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**Original Research Article**

# Factors That Influence the Behaviour of Pregnant Women toward Nutritional Fulfilment in Denpasar City

Sagitarini, P.N[1*], Agustini, N. K. T[2], Dharma Wisnawa I Nyoman[3]

[1, 2] Faculty of Health Institute of Technology and Health Bali
[3] Public Health Center III of North Denpasar

**Abstract:** The mother nutritional needs during pregnancy must be met properly, because the fetal nutrition depends on the nutrition of the mother. Based on the results of Riskesdas in 2013 obtained that the proportion of pregnant women aged 15-49 years who are at risk in experiencing chronic energy lack in Indonesia were 24.2% and in Bali were 10.1%.The incidence of pregnant women with chronic energy lack is influenced by various factors that are closely related to the behavior of pregnant women to fulfill their nutrition. There are three factors that affect behavior, namely predisposing factors or factors that facilitate (Predisposing Factor), Supporting Factors (Enabling Factor) and Driving Factors (Reinforcing Factor). The purpose of this study was to determine the factors that influence the behavior of pregnant women in the fulfillment of the nutrition. This study employed descriptive design with cross-sectional approach. There were 99 respondents recruited in this study by using nonprobability sampling. The data were collected by using questionnaire. The finding of this study showed that factors that influence the behavior of pregnant women in the fulfillment of nutrition were age (value p = 0.020), education (value p<0.001), attitude (value p<0.001), and family support (value p<0.001). While parity (value p = 0.082) and knowledge (value p = 0.226) did not affect the behavior of pregnant women in the fulfillmen of the nutrition. Maintaining pregnancy is important to detect the growth and development of the baby in the womb. The mother should pay attention to the nutrients consumed during pregnancy.

**Keywords:** Factors, behavior, pregnant woman, nutritional fulfillment.

# BACKGROUND

Pregnancy is a physiological process which occurs in every woman. This is the most important period for a pregnant woman, so it requires more attention. Pregnant women need more nutritional intake to meet the nutritional needs of the mother and fetus. This is because the nutritional intake affects the condition in the mother and fetus to be born (Pratiwi *et al*, 2014). The process of pregnancy causes the increase of metabolism, which necessary for fetal growth and development (Susilowati *et al*, 2016).

The nutritional needs of the mother during pregnancy must be met properly because the fetal nutrition depends on maternal nutrition (Ministry of Health, 2016). An adequate nutrition is one of the necessary needs for pregnant women. Pregnant women have different food needs than mothers who are not pregnant, because there is a fetus that grows inside.

Food needs are seen not only in portions but also determined on the quality of nutrients contained in the food consumed. The growth and activity of the fetus requires food channeled through the placenta. The pregnant women must get adequate nutrition for themselves and for their fetuses (Septyarina, S. 2013).

Nutritional problems cause death of mother and child indirectly. This is because some pregnant women do not pay attention to nutrition, causing various adverse effects for mothers and babies (Rukmana, 2013). Insufficient nutritional intake in pregnant women can lead to Chronic Lack of Energy. Chronic Lack of Energy is a condition in which a person suffers from a long-lasting or chronic lack of food that causes health problems. Pregnant women are at risk of chronic lack of energy if they have an upper arm circumference (LILA) < 23.5 cm. Pregnant women with Chronic Lack of Energy are at risk of giving birth

to a low birth weight baby. It carries the risk of death, impaired growth and child development, as well as indirect causes of maternal death. Based on the results of (Riskesdas, 2013) obtained data that the proportion of pregnant women aged 15-49 years who are at risk of Chronic Lack of Energy in Indonesia by 24.2% and in Bali by 10.1% (Ministry of Health, 2016).

The incidence of pregnant women with Chronic Lack of Energy is influenced by various factors that are closely related to the behavior of pregnant women in the their nutrition fulfillment. The behavior of pregnant women is one of the most important factors in the fulfillment of pregnant women's nutrition (Andriani D, 2016).

