PROCEEDING THE 5TH ICSDP

The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

Developing an Instrument for Measuring Athlete's Self-Confidence

Ahadin[1], Nyak Amir[2], Syamsulrizal[3], Saifuddin[4]
ahadin_selian@unsyiah.ac.id
[1,2,3]Department of Physical Education, Faculty of Teacher Training and Education,
Syiah Kuala University, Banda Aceh, Indonesia

Abstract: Standard measuring instrument with high validity and reliability rate to measure the level of athlete'sself-confidence so far has never existed yet in Indonesia, thus affecting the process of developing the athletes'mental aspects. Therefore, it is necessary to develop such a tool in sports field. The purpose of this study was to develop a standard measuring instrument with a high level of validity and reliability to be used as a scale tosee the level of an athlete's self-confidence in sports. The population and sample in this study were 30 athletes and coaches from National Sports Committee of Indonesia of Aceh Province. In addition, 416 National SportsCommittee of Indonesia athletes of Aceh Province were taking part to test the tool. The process of making thetool comprises four stages, (1) collecting items, (2) selecting items, (3) testing the measuring instrument, (4) analyzing athletes' self-confidence rating scale. The collected data is then categorized and analyzed both qualitatively and quantitatively. Based on the results of the research, the scale of athlete's self-confidence consists of 5 factors and 39 statement items. It means that it a valid and reliable measuring tool. The results showed convincing or high validity rate with 0.701 as well as high reliability degree with 0.829 to 0.869. It canbe concluded that the tool for measuring an athlete's self-confidence proves highly reliable and valid.

Key words: *Measuring instrument, Self-confidence, Athlete*

Introduction

In doing every sport activity, physical and mental condition become the main priority as well as technique of doing it. Only when all these elements were done in unison coupled with the availability of supporting facilities and infrastructure, can optimal results be obtained. Bompa (1988) stated that there are fourmain aspects that need to be prepared prior to conducting training for all sports. They are (a) physical preparation, (b) technical preparation, (c) tactical preparation, and (d) psychological preparation.

Self-confidence is a quality found in many aspects of society. Therefore, self-confidence is no strangerto sports field and it can be associated with qualities such as mental strength, composure, fortitude, confidence, and courage. These qualities are descriptive verbs used to describe successful people. Recent study showed that success affects the level of self-confidence and belief can affect success (Covassin & Pero, 2004; Hays, Maynard, Thomas, & Bawden, 2007; Hays, Thomas, Maynard, & Bawden, 2009). The best athletes have revealed that self-confidence affects their achievement and performance through their mind, behaviors, and feelings (Hays et al. 2009). Levy, Nicholls, & Polman (2010) found that subjective performance and self- confidence were statistically significant and positively correlated. Self-confidence has been defined in a number of ways in all related the literature. These definitions generally involve belief in one's ability to perform(Clark et al, 2008). The world of sports recognizes the importance of self-confidence to achieve success (Vealey & Chase, 2008).

Self-confidence plays a role in a team's or an individual's success in sports. Various studies have shownthat the belief as the source of self-confidence helps build and strengthen a person's level of self-confidence (Hays, Maynard, Thomas, & Bawden, 2007; Wilson, Sullivan, Myers, & Feltz, 2004). An athlete's high and steady self-confidence helps them achieve success. Research in the relationship between confidence and performance showed that performance affects self-confidence.

Strong belief, the result from qualitative analysis with small focus groups and individual interviews ofelite athletes, that in order to have a strong level of sports-confidence, athletes need to have a set of positive beliefs that would last long. However, decreasing self-confidence depends highly on psychological challenges and competitive sports setting (Thomas, Lane, & Kingston, 2011).

High self-confidence can develop an individual's interaction with a society, friends and their surroundings. It leads to comparing themselves with their peers in competitions and also gives feelings of confidence and courage because success and failure are a form of self-confidence (Verma, 2014). Self-confidence can be formed through individual interactions with their environment or activities with other people.A coach or a mentor must be able to instill an attitude of confidence in their trainees (Apriansyah, Sulaiman &Mukarromah, 2017).

