THE RELATIONSHIP OF INTELLIGENCE QUOTIENT (IQ), EMOTIONAL QUOTIENT (EQ), AND MOTIVATION TOWARDS BASKETBALL SKILLS

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Abstract:

The purposes of this research are: (1) to know the relation and contribution between intelligence quotient (IQ) and basketball skills. (2) To know the relation and contribution between emotional quotient (EQ) with basketball skills. (3) To know the relation and contribution between motivation and basketball skills. (4) To know the relation and contribution between intelligence quotient (IQ), emotional intelligence (EQ), motivation and basketball skills. The method of the research used was correlation method. The population in this research was the entire students who participated in the basketball extracurricular activities SMA 2 Bae Kudus Indonesia. Samples being used were 50 students collected using purposive sampling technique. The data analysis used were correlation analysis, regression analysis and determination analysis test (R^2 test). The conclusions of this research were: (1) there were positive and significant relation between intelligence quotient (IQ) with basketball skills and it contributed as much as 44.6%. It was shown by the correlation (r) of 0.698, p.value of 0.000. (2) there were positive and significant relation between emotional quotient (EQ) with basketball skills and it contributed as much as 48.7%. It was shown by the correlation (r) of 0.668, p.value of 0.000. (3) There were positive and significant relation between motivation with basketball skills and it contributed as much as 37.9%. It was shown by the correlation (r) of 0.616, p.value of 0.000. (4) There were positive and significant relation between intelligence quotient (IQ), emotional quotient (EQ), motivation and basketball skills as well as contributed as much as 72.6%. It was shown by the correlation (r) of 0,852, p.value of 0.000.

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1. Introduction

Basketball is one of the games that include sports games, sport games including basketball games that use large balls (Farauq 2009: 3). In standard basketball game, each team has five players on the court. Each match is divided into four *quarters*, each of which lasts for 8 to 12 minutes or divided into two rounds, each of which lasts 20 minutes. Each player is allowed to make more than 5 errors, if the player violated at the time of the shot, the player is given two or three free throws if it was on a three-point shots (Oliver, 2007: viii).

According to Wissel (2000: 2) covers the basic techniques of basketball footwork, shooting, passing and catch, dribble, rebound, moving the ball, moving without the ball and survive. Therefore, in sports especially basketball highly skilled engineering base to give a good appearance. Sports basketball hugely needs skills in its practice to be able to give a good performance. Skill is the moving ability of a person on a certain degree. Skilled refers to the degree of success in achieving the objectives effectively and efficiently determined by the speed, accuracy, shape and ability to adapt. Skills can be interpreted as an indicator and the level of proficiency or mastery of a matter that requires motion (Cahya 2012: 8)

Basketball is a complex sport. According to Ahmadi (2007: 13), to be able to have a reliable basketball team, there are three main factors that must be fulfilled, namely: 1. Mastery of basic techniques (fundamental) 2. Security *(physical condition)* 3. Cooperation (patterns and strategies). To be a good player it is necessary to master the fundamentals (basics, techniques and strategies) of a basketball game. With guidance and more in-depth knowledge about the basics of the game and game rules that apply in the international world, the quality of the game that someone present, will be better and more advanced (Rohim 2008: 10).

A person's success in mastering motor skills determined by the ability and the talent of the person. According to Cahya (2012: 10), he identified about 12 factors that are associated with achieving skills. Those factors are: (1) Sharpness of senses, (2) perception, (3) Intelligence, (4) physical size, (5) Past experience, (6) Undertaking, (7) Emotions (8) Motivation, (9) attitude, (10) factors other personalities, (11) Gender, (12) Age.

From the opinions above it can be concluded that motor skills were not only influenced by physical factors, the learning process, and situational factors alone but were also influenced by psychological factors. According to Wahab (2015:

142), *Intelligence quotient (IQ)* is an index of the relative level of a person's intelligence, as compared to others accordingly. *Intelligence quotient (IQ)* is one element of psychological which means a measure of intellectual ability, analytical (the ability to analyze), and the ratio and logic of a person. According to the pedagogic terms committee (1953), which raised stern opinion on what is meant by intelligence the power to adjust to new situation by using the tools of thinking according the purpose (Walgito 2004: 192).

