

BRIDES AND GROOMS-TO-BE IN DELI SERDANG REGENCY USE PRECONCEPTION HEALTH SERVICES

Irma Linda ^{1*}, Rismahara Lubis ² and Cecep Tribowo ³

^{1,2} Midwifery Department of Medan Health Polytechnic of Ministry of Health, Medan, Indonesia.

³ Nursing Department of Medan Health Polytechnic of Ministry of Health, Medan, Indonesia.

*Corresponding Author Email: irmalinda65@gmail.com

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Abstract

Objectives: Preconception health services for upcoming brides and grooms have not received as much attention from the community as other maternal and child health services. Although a woman's preconception health has an impact on her pregnancy health, the public health center's health service programme continues to put a strong emphasis on preventing and treating pregnancy-related illnesses. Preconception treatment programmes can aid in preventing maternal and neonatal deaths, unintended pregnancies, birth defects, premature birth, and fetal growth underdevelopment in utero. This study's objective is to investigate the availability of preconception health services for prospective brides in the Deli Serdang Regency. **Methods:** The type of research is mixed methods. From March to September 2023, the study was carried out at eight health centers in Deli Serdang Regency. This study included 48 participants and 200 brides-to-be. **Results:** According to the findings of this study, only 10% of brides-to-be visit health centers to check their health before getting married. The preconception health services provided did not adhere to the Health Department's standard guidelines for health services before pregnancy. Due to the large working area of the public health center and the limited number of health workers, the delivery of information about preconception health is severely limited. **Conclusions:** It is necessary to expand the delivery of preconception health information by involving the community and social support from local governments in order to develop regulatory policies on the obligation of brides-to-be to have their health checked before marriage.

Keywords: Preconception Care, Pregnancy, Unplanned, Marriage, Social Support.

1. INTRODUCTION

Couples of brides-to-be, in general, want to become pregnant as soon as they marry, but they do not prepare for health before entering the pregnancy period, so that during pregnancy, there are health problems that are frequently found in pregnant women, such as nutritional problems (Anemia and Chronic Lack of Energy) and diseases that accompany pregnancy that can have a negative impact on the health of the pregnancy period. When compared to other maternal and child health services, preconception health services for brides and grooms-to-be have not been a community priority.

Preconception care (PCC) is recommended by the World Health Organization (WHO) as a way to improve women's and couples' health and well-being, as well as subsequent pregnancy and child health outcomes (1). Brides-to-be are one of the target groups for reducing the birth of the stunting generation, with initial action to screen reproductive health for prospective brides / prospective couples of childbearing age (PUS) 3 (three) months premarital, according to Regulation President Republic Indonesia number 72 of 2021 concerning the Acceleration of Stunting Reduction (2).

As a regulation that supports preconception health services, the Minister of Health of the Republic of Indonesia issued Regulation No. 21 of 2021 regarding the implementation of health services for the time before pregnancy, during pregnancy, during childbirth, and during puerperium, as well as the implementation of contraceptive services and sexual health. The regulation's objectives are to reduce

the amount of pain and death experienced by mothers and babies, to ensure quality of life and the fulfilment of reproductive rights, to protect and strengthen the commitment to comfortable health services and quality for mothers and children in response to scientific and technological advances, and to protect and improve that commitment. Preconception health services, such as health promotion and targeted protection, are included in the Primary Prevention stage (3).

In 2017, the Republic of Indonesia's Ministry of Health also issued Guidelines for Health Services before pregnancy (preconception). The guidelines have three target groups: adolescents, brides-to-be, and childbearing couples, with a focus on the promotion and prevention of services through early identification and communication of educational information (IEC). The management of health services prior to pregnancy provides various and relevant priorities to the specific needs of each target group, including interviews, physical examinations, supporting examinations, and management (4).

Pregnancy planning status and the use of preconception health precautions are closely related. Because not all pregnant women take preconception precautions, preconception care should be a regular component of health services. (5). Pregnant women who are trying to get pregnant need help in order to change their lifestyle and health in order to better adhere to preconception care guidelines (6). Preconception care services enable childbearing couples to improve their health-related behaviors prior to pregnancy. To increase service utilization, community-level strategies to promote preconception care to couples of childbearing age, particularly young and multipara women, should be developed (7).

Physical examinations, instruction, and counselling regarding reproductive health are all included in preconception health services. Lack of ongoing community information is one factor that prevents people from using preconception health services, especially brides-to-be. Other factors that prevent preconception health services from being used include other medical conditions. In order to take advantage of preconception health services that have been prepared in healthcare facilities, future mothers-to-be who intend to begin pregnancies after marriage and who are preparing for motherhood optimally need accurate and ongoing preconception health information.