Various research findings showed that mental abilities are significantly related to one's targets, self- confidence, involvement, fear control, concentration,

distraction control, imagery and planning skills, but were still low in terms of activation, relaxation, reaction to stress, and mental practice. (Castillo-Rodríguez et al., 2021; Gouttebarge et al., 2017; Johansen & Haugen, 2013). The emotional stress experienced by athletes, whether caused by officials or spectators, will result in impaired cognitive, affective, somatic and motor skillsthus they can no longer compete properly (Louvet, Campo, and Andre, 2015; Muñoz Arjona, 2021).

Previous observations the author made in several competitions of athletes from Aceh Province demonstrated that the athletes' self-confidence was not good. To find out the state of the athlete's self- confidence, measuring the athlete's confidence level is important. A standard measuring tool with a high level of validity and reliability to measure the level of athlete's self-confidence has never come or existed in Indonesia. This can affect the process of developing the mental aspects of athletes. Therefore, it is necessary to develop such an valid and reliable instrument to measure an athlete's self-confidence. This study aimed to develop a standard measuring instrument with high validity and reliability rate to measure the level of self- confidence of athletes in sports. Vealey (1986) stated that in developing a self-confidence measuring tool, Vealeys suggested that the self-confidence model in sports should take into account "sports specificity, as wellas individual differences in personality and behavior.

Methods

Based on the problem and research objective, namely developing an instrument for measuring athletes'self-confidence in a sport competition, this type of research is classified as Research and Development (R & D) (Ary et al., 2010) with interview technique and the Q-sort method (Mutohir, 1986). This is in accordance with the opinion of Richey, Rita and Nelson (1996) that research on a development is a systematic study related to planning, development, evaluation, processes and products that must meet internal consistency criteria. Furthermore, Sugiyono (2014) Research and Development is a research method used to produce certain products, and put these products to test. Furthermore, Nazir (2005) suggests the notion of research design is allthe processes needed in planning and implementing research. This particular research is on the development of the interview technique, item pool and Q-sort method. The research framework is as follows.

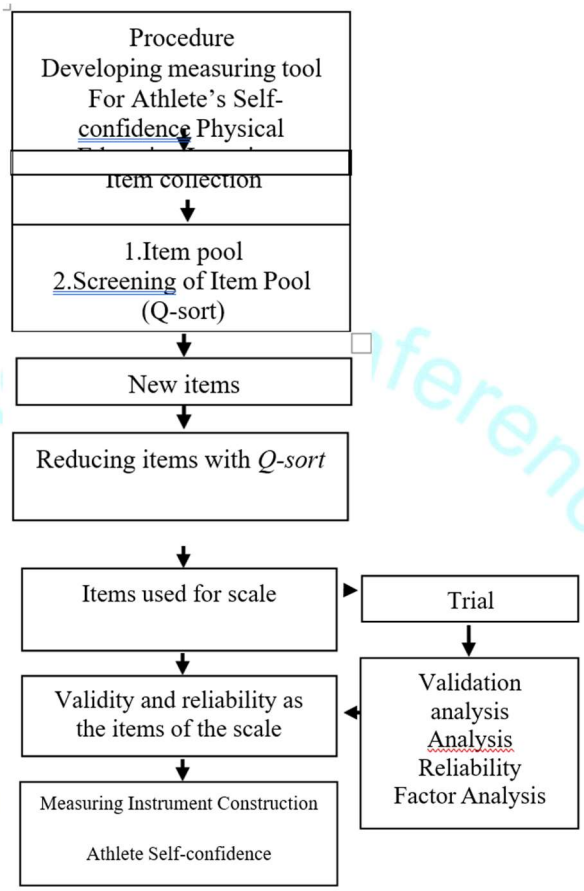

Figure 1. Research framework

This study involved athletes and coaches from sports under National Sports Committee of Indonesia of Aceh Province with a sample of 25 athletes and 5 coaches as well as trials on 416 athletes under National Sports Committee of Indonesia of Aceh Province. The first stage was that the researcher interviewed 25 athletes and 5 coaches. The nominal group stage consisted of 25 athletes and 5 coaches. The Q-sort stage consisted of5 experts. And finally, the trial consisted of 416 athletes under National Sports Committee of Indonesia of Aceh Province.

