The Development of Practice-based Audio Imagery to Reduce the Anxiety Level Tennis Athlete

by Abdul Alim

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FOREWORD

First, allow us to extend our warmest greetings and welcome to you all to the 3rd Yogyakarta International Seminar on Health, Physical Education, and Sports Science (YISHPESS 2018) in conjunction with The 2nd Conference on Interdisciplinary Approach in Sports (CoIS) held by Faculty of Sport Sciences, Universitas Negeri Yogyakarta in Yogyakarta, Indonesia on August 31, 2019.

YISHPESS 2019 takes an interesting theme and currently developing is Physical Literacy. Physical Literacy refers to motivation, self-confidence, physical competence, knowledge, and understanding to value and be responsible for lifelong involvement in physical activities. Involvement in lifelong physical activity in individuals is a personal responsibility to have physical abilities by freely choosing to be active regularly. Involvement in various meaningful and personally challenging activities, as an integral part of someone's lifestyle. Meanwhile, CoIS 2019 took the theme "Implementing Sport Science and Technology in Pushing Human Performance to the Limit". This theme was chosen to anticipate the development of science and technology in the field of sports that continues to develop along with the times and eras of the industrial revolution 4.0. Various methods have developed rapidly to push sports performance to the optimum extent.

We do hope that this conferences proceeding book have benefit for all participants to share ideas and knowledge. We would like to thank to all parties who helped running this program. Hopefully, all the time and efforts we have spent for these two conferences may be beneficial and impactful for the future.

Regards,
Organizing Committee

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The Development of Practice-based Audio Imagery to Reduce the Anxiety Level Tennis Athlete

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Keywords: Imagery, Audio Imagery, Levels of Anxiety-Based, Tennis Athlete

Abstract: This research aims to produce a product in the form of audio media to reduce the anxiety level tennis athletes. Audio media is used to ease athlete and coach in the face of the game. The method of this research is the research and development (Research and Development). Media audio imagery exercise development to reduce the anxiety level tennis athlete is first validated by one expert material and one media expert. In this study researchers use the 7 steps in carrying out development, as for the method of data retrieval method using incidental sampling, namely the techniques in use for sampling based on accidental or incidental damages against 30 athletes or students of UKM UNY. The results of research and development: on the whole, the development of practice-based audio imagery to reduce the level of anxiety this tennis athletes categorized worthy of use. Upon validation of the experts, the feasibility of the development of media imagery audio-based exercises to reduce the anxiety level Athlete Tennis expert examiners include: material by Mr. Komarudin amounted to 84.3% and by Mr. Media expert examiners Nawan Primasoni of 88.89%. From the trials of the products obtained the feasibility of 78.56%. Overall development of media-based audio imagery exercise to reduce the level of anxiety this decent tennis athletes are used to evaluate the guidelines and know the anxiety level tennis athlete.

1 INTRODUCTION

Tennis is a sport that is usually played between two players or two pairs of players. Each player uses a racket to hit the tennis ball. The aim of this game is to hit the ball over the net and into the opponent's court so the opponent cannot hit the ball back. In tennis, exercise aspect components are very important in athlete's maximum achievement in court, whereas the aspect components include physics, techniques, tactics, and mentality.

The physical aspect component of tennis involves power, speed, power, balance, and athlete's agility. Techniques involve forehand, backhand, smash, service, and volley. The tactical component of tennis includes game zones, such as the baseline, ¾ court, the mind court, and the net. Based on phase of play, it includes defending, rallying, and attacking. However, in tennis the mentality aspect is an important aspect in the main purpose of an athlete's practice, without mentality, other aspect such as physics, tactics, and technique components will not be delivered well, for example an athlete is in good physical condition, has good playing tactics

and techniques but has a poor mentality, so the athlete cannot apply his physics, techniques, or tactics that could otherwise easily earn him victory, but they could turn into weaknesses, resulting in losing.