Deli Serdang Regency is the largest district in North Sumatra province and has contributed to the number of maternal deaths in North Sumatra in the last five years, with brides-to-be still underutilizing health services during the preconception period. This research aims to explore the use of preconception health services by brides and grooms-to-be in Deli Serdang Regency.

2. METHODS

1. Type, Design, Time, and Place of Research

The type of research is mixed methods. The research was conducted from March to September 2023. It was carried out at eight public health centers in Deli Serdang Regency. This study was approved by the Polytechnic of Health Ministry of Health Ethics Committee in Medan, North Sumatra, Indonesia (No. 01.046/KEPK/POLTEKKES KEMENKES MEDAN 2023).

2. Participants

This study used *purposively* determined participants/informants, namely 40 people consisting of; 24 key informants, namely; eight Heads of public health centers, eight bride-to-be programme managers and eight Heads of Office of Religious Affairs. While the informants numbered 16 people, consisting of; eight Village Chiefs and eight brides-to-be from each health center of the study site. This study involved 200 brides-to-be to measure their knowledge and attitudes about preconception health.

3. Data Collection

In-depth interviews, documentation, observation, and questionnaires are used to collect data. Data is collected from multiple sources using various data collection techniques (triangulation), and this process is repeated indefinitely until the data is saturated. The research instrument consists of interview guides for all informants and questionnaires for brides-to-be who have undergone construct validity testing, in which the questionnaire is built according to the aspects to be measured based on relevant theories and then reviewed by experts (expert judgment).

4. Data Analysis Methods

The Miles and Huberman Model is used in this study for qualitative data analysis, which is divided into three stages: data reduction, data display (data presentation), and conclusion drawing / verification (drawing conclusions and verification). Quantitative data was analysed descriptively.

3. RESULTS

a. Preconception Health Services at Public Health Centres for Prospective Brides and Grooms

Every public health center and basic health facility must offer preconception health services to engaged women as part of their promotional and preventive programmes. All of the health centers on the study site offer preconception health services. Due to the lack of a separate room for medical examinations and counselling for brides-to-be, services for brides-to-be are combined in the Family Planning service room or the children's service room.

The Republic of Indonesian Ministry of Health published Guidelines for Pre-Pregnancy Health Services in 2017; however, observations on the documentation of preconception health services, the type of health checks performed on prospective brides at each public health centre, and the services provided do not follow these guidelines. The preconception health services provided have referred to the provisions in each public health center's Health Operational Assistance, according to in-depth interviews with the officer in charge of the bride-to-health be's programme at the public health center.

The following table lists the various preconception health services that brides-to-be can access at the public health facility where the study is being conducted:

Table 1: Preconception Health Services for Prospective Brides And Grooms at Public Health Centers

Examinations performed	Public Health Center							
	Namorambe	Kenangan	Sei Mencirim	Deli Tua	Patumbak	Aras Kabu	Gunung Tinggi	Talun Kenas
Height	Available	Available	Available	Available	Available	Available	Available	Available
Weight	Available	Available	Available	Available	Available	Available	Available	Available
Blood Pressure	Available	Available	Available	Available	Available	Available	Available	Available
Upper Arm Circumference	Available	None	Available	Available	Available	Available	Available	Available
Haemoglobin	Available	When necessary	None	When necessary	None	None	None	When necessary
Blood Type	Available	Available	None	None	None	Available	None	None
HIV	None	Available	None	None	Available	Available	Available	None
Syphilis	None	Available	None	None	None	None	Available	None
Hepatitis	None	Available	None	None	None	None	None	None
Blood Glucosa	None	None	None	None	None	Available	Available	None
Urine Protein	None	None	None	None	None	Available	None	None
Tetanus immunization	None	None	Available	Available	None	None	Available	None
Sulfas Ferrosus	None	None	Available	Available	None	None	Available	When necessary
Counseling	Available	Available	Available	Available	Available	Available	Available	Available

Health services for brides-to-be are provided at no cost, and public health centers with Regional Public Service Agency service rates are applied in accordance with the Regent of Deli Serdang's Decree. The community has not used the bride and groom's health services to their full potential. The bride-to-be visits the health center one to two weeks before the wedding. Since the coronavirus outbreak, bride-to-be visits have decreased. The documentation data on the visits of brides-to-be who check their health to the health center show that only about four to six brides-to-be per month (about 10%) of the number of brides-to-be who record a wedding at the Office of Religious Affairs (KUA) in the sub-district amounting to between 40 to 50 couples of prospective brides every month and increasing in the months of Eid al-Fitr and Eid al-Adha.