The instrument for measuring athlete's self-confidence contains statements with a grade scale of one (1) to four (4). Athletes choose the item that best fits their feelings and psyche when they are in a competition. To provide an answer, the following scale was used, namely; Not Appropriate (NA), Somewhat Appropriate (SA), Appropriate (A), and Very Appropriate (VA). The scoring is; 1= Not Appropriate, 2= Somewhat Appropriate, 3= Appropriate, 4= Very Appropriate. The designation of the athlete's self-confidence level is based on the scores listed in table 1 below.

Table 1. Athlete's Self-Confidence Level Based on the Score of Each Scale

Type of Instrument	Self-Confidence Level			
	Very Low < 39%	Low 40% - 55%	Adequate 56% - 75%	Good 76% - 100%
The scale of athlete's self-confidence	< 85	86 – 103	104 -127	128 -156

The procedure for developing an athlete's self-confidence measuring tool in this study was carried outbased on the steps by Mutohir's (1994), namely collecting items; item selection; preparation of scale and trial users of the measuring instrument.

For further development of the instrument for measuring the athlete's self-confidence are as follows:

(1) the collection of new items will be carried out through interviews and nominal group process. The researcher interviewed 25 athletes and 5 coaches. To facilitate the interview in this study, an interview guide was provided. The purpose of the interview was to obtain information related to the five dimensions used in developing athletes' self-confidence measuring tool, namely optimistism, independence, sportsmanship, fearlessness, and adaptation.

(2) (2) The collection of the second item was done using a nominal group process. The nominal group process is in accordance with the opinion of Delbecq and Vande Ven since 1971. In this process, samples were given the opportunity to discuss and participate actively, as well as to express their opinions in turn. Each sample was given time to write an opinion on the given piece of paper. To guarantee freedom of expression, each opinion is assessed by each group member anonymously (Sample, 1984).

(3) Thecollection of prospective items through a nominal group process was carried out on a sample of the 30 athletes and coaches. The two stages of the nominal group process are in accordance with the statement of Mutohir (1987). In the first stage, the sample was asked to gather in a room and then write down their feelingsand emotions on the indicators of self-confidence on a piece of paper from the five dimensions of athlete self-confidence. In the second stage, the nominal group process and the results of the interviews will become the items for the group discussion process. The results of the interview were then categorized into five dimensions of athlete's self-confidence

(4) **Selection of items with Q-sort**. According to Mutohir (1994), item selection was carried out to select items that have symptoms of athlete self-confidence. The item selection process uses the "Q-sort" and "factor analysis" techniques. The Q-sort technique was carried out to collect items that matched the dimensions of the athlete's self-confidence and later to be

written in the given form. TheQ-sort procedure are: (1) the members of the Q-sort group consist of five lecturers from Teacher Training andEducation Faculty at Syiah Kuala University comprising two lecturers from physical education department, two lecturers from counseling and guidance education department, and 1 lecturer from education evaluation department, (2) the researcher would provide an explanation of the scope of the meaning and purpose of Q- sort, and (3) the researcher would sort the items into three categories of importance, namely: "very important","relatively important", and "not important". Through this stage, the researcher would obtain 54 items of self- confidence considered very important and relatively important.

The Scaling. The developing of the athlete's self-confidence measuring instrument in this study was arranged in the form of diagnostic feedback, so that the tool has a broad scope and contains specific points to measure the athlete's self-confidence in carrying out a task reliably and validly.

The Scale Tester. After the process of determining the dimensionality of the measuring instrument through factor analysis, the researcher aims to find out the main dimensions of disorders and symptoms of self-confidence. Furthermore, a trial process was carried out on the 416 athletes by compiling a scale consisting ofitem analysis, measuring instrument reliability, factor analysis, and compiling a rating scale.

