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THE EFFECT OF COORDINATION, CONCENTRATION, AND MOTIVATION ON THE SKILLS OF SCOOP AND CHAIR RHYTHMIC GYMNASTICS ON STUDENTS OF SMAN 39 JAKARTA

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Abstract

This study aims to determine the direct and indirect effects, as well as the simultaneous effect of exogenous variables with endogenous variables. The research method used is an associative quantitative approach, with test and measurement techniques. Data analysis technique using path analysis approach (Path Analysis). The population in this study is students of XII MIPA / IPS, SMAN 39 Jakarta, as many as 2 classes there are 72 students. The sampling technique in this research is total sampling. So the total sample in this study is 72 people. The instrument variable sensi exercise is measured by the sensi exercise test, the coordination variable used the Focus Light test, the concentration variable was measured by the Concentration Grid Test and the motivation variable is measured by the motivation questionnaire. The results of this study are the direct effect of variable X_1 on Y_3 = 1.3% The direct effect of variable X_2 on Y = 16.9%. The direct effect of variable X_3 on Y 28.8% The direct effect of variable X_1 on X_3 =38.3%. The direct effect of the X_2 variable on X_3 is 45.3%. The indirect effect of variable X_1 on Y through X_3 = 2.076. The indirect effect of variable X_2 on Y through X_3 is 2.08. Based on the results of the study, it can be concluded that there are direct and indirect effects on the variables of coordination, concentration, motivation on sensi gymnastics.

Keywords: sensitive gymnastics; concentration; coordination; motivation

INTRODUCTION

Physical education is an educational process through physical activity that aims to improve physical fitness (Jayul & Irwanto, 2020). Physical education includes all elements of fitness, physical movement skills, health, games, sports, dance and recreation (Qomarrullah, 2014) in (Herlina & Suherman, 2020). Physical education learning must be able to improve the quality of students' fitness, motor skills and values that include cognitive and affective aspects (Anggara, 2021).

Learning outcomes become a benchmark for the success of the teaching and learning process. Learning outcomes are abilities possessed by students after they receive learning experiences (Romadhoni, Wiharna, & Mubarak, 2019). The success or failure of achieving educational goals is very dependent on the learning process carried out by students both when they are at school, their home environment and their own family. All can not be separated from the physical fitness of each student, to carry out learning activities a fit physical fitness is needed, students are said to be physically fit if they carry out daily activities without feeling tired even though they will do the next activity. Physical fitness must be owned by every student from every level from elementary, junior high, high school. In order for learning activities to run smoothly, it is very necessary to have a fit physical fitness, with a fit every activity can be carried out easily and smoothly.

During the COVID-19 pandemic, online learning was carried out. The Ministry of Education and Culture (KEMENDIKBUD) takes action in the form of an online learning process (Jauhari, Sambira, & Zakiah, 2020). This policy certainly makes a very significant change, learning which is usually always done face-to-face and carried out directly by the teacher has turned into online learning where all activities are carried out from their respective homes. This is done to break the chain of the spread of COVID-19.

Even though they study from their homes, students must maintain physical fitness to minimize the impact of being exposed to COVID-19. Educators innovate and adapt to existing situations and choose learning materials that can be implemented well and have a positive impact on students. One of these materials is rhythmic gymnastics. According to (Sriwahyuniati, 2020)

Rhythmic gymnastics, often referred to as rhythmic gymnastics, is a gymnastic movement that is performed to the rhythm of music or free exercises that are performed rhythmically. Gymnastics is a body exercise that is chosen and created with a plan, arranged systematically with the aim of forming and developing a person in harmony (Muchlisin, Pasaribu, & Mashuri, 2019). Rhythmic gymnastics is a gymnastic movement that is done with musical gymnastics or free exercises that are done rhythmically (Yulinda & Abubakar, 2020).

