

THE RELATIONSHIP BETWEEN DIET AND THE HEALING PROCESS OF SURGICAL WOUNDS IN POST SECTIO CAESAREA PATIENTS AT KARUNIA KASIH HOSPITAL IN 2023

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Abstract

Background: Diet greatly influences a person's nutritional status, a good diet can improve nutritional status. A state of deficient nutritional status occurs because the body lacks one or several types of nutrients needed, such as the amount of nutrients consumed is insufficient and the frequency and quality are lacking. The trend for caesarean sections is increasing every year. One of the obstacles that often occurs in mothers after caesarean section is abstinence from food after giving birth. If the mother does not consume enough nutrition, it will result in the wound not drying quickly so that wound healing takes a long time. How to recover after a cesarean section is related to mobilization, nutrition, activity stress and personal hygiene. Research Objective: To determine the relationship between eating patterns and the healing process of surgical wounds in post caesarean section patients at Karunia Kasih Hospital. Research Method: This research used a cross sectional approach design with a sample of 98 people. Data techniques include univariate analysis using frequency distribution and bivariate analysis using statistical calculations from the SPSS program. Research Results: The results of this study show that there is a relationship between diet and the surgical wound healing process in post-sectio caesarea patients at Karunia Kasih Hospital, with the chi square test being $(0.009) < \alpha (0.050)$ indicating that diet influences the surgical wound healing process. Conclusion and Suggestions: there is a relationship between diet and the healing process of surgical wounds in post-cesarean section patients at Karunia Kasih Hospital in 2024. Suggestions. It is hoped that the hospital can become a reference for providing coaching and training to health workers to provide more active education to post-section patients so that they are able to maximum in the healing process.

Keywords: Diet, Wound Healing, Sectio Caesarea

Introduction

The actions of *Sectio Caesarea* (SC) show an increasing trend from year to year. According to data from the *World Health Organization* (WHO), states that currently *Sectio Caesarea* (SC) surgical method deliveries continue to increase globally, now accounting for 1 in 5 (21%) of all deliveries. This number will continue to rise over the coming decade, with almost a third (29%) of all deliveries likely to occur via Caesarean section. WHO data in *the Global Survey on Maternal and Perinatal Health* in 2021 shows that 46.1% of all births are carried out through *Sectio Caesarea* (SC) (*World Health Organization*, 2021). According to statistics on 3,509 cases of SC compiled by Peel and Chamberlain, indications for SC are fetal pelvic disproportion 21%, fetal distress 14%, placenta previa 11%, ever SC 11%, fetal location abnormalities 10%, pre eclampsia and hypertension 7%. In China, SC increased dramatically from 3.4% in 1988 to 39.3% in 2010. (World Health Organisation, 2019).

After the delivery process the mother will enter the puerperium, namely: "a period begins after partus is finished and ends after about 6 weeks, but all genitalia organs only recover to pre-pregnancy within 3 months". In order to recover, "the diet given must be of high quality with enough calories, contain a lot of fruits because the woman experiences hemoconcentration" (Wiknjastro, 2010) quoted from (Fadhillah, I.2018).

One of the obstacles that often occurs in post-cesarean section mothers is the abstinence from food after giving birth. Even though after giving birth a mother needs enough nutrition to restore wound healing, if the mother does not consume enough nutrients will result in the wound not drying quickly so that wound healing becomes long. They do not realize that their actions affect the slow recovery of health again, can also be stunted by the baby's growth, due to the lack of maternal behavior in recovery after cesarean section. This post-cesarean section recovery method is related to mobilization, nutrition, activity stress, and personal hygiene. In this case, more in-depth information is needed for post-cesarean mothers and families about how to recover after cesarean section. (Kardinan, 2008) quoted from (Mandasari, N., Afrina, R., & Purnama, A. 2020).

Nutritional needs during the puerperium have increased which are useful for the body's metabolism, food reserves, daily activities and improve the quality of breast milk production and help the wound healing process (ZA & Juwita, 2017). As a result of postpartum mothers who abstain from food, namely lack of nutritional intake so that it has an impact on the recovery period even to the worst impact, namely maternal death. (Sulistyoningsih, 2012) quoted from (Susanti, I 2022 june).