Behavior is the response or interaction of an individual to a stimulus comes from outside and inside. This response can be passive (actionless) or active (taking action). In accordance with these limitations, health behavior can be formulated as a form of experience and interaction of individuals with their environment, especially those concerning knowledge and attitudes about health (Notoatmodjo, 2014).

According to Lawrence Green theory, there are three factors that influence behavior, namely predisposing factors (predisposing factors), supporting factors (Enabling Factor) and driving factors (Reinforcing Factor). Predisposing factors include age, gender, knowledge, attitudes, beliefs, education, work, traditions and values. Possible factors include resource availability, affordability of health services, knowledge and skills of health workers, community and government commitment.While the booster or driving factors include families, teachers, health workers and community leaders (Priyoto, 2014).

Nutrition is important to pregnant women; therefore it is necessary to examine what factors affect the behavior of pregnant women towards the fulfillment of nutrition. By understanding the factors that affect the nutritional fulfillment behavior of pregnant women, it will be easier to determine how to intervene so that the community pays more attention to the nutritional needs of pregnant women. It could decrease the incidence of Chronic Lack of Energy in pregnant women.

Public Health Center as one of the leading health services in the community, especially pregnant women have a very important role to improve the health of mothers and children. All public health center in Denpasar have maternal and child health services making easier to researcher to find respondents. Based on the above problems, researcher consider to conduct research related to factors that affect the behavior of pregnant women toward nutritional fulfillment in Denpasar City.

## METHOD

The study employed a descriptive design of correlation through a cross-sectional approach. The population in this study was pregnant women who visit Public Health Center in Denpasar to check their pregnancy. There were 99 respondents included in this study which were selected through non-probability sampling with quota sampling method. The data collected by using criteria that have been established both inclusion and exclusion criteria (Sastroasmoro *et al*, 2014). The inclusion criteria in this study were pregnant women with normal pregnancies who conduct ANC examinations, pregnant women who have KIA books, and pregnant women in who are willing to be respondents in public health center Denpasar. The exclusion criteria were pregnant women who were in an emergency on the spot during the study.

The data were collected by using questionnaire. Data were analyzed through univariate and bivariate with SPSS program. Univariate analysis was conducted to find out the characteristics of respondents (age, last education, and parity), knowledge, attitudes, family support, and behavior of pregnant women in the fullfillment of nutrition. Bivariate analysis was conducted to find out the factors that influence the behavior of pregnant women in the nutritional fulfillment using the Chi Square test.

## FINDING
### UNIVARIATE ANALYSIS

Univariate analysis was conducted to obtain an overview of characteristics of respondent, independent variables (knowledge, attitudes, and family support) and dependent variables (the behavior of pregnant women in the fulfillment of nutrition). Obtained the following results:

**Table 1: Characteristics of Respondents in Denpasar City in 2021**

| Characteristics of Respondent | Total (n) | Percentage (%) |
|---|---|---|
| Age | | |
|     Risk (aged <20 year or >35 year) | 28 | 28.3 |
|     Not at Risk (aged 20-35 year) | 71 | 71.7 |
| Educational Background | | |
|     Secondary education (high school) | 44 | 44.4 |
|     Higher education (diploma, bachelor's degree) | 55 | 55.6 |
| Parity | | |

| | | |
|---|---|---|
| Risk (first childbirth or parity > 4) | 42 | 42.4 |
| Not at Risk (delivery 2-4 times) | 57 | 57.6 |

From Table 1 showed that as many as 28.3% of respondents were at age that was at risk for childbirth (<20 years or >35 years) and most of the respondents 71.7% were aged 20-35 years and categorized to be not at risk for childbirth. Based on the educational background were obtained that mostly of the respondents 55.6% had higher education (diploma or bachelor's degree) and as many as 44.4% had secondary education (high school graduation). Based on the parity or number of children born, most of the respondents (57.6%) gave birth 2-4 times and 42.4% never given birth or have given birth >4 times.

