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Nutritional Knowledge of Prospective Brides in Indonesia: A Systematic Review

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Abstract – One of the risk factors for stunting is the mother's lack of nutritional knowledge. Therefore, it is necessary to know how the nutritional knowledge of the mother before getting married. This research method was a systematic review using the PRISMA-P guidelines and the PICOS criteria in various research articles on GARUDA. The results found only 3 articles that met the criteria with different definitions of nutritional knowledge. The average percentage of respondents with good nutritional knowledge is below 10%, meaning that out of 10 prospective brides only one has good nutritional knowledge. In Suscatin, guidance and counseling related to health knowledge have been scheduled, but there needs to be an evaluation of the program that has been running.

Abstrak – Salah satu faktor risiko terjadinya stunting adalah kurangnya pengetahuan gizi ibu. Oleh karena itu, perlu diketahui bagaimana pengetahuan gizi ibu sebelum menikah. Metode penelitian ini adalah tinjauan sistematis dengan menggunakan pedoman PRISMA-P dan kriteria PICOS dalam berbagai artikel penelitian tentang GARUDA. Hasilnya hanya ditemukan 3 artikel yang memenuhi kriteria dengan definisi pengetahuan gizi yang berbeda. Rata-rata persentase responden dengan pengetahuan gizi baik dibawah 10%, artinya dari 10 calon pengantin hanya satu yang memiliki pengetahuan gizi baik. Di Suscatin sudah dijadwalkan bimbingan dan konseling terkait pengetahuan kesehatan, namun perlu ada evaluasi terhadap program yang sudah berjalan.

Keywords – Brides and grooms, Nutritional knowledge, Systematic review, Suscatin

INTRODUCTION

Stunting is one of the problems that arise due to nutritional deficiencies that occur over a long time. A child will be identified to be stunted if he/she has with a z-score <-2 SD. This stunting problem will affect the intelligence Quotient (IQ) ability, increase the risk of death, motor development problems, low language skills, and functional imbalances in children.[1],[2].

The problem of stunting occurs globally. In 2017, the prevalence of stunting in the world reached 22.2%, or around 150.8 million children under five were stunted, more than half (55%) from Asia. In the same year, southern Asia was the largest contributor to stunting prevalence and Southeast

Asia was the second largest contributor to stunting prevalence in the Asian continent. In Southeast Asia, the largest stunting rate was found in East Leste (50.2%) and Indonesia (36.4%) as second ranking.[1].

The Baseline Health Research (Riskesdas) in 2007, 2010, 2013, and 2018 reported that in Indonesia the prevalence of stunting was still quite high. It was found that there was a fluctuating prevalence of stunting under-five cases by 36.8%, 35.6%, 37.2%, and 30.8%, respectively, according to Riskesdas. [1],[3],[4], [5] Even though there was a decrease, it is still necessary to get attention because of the risk of health problems in the future. Therefore, the government has prioritized reducing stunting cases to 14% in 2024.

Various studies have proven that stunting can be prevented by fulfilling nutrition before marriage.[6] Abnormal maternal weight before pregnancy increases the risk of health problems in pregnancy outcomes. This is related to the study of Pan et al, who showed that an abnormal prepregnancy Body Mass Index (BMI) was associated with an increased risk of adverse pregnancy outcomes. In particular, underweight pregnant women appear to be at greater risk for adverse pregnancy outcomes in rural China.[7], therefore it is important to ensure that the nutritional status of the prospective bride and groom is normal.

However, in society, preparations are often made only of a physical nature for ceremonial weddings. There are more preparations after the event, one of which is nutrition and health preparation. Because the nutritional status and health of women before pregnancy, during pregnancy, and while breastfeeding is a very critical period for the growth and development of children. The first 1000 days of life are sensitive times that need attention. If the child is currently experiencing nutritional problems, the consequences will be permanent and cannot be corrected.[6],[8].

One of the preparations that need to be done is to increase the bride and groom's knowledge about how to prepare good nutrition for pregnancy.[9],[10] Nutritional knowledge is knowledge about food, food and nutrients, foods that are sources of nutrients, and foods that are safe for consumption to obtain optimal health. It also discusses how to prevent the body from disease, and good food processing methods so that the nutrients in food are not lost.[11] The prospective bride and groom are the forerunner to the formation of a family so before marriage, the bride and groom need to prepare for optimal health conditions to obtain a healthy pregnancy. Thus, it can give birth to children who will become the next healthy generation, and create a healthy, prosperous, and quality family.[12]

Marriage preparation needs to be understood by individuals and couples because it has an impact on marriage, including the desire to live happily, expectations of partners, and perceptions of attitudes and preferences. One form of preparation that is carried out is following guidance and counseling. Premarital guidance and counseling is an effort to help a person or a couple in planning and preparing for various things that are

considered important in a couple's resource-based marriage. The goal is that before marriage they already have the knowledge, attitudes, and skills in developing a vision of married life. The premarital guidance and counseling are arranged based on content, intensity, method, target, and delivery. The knowledge provided during guidance and counseling is useful for developing aspects of individual maturity and skills in achieving a prosperous family.[13].

