

## **Modification of sports motivation instruments based sport motivation Scale-II**

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### **Abstract**

The ability of athletes to use psychological maturity, especially motivation, is an effective effort to achieve maximum performance in every sport. This study aims to adapt the Sport Motivation Scale-II (SMS-II) scale into Indonesian. The subjects of this study were 32 students from the Special Sports Class at Yogyakarta 13 Public Middle School, with 21 male and 11 female students. The findings in this study are that the Indonesian version of the SMS-II scale has good construct validity because it matches the underlying construct and has good reliability values. Thus, the Indonesian version of the SMS-II scale can be used to measure students' sports motivation in the context of research and practice.

**Keywords:** adaptation, motivation, SMS-II.

### **INTRODUCTION**

Motivation has a big part in the world of education, especially physical education. Many studies suggest that motivation is closely related to academic achievement (Facturahman & Cholik, 2014). The success of athletes in various aspects of life is not only influenced by physical quality, technique, and tactics, but is influenced by mental quality. Mental skill is a very important factor because mentality is one of the predicting variables for an athlete's success in living his life (Thomas & Fogarty, 1997). As long as an athlete displays their performance, motivation is an important part of the psychological variable that leads the athlete to success. The ability of athletes to use psychological maturity, especially motivation, is an effective effort to achieve maximum performance in every sport. Motivation is defined as the main impulse that drives a person to behave. Motivation is defined as considerations triggering somebody to undertake a task and determine direction, intensity, and persistence of specific behavior based on tasks (Buckworth, Lee, Regan, Schneider, & Diclemente, 2007).

The process of achieving success in sports demand seriousness of athletes in undergoing an exercise program. Such conditions often make the athlete bored with training

program routine that tend to be monotonous and less varied. Therefore, it is important for someone involved and participate in sports to have both intrinsic and extrinsic motivation. Intrinsic motivation is related to someone's participation in a particular activity for their feelings of fun, pleasure, excitement, and satisfaction. Meanwhile, extrinsic motivation has something to do with rewards such as money, trophies, social approval and punishment avoiding (Vallerand, 2004). This opinion confirms that intrinsic motivation is reflected in the implementation of activities that are always based on feelings of pleasure, joy, and satisfaction. Extrinsic motivation for someone to participate in sports activities is always based on something to be achieved that is extrinsic such as gifts in the form of money, trophies, or public recognition.

Cases that arise in the extrinsic factor of sports often dominate increasing their intrinsic motivation. Extrinsic motivation is focused on performance outcomes which tend to make athletes less interested in achieving success, athletes feel anxious, and difficult to overcome failure (Hatch, Thomsen, & Waldron, 2017). This situation will have a negative impact on the pattern of sports coaching, especially coaching young athletes. Athletes want to practice if given something even though external factors are not everything to do something best. Therefore, as an effort to avoid this, intrinsic motivation needs to be built in such a way as a basis for building athlete commitment to do the best thing, as well as providing confidence that something extrinsic is not everything in achieving something that is best in life.

Research in a company showed 63% of people will continue to do work and practice, because it is based on extrinsic factors in the form of money. However Aldag and Brief (1979) explain "money is something of importance for employees if they make it a final objective, yet it cannot fulfill everyone's needs and desires". Therefore, there needs to be an understanding in the athlete that the extrinsic factor is not the only thing that makes people feel satisfied in meeting all their needs and to do something better.

Motivation will function properly if there is fuel or driving source. One of the fuels the body needs is hormones. The hormones needed in carrying out activities are the hormone serotonin and the hormone dopamine. Both of these hormones function as neurotransmitters (signal carriers) that will be produced when a stimulus occurs to brain cells. In another phrase explained, "the hormone serotonin is a hormone of happiness that will regulate mood and prevent depression in a person. Hormone dopamine is a pleasure hormone that is released when a person tries to reach a goal. This hormone will motivate someone to work hard to achieve goals and make someone become more alert and focused on the task to be achieved (Desideria, 2015).

To determine student motivation, a measurement of motivation needs to be done. Measurements made must be valid and reliable. Valid and reliable measurements can be obtained when the presentation of the measuring instrument is carried out in a standardized manner and the measuring instrument has satisfactory psychometric properties (Azwar, 2015, 2017). So far, the measurement of sports motivation uses a variety of measurement tools. The measuring instrument is considered valid and reliable by looking at some psychometric properties such as reliability and item discrimination. This is quite simple because it does not include other psychometric properties that can actually provide a picture of the validity of the

measuring instrument. In addition to simple psychometric properties, most motivational measures include linear measurement. A linear measuring instrument is a measure that views the underlying variable as a continuum from low to high values. The measurement results of this linear measuring instrument will find the high and low motivation of students to go to school. This becomes a limitation on measurement.

