

# Effects of Educational Background, Parental Economics, Student Nutrition Status on Motoric Capabilities of Primary School Students

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**Abstract**—The purpose of this study is to determine the direct and indirect effects of the variables that researchers suspect on motor skills. This type of research is a quantitative research that involved 35 students. Data were obtained using questionnaires, calculation of Body Mass Index (BMI), and Scott Motor Ability. Data were analyzed using Path Analysis. Based on the analysis of research data obtained; (1) there is a direct influence of parents' educational background on students' motor abilities with a value of  $t = 2.605$  with a direct influence contribution of 11.90%, (2) there is a direct influence of parents' economics on students' motor ability with a value of  $t = 3.303$  with contributions direct effect of 17.97%, (3) there is a direct influence of nutritional status on motor skills of students with a value of  $t = -1.737$  with a direct influence contribution of 4.62%, (4) there is an indirect effect between parents' educational background on students' motor ability through nutritional status with a value of  $t = -2.503$  with an indirect influence contribution of 3.13%, (5) there is an indirect effect of parents' economy on motor skills students with a value of  $t = -2.730$  with an indirect influence contribution of 2.84%, (6) there is an indirect effect of parents' educational background on students' motor skills through parent's economy with a value of  $t = -1.737$  with an indirect influence contribution of 9.43%.

**Keyword**— *Educational Background, Economy, Nutrition Status, Motor Ability*

## I. INTRODUCTION

Education is one of the main pillars in national development. Through education we can prepare good quality human resources. In accordance with the vision of national development, basically based on the whole human development paradigm which puts humans as subjects who have the potential to actualize their potential optimally. In this connection, education is directed to develop overall intelligence, which includes cognitive, social, emotional, aesthetic and kinesthetic, affective and psychomotor abilities.

One of the government's programs in realizing the goals of National education development is the development of elementary school education. Primary School Education is an educational institution that provides provisions for students to continue their education at a higher level and is part of the 9-year compulsory school before entering junior high school, where primary school education is intended for children aged 7-13 years.

It must be realized that the period of education in elementary school is a period that cannot be ignored in one's life span, because at this time the growth of a child's brain is experiencing very rapid development. Basic School Education is given to children in order to develop optimally. Given the importance of this period, the role of stimulation in the form of providing a conducive environment must be prepared by educators, both parents, teachers, or other adults who are around the child, so that children have the opportunity to develop their full potential.

The development of language and thinking is caused by the maturation of speech organs and thinking functions that are assisted by the environment. While the social environment of children is more apparent with the association with other children, with the increase in social area, children increasingly have the desire to carry out various activities which in essence require new energy arrangements.

In primary school education, the process of sensory-motor development must get the attention of educators correctly. One of the factors in the success of elementary school education, which involves physical education / motor activities as forming and aligning the growth of muscles, bones, and nervous system of children. Educators who deal with this problem must know the child's motor work system well, throwing, running, catching and jumping.

Talking about movement in elementary school children becomes very interesting, because the activity or moving conditions in elementary school children are very high (dominant), the observations conclude that not 1% of students graduating from elementary school have excellent motor skills, only 14.8% students who have good motor skills. The results of a physical fitness and recreation center (Pussegjasrek) study in "suggest that the level of physical fitness of students in Indonesia is very low or below average"[1].

## II. EDUCATIONAL BACKGROUND, ECONOMY, NUTRITION STATUS, MOTOR ABILITY FOOTWORK

If the nutritional status of a child is low, he certainly cannot move well, consequently his motor skills are low. Poor or poor nutrition in children can result in

disruption of physical growth and intelligence. If physical growth is inhibited, physical and motor skills will be difficult to develop. Food intake consumed by someone is very influential on their physical growth and development. To meet the needs of life in order to grow properly children should consume nutrients that meet the needs both in terms of quantity and quality.

In addition to nutritional status factors, the educational background of parents is also quite influential with the child's motor skills. Knowledge is a very important domain in shaping one's actions. Knowledge itself is influenced by several factors that can be obtained from formal and non-formal education, so knowledge is very closely related to education. Adequate education is seen as able to help parents in terms of knowledge about fulfilling nutritional adequacy and childcare practices in achieving good motor skills.