In Indonesia, premarital guidance has been carried out at the local Office of Religious Affairs (KUA). The program called the Prospective Bride Course (= Kursus Calon Pengantin) and abbreviated as Suscatin is a joint program of the Ministry of Health and the Ministry of Religion. By participating in this activity, the prospective bride and groom will get a certificate of Marriage Eligibility Certificate. In addition, there are several health checks, such as Thalassemia screening. After carrying out the examination, the prospective bride and groom will receive a certificate of examination of the prospective bride and groom. Certificates will be a requirement for prospective brides when registering marriages at the local village or sub-district office.

The material presented by KUA is quite complete, which includes marriage procedures and procedures, religious knowledge, laws, and regulations in the field of marriage and family, rights and obligations of husband and wife, women's reproductive health, family management, and psychology of marriage and family.[14] Theoretically, this material is considered sufficient as a provision in marriage. However, there are often problems in the field that make the course implementation not run as in the existing guidelines. This is related to the assumption that the course is only a mere formality in the procedure for registering marriages in the state.

One of the problems reported by the KUA extension officer in Kutaraja. According to him, prospective brides and grooms who come for guidance still consider that this premarital guidance is only a formality and only fulfills the requirements for marriage. This causes the bride and groom to be not optimal in following the guidance. In addition, there is an assumption that guidance is the only advice that can be obtained outside the guidance of KUA. In the end, because they did not focus on the implementation of the

guidance, the knowledge to raise a family was minimal.[15].

In addition, problems from the KUA were also found in other locations. According to Latif, there were several obstacles in Bone Regency, namely the weak mastery of the material from the Suscatin instructor, the limited place for activities, the lack of interest and motivation of the Suscatin participants, the low knowledge of the Suscatin participants, and the lack of costs for implementing the Suscatin activities. [16], weak evaluation of this program is also an obstacle that ultimately cannot know whether there is an increase in knowledge of the prospective bride and groom.[17],[18], the lack of data related to the evaluation of the nutritional knowledge of the prospective bride and groom is also a limitation in knowing how this problem is in the population.

Therefore, this study was conducted to explore various studies in the community that was carried out to find out how the nutritional knowledge possessed by the prospective bride and groom when registering for their marriage at the KUA.

METHOD

This study used a systematic review research design. The processing and reporting methods are guided by the guidelines of the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). The review team is a team consisting of several experts in their fields. The studies selected were based on PICOS-adjusted criteria; Participants (respondents), interventions (treatment), Comparators as well as outcome(s) of interest (comparison and interesting results), and study design (research design).

Participants

Research with respondents who meet the criteria is research conducted on prospective brides in Indonesia; men and or women.

Interventions

We have research that includes research that looks at the frequency distribution of nutritional knowledge of brides and grooms reported by researchers.

Comparators or outcomes of interest

An assessment that identifies nutritional knowledge among brides and grooms in Indonesia.

Research design

The research design included was a cross-sectional design. We issue case reports and case series designs. Include only original research involving humans as respondents. The language of the article used is Indonesian. The time of publication of the article is from 2016 to 2021. The search was carried out in November 2021.

Information sources and search strategies

The main source used to search for research articles is the *Digital Reference Garba* (Garuda Kemdikbud). We collect all forms of research published in the form of related journal articles and meet the PICOS criteria. The search was conducted by a review team who understands the field of nutrition and is experienced in searching for research articles. The keywords included are "bride and groom", "bride and health knowledge", and "bride and nutritional knowledge"

