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WEIGHT OF PREGNANT WOMEN IN DELI SERDANG REGENCY: A QUALITATIVE STUDY

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ABSTRACT
Weight gain that is not according to recommendations during pregnancy has become an epidemic throughout the world today and is a clinical problem with high prevalence and can affect the health of mothers and babies. Objective: This study aims to find out more about the perspective of increase in weight of pregnant women in deli serdang regency. Method: This study was qualitative with a descriptive approach. The informants in this study were 3 pregnant women with weight gain above recommendations, 3 pregnant women with weight gain below recommendations, 1 ob-gyn, 1 midwife, and 1 nutrition who were recruited using purposive sampling. Data were collected using semi-structured interviews. Data were analyzed using the Content Analysis. Results: The study emerged 5 themes: (1) Knowledge, (2) Perspective, (3) Behaviour, (4) Family support, and (5) Physical activity. Conclusions: The findings show that several factors influence the increase in weight of pregnant women in Deli Serdang Regency, so the health care provider needs to pay attention to improve their knowledge about weight gain during pregnancy according to the needs of pregnant women.

Keywords: weight gain; pregnancy; qualitative

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INTRODUCTION

Weight gain not according to recommendations during pregnancy is becoming an epidemic throughout the world today and is a clinical problem with high prevalence and can affect the health of mothers and babies, globally around 60% -80% of pregnant women's weight gain is not according to recommendations (Sativa et al., 2023). Pregnant women often misunderstand weight gain, mothers always think that weight gain is always an obligation, which is around 11.5–16 kg during pregnancy, regardless of the classification of the mother's weight before pregnancy. Pregnant women always think about nutritional needs during pregnancy. 2 portions because they consider 1 portion for the mother and 1 other portion for the needs of the fetus and assume that the mother's hunger is caused by the baby feeling hungry in the womb (Rahmawati et al., 2023).

Weight gain that is not according to recommendations is a problem in various countries today (Lin & Li, 2021), Research conducted in 16 countries in five geographic regions (North and South America, Europe, Middle East, and Australia) found that 66% of pregnant women

experienced weight gain that did not meet recommendations, including 29% below recommendations and 37% above recommendations, in Spain 67.3% do not comply with recommendations (below recommendation 33.4%, above recommendation 33.9%) (Arnedillo-Sánchez et al., 2022). In Bangladesh it reached 74.9% (56% below recommendations, 19.9% above recommendations) (S. M. T. Hasan et al., 2021), in Iran's Ilam province it was 50.4% (28.7% below recommendations, 21.7% above recommendations) (Dolatian et al., 2020), in Germany not according to recommendations 27.4% (Ferrari et al., 2012), and weight gain above recommendations in America 49.8%, Africa 55.20%, Oceania 49.0%, Europe 48.6%, Asia 38.2% (Zhou et al., 2022), in New Zealand 74.3% above the recommendation (Restall et al., 2014).

Increasing body weight not according to recommendations in pregnant women will hurt the mother and fetus, the impact that occurs is not only on increasing body weight below the recommendation but above the recommendation will also have an impact on the mother and fetus, below the recommendation will increase the risk of premature birth, heavy low birth weight (LBW) and Intrauterine growth restriction (IUGR) (Goldstein et al., 2017). Likewise, weight gain above the recommendation can have an impact on the mother, such as hypertension in pregnancy, pre-eclampsia, eclampsia, diabetes mellitus in pregnancy, cesarean section delivery, and for babies it can result in macrosomia, and the risk of obesity in childhood and adolescence (Arora & Tamber Aeri, 2019).

In Indonesia, 3.3% of pregnant women experience hypertension. Hypertension in pregnancy is a condition when a pregnant woman's blood pressure is above 140/90 mmHg. Increasing body weight above the recommendation in pregnancy carries the risk of developing hypertension, this is in line with research conducted by Haugen et al. (2014) that mothers have a 1.76 times risk of developing hypertension in pregnancy and the risk is greater if it occurs before the third trimester (Tian et al., 2016). Preeclampsia is a cause of death in pregnancy. Based on study by Ningrum (2020) that mothers with a weight increase above the recommendation experience pre-eclampsia of 42.8% and if not treated properly it can progress to eclampsia.