According to *the World Health Organization* (WHO) in 2019 the Maternal Mortality Rate in the World reached 810 people per day due to complications of childbirth, in several countries including the United States reached 9300 people, North Africa 179,000 people and Southeast Asia 16,000 people. World Bank data states that the MMR ratio in Indonesia is 207 deaths per 100,000 births in 2022. Maternal Mortality Rate (MMR) in Southeast Asian countries such as Malaysia (39/100,000 live births), Thailand (44/100,000 KH), Philippines (170/100,000 KH), Brunei (60/100,000) Vietnam (160/100,000 KH), and Singapore (3/100,000 KH) the number of MMR in Indonesia is still relatively high when compared to other Southeast Asian countries. Maternal mortality due to diseases or complications related to pregnancy, childbirth & puerperium.

The West Java Provincial Health Office has conducted a survey with a maternal mortality ratio of West Java province in 2020, which is 85.77 per 100,000 live births above the target set at 85/100,000 KH. This is due to an increase in maternal death cases in West Jawa, namely from 684 cases in 2019 compared to 2020 which was 745 cases, Based on Reports from Districts / Municipalities in 2020 maternal deaths in 2020 before 745 cases, there was an increase compared to 2019 of 684 cases, an increase of 61 cases, 10 districts / cities contributing to the highest maternal mortality in 2020 were in Bogor Regency, Karawang, Garut, Sukabumi, Cirebon, Bandung, Indramayu, West Bandung, Cianjur and Purwakarta Regency. (Ministry of Health RI, 2020).

According to the results of research Munawarah *et al* (2019) conducted at Anvicenna Hospital Bireun City showed a significant relationship between diet and wound healing post op *Sectio Caesarea*. Food that is nutritious and appropriate portions and does not abstain from eating will cause the mother to be in good health and will accelerate the healing period of post op wounds *Sectio Caesarea*. Postpartum mothers with poor diets experience much longer healing of surgical wounds.

According to Research by Dyah *et al* (2020), mothers whose nutrition is sufficient but still follow the customs of abstinence from eating such as socio-culture so that it can also cause the healing process of postoperative *sectio caesarea* wounds to be less good, meaning moderate healing. While postpartum mothers whose nutrition is good enough, the process of healing *sectio caesarae surgery wounds* will heal faster.

Research Siwi *et al.* (2022) about the effect of diet on wound healing post op *sectio caesarea*, states that there is a relationship between good diet and wound healing post surgery *sectio caesarea*.

The results showed a significant relationship between diet and wound healing post op *sectio caesarea*, nutritious food, appropriate portions and abstinence from eating will result in accelerated wound healing. Postpartum mothers who abstain from eating, nutritional needs will be reduced so that the food consumed does not meet elements that contain protein, lots of fluids, vegetables and fruits, so that it will affect the process of healing wounds after *sectio caesarea* surgery, which results in wounds not healing properly or long in the healing process (Manuaba, 2012).

Research conducted by Hazaini *et al* (2022) on the Relationship between Consumption of makanan in postpartum mothers with post-op *sectio caesarea* wound healing at *Teungku Peukan Hospital in Southwest Aceh*, the research states that there is a relationship between the food consumed by postpartum mothers and post-op *sectio caesarea* wound healing. Puerperal mothers who have a good diet and adequate nutrition then the wound healing process will be faster and heal well.

The number of patients performing *sectio caesarea* section at Karunia Kasih Hospital in 2022 reached 1,548. Where in December there were 136 patients and patients who performed *sectio caesarea* surgery the lowest was in August with a total of 102 patients (Karunia Kasih Hospital, 2022). The research background that has been described motivates researchers so that they are very interested in examining the **Relationship between Dietary Behavior and the Surgical Wound Healing Process in Post *Sectio Caesarea* Patients at Karunia Kasih Hospital in 2023.**

Research Methods

The research method used in this study is quantitative descriptive. Descriptive quantitative is a type of research used to analyze data by describing the data that has been collected. The research design is analytical with a *Cross Sectional* approach where data related to free or risk variables and bound variables or consequent variables, are collected at the same time. With a *cross-sectional* approach, this study uses primary data to determine the relationship between diet and wound healing after *cesarean section* at Karunia Kasih hospital in 2023, by measuring and observing at the same time (once a time) between independent variables and dependent variables (Notoadmodjo, 2018).