Data Analysis

Quantitative data analysis using Statistical Package for Social Sciences (SPSS) (Riduwan, 2011) was used to test the validity, reliability, and factors formed from the statement items of athlete's self-confidence scale. Construct validity is one of the conditions that must be met in order to decide if an instrument works asplanned. Construct validity was obtained by calculating the correlation between the score of each item and thetotal score reduced by the item itself. The second characteristic that is essential in developing a measuring instrument is reliability (Verducci, 1980). The Cronbach Alpha formula was used to see the level of reliability.Factor analysis is one approach to selecting and reducing items in this study. Factor analysis is a useful tool for finding correlated and uncorrelated variables with items from other clusters (Mutohir, 1987). It was furtherexplained that the technique used for factor analysis was the Principal Axis Factoring technique and the Rotation Method Oblimin with Kaiser Normalization to sort a number of items into a scale. In this study, factoranalysis was carried out to show the level of validity by knowing the number of factors and items that were considered valid so that they reflected the characteristics of the athlete's symptoms and disorders in a competition. The research was carried out from April to October of 2021.

Results

The reliability test was carried out using the Cronbach Alpha formula. The result of the calculation of the reliability coefficient was analyzed using the Statistical Package for Social Sciences (SPSS 17.0) (Riduwan,2011). The respondents are 416 athletes. The result of the reliability test showed that the five factors had a reliability coefficient value at 0.829 to 0.869. It means that the athlete's self-confidence measuring tool is reliable. The result of the reliability coefficient is put in table 2 below.

Table 2. Summary of ***Reliability Coefficients*** (N= 556)

Factors	Optimism (10) items	Independence (6) items	Sportsmanship (8) items	Fearlessness (8) items	Adaptation (7)items
Mean	34,3750	19,1607	27,5357	25,9821	24,7679
Variance	19,3929	8,388	9,853	17,909	6,109
Std Dev	3,63099	2,89626	3,13899	4,23188	2,47159
N of Variabel	10	6	8	8	7
Case	416	416	416	416	416
Rn Alpha	,842	,829	,842	,869	,836

Factors	Optimism (10) items	Independence (6) items	Sportsmanship (8) items	Fearlessness (8) items	Adaptation (7)items
Rtable	0,105	0,105	0,105	0,105	0,105
Status	Reliable	Reliable	Reliable	Reliable	Reliable

Furthermore, the KMO and Barleet's test were carried out to see whether the sample and variables could be analyzed further or not. The result are 0.832 with a significance of 0.000. Therefore, this figure is already above 0.500, and the significance is far below 0.050 (0.000 < 0.050). For this reason, samples and variables can be analyzed further. The result of the KMO and Bartlett's test can be seen in table 3 below.

Table 3. Output of KMO and Bartlett's Test

Kaiser-Meycr-Olkin Measure of Sampling AdequacyBartlett's Test of Approx Chi-Square Spherici ty dfSig	.832 139.653 10 .000

The analysis of anti-image matrices test is used to determine which factors have the feasibility to be used in further analysis. Five factors fall into the factor analysis out of 39 items. For this reason, the output ofthe anti-image correlation test is shown in table 4 below.

Table 4. Anti-Image Matrices test result with R table (0,500)

No	Factors	*R table*	Status
	Anti-image Correlation		
1.	Optimism	0,908	In
2.	Independence	0,772	In
3.	Sportsmanship	0,873	In
4.	Fearlessness	0,846	In
5.	Adaptation	0,815	In

The items that are spread over five dimensions that are in the measuring instrument and out of 54 items, after several times of factor analysis, only 39 items had a factor load greater than 0.30 in the pattern matrix. Items with a factor of less than 0.30 are dropped. The final item used for measuring the athlete's self-confidence can be seen in table 5 below.

Table 5. Pattern Matrix Test result

No	**Items**	**Components**				
		Optimism	**Independence**	**Sportsmanship**	**Fearlessness**	**Adaptation**
1	Not easy to give up	0,684				
2	Not easy to despair	0,732				
3	You can do it	0,696				
4	Trying your best	0,722				
5	Believing in your own abilities	0,637				
6	No hesitation	0,606				
7	Full of hope	0,616				
8	Never give up	0,638				
9	Not calm	0,570				
10	Thinking positively	0,605				
11	Not dependent		0,758			
12	Hard working		0,909			
13	Diligent		0,639			
14	Spirited to struggle		0,733			
15	Self correction		0,703			
16	Self		0,611			
17	Accepting suggestions			0,647		
18	Trying to be honest			0,653		
19	Unable to discuss			0,707		
20	Underestimating the opponent			0,667		
21	Dare to apologize			0,838		
22	Respecting the			0,767		