Coach becomes an important success factor of an athlete's practice in court, yet the limited athlete's mentality exercise instruments become an obstacle in training athlete's mentality especially athlete's anxiety before or towards the game. The minimum instrumental factor or a coach reference in exercise aspect is an important factor in exercise, therefore coach is expected to train athletes with balanced intensity among physical, technical, and tactical practices in the court. In doing his role, a coach still does not give enough component practice for athletes whose mentality is imbalanced among the physics, techniques, and tactics. Therefore, a coach must understand and know the right practice aspects for the athletes.

Thus, an athlete also needs to train his mentality in order to have a stable mind during matches, in which case an athlete's anxiety usually comes before or towards the match. It could be obvious that an

athlete is anxious during or prior to a match, such as his tendency to use the toilet several times, hot and cold sweat before playing, and being confused of what to do before the game.

In the condition and situation of the court during or prior to the match, calmness is a main factor in athlete's mentality. However, in reality there are still many athletes who are nervous or anxious before or towards the game. Among the factors causing this anxiety are being afraid of the opponents, not feeling confidence, being afraid of the situation of the match or other things that worry them.

This mental training is very important for athletes in the court due to athlete's lack of mental development practice to prepare him during a match. This could result in unstable anxiety, and reduce athlete's skills in the court. To overcome athlete's anxiety level in the court, audio-based imagery method is used. Audio was chosen because it can make the athletes happy to listen to some music, games, and videos, so it will be easier to adjust the athlete's anxiety level. Audio became the right choice because electronics become the first choice for all groups of people in this global era, from children to adults. There are some ways to overcome anxiety in athletes. For example, by using their favorite equipment, having their favorite drink or snack, or listening to their favorite music. However, the fact that there are still many athletes who feel anxious describes a particular result because the result is even achieved. With visualization, it is as though someone were to make an abstract sketch of the desired result.

Mental imagery is a process or an event when an individual feels an object, an event, or even a particular scene, even though the object, event, and scene are not present to the senses during mental imagery process (Richardson, 1969).

In order to understand the experience before the match, individuals form a mental representation related to their experience. Mental representation or mental imagery process is an activity which involves stimulus, senses, and memory. Eyes and ears which receive information from stimuli are sent to visual cortex and auditory cortex consecutively (Solso et al., 2008).

Then it is sent again for the information received in the frontal area of the brain to be processed further to find out if a work describes an animate or an inanimate object. While information processing is on progress, the understood information will be go into or stored in short term memory (STM) as a transitory or temporary storage (Solso et al., 2008).

When a person feels that the information that he has received is a happy experience or traumatic one before or towards the game. Therefore, one of the alternatives to overcome the problem is by audio-based imagery practice. Mental imagery is remembered instead of other experiences, so that the information stored in STM will be rehearsed to be then stored in long term memory (LTM) (Korn & Johnson, 1983). LTM also functions as a human skill to understand the past and use the information to process "the present" or to relate past experiences to current experiences.

Mnemonic technique is a technique of improving storage and retaking information in memory (Solso et al., 2008). It is from this process that human can imagine or describe and retrieve past information or event in memory and connect them with the present or future events. This is in line with the definition of mental imagery itself, which is a mental representation.

Feeling anxious is a general condition faced by anyone when they are about to face an important thing, including athletes prior to matches. Anxiety occurs because there are wrong images of how the matches will be. Pictures of more powerful opponents, poor physical condition, a big event or how everybody expects too much can cause anxiety. Therefore, the research Audio-Based Imagery practice Development to Decrease Anxiety Level of Tennis Athletes in the Special Region of Yogyakarta is conducted.

2 METHOD

2.1 Research Type

This is a Research and Development (R&D) research. The steps in this research are adapted from Sugiyono's research consisting of 13 steps. However, due to limited time and fund, the researchers only adopted 7 steps in line with the purpose of the developmental research. The instruments used are assessments and questionnaires.

2.2 Research Time and Place

This research was conducted on October 17 -18, 2018 which took place in indoor tennis court of UNY and on FIK campus of west UNY.