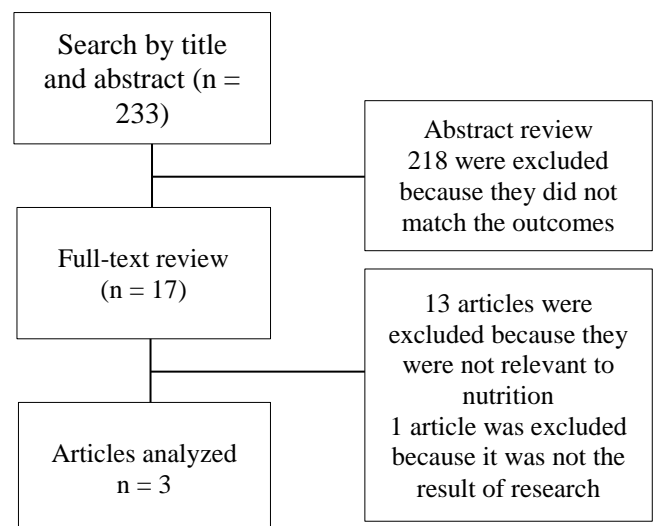


Figure 1. Diagram of article selection on Garuda

RESULT AND DISCUSSION

Search results on Garuda Kemdikbud show that there are 233 abstracts and research titles related to prospective brides and/or nutritional knowledge. After a review of the abstracts, 218 were excluded because they were not by the required research objectives. Then it was carried out on 17 articles in full and found 13 articles not relevant to nutrition, and one was not the result of research or did not provide principles but was a community service activity.

The descriptions of the three selected studies are shown in Table 1. Based on the number of samples, the research of Paratmanitya et.al [19], has more respondents than the other two studies. The age of the study sample varied, ranging from 16-49 years. The nutritional knowledge measured also varies. In research by Melani & Kuswari [20], nutritional knowledge measured was about balanced nutrition guidelines, in Paratmanitya et.al study [19], was knowledge about nutrition-related to preconception, namely preparation before pregnancy, while in Nurlinda et.al study [21], was knowledge about nutrition-related to stunting prevention. Based on the intervention in research, Melani & Kuswari [20], and Paratmanitya et. Al

[19], did not provide intervention, this study was a measurement to determine the nutritional knowledge of the prospective bride and groom in the population. While Nurlinda et.al study [21], provided intervention after measuring the knowledge of the study sample.

Stunting is a condition of failure to thrive in children under five (aged 0-60 months) as a result of long-term malnutrition so that children are too short for their age. Malnutrition usually occurs since the baby is in the womb, in the early days after the baby is born until two years, referred to as the first 1000 days of life. However, the stunting condition will be visible at the age of 2 years.[22]

Table 1. Description of articles that meet the PICO criteria

No	Author and year	Study design	Number of samples	Age	Nutritional knowledge variable	Interventions carried out	Results
1	Melani & Kuswari [20]	Cross-sectional	112 respondents	The bride and groom are 16-45 years old; the groom is at least 19 years old	Knowledge of balanced nutrition	No intervention	The average score of nutritional knowledge in the less group was $47,589 \pm 13,882$ for the groom and $48,482 \pm 14,614$ for the bride. Knowledge category: <ul style="list-style-type: none"> • Less: 76.78% • Sufficient: 22.32% • Good: 0.90%
2	Paratmanitya et al [19]	Cross-sectional and Baseline data from Cluster randomized trial	173 respondents	Categorized directly into: <20, 20-35, and <35 years old	Knowledge of preconception nutrition asked with 25 questions	The intervention carried out is a mentoring program (but this is a continuation that is not reported in this article)	Knowledge of preconception nutrition was said to be good if it answered the question 75% correctly Knowledge category: <ul style="list-style-type: none"> • Less: 92.5% • Good: 7.5%
3	Nurlinda et.al [21]	Quasi-experimental	47 respondents	Not mentioned	Knowledge about stunting prevention	Intervention with counseling using animation media	Knowledge about stunting prevention before and after the intervention is categorized into 3 categories, namely: less, sufficient, and high Pretest Knowledge: <ul style="list-style-type: none"> • Less: 55.3% • Sufficient: 40.4% • Hight: 4.3% Posttest knowledge: <ul style="list-style-type: none"> • Less:0 • Sufficient: 14.9% • Hight:85.1%

Chronic malnutrition in this period greatly affects the future of a child. The impact of malnutrition in this period will persist until adulthood and this can cause the risk of suffering from degenerative diseases faster than children with normal nutritional status [23]. Children who experience stunting have the risk of inhibiting motor, cognitive and verbal development so that development becomes less than optimal. The slow development of children causes the low learning capacity and achievement of children in school.[24], in the future, this will make it difficult for children to compete and gain achievements in various fields such as sports. The long-term impact is the decline in the quality of human resources in Indonesia.[25],[26].