The measuring instrument cannot provide comprehensive information about students' motivation in sports. As for a measuring tool that provides comprehensive and standardized information and is widely adapted in several countries, the measuring instrument is Sport Motivation Scale-II (SMS-II) developed by Pelletier et al (2013). Ocal & Sakalli (2018) in their research that adapted the SMS II scale to the results of their research showed that the Turkish version of Sports Motivation Scale II is a conceptual and structurally valid and reliable measurement for Turkish athletes. Results of Li (2015) indicate that CSMS-II is considered to be reliable and generally valid for use with Chinese university athletes.

## **METHOD**

### **SMS-II Scale Adaptation Process**

The process of adaptation of the SMS-II scale into Indonesian follows the guidelines put forward by Purwono (2010). There are three stages in the adaptation process. First, study the extract with several experts. This stage is carried out to ensure that the extracts are relevant to the cultural context in Indonesia. The second stage is the translation that is done with the forward translation design. The translation is carried out by a team of translators who are competent in doing English-Indonesian translations and students who understand the theory. The translation scale was tested on a preliminary study to ascertain how easily the scale was understood and how well the subject's responses on the scale were. The preliminary study involved 14 students of the Special Sports Class at SMP Negeri 13 Yogyakarta. Students are asked to respond to all statements and assess how easy each point is to be understood. This process resulted in an Indonesian version of the SMS-II scale that was easy to understand and in accordance with the expected response. In the third stage, the Indonesian version of the SMS-II scale was tested to obtain validity and valid reliability.

### **Subject**

The subjects of this study were 32 students from the Special Sports Class at Yogyakarta 13 Public Middle School, with 21 male and 11 female students. The subjects in this study consisted of various types of branching in the Special Sports Class at SMP Negeri 13 Yogyakarta.

### **Instrument**

Arikunto (2010) stated that the research instrument is a tool used and selected by researchers in collecting activities so that the activity becomes systematic and facilitated. The instrument in the study was an adaptation of Sport Motivation Scale-II (SMS-II) developed by Pelletier et al (2013). The instrument adapted has 4 alternative answers, namely: Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). Hadi (1991) explained that the modification of the Likert Scale by omitting the category of answers in the middle has three reasons, as follows:

- a. The category of doubt has a double meaning and can be interpreted as not being able to decide and provide answers.
- b. The category in the middle raises the tendency of answering to the middle (central tendency effect) especially for those who are hesitant over the direction of the tendency of answers.
- c. The SS-ST-TS-STTS category is to see the tendency of the respondents' opinions, towards agreeing or disagreeing. The answer category in the middle will eliminate most of the research data thereby reducing much of the information that can be captured from the respondents.

**Table 1. Instrument Adaptasi Sport Motivation Scale-II (SMS-II)**

No	Sport Motivation Scale-II							Adaptasi SMS-II				SS	S	TS	STTS
	Why do you play your sport?							Mengapa anda berlatih olahraga							
1	Because people around me reward me when I do.							Karena orang-orang di sekitar saya memberi hadiah ketika saya melakukannya.							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
2	Because it gives me pleasure to learn more about my sport							Karena itu memberi saya kesenangan untuk belajar lebih banyak tentang olahraga saya.							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
3	Because I would feel bad about myself if I did not take the time to do it							Karena saya akan merasa buruk tentang diri saya jika saya tidak meluangkan waktu untuk melakukannya							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
4	Because practicing sports reflects the essence of whom I am.							Karena berlatih olahraga mencerminkan esensi dari siapa saya							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
5	Because through sport, I am living in line with my deepest principles.							Karena melalui olahraga, saya hidup sesuai dengan prinsip terdalam saya							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
6	Because I think others would disapprove of me if I did not.							Karena saya pikir orang lain akan menolak saya jika saya tidak							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
7	Because it is very interesting to learn how I can improve							Karena sangat menarik untuk belajar bagaimana saya dapat meningkatkan							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
8	So that others will praise me for what I do							Sehingga orang lain akan memuji saya untuk apa yang saya lakukan							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
9	Because I have chosen this sport as a way to develop myself.							Karena saya telah memilih olahraga ini sebagai cara untuk mengembangkan diri							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
10	It is not clear to me anymore; I don't really think my place is in sport							Tidak jelas bagi saya lagi; Saya tidak berpikir tempat saya dalam olahraga							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										
11	Because it is one of the best ways I have chosen to develop other aspects of myself.							Karena ini adalah salah satu cara terbaik yang saya pilih							
	1	2	3	4	5	6	7								
	Not at all true		somewhat true		Very true										

