be divided for the mother and for the fetus she is carrying. Mothers who have high parity can generally increase susceptibility to bleeding and maternal nutritional depletion (Sari et al., 2022). The more and more frequent pregnancies occur, the woman's body needs more energy to restore her health after the process of pregnancy, childbirth and childbirth. This shows that parity is not the only predisposing factor for anemia in pregnancy (Mardiah & Lubis, 2022; Zuiatna, 2021). When viewed from the data on the characteristics of the respondents, it shows that the majority of respondents are aged 17-34 years. This age range is a healthy reproductive range so that even though the number of children is more than one, they are in good physical condition and safe in accepting pregnancy and childbirth. The safe age for mothers to get pregnant, give birth and postpartum is 20-35 years. Meanwhile, ages under 20 and over 35 are at risk for women to get pregnant, give birth and postpartum (Prawirohardjo, 2016). Maryunani, (2016) explained that pregnant women under 20 years old can be detrimental to the health of the mother and the growth and development of the fetus because the reproductive organs are not yet mature for pregnancy. Complications in adolescent pregnancy (under 20 years old) are higher than the healthy reproductive period between 20-35 years. This situation will be even more difficult if coupled

with psychological, social, economic stress, making it easier for miscarriage to occur (Rosita & Afrianti, 2021). The immaturity of the reproductive organs of mothers under 20 years old and over 35 years old can endanger the health of the mother and fetus (Pitriani et al., 2023). In contrast to women aged 20-35 years who are considered ideal for pregnancy and childbirth. In this age range, women's physical condition is in prime condition. The uterus is able to provide maximum protection or conditions for pregnancy. Generally, mentally, they are also ready, which has an impact on the behavior of caring for and maintaining their pregnancy carefully (Heriansyah & Rangkuti, 2020).

There is a significant effect between the spacing of pregnancies on the incidence of anemia in pregnancy. The research data showed that the proportion of anemia in pregnancy at intervals of <2 years was higher than the incidence of anemia at intervals of ≥ 2 years. The results of this study are close to the research conducted by Heriansyah and Rangkuti that there is a significant relationship between the spacing of pregnancies and the incidence of anemia at the Danau Marsabut Health Center (Heriansyah & Rangkuti, 2020). Likewise, research conducted at the Tapa Gorontalo Health Center stated that there was a significant relationship between pregnancy spacing and the incidence of anemia in pregnant women (Lasamahu, 2021; Zuliyanti, 2022). The uterus and other reproductive systems also need sufficient time to recover from previous pregnancies. Trauma to the birth canal experienced during the first birth can cause stress in the mother before the next delivery. In addition, the mother can also experience nutritional deficiencies during pregnancy Efendi, W. A.,. Another study by Sjahriani et al., (2019) also supports these results, finding that pregnant women with high-risk pregnancy spacing tend to experience anemia in the third trimester. Factors such as the body's condition not having recovered and not optimizing nutritional fulfillment can increase the risk of anemia in subsequent pregnancies. Prawirohardjo (2016) also stated that a short pregnancy spacing can increase the risk of anemia because the body's condition has not fully recovered. Heriansyah (2019) added that the spacing between pregnancies greatly affects the incidence of anemia in repeated pregnancies in a short time, because this can drain the mother's iron reserves. Knowledge of the ideal pregnancy spacing, at least 2 years, is very important so that the mother's body is ready to receive the fetus without having to use up iron reserves. Although pregnant women with high-risk pregnancy spacing do not experience anemia, this may be due to their awareness and

ability to maintain good health and nutritional intake (Efendi et al., 2024). If a pregnant woman has a short pregnancy interval, it is possible that her body has not fully recovered or received sufficient nutritional intake after the previous pregnancy. If pregnancies occur too close together, the pregnant woman may not have enough time to replenish the nutrient stores that have been depleted during the previous pregnancy. This can lead to the risk of iron, vitamin B12, or folate deficiency which can ultimately lead to anemia. If the pregnant woman has experienced bleeding during or after a previous pregnancy, too close a pregnancy interval can increase the risk of recurrent bleeding. Recurrent bleeding can cause significant red blood cell loss and contribute to anemia in subsequent pregnancies (Aulia et al., 2023).

A woman needs time to recover her health condition after giving birth. The ideal time for the recovery period is > two years before undergoing the next pregnancy and childbirth (Zuliyanti, 2022). The shorter the pregnancy interval, the higher the risk of pregnancy complications, one of which is anemia because the mother's body has not fully recovered from previous pregnancies and deliveries. There is an effect of regular consumption of ferrous supplements on the incidence of anemia in pregnancy. Pregnant women who do not regularly consume ferrous supplements will have a 0.86 times higher risk of developing anemia in their pregnancy. This is close to the results of Mardiah and Lubis' research which stated that there was a significant relationship between ferrous consumption and the incidence of anemia in pregnancy (Mardiah & Lubis, 2022). Another study conducted by Hotmauli and Niawati found that pregnant women who are irregular have a greater risk (OR 0.190) of experiencing anemia in their pregnancy (Siregar & Niawati, 2019).