An increase in a pregnant woman's weight above the recommendation can risk obesity in the mother and fetus. Mothers 6 months postpartum can become overweight and are at risk of becoming overweight in the future (Octavia et al., 2020). Meanwhile, babies are at risk of developing obesity in the long term from childhood to adolescence (Morrison et al., 2020). Pregnant women whose weight gain does not match recommendations are at 1.6 times the risk of maternal death compared to those whose gestational weight gain does not match recommendations (Aji et al., 2022). This situation shows a very serious condition considering the complications that occur for both the mother and fetus which can affect the next life, economically this will require more costs (Souza et al., 2024). Therefore, researchers will conduct research on the perspective of pregnant women regarding weight gain during pregnancy. This study aims to find out more about the perspective of increase in weight of pregnant women in deli serdang regency.

METHOD

The study is a qualitative study using a descriptive approach. A qualitative study was used to dig deeper into pregnant women's perspectives on weight gain during pregnancy. The study uses semi-structured interviews because it explores and aligns indicators according to the research area which is carried out informally. The informants in this study consisted of 3 pregnant women with weight gain above recommendations, 3 pregnant women with weight

gain below recommendations, 1 obgyn, 1 midvife, and 1 nutrition who were recruited using purposive sampling. In this study, researchers made observations and tried to explore the behavior of mothers at the research location in terms of pregnancy checks and it is hoped that from the research we will get as much as possible and explore indicators related to weight during pregnancy. This study was conducted in Deli Serdang Regency. Data collection was carried out by in-depth interviews using voice recording. Probing techniques are used to obtain in-depth information. Data analysis in this study went through 4 stages, namely: 1) open coding, namely identifying keywords from all the data collected; 2) concept formation (axial coding), namely collecting codes with the same content which allows data to be grouped into interconnected categories and concepts are formed; 3) categorization (selective coding), namely grouping concepts that are formed and then selected which are related to the formation of theories for research problems; and 4) theory formation (theoretical note), namely to explain the subject being researched by strengthening it with existing theories and studies literature. This study has received ethical approval from the Research Ethics Commission of the Faculty of Medicine, Universitas Andalas No.117/UN.16.2/KEP-FK/2023.

The principle of truthfulness is applied to ensure thoroughness in research. Credibility is a criterion for meeting the truth value of the data and information collected. The researcher used the prolonged engagement technique, namely holding meetings with participants 1-2 times at a place that had been promised to the participant, so that the researcher and participant had a long relationship they became more familiar, more open, and trusted each other. Confirmability is carried out by showing all transcripts and field notes to determine themes. Dependability is used to assess the quality of the process undertaken by researchers. Transferability is carried out by researchers writing research reports that are described in detail, clearly, systematically, and easily understood so that readers can get a clear picture of weight during pregnancy. Authenticity focuses on the extent to which researchers can demonstrate multiple realities. Authenticity emerging in research can convey the authenticity of participants' experiences. The researcher invites readers to feel the life experiences depicted and allows readers to develop increased sensitivity according to the problems depicted

RESULTS

Five themes exist in the weight during pregnancy, namely: (1) knowledge, (2) perspective, (3) behaviour, (4) family support, and (5) physical activity which are depicted in the scheme below.