Rhythmic gymnastics is made into a beautiful sport by combining various elements between gymnastics, ballet, and dance as well as manipulation of movement between instruments and self-expression with musical accompaniment (Sahabuddin, Hakim, & Syahruddin, 2020). There are so many forms of rhythmic gymnastics that can be developed by the teacher. In this case, the exercise developed is SENSI gymnastics (spoon and chair).

Sensi gymnastics is exercise that uses tools in the form of spoons and chairs, this exercise was created by Sabeum Fahmy Fachrezzy, the demonstration team of UNJ students and students were taken from the best in taking rhythmic gymnastics courses, this exercise was created by Sabeum during a pandemic, where during a pandemic all participants students study at home, and because of the limited number of students going out of the house, this exercise can be done at home and the media tools are already in the home of each student, the aim is to increase immunity in an effort to prevent covid 19. Even this sensi exercise can be done in a comfortable room, it does not require a large space, it can be done at the home of each student, at home you can exercise well to maintain body fitness.

SENSI gymnastics is a new exercise, therefore students must concentrate on following the movements taught by the teacher. Learning SENSI gymnastics cannot be done just by watching a video of the movement, but must be studied over and over again until students memorize the movements. Students must have a strong motivation to be able to learn new gymnastics. In addition, to do SENSI gymnastics, good coordination of motion is needed so that the resulting movements are flexible and in accordance with the rhythm of the music. The movements carried out must be in accordance with the rhythm that accompanies them so that the

movements carried out look harmonious and then a coordination of motion is formed between the movements of the limbs with the strains of the rhythm (Hasibuan, Fauzi, & Novianti, 2020). Rhythmic gymnastics or rhythmic gymnastics is an alternative method used to increase concentration through body movements. By doing exercise, it will cause blood flow to the brain to run smoothly and the brain to get a lot of oxygen so that the brain functions optimally.

To learn sensi gymnastics, student motivation is also very important in encouraging student performance in achieving teaching goals, in order to get the desired results. Students who have good learning motivation tend to follow the teaching and learning process in a good class.

In addition to motivation, concentration is also an important factor in learning sensi gymnastics. If the concentration of students is low, it will lead to low-quality activities and can lead to non-seriousness in learning and the ability to understand the material will be reduced. Concentration is the main capital for students in receiving teaching materials as well as an indicator of the success of learning implementation. In order to be able to do sensi gymnastics in accordance with the rhythm of motion, one must have good movement coordination.

It can be understood that coordination is the ability to do or work precisely and efficiently, coordination states the harmonious relationship of various factors that occur in one movement (Ambarwati, Widiastuti, & Pradityana, 2017). If a person has good coordination then he can make movements properly and correctly (Safitri, 2022). This movement will produce precise and directed movement skills, including in realizing gymnastic movements effectively and efficiently.

The role of educators is very important in introducing and practicing rhythmic gymnastics to children. Rhythmic gymnastics is performed by children whose movements are easy to follow, simple, so effective to stimulate, improve coordination, concentration, and motivate children to do it by enjoying following the rhythm of the music that accompanies it. So the authors are interested in conducting research and discussing more deeply about the direct or indirect effect of coordination, concentration and learning motivation

on spoon and chair rhythmic gymnastics skills at SMAN 39 Jakarta students.

METHOD

This study aims to determine the effect of coordination, concentration and motivation on spoon and chair gymnastics in class XII MIPA / IPS SMA Negeri Jakarta. The research method used in this study is an associative quantitative approach, with test and measurement techniques, while the analytical technique uses a path analysis approach. The population in this study are students of XII MIPA / IPS, SMAN 39 Jakarta, there are 72 students in 2 classes. The sampling technique in this research is total sampling. So the total sample in this study was 72 people. The instrument variable sensi exercise was measured by the sensi exercise test, the coordination variable used the Focus Light test, the concentration variable was measured by the Concentration Grid Test and the motivation variable was measured by the motivation questionnaire.