**Table 2: Distribution of Respondents Based on Knowledge, Attitudes, Family Support, and Behavior of Pregnant Women in Denpasar City in 2021**

| Variable | Total (n) | Percentage (%) |
|---|---|---|
| Knowledge | | |
|    Less | 46 | 46.5 |
|    Good | 53 | 53.5 |
| Attitude | | |
|    Less | 42 | 42.4 |
|    Good | 57 | 57.6 |
| Family Support | | |
|    Less | 49 | 49.5 |
|    Good | 50 | 50.0 |
| Behavior | | |
|    Less | 43 | 43.4 |
|    Good | 56 | 56.6 |

Table 2 shows that most respondents had a good knowledge of nutritional fulfillment in pregnant women, namely as many as 53 people (53.5%), most respondents, namely 57 people (57.6%) had good attitude in meeting nutritional needs during pregnancy, some of the respondents, 50 people (50.0%) received good family support during pregnancy in the nutritional fulfillment, and most respondents, namely 56 people (56.6%) had good behavior in nutritional fulfilling during pregnancy.

**BIVARIATE ANALYSIS**

Bivariate analysis used to determine the factors that influence the behavior of pregnant women in the nutrition fulfillment, with the following results.

**Table 3: Factors that affect the behavior of pregnant women in the nutritional fulfillment in Denpasar City in 2021**

| Variable | Attitude | | Value p |
|---|---|---|---|
| | Less n (%) | Good n (%) | |
| Age | | | 0.020 |
|    Risk | 7 (25%) | 21 (75%) | |
|    Not at Risk | 36 (50.7%) | 35 (49.3%) | |
| Educational Background | | | <0.001 |
|    Secondary | 29 (65.9%) | 15 (34.1%) | |
|    Higher | 14 (25.5%) | 41 (74.5%) | |
| Parity | | | 0.082 |
|    Risk | 14 (33.3%) | 28 (66.7%) | |
|    Not at Risk | 29 (50.9%) | 28 (49.1%) | |
| Knowledge | | | 0.226 |
|    Less | 17 (37%) | 29 (63%) | |
|    Good | 26 (49.1%) | 27 (50.9%) | |
| Attitude | | | <0.001 |
|    Less | 41 (97.6%) | 1 (2.4%) | |
|    Good | 2 (3.5%) | 55 (96.5%) | |
| Family Support | | | <0.001 |
|    Less | 35 (71.4%) | 14 (28.6%) | |
|    Good | 8 (16%) | 42 (84%) | |

Table 3 shows that the factors that influence the behavior of pregnant women in nutritional fulfillment were age (value p = 0.020), educational background (value p = <0.001), attitude (value p = <0.001), and family support (value p = <0.001). While parity (value p = 0.082) and knowledge (value p = 0.226) did not affect the behavior of pregnant women in the nutritional fulfillment.

## DISCUSSION

The finding of this study showed that there were 56.6% of pregnant women had good nutritional fulfillment. This was in line with research that conducted in the working area of Public Health Center Mengwi I Badung Bali by (Kusuma *et al,* 2020) which said that 88.7% of pregnant women had good behavior towards nutrition during pregnancy. The study also found that the factors that influence the behavior of pregnant women in the nutritional fulfillment were age, educational background, attitudes, and family support. While parity and knowledge did not affect the behavior of pregnant women in the nutritional fulfillment.

This study explained that age affects the behavior of pregnant women in the nutritional fulfillment with a value of p = 0.020. The age in this study was categorized to be at risk, namely the age of the mother <20 years or >35 years and not at risk, namely the age of the mother 20-35 years. This was in agreement with (Proverawati *et al,* 2009 who said that the age of a mother is related to the development of her reproductive organs. A healthy and safe reproductive age was 20-35 years. Pregnancy less than 20 years was biologically not optimal, the emotions tend to be unstable, mentally immature so it was easy to experience shaking that results in a lack of attention to the nutritional needs during pregnancy. While pregnancy at the age of more than 35 years was related to the deterioration of organ function that causes it to work optimally so that it requires additional sufficient energy in addition to decreased endurance and various diseases.