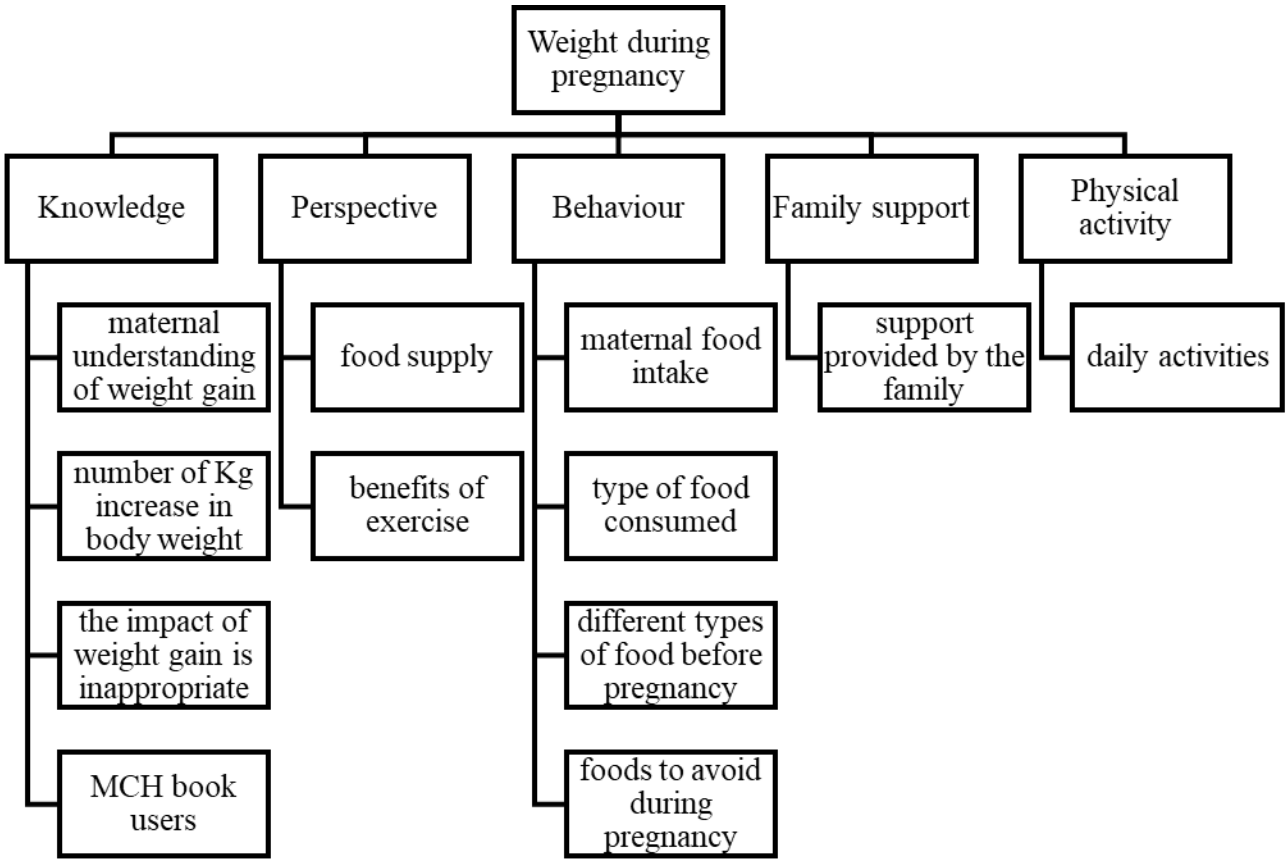

Figure 1 Themes and sub-themes resulting from qualitative research on weight during pregnancy

Pregnant women's perspective on weight during pregnancy

Knowledge

The results of interviews with pregnant women informants stated that their knowledge was still lacking, pregnant women defined that weight gain according to recommendations was that every month a pregnant woman's weight increases and if it doesn't increase, she needs to be careful, and the mother doesn't know how much the increase will be if calculated based on BMI before pregnancy, and pregnant women assume that a pregnant woman's weight gain has increased by 12 kilograms, if it has increased by 12 kilograms during pregnancy then the weight gain is appropriate, this information was obtained from midwives, and the majority of mothers do not know the weight gain is according to recommendations, Excerpts from pregnant women's informants' statements are as stated below:

"Every month the important thing is that the mother's weight increases" (Informant #1, #2, #4 and #6)

"If your weight increases by 12 kilos, it means it is appropriate" (Informant #3, #4 and #5)

"The midwife only said it would increase by 12 - 16 kilos" (Informant #6)

The results of interviews with health workers (doctors, midwives and nutritionists) stated that pregnant women's knowledge about increasing body weight according to recommendations was still poor. According to health workers, pregnant women should have sufficient access to gain knowledge about weight gain during pregnancy through social media. Pregnant women often do not know or understand the ideal weight gain (according to recommendations). Pregnant women think that what is important is that each month there is

an increase. Apart from that, subjective habits or conditions such as "pregnancy traits" that reduce appetite are often more dominant than knowledge. This results in many pregnant women not realizing or not paying attention to the weight gain that should be achieved during pregnancy. quotes from health worker informants as stated below:

"If all this time she (the pregnant woman) doesn't know, why do we say she doesn't know, because in their diet, the important thing is that her weight increases, she doesn't know what weight she wants to aim for" (Informant #7)

"Mothers should know about their weight gain because there is a lot on social media" (Informant #8)

"If it increases, I know, ma'am, but I don't know how many kilos it increases" (Informant #9)

The results of interviews with pregnant women informants show that mothers' knowledge about the impact of weight not following recommendations is quite good, this can encourage pregnant women to pay more attention to their weight gain and follow the guidelines given by health workers. This can help pregnant women make better decisions regarding diet and lifestyle during pregnancy. The following is an excerpt from the statements of informants from pregnant women as stated below:

"The impact is that the baby can become obese when he is born, whether he can breathe spontaneously or not, it will be difficult for him to reduce his weight to the original weight, ma'am, and the baby will be malnourished, ma'am" (Informant #1, #2, #3, #4, #5 and #6).

Based on the results of interviews with health workers, it was stated that the knowledge of pregnant women was quite good, pregnant women were generally aware of the negative impacts that might occur on themselves and their babies related to body weight. However, mothers do not understand the positive impact of maintaining a healthy weight during pregnancy. Mothers tend to think that if weight does not increase drastically, the baby may be unhealthy, even though they do not know the ideal target weight. Even though pregnant women know the health risks, they often follow their instincts or habits without taking the necessary actions to achieve a healthier condition, as is the statement quoted by informants from pregnant women as stated below:

"...certainly pregnant women or the impact that this has on them, but the positive impact is that pregnant women don't know" (Informant #7)

"Pregnant women know that if their baby has problems they will feel uncomfortable" (Informant #8 and #9)

Based on the results of interviews with pregnant women, pregnant women received MCH books from midwives and had their weight weighed during the examination, but did not receive clear information about ideal weight gain during pregnancy and health workers did not explain the target weight gain that should be achieved. Lack of information obtained by mothers at the beginning of pregnancy about weight gain according to recommendations can cause maternal confusion and mothers are anxious about making decisions about diet and physical activity during pregnancy, mothers are unable to monitor their weight gain appropriately and are less motivated to achieve the appropriate weight. recommendation. The following is a statement from a pregnant woman informant:

"Information from the Midwife...and told to eat a lot" (Informant #1 and #4)

"I don't think there is, so I don't know how much weight I will gain according to the recommendations" (Informant #2 and #3)

"…if the midwife only says that the weight gain must be 12 – 16 kg, ma'am" (Informant #5 and #6)

Based on the results of interviews with health workers, it was found that pregnant women who bring the KIA book during the examination will have their height and weight measured, health workers are tasked with providing information regarding weight gain targets and education about the necessary nutrients (carbohydrates, protein, fat) and supervising that weight gain is not excessive, information about weight gain and nutrition has been explained in the MCH book, during ANC (Antenatal Care), pregnant women are also reminded to read the MCH book at home, however, this knowledge is often not appropriate. The following is a statement from a health worker informant:

"...Well, if a pregnant woman brings a MCH book when having a pregnancy check-up, we as health workers measure all of her height and weight and we have to give information about the desired weight or how many kilograms we are targeting for weight gain, so yes, in my opinion Pregnant women should know about that" (Informant #7)

"Actually, it has also been explained in the mother's MCH book, but that's what we also told her when she was at ANC, so we also told her to read it at home,..." (informants #8 and #9)

Perspective

The results of interviews conducted with pregnant women show that pregnant women's perception of the food intake consumed during pregnancy is that they have to eat more than usual to meet the nutritional needs of the baby in the womb because they think that the portion of food should be double that before pregnancy. After all, the mother eats for two people. Mothers also emphasized the importance of eating nutritious food, including following the "4 healthy five perfect" guidelines and adding vitamins and fruit to their diet. The following is a statement from the informant:

"...yes, we should eat double the portion for 2 people, mmm, 4 is healthy, five is perfect..."(Informant #1, #3, #5 and #6)

"...I'm full, I just know that, ma'am, you need to add vitamins and eat lots of fruit so that the baby can be healthy..." (Informant #2)

"...don't do too much, the important thing is to have enough nutrition...(Informant #4)

Based on the results of interviews with health worker informants, it is that pregnant women think that they eat twice as much because they are given 2 meals and this is actually a wrong perception, their attitude towards eating is that sometimes they eat more to make them feel full but the nutrition is not very poor and the mother The need for protein, fat and carbohydrates is lacking and the mother thinks that if she is full, she has fulfilled her needs.

