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CORRELATION ANALYSIS BETWEEN STUDENTS' KNOWLEDGE IN MEDAN CITY AND THE PREVALENCE OF KIDNEY FAILURE SYMPTOMS IN INDONESIA DUE TO POOR LIFESTYLES

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Abstract

This journal will convey information regarding the relationship between the knowledge of students in the city of Medan and the high rate of kidney failure in Indonesia as a result of poor lifestyle patterns. The theme surrounding the correlation between students' knowledge in Medan City and the prevalence of kidney failure in Indonesia as a result of poor lifestyles is also presented based on data quoted by researchers from previous journals, data from Riskesdas and the Ministry of Health, and also results from questionnaire that has been created and distributed by researchers to several respondents who are students in Medan City. The data used by researchers is data regarding kidney failure in Indonesia and in the city of Medan, as well as the results of questionnaires from several respondents containing the knowledge of students in the city of Medan regarding the relationship between the prevalence of kidney failure in Indonesia as a result of patterns bad life. In this research, researchers will also discuss the importance of people's mindset and behavioral patterns in efforts to prevent kidney failure rates in Indonesia, where sufferers are no longer elderly people, but have also attacked young people as well.

Keywords: Bad Lifestyle, Epidemiology of Non-Communicable Diseases, Level of Community Knowledge, Kidney Failure

Introduction

Funds spent on treating the second most common disease are kidney failure. Financing for treatment As of 2012, PT Askes and other insurance contributed 227 billion for kidney disease. Every year, the funds spent continue to increase along with the number of people suffering from kidney failure. In 2015, the Social Security Administration for Health allocated 2.68 trillion for kidney failure treatment, including outpatient and inpatient care. The kidneys are an important organ that performs many important functions in the body. Including regulating body water volume (fluid), regulating osmotic and ion balance in plasma (electrolytes), regulating acid base balance, removing metabolic waste (such as urea, uric acid and creatinine), toxic substances, drugs, hemoglobin metabolism products and foreign chemicals, as well as metabolism and hormonal function (Haryono, 2013). Chronic kidney failure is a medical condition that has a major impact on the body's health. Due to poor lifestyle and other risk factors, this disease has increased in Indonesia and throughout the world in recent years. It is very important for individuals, especially students, to understand and anticipate the risks associated with chronic kidney failure. Medan is one of the metropolitan cities in Indonesia which has a lot of activities and a large population. Unhealthy lifestyles, such as lack of physical

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activity and consuming an unbalanced diet, increase the risk of chronic kidney failure. As a result, it is very important and important to investigate the relationship between Medan City students' knowledge about the symptoms of kidney failure and the prevalence of kidney failure in Indonesia which is caused by poor lifestyle. The aim of this research is to determine whether there is a relationship between students' knowledge about the symptoms of kidney failure and the prevalence of kidney failure in Indonesia which is caused by poor lifestyle patterns. Therefore, it is hoped that this research can help develop plans to prevent kidney failure in Indonesia and increase public awareness of the importance of living a healthy and balanced lifestyle.

Research Methods

The research method used in this journal is a quantitative method accompanied by secondary data which is re-examined based on online data found by researchers in this journal. The reason researchers use quantitative methods is because this method is one of the research methods that is preferred compared to qualitative research, because its form is more scientific, objective and easy to accept. This journal was carried out by distributing questionnaires to several respondents who were students in Medan City, North Sumatra, Indonesia. This journal was carried out starting from the time the researcher distributed the questionnaire to several respondents, namely on May 11 2024 until it was completed in less than two months. The type of research used by researchers in this journal is quantitative methods. Why is that? The reason researchers use quantitative methods is because this method is one of the research methods that is preferred compared to qualitative research, because its form is more scientific, objective and easy to accept.

The most important stage when conducting research is the method of data collection techniques, because the method of data collection techniques in a journal is a way to obtain information that is accurate and has its validity tested, and is the main aim of a research. Researchers must be careful in carrying out data collection techniques and regarding how to collect journal materials. If they are not careful, researchers will not be able to get results that are in sync with predetermined standards. Data collection can also occur in environments of varying types, scale sizes, and also by using certain methods. The following are the steps that must be taken in preparing journal materials or other scientific papers, namely:

The observation method used as a fulcrum by researchers in this journal is the observation method, namely in the form of systematic monitoring and recording of every event and sign found in every result from respondents filling out the questionnaire. The method shown here will be used in the process of collecting data from the answers of each respondent who has filled out the questionnaire given by the researcher, where each respondent has the status of a student in Medan City, which is in accordance and in sync with the journal created by the researcher, which raised the theme of the correlation between the knowledge of students in the city of Medan and the prevalence of kidney failure in Indonesia as a result of poor lifestyle patterns.