Thisstudy also explained that the educational background affects the behavior of pregnant women in the fulfillment of nutrition with a value of p <0.001. The results of this study relevant with Hidayat in 2014 who said that the higher one's education, it will make it easier for someone to receive information so as to improve the quality of life by being positive. Conversely, if someone with a low level of education, it will inhibit the development of one's attitude towards the acceptance of information. This is also confirmed by (Setyorini *et al,* 2018 who explained that one of the determining factors of the attitude of pregnant women in taking Fe tablets is the level of education. According to (Nurzia, 2016 explained that a person's low education will affect his knowledge and daily behavior as with low education will certainly be slower to plan long-term, namely in the fulfillment of nutritious needs

certainly could not be separated from the level of knowledge of something that will be consumed.

This study also explained that attitudes influence the behavior of pregnant women in the fulfillment of nutrients with a value of p<0001. Attitude is the tendency to act, think, perceive, and feel in the face of objects, ideas, situations, or values. Attitude is a reaction or response of someone who is still closed to a stimulus or object of attitude is not yet an action or activity, but is a "predisposition" of action or behavior (Notoatmodjo, 2010). Attitude is the predisposition to doing or not doing a particular behavior, so that attitude is not only a purely psychic inner state, but attitude is more of an individual process of consciousness. This means that this process occurs suibibly and uniquely in each individual. This uniqueness could occur by individual differences derived from values and normality that individuals want to maintain and manage (Wawan *et al,* 2015). The researcher's assumption is that the mother's positive attitude towards the importance of fulfilling nutrition during pregnancy is derived from health counseling, as well as approaches to community leaders, religious organizations, and so on that ultimately affect the mother's behavior in the fulfillment of nutrition during pregnancy.

In this study, it was also explained that family support affects the behavior of pregnant women in the fulfillment of nutrients with a value of p<0001. This is in line with research conducted by Martalisa &Widyawaty in 2018 which states that family support is one of the factors that affect a person's motivation that will affect his behavior in taking Fe tablets. A pregnant woman will feel loved if her husband or family always reminds to take Fe tablets because it is very beneficial during pregnancy (Indriyani, 2014). Juwita's 2018 study is in line with the results of this study, namely there is a significant relationship between counseling and family or husband support with the level of adherence to taking Fe tablets in pregnant women. The assumption of the researcher is that with the support of the family, the mother will feel comfortable undergoing her pregnancy so that it has a positive impact on the behavior of pregnant women in the fulfillment of nutrition.

Parity in this study did not affect the behavior of pregnant women in the fulfillment of nutrients with a value of p = 0.082. Parity is the condition of a person who gives birth to a fetus can be once or more. Mothers who are first pregnant are very new so motivated in meeting nutritional needs during pregnancy. Conversely, mothers who have given birth more than once have the assumption that she is experienced so that she is not motivated to meet nutritional needs during pregnancy (Padila, 2014). But in this study either primigravida or multigravida mothers do not affect the behavior of pregnant women in the fulfillment of nutrition, it is assumed because all pregnant women

must expect their pregnancy to run smoothly so they must maintain their behavior in the fulfillment of nutrition.

The results of this study found that knowledge does not affect the behavior of pregnant women in the fulfillment of nutrition with a value of p = 0.226. Knowledge is the result of tofu and this occurs after people sensing a particular object, knowledge generally comes from sensing that occurs through the five human senses, namely the sense of sight, hearing, smell, taste and groping. Most of human knowledge is gained through the eyes and ears. This is not in line with the opinion of (Nguyen *et al,* 2017 who said that knowledge becomes one of the significant factors that affect nutrition during pregnancy especially in consuming good nutrients such as IFA, calcium tablets, and a variety of diets. The assumption of researchers is that good knowledge about the nutrition of pregnant women is very important, but if there is no awareness alone to perform the act of nutritional fulfillment then it will not affect the behavior of pregnant women in the fulfillment of nutrition.