	decision					
23	Complying with the rules			0,736		
No	Items	**Components *(continue)***				
		Optimism	**Indepen dence**	**Sportsm anship**	**Fearles sness**	**Adaptati on**
24	Recognizing the opponent's strengths			0,586		
25	Not afraid to lose				0,662	
26	Believing in your own abilities				0,866	
27	Hesitating at times				0,804	
28	Not having a strong mentality				0,605	
29	Never give up				0,774	
30	Confident to win				0,822	
31	Accepting any result				0,808	
32	Worried sometimes				0,665	
33	Unable to place myself					0,733
34	Unable to self-adjust quickly					0,717
35	Easygoing					0,810
36	Speaking politely					0,762
37	Saying hello with each other					0,575
38	Easy to get along					0,664
39	Mutual help					0,652

Discussions

Briefly, the manufacture of the measuring tool followed the stages of collecting new items from interviews, nominal groups and Q-sort and then trials. The test results were then analyzed using validity, reliability and factor analysis tests. The results of the analysis showed the factors and items that reflect the athlete's self-confidence factors are included in the tool as follows.

Optimism. The results of the validity, reliability and factor analysis tests showed ten items of athlete self-confidence from the optimism factor. The items are; not give up easily, not easily despair, you can do it, try your best, believing in your own abilities, not hesitant, full of hope, never give up, not calm, and thinking positively. The optimism factor is the first factor in measuring the athlete's self-confidence scale with a correlation value between scores in the range of 0.732 to d. 0.570.

Independence. The results of the validity, reliability and factor analysis tests showed six items of athlete self-confidence from the optimism factor which was included in the instrument. The items are; not dependent, hard-working, making effort, having fighting spirit, having self-correction, and self. The independence factor is the second factor in measuring the athlete's self-confidence scale with a correlation value between scores in the range of 0.909 to d. 0.611.

Sportsmanship. The results of the validity, reliability and factor analysis tests showed eight items of athlete's self-confidence from the sportsmanship factor included in the measuring instrument. The items are; accepting advice, trying to be honest, unable to discuss, underestimating the opponent, dare to apologize, respecting decisions, complying with the rules, and recognizing the opponent's strengths. The sportsmanship factor is the third factor in measuring the athlete's self-confidence scale with a correlation value between scoresin the range of 0.838 to d. 0.586.

Fearlessness. The results of the test of validity, reliability and factor analysis showed eight items of athlete's self-confidence from the fearlessness factor which was included in the instrument. The items are; notafraid to lose, believing in one's own abilities, occasional hesitation, not having a strong mentality, never give up, confidence in winning, accepting any outcome, and occasional worry. This factor is the fourth factor in theathlete's self-confidence scale measuring instrument with a correlation value between scores in the range of 0.866 to d. 0.866.

Self-adjustment. The results of the test of validity, reliability and factor analysis showed seven itemsof athlete's self-confidence from the self-adjustment factor that was included in the instrument. The items are;unable to place oneself, unable to adapt quickly, quickly to get along, speaking politely, saying hello to each other, easygoing, and mutual help. This factor is the fifth factor in the athlete's self-confidence scale measuring instrument with a correlation value between scores in the range of 0.810 to d. 0.575.

Based on the results of the reduction and the results of the validity, reliability and factor analysis tests, the conclusion is that of the many items designed to measure the athlete's self-confidence scale, 39 items showed high validity and reliability and they are found in five factors.

In the context of professional sports, stakeholders need to be aware of the various symptoms of mentaldisorders that athletes may face. This needs to be a priority because the stigma and lack of information are barriers from seeking help in identifying symptoms of mental disorders in elite sports (Gulliver, Griffiths, and Christensen, 2012). This is also in line with the research which shows that there is a very significant positive relationship between anxiety and self-confidence in acompetition (Hoseini et al., 2011).