Root for the word "emotion" is movere, Latin verb which means "to move, move" plus the prefix "e-"to give meaning "move away", implying that the tendency to act is absolute in emotion. All emotion is essentially the impulse to act, immediate plan to address the problems that have been implanted gradually by evolution (Goleman 2003: 7). *Emotional quotient (EQ)* is one of psychological elements that mean a person's ability to control and communicate in two dimensions, i.e., the direction to the inside (personal) and the direction to the outside (interpersonal). Emotional intelligence is very important when one deals with the problems of life. Finding the right solution to problems often requires being able to control the emotions of a person (Finkelor 2004: v).

Motivation is a process that explains the intensity, direction, and persistence of an individual to achieve their goals. Based on the study concerning the definition of motivation from some experts (Krech, 1962; Murray, 1964; Atkinson, 1964; Fernald, 1969; Miller, 1978; Singer, 1972, 1984; Barelson & Steiner, 1980; and Good & Brophy, 1990) an integrative definition can be formulated that motivation is the actualization process of internal generator within the individual to lead the activity, ensure continuity and determine the direction or halauan activities towards the achievement of the goals set (Husdarta 2010: 31). In physical education and sport, Adelman (1974) states that there is no achievement without motivation.

During this time, the coaches and players pay less attention to various psychological factors associated with and can support the skills of the players or athletes. Those various factors must be considered to performance and skills of a basketball player can be maximized. Based on the description above, the researcher was interested in conducting research on psychological factors, entitled "Relationship of *Intelligence Quotient (IQ), Emotional Quotient (EQ),* and Motivation towards Basketball Skills".

Formulation of the problem, based on the problems background above, then it can be formulated problems in this study can be formulated as follows: (1) Is there a relationship between the *intelligence quotient (IQ)* with the skills of basketball and if yes how large is the contribution, (2) Is there any relation between *emotional quotient*

(EQ) with basketball skills and if yes how large is the contribution, (3) Is there any relation between motivation and skills of basketball and if yes how large is the contribution, (4) Is there a relationship between the *intelligence quotient (IQ), emotional quotient (EQ),* and motivation bodies with basketball skills and if yes how large is the contribution?

Research purposes, based on the formulation of the problem that has been stated above, the objectives to be achieved in this study are as follows: (1) To determine the relationship between the *intelligence quotient (IQ)* with basketball skills and level of contribution, (2) To determine the relationship between *emotional quotient (EQ)* with basketball skills and level of contribution, (3) To determine the relationship between motivation with basketball skills and level of contribution, (4) To determine the relationship between the *intelligence quotient (IQ), emotional quotient (EQ), and* motivation, with basketball skills and level of contribution.

Benefits of the research in the study is (1) This research can be used as inputs and contributions to the readers so that it can be used as an additional source of information and data in the field of sports, especially in the field of sport basketball (2) This research can be used as a guideline or consideration for the gym teacher or coach to select prospective athletes as well as to develop training programs in sport basketball so the skills and achievements can be better.

2. Research Methods

The research method used in this study was correlational method. The objectives of the correlational research was to investigate the extent to which variations in a factor related to variations in one or more other factors based on the correlation coefficient (Narbuko and Achmadi 2012: 48). The population in this study is the overall students of SMA 2 Bae Kudus who joined basketball extracurricular activities. The sample used as many as 50 students were taken by using *purposive sampling.* Variables examined consisted of five independent variables that were: *the intelligence quotient (IQ), emotional quotient (EQ),* and motivation. The dependent variables were the basketball skills. The instrument used was a questionnaire consisting of *intelligence quotient (IQ)* test developed by Philip Carter, *emotional quotient (EQ)* test compiled by Prasetiyo 2010 quoted from Daniel Goleman, and motivation test. Analysis of the data used is the correlation analysis, regression and determination analysis test (R^2 test).

3. Results and Discussion

The data resulted from the research was obtained based on the scores on tests that have been done which includes intelligence quotient (IQ) test, *emotional quotient (EQ) test,* and motivation test. After that analysis, prerequisite test was conducted that includes normality and linearity tests. Subsequently, hypothesis test with correlation and regression analysis were conducted.

