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Relationship Between Family Cultural Orientation in Menu Selection and Incidence of Childhood Acute Lymphoblastic Leukemia (LLA) in Surabaya, Indonesia

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ABSTRACT. Diseases can be caused by consuming foods that do not have a balanced nutritional value, choosing the wrong diet, or choosing the wrong food menu. Diet is also a risk factor for cancer, such as leukemia. In the outpatient pediatric polyclinic of Dr. Soetomo Hospital Surabaya, leukemia is one of the ten most common diseases. This study aims to analyze the relationship between family culture of menu selection and the incidence of leukemia in children at the Surabaya Halfway House. The population in this study were all mothers or families and children suffering from leukemia waiting for treatment in the hospital and living temporarily in a halfway house on Jl Karang Menjangan, a total of 30 people. This type of research is analytic using a simple linear regression approach/desianalyticallye the dominant factors that influence the culture of food from menu selection with the incidence of leukemia in children. The independent variable in this study is the family culture of menu selection, which is a pattern of behavior that has been carried out by parents or families as a way to meet the needs of food which includes beliefs, knowledge about nutrition, social functions of food, and menu selection, preferences or preferences. The dependent variable is the incidence of Acute Lymphocytic Leukemia (Leukemia/ALL), which is the diagnosis of leukemia based on the medical diagnosis of the patient's status. analyzed by simple linear regression test. Results: the culture of food menu selection (beliefs, knowledge about the food menu, social functions, preferences do not contribute to the incidence of leukeand and mia in children. It is recommended that the culture of food menu selection regarding trust, knowledge, social function, preference is a food menu selection culture that must be maintained because the results obtained mostly have good habits and some are still lacking so it is hoped that the menu selection pattern will become an initial assessment for children diagnosed with cancer to prevent subsequent events.

INDEX TERMS: culture of food menu selection, leukemia

I. INTRODUCTION

Diseases can occur if the food consumed is of no value to the body or of poor quality, if it is unbalanced, if you eat the wrong foods, or if you choose a food menu. Diet is also an important risk factor for cancer, such as Acute Lymphocytic Leukemia (Leukemia / ALL)[1]. Leukemia is a disease that can affect all ages, including children. Leukemia is a type of cancer that is common in children under the age of 15.

Leukemia is a chronic disease that ranks second or third the cause of death in children [2] [3][4][5]

In Indonesia, the mortality rate for leukemia is 50-60% because the public knows little about the dangers of cancer. Generally, patients come to the wrong place for treatment and do not seek health care facilities until the stage is advanced, making the diagnosis of the disease slow and the cost of treatment more expensive. From 2010-to 2013, leukemia was the disease with the highest number of new

cases and deaths at Dharmais Cancer Hospital. The number of new cases and deaths from leukemia tends to increase every year. The data from Dharmais Cancer Hospital for the year 2014 shows that there were 46 cases of leukemia.

The highest incidence of Acute Lymphocytic Leukemia (ALL) often occurs in children aged 2-5 years, this age being a period when children show the ability to move more, develop curiosity, and explore objects in their environment [2] [3][4]. The toddler age is included in the age range for the onset of childhood leukemia[6]. Toddler age (2-3 years) is a phase of childhood that requires more attention from parents. Therefore, most parents are concerned when something happens to their children at this age, especially if they have chronic diseases such as leukemia. The disease condition of young children is a major crisis that the child himself and his family have to face in the form of anxiety caused by various factors.

Children who have leukemia are three times more prone to malnutrition than children who are healthy or have no history of cancer[5]. A balanced diet is very helpful in preventing leukemia[5]. Factors that influence meeting nutritional requirements in leukemia patients include Internal factors: physiological factors, psychological factors, and external factors: culture, religion, ethical choices, economic factors, social norms, education/awareness about health, media, and advertising[7][5][8]. Culture is the most important determinant of food choices. One of the needs that must be satisfied to sustain life is food and drink. Food is a manifestation of culture, from the processing of raw materials into food to the way it is presented and consumed. Health is influenced by social and environmental, physical, and biological factors[9][10]. One of the ten social determinants that can affect health is the availability of food, the use of family income for food, and how diet affects the health of individuals, families, and communities [9]. Malnutrition and overnutrition have implications for health and disease.