Considering a measuring tool must have multidimensional aspects that can distinguish aspects of athlete's self-confidence, this measuring tool consists of five dimensions, namely optimism, independence, sportsmanship, fearlessness and

adaptation. The Athlete Self-Confidence Scale Measuring Tool is in table 6 as follows.

Table 6. Athlete's Self-Confidence Scale Measuring Tool

No	Statement items	NA	SA	A	VA
1	I don't give up easily in training or in competitions				
2	I don't give up easily when I lose in a match/race				
3	I can definitely do both training and competition well				
4	I always try my best in training and competition				
5	I always believe in my own ability				
6	I don't hesitate in every match/race				
7	I am always full of hope to win in every match/race				
8	I never give up in every match/race				
9	I sometimes don't calm down in matches				
10	I always think positively in matches/races				
11	I don't always depend on the coach during training or matches				
12	I work hard in every training and competition				
13	I always try to do my best				
14	I have a high fighting spirit in doing training				
15	I don't always do self-correction during training or competitions				
16	I can't be myself				
17	I don't always take advice from other people				
18	I always try to be honest in my daily activities				
19	I can't always negotiate or discuss				
20	I never underestimate opponents in competition				
21	I dare to apologize if there is a mistake				
22	I always respect any decision				
23	I always act according to the rules				
24	I can admit my opponent's strengths				
25	I'm not afraid of losing in a match/race				
26	I always believe in my own abilities				
27	I sometimes hesitate in making decisions				
28	I don't always have a strong mentality				
29	I never give up in a match/race				
30	I'm not always confidenet of winning in every match/race				
31	I can accept any result from a match/race				
32	I am sometimes anxious in the face of matches/races				
33	I am not able to place myself in a training environment or a competition				
34	I am not quick to adapt to new surroudnings				
35	I am quick to get along with other people				
36	I can speak politely				
37	I often greet other people				
38	I am an easy-going person				
39	I always help with pleasure				

Conclusion

The results of this study indicate that the athlete's self-confidence scale measuring

instrument consisting of 5 factors and 39 items has a high validity and reliability rate. Therefore, this instrument can be used for initial investigation to check an athlete's readiness in a competition. Although this particular measuring instrument has a high degree of validity and reliability, further development of it is still needed in addition to applying it on a larger sample. This research also still has several weaknesses such as very limitedtrials and the stages of using factor analysis are still under investigation.

Refrences

Apriansyah, Sulaiman & Mukarromah. (2017). *Kontribusi motivasi, kerjasama, kepercayaan diri terhadap prestasi atlet sekolah sepakbola pati training center di Kabupaten Pati*. Journal of Physical Education and Sports: 6 (2) 101-107.

Ary, D., Jacobs, L. C., Sorensen, C., & Razavieh, A. (2010). Introduction to Research in Education, Wadsworth Cengage Learning. In *Wadsworth, Cengage Learning.*

Bompa O, Tudor. (1988). *Theory and Methodology of Training The Key to Athletics Performance. Dubuqe, Low Kendal Hunt Publishing Company.*

Castillo-Rodríguez, A., López-Aguilar, J., & Alonso-Arbiol, I. (2021). Relationship between physical- physiological and psychological responses in amateur soccer referees. *Revista de Psicologia Del Deporte*, *30*(2), 26–37.

Clark, R.A., Goldsmith, R.E. Goldsmith, E.B. (2008). Market mavenism and consumer self- confidence.*Journal of Consumer Behaviour, 7 (3) 239-248.*

Covassin, T., Pero, S. (2004). The relationship between self-confidence, mood state, and anxiety among collegiate tennis players. *Journal of Sport Behavior, 27(3), 230-242.*

Gaspers, V. (1992). *Teknik analisis dalam penelitian percobaan (Jilid 1 dan 2)* [The data in experimental research (Volume 1 and 2)]. Bandung: Tarsito.

Gorsuch, R. L. (1983). *Factor analysis.* Hillsdale: Lawrence Erlbaum Associates Publisher.