## CONCLUSION

Factors that influence the behavior of pregnant women in the fulfillment of nutrition are age, education; attitude and family supprort affect the behavior of pregnant women in the fulfillment of nutrition. While the parity and knowledge does not affect the behavior of pregnant women in the fulfillment of nutrition. Pregnant women should pay attention to the nutrients during pregnancy that affects the growth and development of their fetus.

### THANK YOU

## REFERENCES

- Andriani, D. (2016). Optimalisasi Perilaku Pemenuhan Nutrisi Pada Ibu Hamil Trimester Satu Melalui Penyuluhan. Adi Husada Nursing Journal, 2(2), 17-20.
- Hidayat, A. (2014). Metode penelitian kebidanan dan teknik analisis data. akarta: Salemba Medika.
- Indriyani, D. (2014). Buku Ajar Keperawatan Maternitas: Upaya Promotif dan Preventif dalam Menurunkan Angka Kematian Ibu dan Bayi. Yogyakarta: Ar-Ruzz Media.
- Juwita, R. (2018). Hubungan konseling dan dukungan keluarga terhadap kepatuhan ibu hamil mengkonsumsi tablet Fe. Jurnal Endurance: Kajian Ilmiah Problema Kesehatan, 3(1), 112-120.
- Kementerian Kesehatan RI. (2016). Infodatin Situasi Gizi di Indonesia
- Kusuma, D. R., Aryawangsa, P. D., Satyarsa, A. B. S., & Aryani, P. (2020). Pengetahuan, sikap dan perilaku ibu hamil terhadap nutrisi selama kehamilan di wilayah kerja upt puskesmas mengwi i, badung, bali. Gema Kesehatan, 12(1), 20-29.
- Martalisa, A. A. (2018). Hubungan Motivasi Keluarga Ibu Hamil dengan Keteraturan Mengkonsumsi Tablet Fe. NERSMID: Jurnal Keperawatan dan Kebidanan, 1(2), 156-171.
- Nguyen, P. H., Sanghvi, T., Kim, S. S., Tran, L. M., Afsana, K., Mahmud, Z., ... & Menon, P. (2017). Factors influencing maternal nutrition practices in a large scale maternal, newborn and child health program in Bangladesh. PloS one, 12(7), e0179873.
- Notoatmodjo, S. (2010). Pengantar Pendidikan Kesehatan dan Ilmu Perilaku Kesehatan. Jakarta : Rineka Cipta
- Notoatmodjo, S. (2014). IPKJRC (2015). Ilmu Perilaku Kesehatan. Jakarta: Rineka Cipta. Biomass Chem Eng, 49(23-6).
- Nurzia, N. (2016). Hubungan status ekonomi, pendidikan, dan dukungan keluarga terhadap pencegahan anemia pada ibu hamil di wilayah kerja Puskesmas Tanjung Pinang Kota Jambi tahun 2016. Scientia Journal, 5(2), 167-172.
- Padila. (2014). Keperawatan Maternitas. Yogyakarta: Nuha Medika
- Priyoto, T. S. (2014). Perilaku dalam kesehatan. Yogyakarta: Nuha Medika.
- Proverawati, & Asfuah. (2009). Gizi Dalam Kesehatan Reproduksi. Jakarta. EGC.
- Sastroasmoro, S. (2014). Ismael. Dasar-dasar metodologi penelitian klinis. Jakarta. Sagung Seto. Jakarta, 41.
- Setyorini, A., & Atiqoh, U. (2018). Faktor-Faktor Yang Berhubungan Dengan Sikap Ibu Hamil Mengkonsumsi Tablet Fe Di Puskesmas Banyuasin Kabupaten Purworejo. Jurnal Komunikasi Kesehatan, 9(2),38-48.
- Wawan, & Dewi. (2015). Teori dan pengukuran pengetahuan, sikap dan perilaku manusia. Yogyakarta, Nuha Medik.