The aim of this study is to analyze the cultural form of menu selection with the incidence of leukemia in children living in a shelter in Surabaya. The population in this study were all mothers or families and pediatric patients with leukemia living in a transitional house in Surabaya. In this type of research, and analytical approach/simple linear regression correlation is used by examining the predominant factors that influence the culture of food menu selection with the occurrence of childhood leukemia[11][12][13]. In addition, the research data were analyzed using the logistic regression test to determine the predominant factors that influence the culture of food menu selection with the occurrence of childhood leukemia [11][12][14]

II. METHODS

This type of research used an analytical approach/simple linear regression correlation by looking at the dominant factors that influence the culture of food menu selection with the incidence of leukemia in children[15][16]. The

population in this study were all mothers or families and pediatric patients with leukemia waiting for treatment at the hospital living in a home in Surabaya. The dependent variable is the culture of food choices in children with leukemia, with the following sub-variables: Belief in food menu selection, knowledge of nutrition in food menu selection, social functions in food menu selection, and preferences or likes in daily food menu selection[17][16]. The independent variable is the incidence of childhood leukemia[6][14]. Data collection in this study was done using checklists and observation forms, first explaining to the subjects the objectives and benefits of the research to be conducted and guaranteeing the confidentiality of the subjects' data.

Assessment of each dependent variable with the following sub-variables: Belief in food choices, Knowledge of nutrition in food choices, Social function in food choices, and Preferences or likes in daily food choices using yes and no questions, then the score is calculated as follows:

$$\text{Value} = \frac{\text{total score obtained}}{\text{number of statements}} \times 100\% \quad (1)$$

Good category with criteria in answering the statement: 76 - 100%. Category Quite Good with criteria in answering the statement: 56-75%. Category Not Good with criteria in answering the questions: < 56%. In addition, the research data were analyzed using the logistic regression test to identify the predominant factors influencing the culture of food menu selection with the occurrence of childhood leukemia [11][12][6][8]

III. RESULT

A. CULTURAL SELECTION OF MEAL

Culture selection of meal plans in children with leukemia.

TABLE 1
Faith

Category	Frequency	Percentage
Good	25	83%
Quite Good	5	7%
Not Good	0	
Total	30	100%

TABLE 2
Knowledge of the mother (Selection of food menu)

Category	Frequency	Percentage
Good	28	93%
Quite Good	2	7%
Not Good	0	
Total	30	100%

TABLE 3
Social function of the parents in the choice of the menu

Category	Frequency	Percentage
Good	16	53%

Quite Good	13	43%
Not Good	1	4 %
Total	30	100%

CML	3	10%
Total	30	100%

TABLE 4
Favorite food menu selection

Category	Frequency	Percentage
Good	26	87%
Quite Good	4	13%
Not Good	0	
Total	30	100%

TABEL 6 shows that almost all children in the home have leukemia (90%) and a small proportion have CML (10%).

C. CULTURAL RELATIONSHIP CHOICE OF MENU WITH THE INCIDENCE OF LEUKEMIA

Based on TABEL 7 above, there is a cultural relationship between food menu selection starting from beliefs, knowledge about food menus, social functions, likes, or preferences, the pattern of menu selection shows no effect

TABLE 7
The relationship between the culture of menu choice and the incidence of leukaemia

Culture of food menu selection		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Faith	-.015	.038	.159	1	.690	.985
	Knowledge of the mother (Selection of food menu)	-.141	.114	1.525	1	.217	.868
	Social Function	-.098	.102	.929	1	.335	.907
	Favorite food menu selection	.352	.290	1.471	1	.225	1.422
	Patterns for the selection of dishes	-.046	.098	.219	1	.640	.955
	Constant	-6.519	20.463	.101	1	.750	.001

TABLE 4
Patterns for the selection of dishes

Category	Frekuensi	Persentase
Good	20	67%
Quite Good	8	27%
Not Good	2	7%
Total	30	100%

Based on the above table, it is explained that the culture of choosing food menus for leukemia children in Shelter House on Trust (TABLE 1) shows that almost all of them are good (83%) and a small portion is sufficient (7%). Knowledge of menu choices (TABLE 2) shows that almost all are good (93%) and some are sufficient (7%), social function (TABLE 3) shows that most are good (53%), almost half are good (43%), a small number are poor (4%). menu choice (TABLE 4) shows that almost all are good (87%), a small proportion adequate (13%), and menu choice pattern (TABLE 5) shows that most are good (67%), almost half adequate (27%), a small proportion less (7%).

B. LEUKEMIA IN CHILDREN

TABLE 6
Incidence of leukaemia in children in institutions Juli-21 Agustus 2017

Type	Frequency	Percentage
ALL	27	90%

according to the results of significance (P > 0.05).