"...Well, if a pregnant woman consumes food, she thinks that she is eating twice as much because what she is being fed is 2..."(Informant #7 and #9)

"...he eats a lot to be full, but he doesn't have enough nutrition and hasn't thought about what his protein needs are, what about fat, carbohydrates, ma'am, pregnant women think that the important thing is to be full and have eaten, ma'am..." (Informant #8)

Pregnant women with increased body weight do exercise by attending classes for pregnant women and walking every day for approximately 30 minutes every day. The following is a quote from a pregnant woman informant:

"..., I know the benefits of exercise are good. But I don't do sports because I'm too lazy to move ma'am..." (Informant #1, #2, #3 and #4)

"...Exercise has many benefits, take part in pregnancy exercise too..." (Informant #5 and #6)

Health workers have tried to provide information and motivation through various educational programs. The following is an excerpt from a statement from a health worker:

"...I think pregnant women know about the benefits...but yes, some still feel lazy to do

it..."...(Informant #7, #8 and #9)

Maternal eating behavior

The results of interviews with pregnant women informants stated that pregnant women experienced significant changes in eating patterns during pregnancy, including increasing portion sizes and certain types of food. Pregnant women tend to consume more rice and protein side dishes, while some mothers do not consume vegetables. Understanding of proper nutritional needs during pregnancy needs to be improved to ensure that pregnant women get adequate and balanced nutrition in accordance with medical recommendations.

"... eat twice as much, don't like eating vegetables, so I eat rice, sometimes uduk rice or chicken porridge, for side dishes it's fish, meat or chicken and seafood..." (Informant #1 and #2)

"...3 times but sometimes twice, I bought fruit more often when I was pregnant, now I just like eating sweet potatoes, I immediately don't like eating fish because the fishy smell of the fish I can't stand..."(Informant #3)

"...I just eat normally 3 times a day, but if I eat snacks sometimes I feel like eating rice, for example: satay or boiled noodles, I also don't eat enough fiber so sometimes it's hard to defecate..." (Informant #4)

"... I always try to find healthy food during pregnancy, eat rice 3 times a day, vegetables and fish for protein and I also drink milk once a day..." (Informant #5 and #6)

The results of interviews with health workers regarding the food intake consumed by pregnant women is that pregnant women have the perception that during pregnancy, it is important to eat "double the food", even though what is actually needed is a balanced and nutritious food intake. The following is an excerpt from a statement from a health worker informant:

"...pregnant women eat a lot of rice, the rice becomes 3 pieces, the side dishes remain the same..." (Informant #7)

"...less aware of the need to eat vegetables that are high in fiber...so I prefer junk food..." (Informant #8 and #9)

The results of interviews with pregnant women stated that the types of food consumed in the last day were that pregnant women consumed various types of food with quite large portions, breakfast was usually chicken porridge with larger portions than usual, and in the middle of the day, pregnant women often consumed rujak. and snacks such as bread.

"... eat rice, in the morning I sometimes eat rice cake, noodles, etc. and vegetables..." (Informant #1)

"...eat rice, vegetables, preferably boiled, just boil them with shrimp paste sauce such as spinach, kale, and sweet potato leaves, at least that's the way it tastes and if it's a side dish, it can be anything as light as eggs, tofu and tempeh ma'am and fruit is rare. I eat..." (Informant #3)

Based on the results of interviews with health workers, pregnant women generally eat 3 times a day with portions of rice that can reach 2 or 3 plates. Pregnant women's main protein consumption comes from fish, tofu, and tempeh.