According to the findings of in-depth interviews, all heads of public health centers stated that they have been cooperating cross-sectorally with KUA since 2019 for preconceptions on the health of brides-to-be. KUA is in charge of encouraging and encouraging brides-to-be to visit health centers for health checks and reproductive health counselling. There was a socialization meeting for all village heads on the preconceptions of health services for brides and grooms-to-be, but there was no evaluation, there has been no collaboration with other religious institutions.

According to the findings of an in-depth interview with the Head of KUA at the research site, all KUA Heads admitted to a joint agreement between KUA and public health center to support each other in improving health services for brides and grooms-to-be. The collective agreement has not been implemented optimally, as it only encourages brides-to-be to have their health checked and obtain a health certificate from the public health center.

The findings of interviews with eight village heads from eight sub-districts to learn more about the flow of administrative services for brides-to-be who go to the village head's office to register their marriage or obtain a marriage certificate. Prospective brides and grooms are encouraged to go to the nearest health center for a medical exam. The bride and groom, on the other hand, are still served by the marriage registration administration despite the fact that they have not had a medical check-up and do not have a health certificate from the health center.

b. Knowledge and attitudes of prospective brides about preconception health care.

According to the findings of in-depth interviews with 8 brides-to-be from 8 health centers, as many as 6 people (75%) of informants of prospective brides said they had never received information about the obligation to have a medical examination before marriage, nor had they received a recommendation to have their health checked before marriage. The marriage requirements are completed in accordance with the administrative needs established by the Office of Religious Affairs in the sub-district. The bride and groom can register their marriage at the Office of Religious Affairs if all of the requirements are met. As stated below, all brides-to-be believe that their health is in good shape and that they are ready for marriage.

Table 2 below lists the characteristics of the brides-to-be who participated in the study.

Table 2: Characteristics and Sociodemographies of Brides-to-be

Variable	Category	Frequency	%
Respondents' ages	Average age= 24,39		
	SD= 4,920		
	15-24 year	117	58,5
	25-34 year	77	38,5
	35-49 year	6	3,0
Respondent's education level	Low education	13	6,5
	Secondary education	133	66,5
	Higher education	54	27,0
Religion	Islam	169	84,5
	Protestant Christianity	21	10,5
	Catholic	10	5,0
Tribe	Javanese	115	57,5
	Batak Toba	26	13,0
	Karo	25	12,5
	Malay	29	14,5
	Minangkabau	2	1,0
	Mandailing	3	1,5
The main occupation of the respondent	Civil servants	9	4,5
	Private employees	61	30,5
	Self employed	51	25,5
	Laborer	43	21,5
	Doesn't work	36	18,0
Respondents' earnings	< IDR. 3.000.000,-	85	42,5
	≥ IDR. 3.000.000,-	115	57,5
Sources of Information	Health Workers	44	22,0
	Electronic/print media	66	33,0
	Family/friends	31	15,5
	Never	59	29,5

Brides and grooms-to-be have an average knowledge of 67.66 with SD = 5,745, an average attitude of 75.43 with SD = 4,505, and an average action of 66.83 with SD = 9,367. The table 3 that follows contains more details.

Table 3: Average of the Brides-to-be Knowledge and Attitudes

Variable	Average	SD	At least-maximum	95% CI
Knowledge	67,66	5,745	50-85	66,86-68,46
Attitude	75,43	4,505	60-85	74,80-76,05

4. DISCUSSION

a. Preconception health services for future brides and grooms at the public health center.

Brides-to-be have not taken full advantage of preconception health services. Preconception services are still underutilized by brides and grooms-to-be, with only about 10 percent brides-to-be visiting the health center each month, and brides-to-be visits have decreased since the coronavirus outbreak. The Republic of Indonesia's Ministry of Health published Guidelines for Health Services Preconceptions in 2017, but none of the health center research locations follow them when providing health checkup services to prospective brides and grooms. Cross-sectoral collaboration between public health centers, village governments, and other religious institutions has not been optimal in evaluating and monitoring health check-up visits for brides-to-be to public health centers.