RESULTS AND DISCUSSIONS

Results

The data of this study consisted of the results of sensi exercise (Y) as the dependent variable (endogenous), then eye-hand-foot coordination (X1), concentration (X2) as the independent variable (exogenous) and motivation (X3) as the intervening variable. The data collected from each variable in this study were tabulated according to the needs of data analysis, in order to provide an overview of the distribution of data or the distribution of the required data.

1. Sensi Gymnastics

Variable data of sensi exercise was collected through sensi test of 72 samples. From the results of measurement and data processing, the average value (mean) is 392, the highest value is 426, the lowest value is 292, the standard deviation is 24.7, the median is 399.5 and the mode is 400. students of class XII MIPA / IPS, SMAN 39 Jakarta can be seen in the following table

Table 1.
Variable Frequency Distribution of Gymnastics sensi (Y)

Skor	Frekuensi Absolut	Frekuensi Relatif
292-308	1	1%
309-325	1	1%
326-342	1	1%
343-359	2	3%
360-376	7	10%
377-393	20	28%
394-410	25	35%
411-427	15	21%
	72	100%

2. Coordination

Coordination variable data was collected through the Focus Light test on 72 samples. From the results of measurement and data processing, the average value (mean) is 23.3, the highest value is 36, the lowest value is 17, the standard deviation is 2.5, the median is 24 and the mode is 24. Distribution of Coordination data results to students class XII MIPA / IPS, SMAN 39 Jakarta can be seen in the following table:

Table 2.
Frequency Distribution of Coordination Variables (X_1)

Skor	Frekuensi Absolut	Frekuensi Relatif
15-17	1	1%
18-20	6	8%
21-23	27	38%
24-26	35	49%
27-29	2	3%
30-32	0	0%
33-35	0	0%
36-38	1	1%
	72	100%

3. Concentration

Concentration variable data were collected through the Concentration Grid Test on 72 samples. From the results of measurement and data processing, the average value (mean) is 71.7, the highest value is 100, the lowest value is 45, standard deviation is 15.3, the median is 76.5 and the mode is 50. Distribution of data results Concentration at students of class XII MIPA / IPS, SMAN 39 Jakarta can be seen in the following table:

Table 3.
Frequency Distribution of Concentration Variables (X_2)

Skor	Frekuensi Absolut	Frekuensi Relatif
45-51	13	18%
52-58	6	8%
59-65	6	8%
66-72	8	11%
73-79	8	11%
80-86	20	28%
87-93	8	11%
94-100	3	4%
	72	100%

4. Motivation

Concentration variable data were collected through a motivational questionnaire of 72 samples. From the results of measurement and data processing, the average value (mean) is 288.6, the highest value is 341, the lowest value is 246, the standard deviation is 26.1, the median is 289.5 and the mode is 299. students of class XII MIPA / IPS, SMAN 39 Jakarta can be seen in the following table:

Table 4.
Frequency Distribution of Motivational Variables (X_3)

Skor	Frekuensi Absolut	Frekuensi Relatif
246-257	10	14%
258-269	9	13%
270-281	14	19%
282-293	6	8%
294-305	14	19%
306-317	7	10%
318-329	7	10%
330-341	5	7%
	72	100%

Discussion

1. **The results showed that there was a direct influence of eye and foot coordination on motivation in students at XII MIPA / IPS, SMAN 39 Jakarta**

Based on the results of the analysis of the coordination variable on motivation, the path coefficient results are obtained P_{31} = 0,619 with value *Sig.* = 0,000/2 = 0,000 < α = 0,05, so H_1 Accepted dan H_o rejected. That is, there is a direct influence of coordination on motivation in learners at XII MIPA/IPS, SMAN 39 Jakarta. Based on these results, the magnitude of the direct influence of coordination on motivation in students at XII MIPA/IPS, SMAN 39 Jakarta is as big as 38,3%, while the rest are other factors that are not explained in this study.