Researchers collected data on December 2 – December 30, 2023 at Karunia Kasih Hospital Bekasi. The sample used was 98 respondents by conducting interviews and using questionnaires. The design used in this study was *cross sectional*. This data collection aims to determine the relationship between diet and surgical wound healing.

Research instruments are the tools used for data collection (Notoatmodjo, 2018). The instrument used in this research was a questionnaire. The questionnaire sheet was developed by the researcher himself by referring to the conceptual framework, which was tested in one of the inpatient rooms at Karunia Kasih Hospital. This research instrument consists of 8 questions about eating patterns in the form of choices in 4 categories and the scores are routinely: 4, sometimes: 3, rarely: 2 and never: 1. This questionnaire was made by the researcher himself and will be tested for validity and reliability. his.

The analysis of the data used in this study was carried out using the *Statistical for Social Science* (SPSS) application. Data processing is carried out after medical records are collected, and data is presented in table format accompanied by explanations, arranged and grouped according to the purpose of the study. With Univariate and Bivariate analysis tests.

Research Results

Frequency Distribution of Dietary Characteristics of Sectio Caecarea Maternity Respondents at Karunia Kasih Hospital Bekasi in 2023

		Diet			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less	44	44.9	44.9	44.9
	Good	54	55.1	55.1	100.0
	Total	98	100.0	100.0	

The table above found that of the 98 respondents of postpartum mothers of *Sectio Caesarea*, about 55.1% (54 respondents) had a good diet and about 44.9% (44 respondents) had a poor diet.

Frequency Distribution of Wound Healing Characteristics in *Sectio Caesarea postpartum* mothers at Karunia Kasih Hospital Bekasi in 2023

		Wound Healing			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not cured	46	46.9	46.9	46.9
	Recover	52	53.1	53.1	100.0
	Total	98	100.0	100.0	

The table above shows that in the variable Wound Healing of 98 respondents of postpartum mothers of *Sectio Caesarea*, about 53.1% (52 respondents) were declared cured during the *post-sectio caesarea re-control schedule* and about 46.9% (46 respondents) were declared still not cured at the time of the re-control schedule

Analysis of the relationship between diet and the healing process of surgical wounds.

Wound Healing * Crosstabulation Diet					
		Diet			
			Less	Good	Total
Wound Healing	not cured	Count	29	17	46
		% within Wound Healing	63.0%	37.0%	100.0%
	Recover	Count	15	37	52
		% within Wound Healing	28.8%	71.2%	100.0%
Total		Count	44	54	98
		% within Wound Healing	44.9%	55.1%	100.0%

Based on the table above shows the relationship between diet and surgical wound healing. Based on the table, 46 respondents were obtained with the category of non-healing wounds, where as many as 29 respondents (63.0%) had a poor diet and 17 respondents (37.0%) had a good diet. Based on the table above, 52 respondents were obtained with the category of healed wounds, of which 15 respondents (28.8%) had a poor diet and there were 37 respondents (71.2%) had a good diet.

Analysis of the relationship between diet and the healing process of surgical wounds

Chi-Square Tests						
	Value	Df	Asymp. (2-sided)	Sig. Exact sided)	Sig. (2- Exact (1-sided)	Sig.
Pearson Chi-Square	7.970a	1	.005			
Continuity Correctionb	6.869	1	.009			
The Ratio of The	8.080	1	.004			
Fisher's Exact Test				.008	.004	
Linear-by-Linear Association	7.889	1	.005			
N of Valid Cases	98					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.02.

b. Computed only for a 2x2 table

Based on the *chi square test* on the relationship of leukocyte levels to the incidence of premature rupture of membranes at Karunia Kasih Hospital Bekasi, a *p value of 0.009* was obtained which was smaller than the alpha value of 5% or 0.05 ($p < 0.05$). This shows that there is a significant relationship between Diet and the Surgical Wound Healing Process at Karunia Kasih Hospital Bekasi.