"... eat 3 times a day with rice, usually more, up to 2 or 3 plates, eat vegetables and protein, prefer fish, tofu and tempeh and there are also some I asked who also want to drink their milk..." (Informant #7 and #9)

Based on the results of interviews conducted with pregnant women regarding the differences in the types of food consumed before pregnancy and currently there is no significant

difference. Pregnant women experience an increase in appetite, but the type of food consumed remains the same as before pregnancy.
"...Yeah, but if the type of food is more or less the same, there's no difference...(Informant #1, #2,#3,#4, #5 and #6)

Based on the results of interviews with health workers, there is no difference in the types of food mothers had before they were pregnant and now there is no difference. however, the amount of food intake tends to increase during pregnancy.
"..., if we ask several questions, there is no difference, most of them are the same, ma'am..." (Informant #7, #8, and #9)

Based on the results of interviews conducted with pregnant women regarding the types of food or drinks to avoid during pregnancy, there are no particular food restrictions during their pregnancy. However, there was 3 informants who limited ice consumption according to his parents' advice, because it was believed that drinking ice could cause babies to be born large.
"... I don't have any restrictions on what to eat ... ..."(Informant #1, #5 and #6)
"...there are no food restrictions, I just limit myself to drinking ice, because they say that later if I drink ice the baby will grow up" (Informant #2, #3 and #4)

Based on the results of interviews with health worker informants about foods and drinks that pregnant women avoid, health workers usually recommend avoiding alcohol, smoking, durian, tape and foods that contain nicotine.
"...usually pregnant women will ask sir, ma'am, what are my restrictions? Yes, of course we say don't drink alcohol, smoke, don't eat durian, tape and so on, yes, nicotine in particular, so yes, they avoid food according to what we recommend... ."(Informant #7, #8 and #9)

The results of interviews with pregnant women regarding the adequacy of information about healthy food were quite good, pregnant women felt quite satisfied with the information they got about healthy eating patterns during pregnancy, information was obtained from social media such as TikTok and Facebook.
"... yes, that's enough, ma'am midwife,...I got it from TikTok. I got all the information about my pregnancy from TikTok, Facebook..." (Informant #1, #2, #3, #5 and #6)

Based on the results of interviews with health workers, it was stated that pregnant women get enough information about health and healthy food during pregnancy, and currently it is very easy to access via social media, the internet and various other digital platforms.
"...I think you know...Actually, the mother can get information from anywhere, especially now that social media has become a necessity to get information, so..." (Informat #7 and #8)

Family support
Based on the results of interviews with pregnant women, it was stated that the family really supports pregnant women because the family does not always ask about weight gain or health regularly considering that the family is busy with work.
"...My husband and family are very supportive so that it increases every month..."(informant #1, #2, #3, #4, #5, and #6)

Based on the results of interviews with health workers, it was stated that the majority of pregnant women received support from their families regarding healthy eating patterns, not only from a social but also economic perspective, including in terms of nutrition and health, such as the types of drinks consumed in certain situations. The following is a statement from

health officials:
"...I think if all this time it is still positive, the husband and family will support his wife's pregnancy..." (Informant #7, #8 and #9)

Physical activities
The results of interviews with pregnant mother informants regarding the mother's daily physical activity were light physical activity. Pregnant women carry out daily physical activities such as walking, going up and down stairs due to work, washing dishes, sweeping and mopping the house.
"...well, what are the activities during pregnancy? Walking, going up and down the stairs because of work, ma'am, washing dishes, sweeping the house, mopping as usual, doing housework, ma'am. ”(Informant #1 and #2)

According to health officials, it is important to provide education to pregnant women, including housewives or those who work, about the importance of physical activity appropriate to their condition. They are advised to carry out activities such as going up and down stairs carefully, especially if there are no complications during pregnancy.
"...Well, it's normal, there's more housework except for mothers who work..." (Informant #7, #8 and # 9)