The study's findings are consistent with the findings of previous research, who found that maternal preconception care is underutilized. The mother's knowledge of preconception care, the birth of a troubled baby, having chronic health problems, and husband support are all reasons for the need to improve preconception care utilization (8). To increase awareness of age-related fertility decline and enhance the preconceptional environment, every health professional who interacts with women of advanced reproductive age should take every opportunity to provide preconceptual advice (9). By strengthening health extension programmes and offering counselling to all reproductive age groups who visit healthcare facilities for any services, health promotion programmes are advised to increase community knowledge and awareness about preconception care. Community members must be involved in the development and implementation of health programmes, including religious leaders and other important people (10).

Preconception services use can be increased through a variety of efforts, one of which is easy, useful, and long-term access to information tailored to the needs of every woman preparing to begin a pregnancy. Preconception health services should be the primary promotional and preventive programmed in public health. Preconception health services should be made available to the target population at all times, and information should be expanded at all stages of the life cycle.

b. Knowledge and attitudes of the bride-to-be about preconception health

The need for a medical examination, according to the bride-to-be, is only when there are symptoms of unhealthy feelings, and most of them do not receive the advice to check their health at the health center before marriage. Information about preconception health services for brides-to-be has not been widely and evenly disseminated. The bride and groom's wedding preparations are still focused solely on

the series of stages of the event that will be carried out by the family and all material needs related to the wedding event. This is most likely due to a lack of information about preconception health from credible sources, particularly for brides and grooms-to-be.

All bride informants agreed and gave a positive response to the existence of preconception health services for the bride and groom, as well as the requirement to conduct a medical examination before the wedding. However, some informants stated that they were unable to visit the health center due to work obligations, and that there was no special leave available for medical check-ups prior to the wedding.

The study's findings are relevant to research findings previously that increased maternal knowledge will place a higher value on preconception health preparation perceptions. This highlights the importance of educating women of childbearing age about the importance of preconception health preparation. Lack of information from medical professionals and other media sources can lead to ignorance about preconception health care (11). Preconception health education and counselling increases the likelihood that women will learn more and make healthier lifestyle choices. In order to improve reproductive health, preconception care should be encouraged as a means of health problem prevention (12).

Most women agree that maintaining a healthy lifestyle during the preconception period is crucial, with regular physical activity ranking among the top priorities (13). The significance of preconception health in general is not well understood in detail. It showed a desire to learn more about preconception health, which opens the door to promoting preconception healthcare through evidence-based instruction, social media campaigns, and life-course-based healthcare systems (14).

Women's health-promoting behaviours can be improved by changing their attitudes and beliefs about how their own abilities and actions affect pregnancy outcomes. This can also aid in the expansion of preconception health programmes and the development and evaluation of those programmes. With a focus on the couple's behaviour and attention effects on pregnancy and the foetus, preconception counselling should take strengthening women's internal beliefs into consideration (15).

Women who have planned or unplanned pregnancies report that they can engage in preconception health behaviors and have limited involvement in health care. Expanding the pregnancy planning paradigm by recognizing when pregnancy should or should not occur, valuing reproduction from various perspectives based on race or ethnicity, class or socioeconomic status, and reducing associated stigma. Allowing women to make their own pregnancy decisions is an important step toward empowering all women to build the life and family they desire (16).

An environment of social and cultural support at home and at work may help women have healthy pregnancies. A standardized practice guideline for preconception care is necessary to support home- and community-based education in the nearby provinces. Initiatives to prepare mothers and fathers through public education may provide them with useful information that will aid in their decision-making (17). The providing health education and health promotion to women is critical for improving their knowledge of preconception care (18). It is therefore strongly advised that preconception care among healthcare providers become a standard of care in order to achieve positive maternal and fetal outcomes (19).

Good preconception health behaviors of brides-to-be will have an impact on their health before the wedding, allowing them to plan and prepare for a healthy pregnancy for the health and safety of women in their reproductive duties, as well as the birth of a superior and quality generation, which every family expects.

