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Effect of Sport Imagery on 50 Metres Dash Performance among Selected Secondary School Athletes in Ijebu Igbo, Ogun State, Nigeria

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Abstract. Psychological skills are significant practices necessary when identifying valuable activities for improving athlete's performance. Many athletes and coaches recognized the power of imagery in sport performance today and attribute part of their success to their use of imagery in most sports. This study therefore, was carried out to examine the effect of sport imagery on 50m dash on sport performance among selected secondary school athletes in Ijebu Igbo Ogun State. Experimental research design was adopted for the study. A total of 30 participants were drawn from four selected secondary school. The instrument used for the study was a standardised instrument of sport imagery questionnaire. Reliability value of SIQ was 0.75. The data were analysed using the analysis of covariance (ANCOVA). The findings of the study revealed thatrevealed that sport imagery has a significant effect on the performance on athletes in selected secondary schools in Ijebu-Igbo, Ogun State.Based on the findings of the study. it was recommended among others that school authority should provide a suitable sporting equipment and environment conducive for teaching imagery techniques on the athletes.

Keywords; imagery, performance, 50m dash

1. Introduction

Psychological skills are an important practice to consider when identifying effective activities for improving athlete's performance (Cumming and Hall, 2002).Beauchamp,Braig and Albinson,(2002) stated that several psychological techniques including the use of imagery are believed to contribute to enhance performance in a number of physical tasks.

Watt, Spittle and Morris (2002)defined imagery use as the manner in which people imagine themselves in ways that can lead to learning and developing skills and can facilitate performance of those skills. It is normally assessed in terms of its cognitive and motivational attributes. Adegbesan (2009) noted that imagery is usually defined as using all senses to construct imagined experience and is a commonly used for mental training for athletes. By using imagery, athletes can evoke the physical characteristics of an object, event, or activity which has been perceived in the past or may occur in the future.

Imagery has been used for several purposes in sports, including specific skill acquisition or rehearsal, strategy mastering or rehearsal, goal-oriented behaviours and the mediation of psychological states such as confidence, arousal and anxiety (Gould, Damarijian, Greenleaf (200 2); Hall Mack, Paivio and Hausenblas (1998); M artin, Moritz and Hall (1999); Pavio (1985); Wei nberg and Gould, 2007). Munroe, Giacobbi, Hall and Weinberg, (2001) also affirmed that athletes used imagery more in competition than in practice which implies that they may use imagery more to enhance performance than to learn skills. Several studies suggest that elite athletes are more likely to use imagery in practice and competition than non-elite athletes. Haunsenblas,Hall,Rodgers and Munroe (1999) specified that both athletes and exercisers use imagery to aid their performance, but not all athletes are able to verbally describe exactly how they use imagery. This fact was supported by Anderson (2000) that imagery system can be used to help person meet some personal or performance goal, but it is most effective when it is used for a specific purpose.

Several literature have demonstrated that imagery can directly enhance performance by improving movement execution (Williams, 2011; Li-Wei, Qi-Wei, Orlick, and Zitzelsberger, 1992;Nordin and Cumming, 2005; Robin et al., 2007; and Short et al., 2002). Imagery can also indirectly affect performance by enhancing motivation, confidence/self-efficacy, concentration, arousal and anxiety regulation, as well as augmenting emotional control, planning, creative thought processes, and reviewing and evaluating tasks and activities (Bernier and Fournier, 2010, Callow, Hardy, and Hall, 2001, Calmels, Berthoumiex, and d‟Arripe-Longueville, 2004, Hale and Whitehouse, 1998, Hanton and Jones, 1999, Munroe, Giacobbi, Hall, and Weinberg, 2000). To explain how these benefits occur, Paivio (1985) developed a 2 x 2 framework identifying cognitive and motivational functions of imagery that operate for a specific action or at a more general level. According to Paivio, imagery has four main functions. They include: cognitive specific (CS), which involves imaging to improve various sport skills; cognitive general (CG), which aids game plans, strategies, and routines; motivational specific (MS), which helps to achieve various specific process, performance, and outcome goals; and motivational general (MG). The MG function was elaborated on by Hall, Mack, Paivio, and Hausenblas (1998) subdividing it into motivational general arousal (MG-A), employed to regulate feelings, mood, and emotion, and motivational general mastery (MG-M), which enhances mastery cognitions such as confidence.

All five of these functions are positively linked with athletic performance and success (Hall et al., 1998), with higher level athletes using the functions more than lower level athletes (Cumming and Hall, 2002b, Hall et al., 1998).

Terms and definitions of the Sport Imagery Questionnaires (SIQ; Hall et al., 1998

Sub-scale	Description
Cognitive Specific (CS)	In this type of imagery, the athlete imagines himself correctly executing specific sport skill during competition.
Cognitive General (CG)	In this type of imagery, the athlete imagines himself reviewing team defensive strategies in sport involves.
Motivation Specific (MS)	In this type of imagery, the athlete imagines himself in a specific setting that is highly motivating.
Motivation General-Arousal (MG_A)	In this type of imagery, the athlete imagines himself in a general sport situation exhibiting the ability to control anxiety.
Motivation General-Mastery (MG_M)	In this type of imagery, the athlete imagines himself in a general sport situation exhibiting the ability to remain focused.

Source: *Adapted from Paivio'stwo-dimensional model, Hall, Mack, Paivio and Hausenblas (1998),*

In their meta-analysis of the literature, Driskell, Copper, and Moran (1994) determined that imagery use has a moderate and significant impact on motor skill performance. The frequency of imagery use has been positively linked with athletic performance (Hall et al.,

1998). In addition, various researchers (e.g., Cumming & Hall, 2002; Hall et al., 1998) have found that athletes at higher competitive levels (e.g., varsity, national) use all five functions of imagery to a greater extent in both training and competition than do athletes at lower levels (e.g., local, recreational).

Imagery has also been used as an intervention technique to enhance confidence (Callow, Hardy, & Hall, 2001; Evans, Jones and Mullen, 2004; Garza and Feltz, 1998; Hale and Whitehouse, 1998, Mamassis and Doganis, 2004; McKenzie and Howe, 1997; Short, Bruggeman, Engel, Marback, Wang, Willadsen, &hort, 2002), motivation (Beauchamp et al., 1996; Martin and Hall, 1995), and attentional control (Calmels, Berthoumieux, and d'Arripe-Longueville, 2004) in athletes. Imagery combined with other mental training methods (relaxation, stress inoculation training) has been shown to help athletes decrease or control precompetitive anxiety (Cogan and Petrie, 1995, Kerr and Leith, 1993; Lee and Hewitt, 1987, Ryska, 1998,Savory, 1997). Research has also shown that specific types of imagery are effective in changing athletes' perceptions of anxiety from harmful and negative to facilitative and challenging (Evans etal., 2004, Hale and Whitehouse, 1998; Mamassis and Doganis, 2004; Page, Sime, and Nordell, 1999). Imagery incorporates all of the natural senses in order to create a vivid, lifelike image in an athlete's mind. The purpose of this technique is for athletes to imagine themselves participating in a certain skill or activity and view themselves executing skills properly and achieving the desired outcome. Although nothing is quite as effective as physical practice, imagery training is a good method for Athletes who need to improve their performance or are unable to physically perform due to injury or other circumstances (Newsom, Knight, and Balnave, 2003; Sordoni, