

A STUDY OF ANEMIA AMONG EARLY ADOLESCENT IN ELEMENTARY SCHOOL

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ABSTRACT

Adolescents health is one of the most critical aspects of health in next step. Health problems often experienced by adolescents are anemia. Anemia is a condition in which the hemoglobin level is less than 12 mg/dl. Anemia is one of the health problems in Indonesia. Anemia in adolescence cause health disorder. If not getting the right treatment will cause reproductive health disorder. The purpose of this research is to examine the status of anemia, nutritional status and identify its characteristics. The subject of this study is elementary school students of 35 people who get from 5 and 6 grades. The research has been carried out at Jetis Elementary School. In this study, the measurement of body weight, height and Hb rate against 35 students. The results showed that the characteristics of the respondent based on the age of majority aged 11 years as much as 42.9%. The measurement results of Anthropometry showed that most are in the thin BMI status as much as 74.3. The prevalence of anaemia is 8.6% with majority are non anemia. The conclusion of this research is the incidence rate of anemia in early adolescent amounted 8.6%

KEYWORDS

anemia; early adolescent; nutritional status



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INTRODUCTION

Youths aged 10-19 a long time talk to 18% of the world's include up to masses, generally 1.2 billion. In addition, the assessed populace of those aged 10-24 a long time around the world comes to 1.8 billion and has gotten to be the greatest in history, with most of them living in developing nation (World Bank Group, 2017). The prevalence youths in Indonesia is 24 % of total population (BPS, 2020). Youth could be a period of transition between childhood and adulthood. It is stamped by different changes, specifically physical, social, passionate, and cognitive (World Health Organization, 2018). Extended dietary needs at this point relate to the reality that adolescents choose up up to 50% of their grown-up weight, more than 20% of their grown-up stature, and 50% of their grown-up skeletal mass in the midst of this period. The needs are tall in young ladies since of growths spurt and onset of monthly cycle (Kumar, Goyal, Verma, & Mahesh, 2018).

Anemia is an basic open well-being issue. It can impact people of all ages and from any region. The first transcendent sort of iron deficiency is dietary press insufficiency, caused by a require of press, folate or vitamin B12. Press iron deficiency anemia (IDA) may be a really essential sickness to recognize, but since of its dull clinical signs, it can lie untreated for a long period (Verna & Baniya, 2022). The rate of anemia in creating nation

is still a open well-being issue, checking Indonesia. It is related with destitution, lacking eat less, certain illness, pregnancy/lactation and destitute access to wellbeing administrations (Kumar et al., 2018). Roughly 27% of pre-adult youthful women have frailty in creating nations. Press lack inside the adolescent age bunch is characterized when the hemoglobin level does not reach 12 g / dL. In Indonesia there's an increase inside the prevalence of frailty in pre-adult youthful women. Based on Riskesdas 2013 the prevalence of feebleness in young youthful women, to be particular 37.1%, extended in 2018 to 48.9% (Ekasanti, Adi, Yono, Nirmala G, & Isfandiari, 2020). Youthful prosperity these days will choose the prosperity picture of a populace of people create inside the taking after decade. Prosperity on adolescent is one crucial point in an individual's life cycle.

Anemia as an open well-being issue impacts around 20% of maternal and newborn child passings. Press insufficiency additionally has an influence on lessening work productivity and obstacles in cognitive headway so that school achievement diminish. Usually since frailty cause moo concentration of children coming about in less than ideal children's learning accomplishment (Ekasanti et al., 2020). Anemia in young ladies will have a long-term affect on the regenerative handle. Iron deficiency may be a need of hemoglobin (Hb) within the blood caused by lacking of supplements required for the arrangement of hemoglobin. Puberty are said to be iron deficient in case the less than 12 gr / dl (Tarini, Sugandini, & Sulyastini, 2020).

Young people truly require press admissions to make ruddy blood cells. Adolescents' wholesome status is related to the rate of frailty. There's a need of sound living propensities among youngsters, separated from that, appearance components moreover trigger young people to receive unfortunate diets which result in young people encountering iron deficiency. There was a relationship between Body Mass Record (BMI) and frailty among youthful young ladies in Indonesia. It is appeared that underweight juvenile young ladies with BMI categories, have a 1.198 more prominent hazard of encountering iron deficiency than girls with normal BMI categories (Enggardany, Yovita Hendrati, & Hairi, 2021). Based on this research explanation this aims to determine the incidence of anemia among early adolescent in Jetis elementary school.

RESEARCH METHOD

Inquire about strategies utilized may be a quantitative descriptive with a cross-sectional approach. This think about points to look at anemia status in youth girls. The investigate subjects were 35 Jetis elementary school understudies from grades 5 and 6. The incorporation criteria were understudies who had their weight, tallness and hemoglobin checked and aged 10-12 years ancient. Avoidance criteria are understudies who are not show amid the examination. The test collection strategy was purposive examining with understudy subjects having their hemoglobin levels measured and filled in questionnaire about characteristics. The disobedient utilized are sheet watch the comes about of estimations of tallness, weight and hemoglobin (HB) levels. Estimation of HB levels utilizing Hemoglobin Autocheck (Elektrik HB), for body weight using a scale and stature using a microtoise. Univariate information examination with recurrence dispersion to urge an outline of the ages, sex, frailty status and BMI list . BMI classification is based on the classification issued by the Ministry of Health of the Republic of Indonesia, specifically lean in case less than 18.5, typical 18.5-25 and fat on the off chance that more than 25. Hemoglobin levels are separated into frailty and non-anemia. It is said to be frailty in the event that the respondent's hemoglobin esteem is less than 12 mg/dl.