2. **The results showed that there was a direct effect of concentration on motivation in students at XII MIPA/IPS, SMAN 39 Jakarta**

Based on the results of the analysis of the concentration variable on motivation, the path coefficient results obtained P_{32} = 0,673 with value *Sig.* = 0,000/2 = 0,000 < α = 0,05, so H_1 is accepted and Ho is rejected. That is, there is a direct effect of concentration on motivation in students at XII MIPA/IPS, SMAN 39 Jakarta. Based on these results, the magnitude of the direct effect of concentration on motivation in students at XII MIPA/IPS, SMAN 39 Jakarta is 45.3%, while the rest are other factors not explained in this study.

3. **The results showed that there was a direct effect of coordination on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta**

From the results of the eye-hand-foot coordination research on 72 students at XII MIPA/IPS, SMAN 39 Jakarta, the results obtained with a score of 15-17 as many as 1 person (1%), who got a score of 18-20 as many as 6 people (8%), who got a score of 21-23 as many as 27 people (38%), who got a score of 24-26 as many as 35 people (49%), who got a score of 27-29 as many as 2 people (3%), who got a score of 30 -32 as many as 0 people (0%), who got a score of 33-

35 as many as 0 people (0%), who got a score of 36-38 as many as 1 person (1%).

The effect of coordination on sensi gymnastics is 31.3%. While the remaining 68.7% are influenced by other factors. The results of this study are also reinforced by that in gross motor development in children, they train physical movements in the form of coordinating body movements in children, such as crawling, running, tiptoeing, jumping, hanging, throwing and catching, and maintaining balance. Rhythmic gymnastics can be interpreted as one of gymnastics that is done by following the rhythm of music or singing which then forms a coordination of motion between the movements of the limbs with the strains of the rhythm (Burhaein, 2017). Coordination between eyes, hands and feet is an important thing that affects skills in sense gymnastics. Because coordination plays a role in producing a regular rhythm of motion between the information received by the eyes, processed by the nerves and then carried out by the hands and feet. Therefore, in order to improve the skill of sensuous gymnastics.

Based on the results of research conducted, that there is a direct effect of eye-hand-foot coordination on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta with the path coefficient Py1 = 0.559 with a Sig value. = 0.000//2 = 0.0000 < = 0.05. It turns out that eye-hand-foot coordination has a direct and significant effect on sensi gymnastics for students at XII MIPA/IPS, SMAN 39 Jakarta.

4. The results showed that there was a direct effect of concentration on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta

From the results of the study, the concentration of 72 students at XII MIPA/IPS, SMAN 39 Jakarta, with a score of 45-51 as many as 13 people (18%), who got a score of 52-58 as many as 6 people (8%), who got a score of 59 -65 as many as 6 people (8%), who got a score of 66-72 as many as 8 people (11%), who got a score of 73-79 as many as 8 people (11%), who got a score of 80-86 as many as 20 people (28%), who got a score of 87-93 as many as 8 people (11%), who got a score of 94-100 as many as 3 people (4%).

The effect of concentration on sensi gymnastic skills is 16.9%. While the rest is influenced by other factors. This result is also reinforced by physical activity that will focus students' attention in class and help remember by encoding learning through the body's neuro-

musculator. While music, for example, humorous music, is something important that can sharpen hearing and concentration skills. According to (Dryden and Vos, 2000) there are six main pathways to the brain, namely we learn through what we see, what we hear, what we feel, what we touch, what we smell, and what we do. In addition, to increase concentration, the movements performed must be in accordance with the rhythm of the music so that they are also given themed movements.

Based on the results of research conducted, that there is a direct effect of concentration on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta with the path coefficient Py2 = 0.411 with a Sig value. = 0.041/2 = 0.0205 < = 0.05. It turns out that concentration has a direct and significant effect on sensi exercise for students at XII MIPA/IPS, SMAN 39 Jakarta.