SDN 01 Paninjauan Kecamatan X Koto Di atas Kabupaten Solok inseparable from the motor development curriculum, which also develops aspects of motor development, such as walking, running, throwing, catching and jumping. One of the late motor skills will have an impact on the mastery of sports skills, both in individual sports and team sports.

Based on data obtained from the Physical Education, Sport and Health teacher at SDN 01 Paninjauan Review of student learning outcomes, in physical and sports physical education subjects in grades V and VI semester I of 2018/2019 academic year the average value of student practice is 75.65 and 77.83, the value is obtained from the ability of students to practice throwing, catching, hitting on sports game material. Based on the scores obtained by students, it shows that the ability of motormasters is still relatively low. this can be seen from the majority of students who still have limitations in playing sports.

"Reveals the word motorik comes from the word "motor" sensory motor, or perceptual motor"[2]. "The purpose of "motor" here is the motion, stimulus, and response"[3]. Motor is a latent event that includes the whole processes of controlling and regulating bodily functions both physiologically and psychologically which cause a motion. In sports activities the point is motion, the level of motor ability is the ability to move. The process of learning motion is influenced by the level of motor ability with the main parts of the body, blood circulation, breathing and muscles. One of the main differences of each individual in developing a task of motion lies in one's motor skills.

"States that motor ability is the capacity of a person related to the implementation and demonstration of a skill that is relatively inherent"[4]. From the opinion above illustrates if someone has mastered a motor skill, then he will be able to make good movements for the next time. This shows that the provision of correct basic techniques in motor learning is very important. If someone learns something wrong motor skills, then the movement will be difficult to improve. That education can be interpreted as a process with certain methods so that people obtain knowledge, understanding, and ways of behaving according to needs. "In the broadest sense education is all stages of the development of human abilities and behaviors, also the use of almost all life experiences"[5]. The above quotation

provides an explanation that education is meaningful as an effort made by humans in increasing knowledge and understanding of science and life experiences.

According to RI Law No 20 of 2003 concerning the National education system article 1 paragraph 1 states that: "Education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society, nation and country"[6].

Parents can provide education and then realize it by creating situations and conditions that can be lived by children. Providing education is very necessary in the process of children's self development, such as religious beliefs, cultural values, skills and community life. The provision of education is expected to help children in adulthood later and parents should be able to master and apply it to their children.

That socioeconomic status is a grouping of people based on similar characteristics of work, education, and economy. Socioeconomic status indicates certain inequalities. In general, community members have (1) very varied work, and some individuals have greater access to higher status jobs than others, (2) Different levels of education, there are some individuals who have greater access to higher education better than anyone else; (3) different economic resources; and the level of power to influence community institutions. "Differences in ability to control resources and participate in community rewards produce unequal opportunities"[7].

Based on the above quotation, we can see that in determining the economic status of a family, it can be seen through the education being passed, the jobs that are owned and the material that is owned. "Work is an activity or a person's activity to earn income to meet their daily needs. Nutritional status is a condition of each individual that is influenced by the use of food substances"[8]. That nutrition is: "A process of organisms using food that is consumed normally through the process of degestion , absorption, transportation. Storage, metabolism and release of substances that are not used to maintain life" [9].

"Nutritional Status is the condition of every individual who is influenced by the use of nutrients, health and has the energy to learn and play" [1]. Nutritional status is a state of the body that describes the health status of a person or community in daily life due to interactions of food, the human body and the environment [1]. Malnutrition can occur because the body lacks one or several types of nutrients needed. Nutrient deficiency according to Mutohir is caused, among others, by "social, economic factors such as food habits, trust and low purchasing power, while the second condition is caused by digestive function disorders [1]. "Nutritional status is the state of the body as a result of consumption, absorption and use of food in the body"[10]. Thus nutritional status can be interpreted as the amount of food consumed by a person which is an indicator of their nutritional status. The energy needed for physical performance is obtained from the metabolism of food consumed daily, so food or nutrients is a determinant of the

quality of one's physical performance and growth. Based on some expert opinions above, it can be interpreted that nutrition is a very important thing for children's growth and development. This will affect the child's motor development. Based on the results of research conducted there is a contribution of nutritional status to motor ability of 8.6% [8].