Gouttebarge, V., Johnson, U., Rochcongar, P., Rosier, P., & Kerkhoffs, G. (2017). Symptoms of common mental disorders among professional football referees: a one-season prospective study acrossEurope.*Physician and Sportsmedicine*, *45*(1), 11-16. https://doi.org/10.1080/00913847.2017.1248796

Hartanti, Yuwanto L, Pambudi I, Zaenal T, & Lasmono, H. (2004). *Aspek psikologis dan pencapaian prestasi atlet nasional Indonesia*. Anima Indonesian Psychological Journal,20(1), 40-54.

Hays, K., Maynard, I., Thomas, O., Bawden, M. (2007). Sources and types of confidence identified by world class sport performers. *Journal of Applied Sport Psychology,19*, 434-456.

Hays, K., Thomas, O., Maynard, I., Bawden, M. (2009). The role of confidence in worldclass sport performance. *Journal of Sport Sciences, 27 (11), 1185-*

1199.

Hoseini, S. H., Aslankhani, M. A., Abdoli, B., & Mohammadi, F. (2011). The relationship between the numberof crowds with anxiety and the function of the soccer premier league's referees. *Procedia - Social and Behavioral Sciences*, 2374 – 2378. https://doi.org/10.1016/j.sbspro.2011.10.463

Johansen, B. T., & Haugen, T. (2013). Anxiety level and decision-making among Norwegian top-class soccer referees. *International Journal of Sport and Exercise Psychology*, *11*(2), 215–226. https://doi.org/10.1080/1612197X.2013.773665

Levy, A. R., Nicholls, A. R., Polman, C. J. (2010). Pre-competitive confidence, coping, and subjective performance in sport. *Scandinavian Journal of Medicine and Science in Sport, 21,* 721-729.

Louvet, B., Campo, M., & André, A. (2015). Psychological determinants of coping strategies among soccer referees. *Movement & Sport Sciences*, *87*, 63–77. https://doi.org/10.1051/sm/2014015

Muñoz Arjona, C. (2021). ¿Influyen las respuestas psicológicas y la experiencia en el rendimiento físico del árbitro de fútbol? *Aloma: Revista de Psicologia, Ciències de l'Educació i de l'Esport*, *39*(1), 65–72. https://doi.org/10.51698/aloma.2021.39.1.65-72.

Mutohir, T. C. (1986). *The development and examination of student evaluation of teaching effectiveness in an Indonesian higher education* setting. (Unpublished PhD thesis). Macquarie University, Sydney.

Mutohir, T. C. (1987), *Laporan Penelitian Pengembangan Alat Ukur Evaluasi Efektivitas Pengajaran di Perguruan Tinggi (suatu rintisan)*, Surabaya, Pusat Penelitian IKIP Surabaya, Depdikbud.

Mutohir, T. C. (1994). Evaluasi keefektifan pengajaran studi kasus di IKIP Surabaya. *Media Pendidikan dan Ilmu Pengetahuan, 73*/Th XVI, 7.

Nazir. (2005). *Metode penelitian* [Research methods]. Jakarta: Ghalia Indonesia.

Nugraha, P, A&Gunarto, D. (2013). *Top No.1 Tes Masuk TNI Polri*. Flash Books: Yogyakrta.

Richey, R. C, & Nelson, W. (1996). Developmental research. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 1213-1245). New York: Macmillan Simon andSuchuster.

Riduwan. (2011). *Cara Mudah Belajar Statistik Package for Social Sciences, (SPSS 17.0),dan Aplikasi StatistikPenelitian*. Bandung: Alfhabeta.

Sample, J. A. (1984). Nominal group technique: An alternative to brainstorming. *Journal of Extension,*22(2).

Retrieved July 8, 2016 from https://joe.org/joe/1984march/iw2.php.

Sugiyono. (2014). *Metode Penelitian Kuantitatif dan Kualitatif dan R & D.* Bandung: Alpha Betha.

Thomas, O., Lane, A., & Kingston, K. (2011). Defining and contextualizing robust sport-confidence. *Journalof Applied Sport Psychology, 23, 189-208.*

Wilson, R. C., Sullivan, P. J., Myers, N. D., Feltz, D. L. (2004). Sources of sport confidence of master athletes.

Journal of.Sport and Exercise Psychology, 26, 369-384.

Verduci. Frank M. (1980). *Measurament Concepts in Psysical Education*. Toronto: The C.V. Mosby Company