Discussion

In this chapter, the author will discuss the results of research that has been carried out and analyzed in accordance with existing literature and the results of similar research that has been conducted. This chapter will also show the number of diet and wound healing in post *sectio caesarea patients* and present the limitations of research at Karunia Kasih Hospital Bekasi.

Univariate Analysis

A. Diet in Post Sectio Caesarea Patients

The results of the study on the diet of post-*sectio caesarea* patients at Karunia Kasih Hospital in 2023, it was found that a good diet was 54 respondents (55.1%) with 37 respondents categorized as cured and 17 respondents categorized as not cured at the time of re-control.

The results of this study are in accordance with the theory that a good diet with the fulfillment of a variety of eating menus is one of the most important things that can maximize the wound healing process, the function of food is not just to relieve hunger, but more importantly to get energy, get building blocks for body cells, increase the body's resistance to disease, as well as to ensure the smooth running of all kinds of processes that occur in the body. Hardani (2018).

The researchers' assumption of the results of this study is that a postpartum person can be optimal during his recovery period does not only meet his food needs with one type of food, because it has not been able to meet the nutritional needs of postpartum mothers. The components needed by the body are continuous with each other. This is in line with the theory that the food consumed by postpartum mothers must be of good quality, nutritious and sufficient calories. Consumption of a balanced menu needs special attention in the community. For example, every day a balanced menu includes healthy meaning consisting of rice, side dishes, vegetables and added with animal protein. (Sulistyoningsih, 2019)

B. Wound healing in *post sectio caesarea* patients

In this study showed that the variable of surgical wound healing was 52 respondents (53.1%) categorized as healed and 46 respondents (46.9%) categorized as not healed at the time of *post sectio caesarea re-control*.

In accordance with the theory, there are several categories of wound healing processes. Postoperative wound healing *sectio caesarea* for 1 week is categorized as healed if there are no signs of infection & there is no open wound, while the recovery of the uterus is approximately 3 months. The pain may still be felt for up to 6 months with mild intensity caused by thread knots in the fascia (muscle sheath) while the healing time of *sectio caesarea* continues for 1 year or more until the scar sticks strongly (Damayanti, 2014 in Zuiatna, 2019).

There are several factors that affect the healing of surgical wounds in Post *Sectio caesarea* mothers such as knowledge, how to care, and personal hygiene. Other important factors are mobilization, balanced nutritional intake and rest patterns. Everything is mutually continuous and cannot be missed one of them, so that patients are able to get excellent and quality conditions after undergoing surgery.

Bivariate Analysis

A. The Relationship of Diet with the Wound Healing Process of *Sectio Caesarea* Surgery.

The data from the study found that 98 respondents who were Post *Sectio Caesarea* maternity mothers at Karunia Kasih Hospital Bekasi in the December 2023 period obtained results as many as 52 respondents (53.1%) were categorized as having surgical wounds that healed during the re-control schedule, namely around 37 respondents (71.2%) had a good diet and 15 respondents (28.8%) had a poor diet. While as many as 46 respondents (46.9%) were categorized as having not healed their surgical wounds at the time of the control schedule, around 29 respondents (63.0%) had a poor diet and 17 respondents (37.0%) had a good diet.

Based on the chi square *test on* the relationship between diet and the wound healing *process of sectio caesarea surgery at Karunia Kasih Hospital Bekasi* obtained a value of 0.009, where $0.009 < \alpha = 0.05$, then H_0 was rejected and it can be concluded that there is a significant relationship between diet and the healing process of surgical wounds in *post sectio caesarea* patients at Karunia Kasih Hospital.

This is in line with research conducted by Munawarah (2019) entitled The relationship between diet and wound healing after *cesarean section* surgery at Avicenna hospital, Bireun Regency. The results of this study show that there is a significant relationship between dietary habits and wound healing *sectio caesarea surgery*. It is expected that postpartum mothers can consume nutritionally balanced foods, adequate portions and do not abstain from eating, unless they have allergies to certain foods so that the healing process of postoperative *Sectio caesarea wounds* takes place quickly and normally.