### III. THE DATA ACQUISITION SETUP

The This type of research is quantitative research. The research location was SDN 01 Paninjauan Kecamatan X Koto Diatas, the study population was 90 people. The sampling technique used purposive sampling as many as 35 people. Retrieval of research data using questionnaires, calculation of Body Mass Index (BMI), and Scott Motor Ability. Data were analyzed using Path Analysis.

### IV. THE DATASET

Based on the analysis of research data obtained; (1) there is a direct influence of parents' educational background on students' motor abilities with a value of  $t = 2.605$  with a direct influence contribution of 11.90%, (2) there is a direct influence of parents' economics on students' motor ability with a value of  $t = 3.303$  with contributions direct effect of 17.97%, (3) there is a direct influence of nutritional status on motor ability of students with a value of  $t = -1.737$  with a direct influence contribution of 4.62%, (4) there is an indirect effect between the educational background of parents towards students' motor skills through nutritional status with a value of  $t = -2.503$  with an indirect influence contribution of 3.13%, (5) there is an indirect effect of parents' economics on students' motor ability with a value of  $t = -2.730$  with an indirect influence contribution of 2, 84%, (6) there is an indirect effect of parents' educational background on students' motor skills through people's economics  $t$  ua with a value of  $t = -1.737$  with an indirect influence contribution of 9.43%.

Based on the results of the calculation of the effective contribution, it can be seen, that the largest contribution of the element of the independent variable to the students' motor ability variable is the economic variable of parents with an effective contribution of 17.95%, then followed by the variable on the educational background of the effective contribution of 11.90% as second rank, and nutritional status as the last or third rank for effective contributions of 4.62%, with an overview of the level of effective contributions as follows: Discussion

1. Direct influence of parents' educational background on students' motor skills.

From the analysis of the influence of parents' educational background (X1) on students' motor skills (Y), the value of  $t = 2.605$  with  $\text{sign} = 0.014$  at the 0.05 level of confidence. Based on the 0.05 significance level it can be interpreted that the null hypothesis that states there is no positive influence of parents' educational background on students' motor skills is rejected. Thus it means that it can be concluded that there is a positive influence of parents' educational background on students' motor skills.

According to RI Law No 20 of 2003 concerning the National education system article 1 paragraph 1 states

that: Education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society, nation and country [6].

From the quote above it is explained that education can shape a person to achieve a better degree of humanity, both in the religious field, self-control, personality, intelligence, noble character, and skills. Conclusion understanding of parental education is a process or planned effort by someone to gain knowledge, understanding, and how to behave, as well as gain knowledge to educate the child's growth and development.

2. Positive direct influence of parents' economy (X2) on students' motor skills (Y).

From the analysis of the economic influence of parents (X2) on motor skills (Y), the value of  $t = 3.303$  with  $\text{sign} = 0.002$  at the 0.05 level of confidence. Based on the 0.05 significance level, it means that the null hypothesis which states that there is no positive economic influence of parents on motor skills is rejected. Thus it can be concluded that there is a positive influence on parents' economic impact on motor skills.

According to Santrock's opinion that socioeconomic status is a grouping of people based on similar characteristics of work, education, and economy [7]. Based on the above quoted explanation that economic status can be seen from the status of work, the level of education possessed by parents, and also the level of power that exists in society. George argues that: in school life and outside school, children's success and achievement is greatly influenced by the socioeconomic status of their family. Socio-economic status consists of three main but interrelated things namely; parental education level, parental employment status and family income. "The three dumbbells refer to as one entity, influencing; how to raise children, family interactions with children, the home environment and the extent to which the environment supports or does not support the development of language and learning, the type and amount of discipline used and the type and range of future plans regarding children's education and work"[11].

3. Positive direct effect of nutritional status (X2) on students' motor skills (Y)

From the analysis of the influence of nutritional status (X3) on students' motor skills (Y), the value of  $t = -1.737$  with  $\text{sign} = 0.092$  at the 0.05 level of confidence. Based on the 0.05 significance level, it can be interpreted that the null hypothesis that states there is no positive influence on the nutritional status of students' motor ability is rejected. Thus it can be concluded that there is a positive influence of nutritional status on motor ability.