2.3   Research Target/Subject

The trial test subjects were students of UNY, and tennis athletes of UKM UNY. The subjects in this research were selected through incidental sampling. The technique used to select samples based on coincidence, which means that anyone who sees the researchers could be used as samples providing that the researchers find the person suitable as a data source (Sugiyono, 2015).

2.4   Research Instrument and Data Collection Technique

Research instrument is one of the devices used to measure a natural or a social phenomenon which is observed (Sugiyono, 2014). This research used 2 data collection techniques:

2.4.1   Testing and Observation

A media expert is needed in order to obtain credibility result from audio-based practice development media on athlete's anxiety for this product repair. The data analysis technique by Material Expert and Media Expert, as well as respondents are as follows: (1) Material Expert and Media Expert Credibility, (2) Qualitative testing and observation data analysis technique. The result of the test is explained with data of trial test and direct observation result.

2.4.2   Questionnaire

Questionnaire is a data collecting technique by giving a series of questions or written statements for the respondents to answer (Sugiyono, 2014). There are two different ways of giving responses: (1) Open-ended question is a type of questionnaire written in such a way that the respondents could give their own responses as needed. (2) Close-ended question is a type of questionnaire written in such a way that the respondents only need to give a check mark (√) in the corresponding column or space.

Data collecting in this developmental research used both open-ended and close-ended questions, with suggestion column provided in the following page. The questionnaires were given to lecturers of learning media expert, material expert, students of UNY, and Tennis athletes of UKM UNY. This research used check list (√) questionnaire in the answer column (strongly disagree/ disagree/ agree/ strongly agree).

2.5   Data Analysis Technique

The data obtained through trial test was classified into two, quantitative data and qualitative data. The quantitative data was in numbers, collected from the questionnaires. While the qualitative data was suggestions for this research using descriptive statistics, with statements 'not credible, less credible, quite credible, credible' which are converted to quantitative data on the scale of 4, with scores from 1 to 4.

Table 1: Material expert and media expert credibility percentage category.

No.	Percentage	Category
1	< 40 %	Not Credible
2	40 % - 55 %	Less Credible
3	56 % - 75 %	Credible

Respondent Data Analysis, Qualitative data analysis technique in this research used descriptive statistics, using statements Strongly Agree, Agree, Disagree, Strongly Disagree, which are converted into quantitative fata on a scale of 4, with scores from 1 to 4.

Table 2: Credibility percentage category.

No	Percentage	Category
1	< 24,9 %	Strongly Disagree
2	25 % - 49,9 %	Disagree
3	50 % - 74,5 %	Agree
4	75 % - 100 %	Strongly Agree

Source: (Suharsimi Arikunto, 2010)

It could be stated mathematically with assessment percentage equation (Sugiyono, 2009):

$$\frac{\sum score\ obtained\ by\ the\ researcher}{\sum ideal\ score\ of\ all\ items} \ x\ 100\% \qquad (1)$$

3   RESULT AND DISCUSSION

3.1   Product Validation Data by Material Expert

The Material Expert as a validator of this research is Komarudin, He is a Sports Coaching Education lecturer at Universitas Negeri Yogyakarta. The researchers chose him as material expert because of his excellent competency in sports.

Data collecting by material expert was done on July 27, 2018 by giving the initial product of audio-based imagery practice development to reduce athlete's anxiety before a match along with the assessment sheets in the form of questionnaires.

Validation data of material expert was obtained by using Likert-scale questionnaire of 4 scales. During the execution, the material expert tried to read and examine the product and then gave assessments, comments, and revision suggestions related to media. The result of the credibility assessment by the material expert can be seen in the following:

Table 3: Material expert assessment result data

No	Aspect	Score	Max.Score	%	Category
1	Material Indicator	27	32	84.3%	Credible
	Total	27	32	84.3%	Credible

3.2 Product Validation Result Data by Material Expert

3.2.1 Phase 1

Media expert who becomes a validator in this research is Nawan Primasoni, whose expertise is in exercise media and is a lecturer in Sports Coaching Education. Sports Science Faculty, Universitas Negeri Yogyakarta.