IV. DISCUSSION

A. CULTURE MENU SELECTION IN CHILDREN WITH LEUKAEMIA

Culture The selection of food menus on beliefs, knowledge about food menus, social functions, preferences or likes, patterns of selection of food menus for children in the shelter house shows almost all of them well [13][17]. This is consistent with the characteristics of mothers that almost half of them (50%) have high school education and some PT is small (3%), so it is quite understandable while understanding is quite influential on behavior. According ton L. Oktavia a person's understanding of behavior is the behavior that a person engages in when seeking, purchasing, using, evaluating, and not using products, services, or ideas that are expected to satisfy a person's needs by consuming the products offered. Furthermore, a person's behavior is a decision-making process and the physical activities of individuals, all of which involve evaluating, acquiring, using, or ignoring products. In addition to knowledge and education, the parents of the children in this study received a whole range of information about leukemia, particularly about the factors that contribute to or influence the occurrence of this disease[8].

The culture of menu selection in terms of social functions and food choice patterns is somewhat lacking in this study[18].

Social functions (religious and communicative functions) are still poorly implemented, so important media are not used in people's efforts to relate to each other, especially in the provision of food[7].

The culture of menu selection related to the pattern of menu selection from the findings of this research is still a small part that is still lacking, this is in accordance with the family income, which is almost half of which is less than 1 million Rupiah, so it greatly affects the consideration of the selection of family food menus and types of menus[18][19]. According M. Maringer, it was explained that the food selection plan was based on ethnic groups and advantages, so parents did not take it into consideration when choosing the type of menu[17][20][10][21].

B. INCIDENCE OF LEUKEMIA IN CHILDREN LEUKEMIA

The incidence of leukemia in children at Shelter House was almost exclusively diagnosed with ALL and a small proportion with CML

This is consistent with the fact that almost all children are older. Acute lymphoblastic leukemia (ALL) is the most common form of leukemia in children and the most common childhood malignancy[6][14]. The incidence of ALL is 1/60,000 people per year, with 75% of patients younger than 15 years. The highest incidence is between 3-and 5 years of age.[2] Meanwhile, chronic myeloid leukemia (CML) is also counted as a myeloid stem cell malignancy[5]. However, there are more normal cells than in the acute form, so the disease is milder. A genetic abnormality called the Philadelphia chromosome is found in 90 to 95 % of patients with CML. CML rarely occurs in people under 20 years of age, but the incidence increases with age[8]

The findings of this study only identified the type of cancer in children (leukemia) ALL but in other cancer-protective conditions such as; retinoblastoma, brain tumor, Willms tumor, and there is a trend or trend of increase in the incidence of other types of tumors which have not identified the trend of incidence from 2014 to 2016 as follows 7%, 15%, and 22%. [5]

C. THE RELATIONSHIP BETWEEN FOOD MENU CHOICE CULTURE AND THE INCIDENCE OF LEUKEMIA

The results of the linear logistic analysis test show that the association between culture and food menu selection begins with belief, knowledge about menus, social functions, likes, or preferences, and the pattern of menu selection shows no influence according to the results of significance ($P > 0.05$). This is because the child's parents are already in the chemotherapy phase, so they have already received a lot of information about cancer, especially about the factors that trigger the onset of cancer.

Of the various factors that have been regressed, there are several factors that could contribute to this, namely the knowledge factor, menu preferences or tastes and the socio-cultural function of food menu choices[22][10][23].

Knowledge factor: A person's knowledge is usually gained from experiences that come from various sources, such as mass media, electronic media, manuals, health workers, poster media, close relatives, and so on. Knowledge can also be acquired through learning processes such as consultations, training, or courses. Knowledge can help explain important aspects of the world and predict the occurrence of events

Preference factor preference, Drewnowski's (1999) research states that there is a significant relationship between food preference and frequency of eating among women. There are three main factors that influence food consumption, namely: individual characteristics, food characteristics, and environmental characteristics. A model or framework is needed to examine food consumption in relation to these different characteristics as well as the relationship between the characteristics themselves[24].

As a factor in social function, food is an important medium in people's efforts to relate to each other. In the household, the warmth of the relationship between its members takes place at mealtimes[22]. Even in large households, regular meetings with meals are sought to maintain and strengthen the relationship. Food is often exchanged between neighbors[22][19][21]

The limitations of the study are the number of samples in the amount of 30 and measuring instruments that have not been standardized. So that the results about menu selection are mostly good and some are lacking about social functions related to family communication with explanations and food menu selection related to family income[18][15][25].

V. CONCLUSION

This study aims to analyze family culture in menu selection with the incidence of leukemia in children living in shelters in Surabaya. Family culture in food menu selection, there is something to consider with the results of statements that are still lacking related to family culture about social functions that are closely related to communication and menu selection closely related to family income, so it is hoped that for further research the number of respondents will be increased and the development of measuring instruments with reliability tests.

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