A. Prerequisites Test Analysis

1. Normality test

Normality test is intended to test the normality of the data distribution to be analyzed. To test the normality of the data *Kolmogorov-Smirnov Test* analysis was used. Data distribution is normal when the significant value of *Kolmogorov Smirnov Test* > 0.05. *Kolmogorov-Smirnov Test* calculation results obtained by research variables can be seen in following table:

Table 1: Normality Test with *Kolmogorov Smirnov Test*

No.	Variables	Kolmogrov-Simirnov Test Value	P (Sig)	Information
1	Intelligence Quotient (IQ) (X_1)	0.120	0.069	Normal
2	Emotional Quotient (EQ) (X_2)	0.101	0.200	Normal
3	Motivation (X_3)	0.075	0.200	Normal
4	Skills Basketball (Y)	0.090	0.200	Normal

Sources: Primary data being processed, 2016

2. Linearity test

Linearity test is intended to test whether the data obtained were linear or nonlinear, if the data were linear then the data could be resumed on the parametric test with regression techniques, but if the data were not linear then non-linear regression was used. Linearity test used variance analysis technique for regression or F test with the test criteria is if the significance <0.05 the data is revealed linear, otherwise if the significance of> 0.05 data were declared nonlinear. The calculations results of linear test obtained by research variables can be seen in the following table:

Table 2: Linearity test

No.	Variable	Flinear	P value (Sig)	Information
1	Intelligence Quotient (IQ) (X_1) with Basketball Skills (Y)	51.524	0,000	Linear
2	Emotional Quotient (EQ) (X_2) with Basketball Skills (Y)	52.149	0,000	Linear
3	Motivation (X_3) with Skills Basketball (Y)	38.157	0,000	Linear

Sources: Primary data being processed, 2016

B. Hypothesis testing

1. *Product Moment Correlation* Analysis

Based on the testing results of the hypothesis of the relationship between independent variables *intelligence quotient (IQ), emotional quotient (EQ)*, motivation, with basketball skills as the dependent variable, *product moment correlation* formula were used and the following results were obtained:

Table 3: Product Moment Correlation

No.	Variable	Correlation Value (r_{xy})	P value (Sig)	Information
1	*Intelligence Quotient (IQ) (X₁)* with Basketball Skills *(Y)*	0.698	0,000	Positive and significant correlation
2	*Emotional Quotient (EQ) (X₂)* with Basketball Skills *(Y)*	0.668	0,000	Positive and significant correlation
3	Motivation *(X₃)* with Basketball Skills *(Y)*	0.616	0,000	Positive and significant correlation

Sources: Primary data being processed, 2016

2. Multiple Correlation Analysis

Hypotheses Testing concerning the relationship between *intelligence quotient (IQ) (X₁), emotional quotient (EQ) (X₂)*, and motivation *(X₃)*, with basketball skills *(Y)* multiple correlation test was used (R_{y123}). The test results of multiple correlation relationship between *intelligence quotient (IQ), emotional quotient (EQ)*, the motivation, the basketball skills obtained a value *of* 0.852 with p value (sig) of 0.000 to p <0.05 indicates that there is a significant relationship between the *intelligence quotient (IQ), emotional quotient (EQ)*, and motivation with basketball skills.

3. Multiple Linear Regression Analysis

Based on the calculation results of multiple linear regressions the following equation was obtained:

Y = 3.978 + 0.821 + 0.177 + 0.113

Information:

Y = Basketball Skills

X₁= Intelligence Quotient (IQ)

X₂= Emotional Quotient (EQ)

X₃= Motivation

The regression coefficient value of intelligence *quotient (IQ) (X₁)*, amounting to 0.821 with a positive sign, meaning that if the *intelligence quotient (IQ) (X₁), an* increase of the skills of basketball student will also increase by 0.821.

The regression coefficient value of *emotional quotient (EQ) (X₂)*, amounting to 0.177 with a positive sign, meaning that when the *emotional quotient (EQ) (X₂), an* increase of the skills of basketball student will also increase by 0.177.