Iron is a micronutrient needed during pregnancy. Daily requirements increase during pregnancy to support the process of forming blood cells. Apart from food ingredients, fulfilling iron needs can be obtained from Fe tablet supplements. During pregnancy, the mother will get 90 ferrous tablets which must be taken every day to maintain normal hemoglobin levels (Malaka et al., 2023). Consuming iron tablets during pregnancy is important for pregnant women because the need for iron increases during pregnancy due to the dilution of red blood cells during pregnancy, where iron tablets are needed to increase the number of red blood cells (Sukmawati et al., 2021). The more regularly you consume Fe tablets, the mother will avoid the risk of anemia during pregnancy.

CONCLUSIONS

There was effect of pregnancy space and regular consumption of ferrous on incidence of anemia. Health provider, health workers, and cadres would provide health promotion to prevent anemia, such as providing health education about pregnancy spacing, family planning, and the advantages of consuming ferrous supplements in pregnant women.

SUGGESTION

Health provider, health workers, and cadres would provide health promotion to prevent anemia, such as providing health education about pregnancy spacing, family planning, and the advantages of consuming ferrous supplements in pregnant women.

REFERENCES

- Adawiyah, R., & Wijayanti, T. (2021). Hubungan Paritas dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Trauma Center Samarinda. *Borneo Studies and Research*, 2(3), 1553–1562.
- Aulia, N., S, G. H., & Hidayati, T. (2023). Hubungan Jarak Kehamilan Dengan Angka Kejadian Anemia Di Puskesmas Tempeh Kecamatan Tempeh Kabupaten Lumajang. *MEDICAL JURNAL OF AL-QODIRI*, 8(2), 123–128. https://doi.org/10.52264/JURNAL_STIKESAL_QODIRI.V8I2.293
- BAKRI, S. R. I. H., ST, S., & KEB, M. (2021). *Upaya Peningkatan Kesehatan Dan Gizi Ibu Hamil*. Media Sains Indonesia.
- Dewi, H. P., & Mardiana, M. (2021). Faktor Risiko Yang Mempengaruhi Kejadian Anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Nusawungu li Cilacap. *Journal of Nutrition College*, 10(4), 285–296.
- Efendi, W. A., Sahadewa, S., & Tjandra, L. (2024). Hubungan Paritas dan Jarak Kehamilan dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Purwosari Kabupaten Pasuruan. *Journal of Mandalika Literature*, 5(3), 330–337.
- Farhan, K., & Dhanny, D. R. (2021). Anemia Ibu Hamil dan Efeknya pada Bayi. *Muhammadiyah Journal of Midwifery*, 2(1), 27–33.
- Gusnidarsih, V. (2020). HUBUNGAN USIA DAN JARAK KEHAMILAN DENGAN KEJADIAN ANEMIA KLINIS SELAMA KEHAMILAN. *Jurnal Asuhan Ibu Dan Anak*, 5(1), 35–40. <https://doi.org/10.33867/JAIA.V5I1.155>
- Heriansyah, R., & Rangkuti, N. A. (2020a). Hubungan Jarak Kehamilan Dengan Kejadian