5. The results show that there is a direct influence of motivation on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta

From the results of motivation research to 72 students at XII MIPA/IPS, SMAN 39 Jakarta, the results obtained were motivational findings with a score of 246-257 as many as 10 people (14%), who got a score of 258-269 as many as 9 people (13%), who scored 270-281 as many as 14 people (19%), who got a score of 282-293 as many as 6 people (8%), who got a score of 294-305 as many as 14 people (19%), who got a score of 306-317 as many as 7 people (10%), who got a score of 318-329 as many as 7 people (10%), who got a score of 330-341 as many as 5 people (7%).

The effect of motivation on sensi exercise is 6.6%. While the rest is influenced by other factors. The results of this study are also reinforced by the importance of motivation for physical education as a predictor variable for the greater importance and benefits ascribed to physical education itself (Granero Gallegos, Baena-Extremera, Gómez-López, & Abraldes, 2014). This is in line with previous research conducted by (Prakoso & Simanjuntak, 2019), which suggests that motivation has a correlation with learning outcomes of rhythmic gymnastics.

Based on the results of research conducted, that there is a direct influence of motivation on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta with the path coefficient Py3 = 0.537 with a Sig value. = 0.000/2 = 0.000 < = 0.05. It turns out that motivation has a direct and significant positive effect on

sensi exercise for students at XII MIPA/IPS, SMAN 39 Jakarta. This means that if the athlete has a high level of motivational ability, it will affect the ability of sensory gymnastics.

6. The results showed that there was an indirect effect of coordination through motivation on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta

Based on the results of the Sobel test using the online Sobel Test Calculator for the Significance of Mediation, the sobel test statistic value was 2.076 > t table 1.96 and p-value 0.0379 < 0.05, so the effect of coordination on sensi exercise through motivation was significant. This means that if these two variables are integrated, the effect obtained is very significant. It can be interpreted that eye-hand-foot coordination through motivation has a great influence on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta.

The results of this study indicate that students at XII MIPA/IPS, SMAN 39 Jakarta who have good coordination can certainly do sensi gymnastics appropriately supported by a high level of motivation. Based on the results of the research conducted, it can be concluded that this research can be accepted empirically. The rationale that has been presented in the conceptual framework can be tested for real.

7. The results showed that there was an indirect effect of concentration through motivation on sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta

Based on the results of the Sobel test using the online Sobel Test Calculator for the Significance of Mediation, the sobel test statistic value was 2.08 > t table 1.96 and p-value 0.0375 < 0.05, then the effect of concentration on sensi exercise through motivation is significant. This means that if these two variables are integrated, the effect obtained is very significant. It can be interpreted that concentration through motivation has a big influence on the results of sensi gymnastics on students at XII MIPA/IPS, SMAN 39 Jakarta.

The results of this study indicate that students at XII MIPA/IPS, SMAN 39 Jakarta who have good concentration can certainly do sensi gymnastics properly supported by a high level of motivation. Based on the results of the research conducted, it can be concluded that this research can be accepted empirically. The rationale that has been presented in the conceptual framework can be tested for real.

CONCLUSION

Conclusions were drawn based on the results of research findings with exogenous variables consisting of Coordination (X_1) and Concentration (X_2) and motivational variables (X_3), and the endogenous variable was gymnastics skills.

1. There is a direct influence of Coordination (X_1) on Motivation (X_3).
2. There is a direct effect of Concentration (X_2) on Motivation (X_3).
3. There is a direct influence of Coordination (X_1) on Sensi Gymnastics Skills (Y).
4. There is a direct effect of Concentration (X_2) on Sensi Gymnastics Skills (Y).
5. There is a direct effect of Coordination (X_1) on Concentration (X_2).
6. There is an indirect influence of Coordination (X_1) through Motivation (X_3) on Sensi Gymnastics Skills (Y).
7. There is an indirect influence of Concentration (X_2) through Motivation (X_3) on Sensi Gymnastics Skills (Y).

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