One of the factors related to stunting is teenage pregnancy. Adolescents with pregnancy are still experiencing a growth phase. So that there will be two very important nutritional needs, namely for the growth of the mother herself and the fetus. If the intake is met and there are additions during the pregnancy phase, it is certainly not a worry. Unfortunately, most cases of pregnancy in adolescents occur in mothers with suboptimal nutritional intake, resulting in a struggle for nutrients which results in delayed fetal development. This condition will increase the risk of Intrauterine Growth Restriction (IUGR) and Low Birth Weight (LBW). Both of these events can trigger babies to experience stunting in the next phase. Therefore, various efforts have been made to suppress the occurrence of pregnancy in adolescents in Indonesia.[27],[28] In addition, adolescents are considered to be still in the process of transitioning from child to adult. So, it is still easy to be tempted to certain behaviors if he/she does not have good knowledge. In the field of nutrition, adolescents face a triple burden of undernutrition, overnutrition, and specific malnutrition. This condition is also related to several problems such as eating disorders, bad body image, consumption of fast food, and others.[29],[30].

Therefore, various efforts have been made by the government to reduce the prevalence of teenage pregnancy. One of them is revising the age of marriage for women. In the latest marriage law, namely Law number 16 of 2019, a revision has been made to the state-approved marriage age. Previously, it was stated that marriage was only permitted if the man had reached the age of 19

years and the woman had reached the age of 16 years, then a revision was made to the minimum age of marriage to 19 years for both men and women [31].

The next effort is to carry out Suscatin to prepare the bride and groom to know to maintain health and prepare for pregnancy. Suscatin is a program in the form of guidance and counseling given to prospective brides as a form of providing knowledge, attitudes, understanding, and skills in marriage. Implementation time is quite short and solid. The legal basis for its implementation is the Regulation of the Director-General of Islamic Community Guidance at the Ministry of Religion No. DJ.II/542 of 2013. So, the government has taken the form of equipping the bride and groom to have the knowledge, attitudes, understanding, and skills in household practice. It is hoped that with this provision, married couples can overcome various problems in the family [14].

In terms of health, the important material presented is reproductive health to maintain health to produce offspring in the household. The presenters who delivered this material were officers from the National Family Planning Coordination Board (BKKBN) and the Public Health Center (Puskesmas). The material presented includes three things, namely family planning, efforts to improve family nutrition, and immunization.[32],[33].

Family planning (KB) is often translated as child refusal programs. The family planning program is an effort to achieve happiness and prosperity in the family. The benefits of family planning for families include maintaining the health of mothers and babies, encouraging breastfeeding and good parenting, preventing unplanned pregnancies, regulating births, and other benefits. This knowledge is conveyed to the prospective bride and groom as a form of reducing maternal and infant mortality due to childbirth that is too close apart or pregnancy at a risky age. The next information is the role of nutrition in the family. The third information is the importance of immunization for the bride and groom, such as DPT, TT, and HPV immunizations. The bride and groom must understand this as an effort to prevent certain diseases that occur after marriage.[32],[33].

However, due to various obstacles that have been presented in the introduction, health information is not conveyed properly. The prospective bride and

groom finally do not understand the preparations that must be made before marriage, especially for women who are related to pregnancy preparation. This is illustrated by the results of a study of research in Indonesia. Of the three studies analyzed, the average percentage of respondents with good nutritional knowledge is below 10%, meaning that out of 10 prospective brides only one has good nutritional knowledge. This figure can not necessarily be generalized to all prospective brides in Indonesia, so it requires further research with a larger number of respondents representing regions in Indonesia.

In terms of the assessment of research variables, there were some differences in measuring the nutritional knowledge of the prospective bride and groom, the knowledge measured is related to balanced nutrition guidelines, preconception nutrition, and stunting prevention. Therefore, it is still important to carry out further studies on nutritional knowledge needed in preparation for pregnancy for prospective brides.

In the research that conducted the intervention, it was found that there was an increase in the knowledge of the bride and groom related to stunting prevention. To prove the effectiveness of a program requires research with a larger and more representative sample of the various characteristics of the population in Indonesia. Some community service activities carried out can increase the nutritional knowledge of the prospective bride and groom.[34-37], there are various approaches and methods used to increase the nutritional knowledge of the bride and groom, in the future a systematic review will be carried out to explore the various approaches and methods used to increase the nutritional knowledge of the prospective bride and groom.

One of the limitations in conducting this study is that the sources are only limited to Garuda Kemdikbud. This is because not all journals in Indonesia are indexed with the Garuda Kemdikbud. So the results obtained are small. In the future, studies can be carried out on broader indexation sources or research on regions from developing countries.

CONCLUSION

From the results of a review of the three studies, it was concluded that the percentage of prospective

brides and grooms who know information related to nutrition is still low. The nutritional knowledge measured was also varied, namely knowledge of balanced nutrition guidelines, preconception nutrition, and stunting prevention. In Suscatin, guidance and counseling related to health knowledge have been scheduled, but there needs to be an evaluation of the program that has been running.

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