	Not at all true	somewhat true	Very true	untuk mengembangkan aspek lain dari diri saya								
12	Because I feel better about myself when I do			Karena saya merasa lebih baik tentang diri saya ketika saya melakukannya								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
13	Because I find it enjoyable to discover new performance strategies.			Karena saya merasa senang menemukan strategi kinerja baru								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
14	Because I would not feel worthwhile if I did not.			Karena saya tidak akan merasa berharga jika saya tidak melakukannya								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
15	Because participating in sport is an integral part of my life.			Karena berpartisipasi dalam olahraga adalah bagian integral dari hidup saya								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
16	Because people I care about would be upset with me if I didn't.			Karena orang yang saya sayangi akan marah kepada saya jika saya tidak melakukannya.								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
17	Because I found it is a good way to develop aspects of myself that I value.			Karena saya menemukan itu adalah cara yang baik untuk mengembangkan aspek diri saya yang saya hargai								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									
18	I used to have good reasons for doing sports, but now I am asking myself if I should continue			Dulu saya punya alasan bagus untuk berolahraga, tetapi sekarang saya bertanya pada diri sendiri apakah saya harus melakukannya								
	1	2	3						4	5	6	7
	Not at all true	somewhat true	Very true									

### Data analysis

The classical approach was used to analyze the data of this study. Psychometric properties to be analyzed are the reliability and validity of the extract. Reliability was obtained through internal consistency using the Cronbach's Alpha formula. The validity of the construct was tested through correlations between dimensions that will form a simple pattern.

## RESULTS AND DISCUSSION

### Validity test

Arikunto (2010) states that "validity is a measure that shows the levels of validity or validity of an instrument". The value of  $r_{xy}$  obtained will be consulted with the price of the product moment at the 0.05 significance level. If  $r_{xy} > r_{tab}$ , the item is declared valid. The calculation uses SPSS 20. The results of the instrument validity test in table 2 are as follows:

**Tabel 2. Hasil Uji Validitas Instrumen**

Butir	r hitung	r tabel (df 32;5%)	Keterangan
01	0,467	0,339	Valid
02	0,849	0,339	Valid
03	0,455	0,339	Valid
04	0,818	0,339	Valid
05	0,797	0,339	Valid
06	0,592	0,339	Valid

<b>07</b>	0,583	0,339	Valid
<b>08</b>	0,640	0,339	Valid
<b>09</b>	0,671	0,339	Valid
<b>10</b>	0,888	0,339	Valid
<b>11</b>	0,911	0,339	Valid
<b>12</b>	0,592	0,339	Valid
<b>13</b>	0,600	0,339	Valid
<b>14</b>	0,900	0,339	Valid
<b>15</b>	0,671	0,339	Valid
<b>16</b>	0,904	0,339	Valid
<b>17</b>	0,849	0,339	Valid
<b>18</b>	0,603	0,339	Valid

Based on the results of the validity test analysis in table 2 above, it shows that out of 18 items indicate that all items are valid. That is because  $r_{count} > r_{table}$ , so 18 items are declared valid.

### **Reliability test**

Instrument reliability refers to an understanding that an instrument can be trusted enough to be used as a data collection tool because the instrument is already good (Arikunto, 2010). Item reliability analysis is only performed on items that are declared valid and not all items that have not been tested. To obtain reliability using the Cronbach Alpha formula (Arikunto, 2010). Based on the analysis results, the instrument reliability test results in table 3 were as follows:

**Table 3. Reliability**

<i>Cronbach's Alpha</i>	<i>N of Items</i>
0,946	18

Based on the reliability test results table above, it shows that the SMS-II instrument is reliable, with a reliability coefficient of 0.946 so the instrument is feasible to be used as a measure of sports motivation. The validity tested in this study was the validity of the extract. The validity of the construct in this study drawn from the research of Vallerand (1992) who found a simple pattern on correlations between dimensions. The closer the correlated dimensions are, the higher the correlation value, conversely the further the correlated dimension, the lower the correlation can even be a negative correlation.

In the reliability test, the Indonesian version of the SMS-II scale has a value above 0.7. Azwar (2015) explains that the reliability value of 0.7 is good for reliability on the scale used with the aim of conducting research. Reliability values ranging from 0.7 to 0.8 can also be used for research and practice purposes. Thus, it can be said that the reliability of all dimensions in the Indonesian language version of AMS is quite satisfying and can be used for research and practice purposes.

### **CONCLUSION**

The findings in this study are that the Indonesian version of the SMS-II scale has good construct validity because it matches the underlying construct and has good reliability values. Thus, the

Indonesian version of the SMS-II scale can be used to measure students' sports motivation in the context of research and practice.

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