- Anemia Ibu Di Puskesmas Danau Marsabut Kabupaten Tapanuli Selatan Tahun 2019. *Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal)*, 5(1), 77–84.
- Heriansyah, R., & Rangkuti, N. A. (2020b). Hubungan Jarak Kehamilan Dengan Kejadian Anemia Ibu Di Puskesmas Danau Marsabut Kabupaten Tapanuli Selatan Tahun 2019. *Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal)*, 5(1), 77–84.
- Irawati, D., Syalfina, A. D., Priyanti, S., & Ssekalembe, G. (2021). *Determinants of anemia in the third trimester of pregnancy in Mojokerto*.
- Jevitt, C., Brucker, M. C., & King, T. L. (2019). *Varney's Midwifery*. Jones & Bartlett Learning.
- Kemenkes, R. I. (2018). *Riset Kesehatan Dasar 2018*.
- Lasamahu, J. F. (2021). *Identifikasi Faktor-faktor Kejadian Anemia pada Ibu Hamil di Kecamatan Amahai Kabupaten Maluku Tengah*.
<https://repository.uksw.edu/handle/123456789/22331>
- Malaka, N. M. A., Irwan, I., & Ahmad, Z. F. (2023). Factors Associated With The Incidence Of Anemia In Pregnant Women In Tapa Public Health Center Working Area. *Journal Health & Science: Gorontalo Journal Health and Science Community*, 7(1), 143–152.
- Manuaba, I. B. G. (2010). Ilmu kebidanan, penyakit kandungan dan keluarga berencana. *Jakarta: Egc*, 15, 157.
- Mardiah, M., & Lubis, A. U. N. (2022). Hubungan Kepatuhan Konsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Rambung Binjai Selatan. *Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal)*, 7(1), 288–300.
- Maryunani, A. (2012). Asuhan kegawatdaruratan dalam Kebidanan. *Trans Info Media, Jakarta*.
- Paridah, Y., Sitorus, R. J., Flora, R., Nurlaili, N., & Tanjung, R. (2021). Analisis Perilaku Keteraturan Mengonsumsi Tablet Tambah Darah dengan Kejadian Anemia pada Ibu Hamil. *Jurnal Keperawatan Silampari*, 5(1), 560–569.
- Pitriani, T., Nurvinanda, R., & Lestari, I. P. (2023). Faktor-Faktor yang Berhubungan dengan Meningkatnya Kejadian Bayi Berat Lahir Rendah (BBLR). *Jurnal Penelitian Perawat Profesional*, 5(4), 1597–1608.
- Pratiwi, B. S. A. (2021). *HUBUNGAN ANTARA PERCEIVED SOCIAL SUPPORT DENGAN EMOTIONAL EXHAUSTION PADA PERAWAT DI RUMAH SAKIT UMUM DAERAH KOTA BANDUNG*. Universitas Pendidikan Indonesia.
- Prawirohardjo, S. (2016). *Ilmu Kebidanan* (4th ed.). PT. Bina Pustaka Sarwono Prawirohardjo.
- Rosita, S., & Afrianti, T. (2021). Hubungan Faktor Ibu Dengan Kejadian Bblr Pada Balita Di Puskesmas Indrajaya Kabupaten Aceh Jaya. *Jurnal Serambi Akademika*, 9(3), 518–525.
- Sari, D. M., Hermawan, D., Sahara, N., & Nusri, T. M. (2022). Hubungan Antara Usia Dan Paritas Dengan Kejadian Anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Seputih Banyak. *Malahayati Nursing Journal*, 4(5), 1315–1327.
- Siregar, H., & Niawati, N. (2019). Karakteristik Ibu Hamil Dan Keteraturan Mengonsumsi Tablet Besi (Fe) Terhadap Kejadian Anemia Di Kampung Buana Makmur Kecamatan Dayun Kabupaten Siak. *JOMIS (Journal of Midwifery Science)*, 3(2), 101–111.
- Sjahriani, T., Kebidanan, V. F.-J., & 2019, undefined. (n.d.). Faktor-faktor yang berhubungan dengan kejadian anemia pada ibu hamil. *Academia.EduT Sjahriani, V Faridah Jurnal Kebidanan, 2019•academia.Edu*. Retrieved November 28, 2024, from <https://www.academia.edu/download/112637837/pdf.pdf>
- Sue Macdonald, S. M., & Julia Magill-Cuerden, J. M.-C. (2011). *Mayes Midwifery A Textbook for Midwives Fourteenth Edition*. Elsevier Limited.
- Sukmawati, S., Widiastih, R., Mamuroh, L., & Nurhakim, F. (2021). ANEMIA KEHAMILAN DAN FAKTOR YANG MEMPENGARUHI: STUDI KORELASI. *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-Ilmu Keperawatan, Analisis Kesehatan Dan Farmasi*, 21(1), 43–53.
<https://doi.org/10.36465/JKBTH.V21I1.679>
- Tara, A. A. D., & Ciptono, F. (2022). Prevalensi dan determinan anemia pada ibu hamil di Puskesmas Grogol Petamburan Jakarta Barat periode 2019-2021. *Tarumanagara Medical Journal*, 4(1), 41–47.
- Teja, N. M. A. Y. R., Mastryagung, G. A. D., & Diyu, I. A. N. P. (2021). Hubungan pengetahuan dan paritas dengan anemia pada ibu hamil. *Menara Medika*, 3(2).
- Wasiah, A. (2020). Hubungan Keteraturan Mengonsumsi Tablet Fe Dengan Kejadian

- Anemia Pada Ibu Hamil Di Puskesmas Kembangbahu Lamongan. *Jurnal Ilmiah: J-HESTECH*, 3(1).
- Zuliyanti, N. I. (2022). Hubungan Jarak Kehamilan Dengan Kejadian Anemia Pada Ibu Hamil Trimester III Di Puskesmas Bagelen Kabupaten Purworejo. *Jurnal Komunikasi Kesehatan*, 13(1), 1–8.