The regression coefficient value of motivation *()*, amounting to 0,113 with a positive sign, meaning that if the motivation (X_3), *an* increase of the skills of basketball student will also increase by 0,113.

4. **Model Significance Test**

Model significance test results obtained F value of 40.602 with p.value (sig) of 0.000 to p <0.05 indicates that regression linear form obtained can be used to make inferences about the relationship number of variables being studied were *intelligence quotient (IQ), emotional quotient (EQ),* the motivation, basketball skills.

5. **Determination Analysis Test (Test R^2)**

Analysis of determination (R^2 test) was used to determine the percentage of the effect of the independent variable (X_1, X_2, ..., Xn) simultaneously to the variable dependent (Y). Analysis of the calculation results of the determination (Test R^2) can be seen in Table 4 as follows:

Table 4: Results Analysis of Determination (Test R^2)

No.	Variables	Correlation Value (r_{xy})	R Square
1	Intelligence Quotient (IQ) (X₁)	0.698	0.487
2	Emotional Quotient (EQ) (X₂)	0.668	0.446
3	Motivation (X₃)	0.616	0.379
6	Intelligence quotient (IQ) (X₁), emotional quotient (EQ) (X₂), and motivation (X₃), with basketball skills (Y)	0.8 52	0.726

Sources: Primary data being processed, 2016

R^2 (R Square) value of *intelligence quotient (IQ), emotional quotient (EQ),* and motivation, weight is 0.726 or 72.6%. It shows that the percentage of influence / contribution of *intelligence quotient (IQ) (X₁), emotional quotient (EQ) (X₂)* and motivation *(X₃)*, body towards basketball skills *(Y)* as much as 72.6% and the remaining 27.4% is influenced by other variables not included in this research model.

4. Discussion

Discussion of the results of this study provides further interpretation of the results of data analysis that had been done before. Based on the hypothesis testing has resulted in the conclusion that the analysis can be described in further detail as follows:

A. Relations and Contributions between *intelligence quotient (IQ)* with Basketball Skills

Based on the analysis of the correlation between *intelligence quotient (IQ)* with basketball skills obtained a value *of* 0.698 with p.value (sig) of 0.000 to p <0.05. The contributions provided by *intelligence quotient (IQ)* of the basketball skill that is equal to 48.7%. It shows that there is a positive relationship and contribution between *intelligence quotient (IQ)* and basketball skills.

The word 'intelligence' is derived from the Latin word "intelligenre" which means connecting or uniting with one another (to organize, to relate, to bind together). *IQ* is essentially a measure of the level of intelligence (Khadijah, 2006).

The results of this study demonstrate and prove that the psychological aspect which is the level of *intelligence quotient (IQ)* is an element that has an important role to basketball skills, especially in mastering and analyzing various movement skills in basketball. To be able to own and control skills in basketball requires a good level of intelligence as well. In addition, one can also identify and analyze the shortcomings and weaknesses of the basketball skills movement being practiced so it can be used to correct or improve the possessed skills.

B. Relations and Contributions between *emotional quotient (EQ)* with Basketball Skills

Based on the analysis of the correlation between *emotional quotient (EQ)* with basketball skills obtained a value *of* 0.668 with p.value (sig) of 0.000 to p <0.05. The contributions provided by *emotional quotient (EQ)* on *the* basketball skill are equal to 44.6%. It shows that there is a positive relationship and contribution between *emotional quotient (EQ)* with basketball skills.

Controlling emotions is very important for a person's life because it is through controlled emotions then someone will be able to control himself well, so that a person has calmness and accuracy in doing various things. If someone can identify, control, and deliver an emotion in the right and positive direction, then the person is said to be intelligent in his emotions. By using aspects of emotional intelligence properly, automatically the good individual attitudes will arise as well. People are bad at their

ability to manage emotions will continuously fight melancholy feelings, while those who are smart can bounce back much faster than the decadences and downfalls in life (Goleman 2003: 58).

The results of this study indicate that the psychological aspect which is the level of *emotional quotient (EQ)* is one of the elements that play a role in the basketball skills. *Emotional quotient* is a person's ability to manage the behavior and control of various aspects of emotions he has in order to control and direct himself well. Basketball skills require good emotional control and self-direction in order to perform a movement with a focus so that the result being done will also be good. According to Goleman (2002: 48) emotional self-control and restraint towards the satisfaction and control of impulse is the cornerstone of success in various fields, and being able to adjust in the *"flow"* allows the realization of high performance in various fields.

