



Journal of Science and Technological Education, Vol. 2 No. 2, 2023
ISSN: 2830-5043 (Print) 2830-4829 (Online)

Journal of Science and Technological Education
(META)

journal homepage: www.meta.amiin.or.id

Article history: Received Nov 23, 2023; Accepted Dec 05, 2023; Published Dec 07, 2023

Correlation of Understanding of Excretion System Material with Healthy Living Behavior of Class XI Science Students in MAN 3 Jember

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Abstract The study's goal is to find a correlation between learning the excretory system material and the behavior of keeping a healthy lifestyle in class XI Science students at MAN 3 Jember. This research uses a non-experimental correlational quantitative approach. The population of this research was students of class XI IPA MAN 3 Jember, totaling 169 respondents. The samples taken were 118 respondents using the Simple Random Sampling technique. The data collection instruments used were tests on the variable understanding of the excretory system material and questionnaires with a Likert scale on the behavioral variable of maintaining a healthy life. Data analysis uses the product moment correlation test. Based on research data analysis, it shows that students' understanding of the excretory system material is categorized as moderate with a percentage of 84% and an average score of 12,3. Meanwhile, the behavior of maintaining a healthy life is in the medium category with a percentage of 59% and an average score of 27,5. The results of the product moment correlation analysis show that there is no relationship between understanding the excretory system material and the behavior of maintaining a healthy life in class XI Science students at MAN 3 Jember. The obtained significance value of $0.442 > 0.05$, which means that H_a is rejected and H_0 is accepted.

Keywords: Understanding of excretion system material, Healthy living behavior, Science students, Correlation

INTRODUCTION

Students' comprehend of the excretory system knowledge is critical since learning and understanding the principles of the material will indirectly impact their thinking patterns. The actions and behavior that results from each person's activities is the outcome of their understanding and knowledge. Understanding the excretory system is critical for maintaining a healthy body. Understanding how the excretory system works allows a person to maintain fluid balance in the body. Prevents renal disease while also improving skin, liver, and lung health.

An in-depth understanding can also assist someone in making informed choices about eating, drinking, and activity routines that are appropriate for their body's demands. Especially for class XI students, who are at a higher risk of health problems as a result of an unhealthy lifestyle. Students, on the other hand, frequently lack understanding and awareness of the necessity of preserving health and tend to lead harmful lifestyles, such as imbalanced eating patterns, a lack of physical exercise, and smoking habits. This is the starting point for many diseases that affect the body, at an important point in their lives when strong healthy living habits will influence their future lifestyle.

The excretory system material in humans has abstract characteristics as the process cannot be perceived, and the research involves physiological processes that occur in the human body. Excretory system material is a biological notion relevant to daily life in which the core competency is recognizing, relating, and describing the structure, function, and operations of the human excretory system. The material also incorporates difficulties such as illnesses that occur in the lives of students, such as kidney problems, hepatitis, asthma, and skin diseases, for which treatments or prevention are required (Saragih, 2016).

Each person's concept of capturing knowledge is critical in the process of establishing a person's attitude. This is due to the fact that attitudes are developed as a result of knowledge or material gained, which can originate from the family environment, educational institutions, the community environment, or in the form of information obtained from experience. Habit formation may be done on a regular basis to get someone used to performing something effectively. Aside from that, frequent habituation will result in more acceptable and beneficial attitudes and practices. A teacher can also have an impact on how pupils establish their attitudes. Everything the instructor teaches (stimulus) may increasingly visibly impact pupils' responses to their surroundings.

Even if a person has a high degree of comprehension, changing their attitude takes time. This is because comprehension does not always manifest itself in an attitude. Wawan further claims that changes in a person's attitude or conduct are impacted by a variety of elements, including emotional (internal) considerations, trust, confidence, facilities, family environment, and educational institutions. Meanwhile, supportive variables are required to achieve healthy lifestyle habit. Other people's support, experience, facilities and infrastructure, and the physical environment are all examples of supportive variables (Wawan & Dewi, 2017).

Everything the teacher says (stimulus) has the potential to affect student reactions. The more frequently students are exposed to stimuli, the more obvious the student's response to the surrounding environment. It is vital to have regular routines and offer more stimulation to pupils in order to actualize the behavior of sustaining a healthy existence. Carrying out habituation as frequently as feasible will help to shape good student character (Gantini & Fauziati, 2021). A routine is an activity that is repeated in order to form a habit. Habituation is a circumstance in which someone applies action that is infrequently done to be done regularly until it eventually forms a habit (Octaviani et al., 2022).

The behavior seen in this study was the behavior of maintaining a healthy lifestyle after students acquired knowledge or awareness of the excretory system. Maintaining a healthy lifestyle is a behavioral activity in the process of thinking, knowledge, and beliefs regarding healthy reproduction. According to Rogers' study, as cited by Damayanti et al. (2017), a sequential process happens within a person before they adopt a new habit.

Based on this background study, the purpose of this study was to discover how the understanding of excretion system materials relates to the healthy living behavior of class XI science students in MAN 3 Jember.

METHOD

This study takes a quantitative approach, which stresses the examination of numerical data (numbers) using statistical methods. Non-experimental correlational research is used in this sort of study. The population in this study consisted of all 169 students in class XI Science at MAN 3 Jember. Quantitative educational research is also commonly carried out at the high school level in Jember, such as by Hasanah et al. (2022) or Hidayah et al. (2022). Research instruments are tools used to obtain or collect data in order to solve research problems and to achieve research objectives (Jakni, 2016).

Data collection instruments use multiple choice tests and questionnaires. Understanding of the excretory system material was obtained from a multiple choice test with 20 questions processed by the researcher. Meanwhile, student surveys are utilized to assess healthy living habits. A closed questionnaire with ten statements on a Likert scale was employed.

According to Siregar (2013), the data analysis approach employs the product moment correlation test with the assistance of SPSS IBM 26 as the basis for decision making:

- 1) H_0 is accepted if $t_{count} < t_{table}$ (there is no correlation between variables X and Y).
- 2) If $t_{count} > t_{table}$, then H_0 is rejected (a correlation exists between variables X and Y).

In this study, the correlation coefficient value is between -1 and 1, and the direction is represented in positive (+) and negative (-) form to assess the strength of the link.

As an example:

- 1) If $r = -1$, it indicates complete negative correlation, which signifies that there is a contradictory link between variables X and Y; if variable X rises, variable Y falls.
- 2) as $r = 1$, it suggests that the link between variable X and variable Y is linear; as variable X grows, so does variable Y.

A reference table for assessing the strength of a link between two variables is provided Table 1 below.

Table 1. Correlation coefficient criteria

Correlation Value (r)	Level of Relationship
0,00-0,199	Very weak
0,20-0,399	Weak
0,40-0,599	Medium
0,60-0,799	Strong
0,80-0,100	Very strong

FINDINGS AND DISCUSSION

Following an understanding test on the excretory system subject, there were 20 multiple choice questions. The acquired findings are depicted in Figure 1 below.

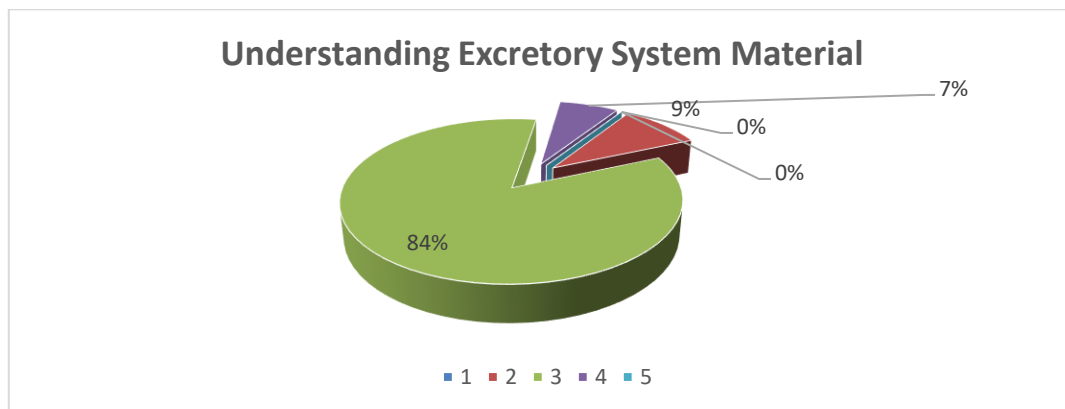


Figure 1. Student understanding of excretory system material.

According to illustration image 4.1, 118 respondents completed the questionnaire, with 0 in the very high category with a percentage of 0%, 11 students in the high category with a percentage of 9%, 99 students in the medium category with a percentage of 84%, 8 students in the low category with a percentage of 7%, and 0% in the very low category with a percentage of 0%. The average student understand of excretory system subject for MAN 3 Jember class XI IPA students is 61.48.

The median student understanding of the excretory system material for class XI IPA students at MAN 3 Jember is 60.00. The standard deviation of students' understanding of the excretory system material for class XI science students at MAN 3 Jember is 9.07. This shows that the average level of students' understanding of the excretory system material for class XI IPA students at MAN 3 Jember is

categorized as medium, and 11 students out of 118 students with a percentage of 9% are categorized as high.

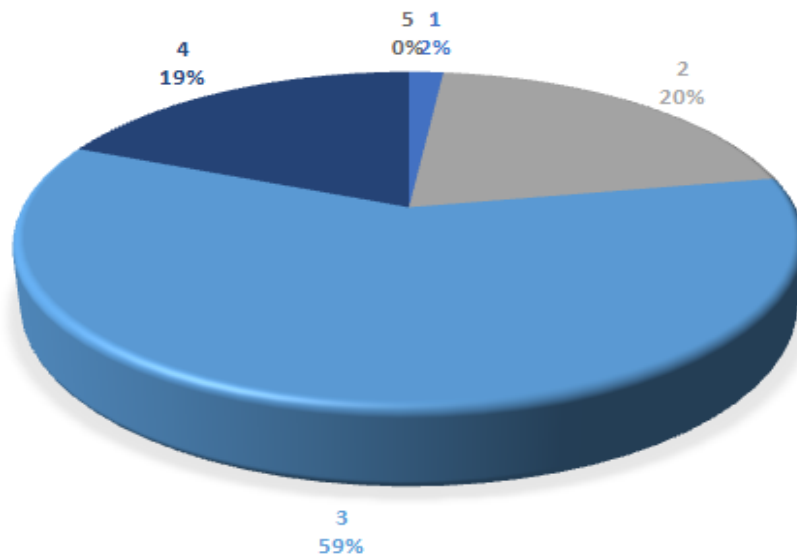


Figure 2. Student behavior in maintaining a healthy life.

According to Figure 2, of the 118 respondents who completed the questionnaire, there were 2 students in the very high category with a percentage of 2%, 24 students in the high category with a percentage of 20%, 70 students in the medium category with a percentage of 59%, 22 students in the low category with a percentage of 19%, and 0 students in the very low category with a percentage of 0%. The average behavior of class XI Science students at MAN 3 Jember in terms of keeping a healthy lifestyle is 27.5. The median behavior for keeping a healthy life for MAN 3 Jember class XI Science students is 27. The standard deviation for students' conduct in sustaining a healthy lifestyle for class This indicates that the average degree of conduct for keeping a healthy life for class XI Science students at MAN 3 Jember is modest.

Before conducting a hypothesis test, a prerequisite test, particularly a normality test, is required to determine whether the distribution of the data is normally distributed or not, followed by a linearity test to determine whether the relationship between the two is linear or not. Following completion of the necessary examinations, a hypothesis test was conducted to establish the relationship between comprehending excretory system content and behavior in sustaining a healthy life.

The results of calculations using the SPSS for Windows version 26 application revealed that the data was normally distributed. A significant value of 0.399 was achieved based on the findings of the normality test performed by researchers on the variables of comprehending the excretory system material (X) and behavior for keeping a healthy life (Y) using the Kolmogorov-Smirnov test. Because the significance value is greater than 0.05, these results imply that the data is regularly distributed.

The data demonstrated linearity between variables X and Y, according to the findings of computations using the SPSS for Windows version 26 application. The Deviation From Linearity Sig was calculated. The value 0.919 is bigger than 0.05. As a result, a linear relationship exists between variable X (knowledge of excretory system material) and variable Y (healthy lifestyle behavior). Following the assessment of the requirements, the hypothesis is tested using the product moment correlation test.

Table 2. Product moment correlation test results

		X	Y
X	Pearson Correlation	1	,071
	Sig. (2-tailed)		,442
	N	118	118
Y	Pearson Correlation	,071	1
	Sig. (2-tailed)	,442	
	N	118	118

The results of the computations in the table above reveal that the correlation between variables is positive. H_0 is rejected if P.Value α (0.05). In contrast, if P. Value $> \alpha$ (0.05), H_0 is approved. According to the table above, the P. value is $0.442 > 0.05$, indicating that H_0 is accepted and H_a is rejected. The relationship between the variables obtained was 0.071 which is located in the interval 0.00 – 0.199, which means the relationship is very weak. So from the results of the calculation above, H_0 is accepted, meaning "There is no significant relationship between understanding the excretory system material and the behavior of maintaining a healthy life in class XI Science students at MAN 3 Jember".

The understanding alluded to in this study is comprehending the excretory system material and how it is applied to behavior in sustaining a healthy life, and whether or not a person obeys has an affect on him. The ability of each individual to capture knowledge is critical in the process of establishing a person's attitudes or conduct. This is due to the fact that formed behavior is the result of knowledge or material gained, which can originate from the home environment, formal/non-formal education, the community environment, or in the form of information obtained from experience.

Each person's concept of capturing knowledge is critical in the process of establishing a person's attitude. This is due to the fact that attitudes are developed as a result of knowledge or material gained, which can originate from the family environment, educational institutions, the community environment, or in the form of information obtained from experience. Habit formation may be done on a regular basis to get someone used to performing something effectively. Aside from that, frequent habituation will result in more acceptable and pleasant attitudes and practices (Ihsani & Suprapti, 2018). A teacher can also have an impact on how pupils establish their attitudes. Everything the instructor teaches (stimulus) may increasingly visibly impact pupils' responses to their surroundings.

Even if a person has a high degree of comprehension, changing their attitude takes time. This is because comprehension does not always manifest itself in an attitude. Wawan (2017) claims that changes in a person's attitude or conduct are impacted by a variety of elements, including emotional (internal) considerations, trust, confidence, facilities, family environment, and educational institutions. Students' capacity to maintain their health is critical in order for them to have a healthy life in the future. With the capacity to maintain good personal health, he might possibly preserve the health of his family, for example, by applying diverse biological knowledge such as hydroponics. Meanwhile, supportive variables are required to achieve healthy lifestyle habit. Other people's support, experience, facilities and infrastructure, and the physical environment are all examples of supportive variables (Wawan & Dewi, 2017).

CONCLUSION

Based on the findings of the study, it is possible to infer that the understanding of class 118 respondents. With a significance value of $0.442 > 0.05$, the correlation results of the two variables show that there is no significant relationship between understanding the excretory system material and the healthy living behavior of science class students at MAN 3 Jember, indicating that H_0 is accepted and H_a is rejected.

Meanwhile, the relationship's connection is defined as "very weak" based on the coefficient value obtained from the correlation test between the two variables X (knowledge of excretory system material) and Y (healthy living behavior), which is 0.071. This link demonstrates that the students' grasp of the excretory system information is not immediately realized when seen through the lens of their conduct in sustaining a healthy lifestyle.

This is because understanding the content is not enough to develop a person's behavior; it must be followed by habituation through the incentive and support supplied. Habit will be realized when someone repeats a behavior that is seldom done until it becomes habitual. The findings of this study can be utilized as assessment material for educators who want to develop meaningful learning for their pupils. Aside from that, experts recognize that this study still has several flaws due to the few factors used. Further research can address these inadequacies by include independent variables in the form of additional factors that potentially impact behavior.

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