DISCUSSION

Fulfilling the nutrition of pregnant women is very important because it can have an impact on both the mother and the baby she is carrying. Pregnant women with poor nutritional status can risk the fetus not developing, defects in the baby, low birth weight, and death of the baby in the womb. Fulfillment of nutrition for pregnant women is influenced by the mother's knowledge of nutrition during pregnancy (Ilmiani et al., 2020). Excessive or underweight gain in pregnant women can have an impact on both the mother and the fetus. One of the impacts of excess weight gain in pregnant women is that the baby is born large so there is a risk of experiencing difficulties during childbirth, apart from that, excess weight during pregnancy is one of the risk factors for hypertension in pregnancy (Abubakari et al., 2023). Meanwhile, the impact that occurs on pregnant women who gain less weight than recommended during pregnancy is the risk of the fetus not developing, apart from that, malnutrition and anemia can cause difficulties during childbirth (Seid et al., 2023).One of the factors that can influence a mother's weight gain during pregnancy is knowledge (Ester Pakpahan et al., 2024). The knowledge possessed by a mother can influence decision-making and also influence her behavior. Mothers with good nutritional knowledge are likely to provide adequate nutrition for their babies (Bukit et al., 2023). When a mother enters a period of cravings, where her stomach feels nauseous and does not want to be filled, even in this condition, if a mother has good knowledge, then she will try to meet her and her baby's nutritional needs (Ilmiani et al., 2020).

The results of this study are in line with previous research which showed that more than half, namely 35 people (57.4%) had behavior in meeting nutritional needs that was inadequate (N. Hasan et al., 2019). Insufficient behavior in fulfilling nutritional needs can be caused by pregnant women's insufficient knowledge about the nutritional needs of pregnant women including carbohydrates, protein, minerals, fats, folic acid, and vitamins (Brink et al., 2022). One of the mother's factors in meeting nutritional needs during pregnancy is knowledge. Knowledge of pregnancy nutrition is very necessary for a pregnant mother in planning her food menu (Maulidanita et al., 2023).The behavior of fulfilling the nutritional needs of pregnant women still adheres to a culture of abstaining from certain types of food. Pregnant

women are prohibited from eating squid or fish because it will cause fishy blood during delivery. These food restrictions affect the nutritional status of pregnant women, such as chronic energy deficiency (Shine et al., 2024). Previous research results stated that 97.4% of pregnant women who experienced chronic energy deficiency abstained from eating (Indrayani et al., 2022).

The results of previous research showed that 45.2% or 19 respondents had family support in the poor category. Family support in the research was seen from the aspects of emotional, instrumental, appreciation, and informational support. The lowest level of support in this study was the emotional aspect, family assistance for pregnant women for check-ups, more without any assistance (Sunaringtyas & Rachmania, 2023). Family support to meet needs during pregnancy can take the form of providing support in carrying out physical activities, choosing types of food and managing food patterns correctly, adopting a healthy lifestyle, accompanying routine pregnancy checks, and various efforts by pregnant women to improve their health during pregnancy (Koletzko et al., 2018). This support is a great strength and provides good continuity for the psychological condition of pregnant women so that from this support pregnant women try to increasingly maintain their health (Al-Mutawtah et al., 2023). There are two things that can prevent obesity in pregnant women, namely regulating nutrition and eating patterns in pregnant women. Pregnant women should avoid eating foods that contain a lot of fat, especially saturated fat. Saturated fat can make it easier for fat globules to stick to the walls of blood vessels. Consume little fat (30% of the total number of calories consumed). Apart from that, reduce excessive carbohydrate consumption so that your body weight can be in a normal position (Chen et al., 2022). Pregnant women must have a good diet and physical activity. Physical activity is useful for controlling body weight by burning calories. A good lifestyle can prevent hypercholesterolemia and hypertension (Paulsen et al., 2023). Maternal obesity can cause several complications for both the pregnant mother and the fetus. Nutrition and diet management for pregnant women must be accompanied by good physical activity (Shrestha et al., 2021). Some of the recommended techniques for controlling obesity are motivational interviewing and patient-centered which aims to control lifestyle, diet and exercise (Christie & Channon, 2014).

CONCLUSION

The results of this research show that several factors influence the increase in weight of pregnant women in Deli Serdang Regency, namely: (1) knowledge, (2) perspective, (3) behavior, (4) family support, and (5) physical activity so the health care provider needs to pay attention to improve their knowledge about weight gain during pregnancy according to the needs of pregnant women.

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