Nutritional status is the result of the balance of food that enters the body with the body's needs for the substance. The nutritional status is optimal if the body gets enough nutrients that are used efficiently, so that it allows physical growth, brain development, work ability and general health. According "nutritional status is the state of the body as a result of consumption, absorption and use of

food in the body [10]. Thus nutritional status can be interpreted as the amount of food consumed by a person which is an indicator of their nutritional status. Energy needed for physical performance is obtained from the metabolism of food consumed daily, so food or nutrients is one of the determinants of the quality of physical performance and one's growth.

Based on some expert opinions above, it can be interpreted that nutrition is a very important thing for children's growth and development. This will affect the child's motor development. Based on the results of research conducted there is a contribution of nutritional status to motor ability of 8.6% [8].

4. The indirect effect of parental education (X1) on motor skills (Y) through the nutritional status of students (X3).

From the analysis of the influence of parental education (X1) on motor skills (Y) through the nutritional status of students (X3) with a value of  $t = -2.503$  with a sign  $= 0.018$  at a 0.05 level of confidence. Based on the 0.05 significance level, the null hypothesis which states that there is no positive influence of parental education on motor skills through nutritional status is rejected. Thus, it can be concluded that there is a positive influence of parental education on motor skills through nutritional status.

Good parental education will understand the importance of nutrition in the growth of their children, so nutrition is a concern for parents, if the child's nutritional status is good, it will certainly also affect the child's motor skills. So parents who have a good level of education will affect good motor skills seen from the nutrition of children.

5. Indirect economic effects of parents (X2) on motor skills (Y) through nutritional status (X3).

From the analysis of the economic influence of parents (X2) on motor skills (Y) through nutritional status (X3), the value of  $t = -2.730$  was obtained with a sign  $= 0.010$  at the 0.05 level of confidence. Based on the 0.05 significance level, it can be interpreted that the null hypothesis that states there is no positive influence on the economic ability of parents to motor ability through nutritional status is rejected. Thus it can be concluded that there is an economic influence of parents on motor ability through nutritional status.

The economic level of the parents influences the nutritional pattern of the child, if the economic level of the parents is good, the nutritional intake of the child will be good and sufficient so that it can support motor skills in the child. Vice versa if the parents' low economic ability affects the child's nutritional intake, so that it can affect motor skills in the child. Therefore, the parents' economy also has an influence on a child's motor skills in terms of the child's nutritional status.

6. The indirect influence of the analysis of the influence of educational background (X1) on motor skills (Y) through the economy of parents (X3).

From the analysis of the influence of educational background (X1) on motor skills (Y) through the parents' economy (X3), the value of  $t = 3.891$  is obtained with sign  $= 0.000$  at the 0.05 level of confidence. Based on the 0.05 significance level, it can be interpreted that the null

hypothesis states that there is no positive influence of educational background on motor skills through the parents' economy. Thus it can be concluded that there is an influence of educational background on motor skills through the parents' economy.

Parental education is crucial for a child's ability, highly educated parents will certainly provide the best for their children. Through economics, one of them is the high level of parental education must be influenced by economic status. So that most children who have good motor skills must have a good parent's educational background supported by good economic status

## V. CONCLUSIONS

In accordance with the results of the research described in Chapter IV, several conclusions can be elaborated as follows:

First, the educational background of parents has a positive influence on students' motor skills. This shows that if the educational background of parents is high, then motor skills will also increase.

Second, parental economics has a positive influence on students' motor skills. Thus the parents' economy significantly determines the motor skills of students. That is, if the parents' economy is good, then students' motor skills will also be good and vice versa.

Third, nutritional status has a positive influence on students' motor skills. Thus the nutritional status significantly determines the motor skills of students. That is, if the nutritional status is good, then motor skills will also increase and vice versa.

Fourth, parental education has a positive influence on students' motor skills through nutritional status. Thus parental education and nutritional status affect the motor abilities of students. This means that if the education of parents is good, economic status also supports the motor skills will also increase and vice versa.

Fifth, parents' economy has an influence on students' motor skills through nutritional status. Thus if a good parent's economy will affect nutrition intake so that motor skills will be affected. This means that if the economy is good and the nutritional status is good it will increase the child's motor skills.

The sixth educational background of parents influences students' motor skills through the parents' economy. Thus if parents' education is good and economic status is good, it will affect students' motor skills

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