RESULT AND DISCUSSION

Table 1. Univariate Analysis of Variable

Variable	n	%
Age		
10	14	40
11	15	42.9
12	6	17.1
Gender		
Girl	16	45.7
Boy	19	54.3
Anemia Status		
Anemia	3	8.6
Non anemia	32	91.4
BMI		
Thin	26	74.3
Normal	8	22.9
Overweight	1	2.8

The research comes about in table 1 show up that the characteristics of respondents based on the age of 11 years old, particularly 15 people (42.9%). Most of the respondents are male, 19 people (54.3%). The foremost BMI status was thin with 26 people (74.3%) and the bigger portion (91.4%) had a hemoglobin level of more than 12 gr/dl, which recommends they were not iron deficiency.

All respondents drop into the early teenagers category. Typically in agreement with the classification of teenagers which are classified into three stages, to be specific early young people (aged 10-13 years), middle youths (aged 14-17 years), and late teenagers (matured 18-21 a long time) (Ragita & Fardana N., 2021). The period of early youth (aged 11 to 14 years) is stamped by significant physical and cognitive growth with wide suggestions for wellbeing over the life course. The health of early young people may subsequently have long-term benefits into adulthood (Mank et al., 2022). Early detection of hemoglobin levels in early adolescents can determine the level of health of adolescents at the next stage, including reproductive health in the future life of these adolescent girls when they become mothers also stunting prevention.

Iron deficiency may be a condition where there's a need of ruddy blood cells within the body. Ruddy blood cells have imperative part within the body to convey hemoglobin, specifically protein contains oxygen all through the body. Iron deficiency can be experienced by anybody, counting young people. Young ladies are more at chance of creating iron deficiency compared to youthful men. Pre-adult young ladies are one of the bunches that are defenseless to frailty. Anemia can cause the body to ended up tired effortlessly, powerless and less eager (Aulia, G.Y. Udiyono, A. Saraswati, L.D. Adi, 2017). Anemia has an impact on adolescents' health, performance, and productivity. It also leads to healthier pregnancy outcomes and benefits future generations' health (Sari, Herawati, Dhamayanti, & Hilmanto, 2022). Normal Hb levels in adolescent are 12 gr / dl. Adolescence are said to be anemic if the Hb level is less than 12 gr / dl (Tarini et al., 2020). The majority of respondents did not suffer from anemia. This could happen because the majority of respondents were men, 11 years old, most of the women who were respondents had not menstruated and students often had breakfast. Iron nutritional anemia can be caused by insufficient intake of foods containing iron and consumption of foods that inhibit iron absorption likes tea, as well as infectious diseases. The habit of eating breakfast is a risk factor for the occurrence of nutritional anemia in elementary school students (Sirajuddin & Masni, 2015). Increased prevalence of anemia was noted among girls age 14 years followed by 16 years of age. Increased prevalence of anemia was seen during the late adolescent age

(Chandrakumari, Sinha, Singaravelu, & S, 2019). This can happen because the girls teenager already had period

The most dietary issues experienced by young people incorporate press insufficiency frailty, overweight/obesity and wholesome lacks. Body Mass Index (BMI) may be a basic measuring tool to screen dietary status. Concurring to Thompson, wholesome status includes a positive relationship with hemoglobin concentration, meaning that the more regrettable a person's dietary status, the lower the person's hemoglobin level (Sukarno & Adrian, 2020). Youth could be a period of development where the body will require satisfactory nutritional intake. Calculating a person's wholesome status may be a strategy that can be utilized to discover out what the dietary ampleness or adjust of supplements in a person's body looks like. A person's dietary status can be said to be missing in the event that the body needs admissions of one or more fundamental supplements for the body. One marker to survey a person's wholesome status is through Body Mass Index (BMI). When an person expends nourishments with tall wholesome esteem, the person dietary status certainly get superior, and bad habit versa. Young people with great wholesome status will diminish the event of anemia and young people with destitute wholesome status will increment the hazard of iron deficiency (Enggardany et al., 2021). In other hand distributed prove to back an affiliation between BMI and iron deficiency remains disputable. A few considers report a coordinate relationship, i.e., expanding BMI increments the probability of getting to be iron deficient, whereas others report the inverse but a few conclude there's no relationship between BMI and iron deficiency. The higher predominance of iron deficiency among stout ladies is some of the time clarified as an impact of either dilutional hypoferrremia, destitute dietary press admissions, expanded press require- ments, and/or impeded press retention in individual with obese (Kamruzzaman, 2021)

CONCLUSION

Majority respondents based on the age of 11 years old. Most of the respondents are male. The most BMI status was thin with 26 individuals (74.3%) and the larger part (91.4%) had a hemoglobin level of more than 12 gr/dl, which suggests they were not anemia.

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