Data collection by media expert was on July 24, 2018 by giving the initial product of audio-based imagery practice development to reduce athlete's anxiety before a match along with the assessment sheets in the form of questionnaires.

Validation data of material expert was obtained by using Likert-scale questionnaire of 4 scales. During the execution, the media expert tried to read and examine the product and then gave assessments, comments, and revision suggestions related to media. The result of the credibility assessment by the media expert can be seen in the following.

Table 4: Product validation result data by media expert phase 1

No	Aspect	Score	Max.Score	%	Category
1	Material Indicator	28	32	87.5 %	Credible
	Total	28	32	87.5%	Credible

The product revision is as follows:
(1) The creator's voice, so there is no plagiarism. (2) Creator to make closing or dedication at the end of the work. (3) Give a picture and cover of the creator in the background music.

3.2.2 Phase 2

The second phase of data collection was done on October 19th 2018 by giving the revised product of audio-based imagery practice development media to reduce athlete's anxiety before a match along with the assessment sheets in the form of questionnaires.

Validation data of material expert was obtained by using Likert-scale questionnaire of 4 scales. During the execution, the media expert tried to read and examine the product and then gave assessments, comments, and revision suggestions related to media.

Table 5: Product validation result data by media expert phase 2

No	Aspect	Score	Max.Score	%	Category
1	Material Indicator	32	36	88.9 %	Credible
	Total	32	36	88.89%	Credible

3.3 Discussion

In the product "Audio-Based Imagery practice to Reduce Athlete's Anxiety Level in the Court" are guidelines, silence, and encouragement to overcome athlete's anxiety in the court.

The developed learning media product can be used as an innovative step in learning by utilizing the product. The strength of this audio-based exercise media is that it can make it easy for athletes to overcome anxiety in the court. This audio media can be used anywhere and anytime according to the athlete's needs in the court, instead of manual mental exercise or the previous method of exercise. This method can also make it easy for coach to find a mental exercise instrument for athletes during or prior to the match. The developed media could be used as one of the sources of exercise for athletes, so this development of audio-based imagery practice is expected to be beneficial as a method of exercise to overcome athlete's anxiety in the court. The weakness of this product is that it is not easy for coaches to use because this audio-based imagery practice media is applied personally or individually in a convenient situation and peaceful condition, and this audio-based imagery practice media to reduce athlete's anxiety in court is still limited.

Even though this product is not the top primary learning source, using the product "Audio-Based

Imagery Practice to Reduce Athlete's Anxiety Level in Court" is expected to help overcome athlete's anxiety problem during or prior to the match in court.

4 CONCLUSION AND SUGGESTION

4.1 Conclusion

Based on the credibility of the development research and discussion, it can be concluded that: This research has created a product "The Development of Audio-Based Imaginary Exercise to Reduce Tennis Athlete's Anxiety in the Court". The product credibility was validated by a material expert and a media expert. On validation, the Material Expert gave an assessment under the criterium "Credible" with a percentage of 84.3% while the media expert gave a 87.5% stated it to be "Credible". After it was deemed credible for testing, this product received assessment from the athletes/pupils and students of UKM UNY through questionnaires. Overall, the quality assessment for this product was 78.56% and was deemed "Strongly Agree" and credible for use. Therefore, it can be concluded that this assessment has produced "The Development of Audio-Based Imagery Practice to Reduce Tennis Athlete's Anxiety in the Court" with the criterium "Credible" to use.

4.2 Suggestions

Based on the media quality, limited research, and the aforementioned conclusion, the researchers can give some suggestions of further media development and usage as follows: (1) The product Produk "The Development of Audio-Based Imagery Practice to Reduce Tennis Athlete's Anxiety in the Court before Match" can be used as a media to introduce and explain to athletes and coaches about audio-based practice for athlete's anxiety in a more practical and easier way. (2) Further research and development to improve audio-based imagery method of practice to reduce athlete's anxiety level before match so it will be better and more efficient in the future.

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