C. The relationship and Contribution between motivation to Basketball Skills

Based on the analysis of the correlation between motivation and obtained basketball skills a value *of* 0.616 with p.value (sig) of 0.000 to p <0.05. Contributions given by motivation on basketball skills, namely 37.9%. It shows that there is a positive relationship and contribution between motivation to basketball skills.

Motivation is defined as an impulse that comes from within or from outside of the individual to perform an activity that can guarantee the continuity of the event, and can determine the direction, the direction and the amount of effort that was deployed to perform activities so as to achieve the goals that have been set (Komarudin 2015: 24).

The results of this study indicate that psychological aspects which is motivation is an important element in basketball skills. Motivation is a force that can drive a person to do an activity to achieve the goals, it can also be seen as the driving force that causes a person to do something to achieve the goals. Without the presence of a base or a strong desire and drive then one would not do a thing seriously and optimally. Therefore, to be able to perform basketball skills properly and optimally, high encouragement or motivation is needed. Without motivation, the basketball skills being done cannot be maximized. In physical education and sport, Adelman (1974) states that there is no achievement without motivation.

D. Relations and Contributions between *intelligence quotient (IQ), emotional quotient (EQ),* and Motivation with Basketball Skills

Based on the analysis of the correlation between *intelligence quotient (IQ), emotional quotient (EQ),* and motivation with basketball skills obtained a value *of* 0.852 with p

value (sig) of 0.000 to p <0.05. The contributions that the *intelligence quotient (IQ),* *emotional quotient (EQ), motivation,* limb *muscles power,* the height of the basketball skill that is equal to 72.6%. It shows there is a positive relationship and contribution between *intelligence quotient (IQ), emotional quotient (EQ),* and motivation with basketball skills.

The results showed that the entire psychological element, namely *Intelligence quotient (IQ), emotional quotient (EQ),* and motivation altogether are the components that can support the basketball skills. Thus, to be able to master the basic skills of basketball properly and optimally, basketball players must maximize these components properly.

5. Conclusion

1. There is a positive and significant relationship between the *intelligence quotient (IQ)* with basketball skills, meaning that the higher the level of *intelligence quotient (IQ),* the higher the basketball skills. This is evidenced by the correlation value of 0.698 with p.value (sig) of 0.000. *Intelligence quotient (IQ)* contributed 48.7% of the basketball skills.

2. There is a positive and significant relationship between *emotional quotient (EQ)* with basketball skills, meaning that the higher the level of *emotional quotient (EQ)* the higher the basketball skills. This is evidenced by the correlation value of 0.668 with p.value (sig) of 0.000. *Emotional quotient (EQ)* contributed 44.6% of the basketball skills.

3. There is a positive and significant relationship between motivation and skills of basketball, meaning that the higher the higher the motivation of basketball skills. This is evidenced by the correlation value of 0.616 with p.value (sig) of 0.000. Motivation contributes 37.9% to the basketball skills.

4. There is a positive and significant relationship between the *intelligence quotient (IQ), emotional quotient (EQ),* and motivation, which means the higher the *intelligence quotient (IQ),* the higher the level of *emotional quotient (EQ),* and the higher the motivation, the higher skills of basketball , This is evidenced by the correlation value of 0.852 with p.value (sig) of 0.000. *intelligence quotient (IQ), emotional quotient (EQ),* and motivation together contributed 72.6% of the basketball skills.

6. Suggestion

Efforts to improve the quality of the ability of a basketball player or athlete, election for good players candidates should be conducted, namely with regard to psychological

factors, not only physical factors alone, especially viewed from the factors of *Intelligence quotient (IQ), emotional quotient (EQ),* and the motivation of the players, because these factors have a relationship and a significant contribution to basketball skills. For further researchers, in order to organize the consideration of this research by using other populations, both in quantity and quality of the player. In addition to better pay attention and look at other factors that affect basketball skills so that the results achieved over the maximum of the research that has been done.

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