The interview method is a form of interaction and communication between two or more people, where one person acts as an absorber of information from another person by conveying clear aims and objectives. However, in the journal created by the researcher this time, the researcher did not use the interview method. The researcher only collected data from Riskesdas and the Ministry of Health, and also referred to previous journals, and explained the results of the questionnaire that had been made by the researcher and answered by several respondents. This means that researchers did not conduct direct interviews with people suffering from kidney failure due to limited time, energy and materials from researchers in this journal.

Results

Questions from researchers to respondents regarding whether respondents know the meaning of kidney failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to have 'sufficient' knowledge about kidney failure.

3.1. Questions from Researchers to Respondents Regarding Whether Respondents Have Maintained a Balanced Lifestyle in Efforts to Prevent Symptoms of Kidney Failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'sufficient' in terms of maintaining a balanced lifestyle in an effort to prevent symptoms of kidney failure.

3.2. Questions from Researchers to Respondents Regarding Whether Respondents Feel They Have a Bad Lifestyle That Can Trigger the Symptoms of Kidney Failure.

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'little' in maintaining a bad lifestyle which could trigger symptoms of kidney failure.

3.3. Questions from Researchers to Respondents Regarding Whether Respondents Know the Causes of Kidney Failure Symptoms.

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to have 'sufficient' knowledge regarding the causes of symptoms of kidney failure.

3.4. Questions from Researchers to Respondents Regarding Whether Respondents Recognize What Signs are the Early Symptoms of Kidney Failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'little' in knowing whether the respondents recognized what signs were the initial symptoms of kidney failure.

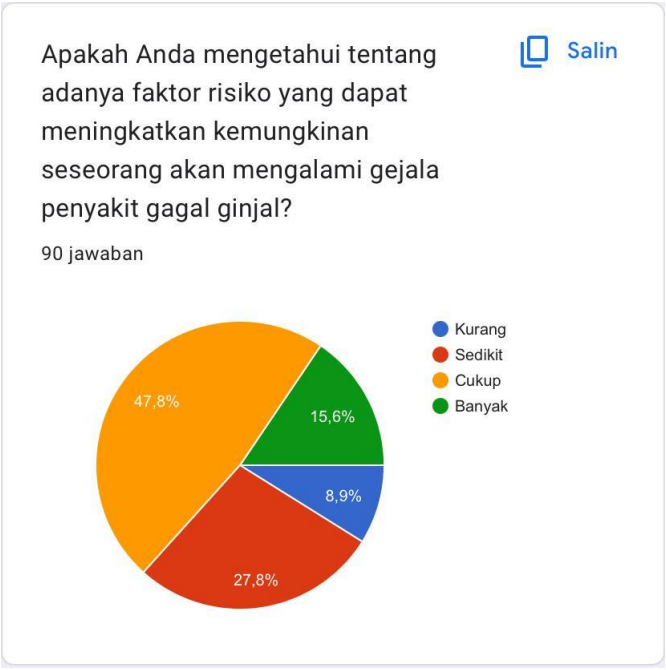
3.5. Questions from Researchers to Respondents Regarding Whether Respondents Believe That an Unbalanced Lifestyle Triggers the Symptoms of Kidney Failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'sufficient' regarding whether the respondents believed that an unbalanced lifestyle was a trigger for the symptoms of kidney failure.

3.6. Questions from Researchers to Respondents Regarding Whether Prevention and Early Detection Play an Important Role in Treating Symptoms of Kidney Failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to have 'a lot' in terms of prevention and early detection which plays an important role in treating the symptoms of kidney failure.

3.7. Questions from researchers to respondents regarding whether respondents knew about the existence of causal factors that could support the possibility that someone could experience symptoms of kidney failure



Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'fair' about kidney failure, whether the respondents knew about the existence of causal factors that could support the possibility that someone could experience symptoms of kidney failure.

3.8. Questions from Researchers to Respondents Regarding the Importance of Knowledge and Insight in Recognizing Symptoms of Kidney Failure

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'a lot' regarding how important knowledge and insight are in recognizing the symptoms of kidney failure.

3.9. Questions from Researchers to Respondents Regarding Whether Respondents Know That the Symptoms of Kidney Failure Are Symptoms of a Disease that Has Quite a Large Cost in the Treatment Process

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents there tended to be 'a lot' regarding whether the respondents knew that the symptoms of kidney failure were symptoms of a disease that had quite large costs in the treatment process.

3.10. Questions from researchers to respondents regarding whether respondents often consume sweet drinks (for example: soda, sweet tea, sweet coffee)

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to be 'less' regarding whether the respondent often consumes sweet drinks (for example: soda, sweet tea, sweet coffee).

3.11. Questions from researchers to respondents regarding whether respondents often consume fast food or processed foods that are high in salt

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to be 'fair' regarding whether the respondent often consumes fast food or processed foods that are high in salt.

3.12. Questions from Researchers to Respondents Regarding Whether Respondents Often Consume Fizzy Drinks or Energy Drinks

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'less' regarding whether the respondents often consumed fizzy drinks or energy drinks.

3.13. Questions from Researchers to Respondents Regarding Whether Respondents Diligently Do Sports or Sufficient Physical Activity

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to have 'little' knowledge regarding whether the respondent is diligent in doing sports or sufficient physical activity.

3.14. Questions from researchers to respondents regarding whether the respondent is an active smoker

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents tended to be 'no' or not active smokers.

3.15. Questions from Researchers to Respondents Regarding How Often Respondents Pay Attention to Mental Health and Seek Help If Necessary

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to be 'fair' regarding how often respondents pay attention to mental health and seek help if needed.

3.16. Questions from Researchers to Respondents Regarding Whether Respondents Consume Body Fluid Requirements in Accordance with Body Needs Every Day

Based on the diagram above, information was found that was in accordance with the respondents' answers, that of the 90 respondents there tended to be 'a lot' regarding whether the respondents consumed body fluids according to their body's needs every day.

3.17. Questions from Researchers to Respondents Regarding Whether Respondents Consume Hard Drugs and Over Long Periods of Time

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to be 'less' regarding whether the respondent consumes hard drugs and over a long period of time.

3.18. Questions from researchers to respondents regarding whether respondents are often passively exposed to cigarette smoke

Based on the diagram above, information was found that was in accordance with the respondents' answers, that out of 90 respondents tended to be 'slightly' regarding whether the respondents were often passively exposed to cigarette smoke.

3.19. Questions from researchers to respondents regarding whether respondents have enough sleep every night

Based on the diagram above, information is obtained that is in accordance with the respondents' answers, that out of 90 respondents tend to be 'poor' regarding whether the respondents have enough sleep every night.

Discussion

4.1. Facts and Figures on Kidney Failure in Indonesia

The Indonesian Ministry of Health (Kemenkes) announced that 12 provinces in Indonesia have the highest incidence of chronic kidney disease. The death rate due to chronic kidney disease in Indonesia exceeds 42,000 people, said Eva Susanti. Director General of Prevention and Control of Non-Communicable Diseases, Indonesian Ministry of Health, at the online World Kidney Day 2023 meeting in Jakarta, Tuesday, in a press conference. In Indonesia, the regions with the highest transmission rates are North Kalimantan, Maluku, North Sulawesi, Gorontalo, Southeast Sulawesi, NTB, Aceh, West Java, Maluku, DKI Jakarta, Bali and Yogyakarta. Based on medical diagnoses, the number of chronic kidney diseases in people aged 15 years and over in 2018 was 739,208 people, an increase of 2 per 1,000 people compared to 2013 which was 3.8 per 1,000 people. Based on age criteria, the population aged 65 to 74 years dominates at 8.23 per 1000 population, the population aged over 75 years is 7.48 per 1000 population, the population aged 55 to 64 years is 7.21 per 1000 population, and the population aged 7 .21 per 1000 residents. Ages 45 to 54 years are 7.21 per 1000 residents 5.64 people per mile. Due to gender, men dominate urban areas.

Chronic kidney disease is the 11th deadliest disease on the continent, affecting more than 1.42 million people. This figure is higher than other deadly diseases such as heart disease (9.13 million), stroke (6.5 million), chronic obstructive pulmonary disease (COPD) (3.2 million), lower respiratory tract infections (2.49 million). , and lung disease, various sexual diseases. Cancer (2 million people) and neonatal disease (1.88 people). Of the 1 million population, 1.62 million people suffer from Alzheimer's disease, 1.55 million people suffer from diabetes, 1.53 million people suffer from diarrhea, and 1.47 million people suffer from liver cirrhosis. Based on this report, kidney failure is one of the costs of catastrophic diseases in Indonesia, amounting to more than IDR 1.93 trillion as of 30 November 2022. The prevalence of kidney failure is higher in men (0.3%) than women (0.2%) . Based on age characteristics, the highest prevalence is in the 75+ age group (0.6%) and begins to increase at the age of 35 years.

4.2. Relationship between Student Knowledge and Risk Factors for Kidney Failure

Based on educational history, groups who do not or have not attended school have the highest rates of chronic kidney failure. Urinary tract infections, urinary tract stones, lupus, chronic pyelonephritis, chronic glomerulonephritis, and mixed kidney disease can also cause chronic kidney failure, according to Renal Registry (IRR) data. Chronic kidney failure is associated with life habits such as smoking, protein diet, consumption of herbal medicine, use of analgesic drugs, consumption of fat, and high salt consumption.

Kidney failure can be caused by lifestyle changes made by many teenagers and adults, which lead to an unhealthy lifestyle (Hidayati et al., 2013). Diabetes mellitus, hypertension, smoking habits, drinking fizzy drinks and eating foods high in salt and consuming supplements are the most common risk factors for chronic kidney failure in young adults, according to data from the Indonesian Renal Register (IRR) (2015). A study conducted by Lathifah (2016) found that 26.67% of people with chronic kidney failure were aged 18-24 years, 46.66% of people aged 25-32 years, and 26.67% of people aged 33-40 years. Therefore, knowledge about the symptoms of kidney failure is needed to influence preventive behavior to prevent an increase in cases of chronic kidney failure. This may be due to recent trends, especially among teenagers, where people spend more time on social media than exercising, consuming fast food, caffeinated drinks, and other things. Therefore, in-depth information regarding knowledge about chronic kidney failure is needed for adolescents and adults to improve preventive behavior and reduce unhealthy lifestyles.

4.3. Relationship Between Lifestyle and Kidney Failure

People who suffer from chronic kidney failure, especially people with severe kidney disease who require dialysis therapy, should limit their food and drink intake. This is intended to prevent major damage to the kidneys (Priyanti, 2016). Limiting food intake also affects fruit and vegetable intake. This limitation is related to the potassium content found in vegetables and fruit (Herawati and Ariyanto, 2014). Normal kidneys may excrete excessive amounts of potassium. However, in people with chronic kidney failure, kidney function decreases so that high potassium levels cause potassium to accumulate in the blood (Siagian, 2018). Therefore, people with chronic kidney disease in particular need to limit their food intake, including fruit and vegetable intake. The alcohol consumption variable shows that the distribution of chronic kidney failure in Indonesia aged 18 years and over in 2018 was found to occur among non-alcoholic respondents, namely 95.7%. His research presented the same results as research conducted at the hemodialysis unit at Jamlsari Islamic Hospital, Surabaya.

This means that many people who suffer from chronic kidney failure come from communities that do not consume alcohol (88.34%) (Agustianingsih et al., 2019). This happened because in the research more respondents (95.4%) belonged to the group of people who did not consume alcohol. Apart from that, the time factor in classifying alcohol consumption based on the 2018 Riskesdas questionnaire is limited to the last month before the 2018 Risksudas implementation, so it can influence the results of the distribution of alcohol consumption among respondents. There were no variations in the distribution of data on fruit and vegetable consumption variables and alcohol consumption variables in chronic kidney failure. It has been proven that people who consume little fruit and vegetables are more likely to develop chronic kidney failure (99.9%). Likewise, chronic kidney failure, one of the variables of alcohol consumption, is more common in people who do not consume alcohol (95.7%). For this reason, the two variables cannot be analyzed further in bivariate analysis.

4.4. Intervention and Prevention of Kidney Failure

The importance of health education interventions in the prevention and treatment of chronic kidney failure. This disease can be prevented by providing education that focuses on maintaining overall kidney health, including understanding kidney disease, its causes, treatment and prevention. Demonstrate efforts to prevent chronic kidney disease through early detection of kidney disease, especially in people with diabetes and hypertension. Prevention can be done by expanding patient knowledge regarding the application of early detection of kidney disease and healthy lifestyles. Emphasizes the role of nurses in the hemodialysis process and how surgical procedures can be performed to prevent complications. To achieve optimal health in hemodialysis patients, ongoing health education efforts are needed through comprehensive education programs. We show how non-pharmacological interventions can be used to reduce stress in hemodialysis patients. Through the use of articles and journals, this research found that non-pharmacological interventions can effectively reduce stress in patients. Educating them about overall kidney health can help explain how to prevent kidney failure. Discussions were also held to increase public awareness about kidney health and preventing kidney disease as early as possible. Several studies believe that intervention and prevention of kidney failure is an effective strategy to prevent and treat this disease. Health education interventions, community empowerment, surgical interventions, non-pharmacological interventions, and prevention of kidney failure are generally considered as ways to reduce the risk and treat the disease.

Conclusion

Based on data collected from discussions and the results of the researcher's questionnaire to 90 respondents regarding whether the respondents had maintained a balanced lifestyle in an effort to prevent the symptoms of kidney failure, there were 46.7% of respondents who had maintained a good lifestyle to avoid it. symptoms of kidney failure and there were 42.2% of respondents who felt they had a bad lifestyle which could trigger symptoms of kidney failure. Among the triggers for symptoms of kidney failure are poor lifestyle habits such as eating processed or fast food, drinking fizzy or high-caffeine drinks, as well as not getting enough sleep and rarely doing physical activity.

1. Increase knowledge about kidney failure and the risks resulting from a poor lifestyle.
2. Adopt a healthy lifestyle.
3. Avoid bad habits.
4. Carry out regular health checks

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