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References

- 1) World Health. Meeting to develop a global consensus on preconception care to reduce maternal and childhood mortality and morbidity. WHO Headquarters, Geneva Meet report Geneva ... [Internet]. 2013;78. Available from: <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Meeting+to+Develop+a+Global+Consensus+on+Preconception+Care+to+Reduce+Maternal+and+Childhood+Mortality+and+Morbidity#0%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Meeting+t>
- 2) Republik LN, Indonesia. Peraturan Presiden Republik Indonesia Nomor 72 Tahun 2021 tentang Percepatan Penurunan Stunting. 2021.
- 3) Kemenkes R. Peraturan Menteri Kesehatan Nomor 21 Tahun 2021. 2021;1–184.
- 4) Kementerian Kesehatan RI. Buku Pedoman Pelayanan Kesehatan Masa Sebelum Hamil. 2017.
- 5) Borges ALV, dos Santos OA, Nascimento N de C, Chofakian CB do N, Gomes-Sponholz FA. Preconception health behaviors associated with pregnancy planning status among Brazilian women. *Rev da Esc Enferm*. 2016;50(2):208–15.
- 6) Chivers BR, Boyle JA, Lang AY, Teede HJ, Moran LJ, Harrison CL. Preconception health and lifestyle behaviours of women planning a pregnancy: A cross-sectional study. *J Clin Med*. 2020;9(6).
- 7) Du L, La X, Zhu L, Jiang H, Xu B, Chen A, et al. Utilization of preconception care and its impacts on health behavior changes among expectant couples in Shanghai, China. *BMC Pregnancy Childbirth*. 2021;21(1):1–8.
- 8) Asresu TT, Hailu D, Girmay B, Abrha MW, Weldearegay HG. Mothers' utilization and associated factors in preconception care in northern Ethiopia: A community based cross sectional study. *BMC Pregnancy Childbirth*. 2019;19(1):1–7.
- 9) Chronopoulou E, Raperport C, Serhal P, Saab W, Seshadri S. Preconception tests at advanced maternal age. *Best Pract Res Clin Obstet Gynaecol* [Internet]. 2021;70:28–50. Available from: <https://doi.org/10.1016/j.bpobgyn.2020.11.003>
- 10) Teshome F, Kebede Y, Abamecha F, Birhanu Z. Why do women not prepare for pregnancy? Exploring women's and health care providers' views on barriers to uptake of preconception care in Mana District, Southwest Ethiopia: A qualitative study. *BMC Pregnancy Childbirth*. 2020;20(1):1–13.
- 11) Linda I, Santosa H, Siregar MFG, Lubis Z. Characteristics, Knowledge, and Perception of Expectant Mothers About Preconception Preparations. *Proc First Int Conf Heal Soc Sci Technol (ICoHSST 2020)*. 2021;521(ICoHSST 2020):121–6.
- 12) Fransen MP, Hopman ME, Murugesu L, Rosman AN, Smith SK. Preconception counselling for low health literate women: An exploration of determinants in the Netherlands 11 Medical and Health Sciences 1117 Public Health and Health Services 17 Psychology and Cognitive Sciences 1701 Psychology. *Reprod Health*. 2018;15(1):1–12.
- 13) Khan NN, Boyle J, Lang AY, Harrison CL. Preconception health attitudes and behaviours of women: A qualitative investigation. *Nutrients*. 2019;11(7).

- 14) McGowan L, Lennon-Caughey E, Chun C, McKinley MC, Woodside J V. Exploring preconception health beliefs amongst adults of childbearing age in the UK: A qualitative analysis. *BMC Pregnancy Childbirth*. 2020;20(1):1–13.
- 15) Mirghafourvand M, Babapour J, Mohammad-alizadeh- S, Yngyknd SG. The effect of preconception counselling on health locus of control and stress in Iranian women : a randomized control trial. *Women Health [Internet]*. 2019;0(0):1–16. Available from: <https://doi.org/10.1080/03630242.2019.1626790>
- 16) Lang AY, Harrison CL, Barrett G, Hall JA, Moran LJ, Boyle JA. Opportunities for enhancing pregnancy planning and preconception health behaviours of Australian women. *Women and Birth [Internet]*. 2020;34(2):e153–61. Available from: <https://doi.org/10.1016/j.wombi.2020.02.022>
- 17) Kim HW, Kim DH, Lee HY, Lee YJ, Ahn HY. Adult perceptions of healthy pregnancy: A focus-group study. *Int J Environ Res Public Health*. 2020;17(7).
- 18) Teshome F, Kebede Y, Abamecha F, Birhanu Z. What do women know before getting pregnant? Knowledge of preconception care and associated factors among pregnant women in Mana district, Southwest Ethiopia: A community-based cross-sectional study. *BMJ Open*. 2020;10(7):1–9.
- 19) Bekele MM, Gebeyehu NA, Kefale MM, Bante SA. Knowledge of Preconception Care and Associated Factors among Healthcare Providers Working in Public Health Institutions in Awi Zone, North West Ethiopia , 2019 : Institutional-Based Cross-Sectional Study. 2020;2020:1–7.