Nutritional deficiencies can also generally result in reduced wound strength, increased wound dehiscence, increased susceptibility to infection and poor quality scarring. Food consumed by postpartum mothers must be of good quality, nutritious and sufficient calories. Consumption of a balanced menu needs to be considered by maternity mothers, for example a balanced menu including healthy foods consisting of rice, side dishes, vegetables and plus at least one egg every day (Manuaba, 2018).

Postpartum mothers who tend to abstain from eating, their nutritional needs will decrease. We recommend that the food consumed contains protein, lots of fluids, vegetables and fruits. This is influential in the healing process of *post op sectio caesarea* (SC) wounds, which results in wounds not healing properly or abnormally (Manuaba, 2018).

Protein is also a very important food substance to form new tissues, so it is very good to be consumed by postpartum mothers so that *post op sectio caesarea* (SC) wounds heal quickly. However, if these protein foods are abstained from eating, the wound healing process will run slowly and this will

trigger surgical wound infections (Manuaba, 2018)

Maternity mothers who have a fairly good diet, but still follow the customs of abstinence from eating as parents usually do, so it can also cause the healing process of surgical wounds to be less good. While postpartum mothers whose nutrition is good enough, the healing process of post op *sectio caesarea* (SC) wounds will heal faster. Dietary behavior is a varied menu with the appropriate number of servings closely related to the healing process of surgical wounds.

The research assumption expected by researchers in this study is the extent to which diet is able to affect the wound healing process in post *sectio caesarea* (SC) patients at Karunia Kasih Hospital. Nutrition plays an important role in efforts to realize happiness and well-being. In connection with that, religion also teaches us to give good and halal food to our descendants.

Based on the results of research and discussion, it can be concluded that the pattern of mkaan is positively related to surgical wound healing in post *sectio caesarea* (SC) patients at Karunia Kasih Hospital. This also shows, during the puerperium and / or wound healing process after *sectio caesarea* (SC) surgery patients really need good food intake, vatiastif and balanced portions. Because a good and quality diet can have a positive impact on wound healing, especially for postoperative *sectio caesarea* (SC) patients.

Conclusions

Based on research and discussions that have been carried out on post *sectio caesarea* (SC) patients at Karunia Kasih Hospital Bekasi in 2023, the following results were obtained:

1. Based on the frequency of *Sectio caesarea* (SC) maternity mothers at Karunia Kasih Hospital in the November 2023 period as many as 129, a research sample of 98 respondents was obtained.
2. Based on the frequency distribution of diet, post *sectio caesarea* (SC) patients at RS Karunia Kasih Bekasi, as many as 54 respondents (55.1%) out of 98 respondents had a good diet and 44 respondents (44.9%) had a poor diet.
3. Based on the frequency distribution of wound healing, post *sectio caesarea* (SC) patients at RS Karunia Kasih Bekasi, as many as 52 respondents (53.1%) were declared healed surgical wounds during re-control after post ranap and 46 respondents (46.9%) were included in the category of not healed.
4. There is a significant relationship between diet and healing of surgery in post *sectio caesarea* patients at Karunia Kasih Hospital Bekasi with a *p value* of 0.009 ($p < 0.5$).

Suggestion

1. Researchers

It is hoped that this research can be an inspiration, basic data and reference for conducting further research. This study needs to be continued by conducting a closer analysis and multiplying the variable factors to be studied, and for future researchers, the advice given for future research researchers hope to be able to continue this research by comparing future studies on the relationship of diet with surgical wound healing in post *sectio caesarea* patients with different periods of years and places and a larger number of samples.

2. For health workers

It is hoped that this research will be an information material and spur officers to monitor and increase education related to the benefits of diet on surgical wound healing, especially in post *sectio caesarea* patients.

3. Hospital Agencies

It is hoped that this research can be a reference for hospitals to continue to improve coaching and training for health workers in the form of seminars or additional education, in order to create excellent service that exceeds patient expectations.

4. Educational Institutions

It is expected that the results of this study can be used as information and reference for libraries in practices related to diet and wound healing in post *sectio caesarea* (SC) patients.

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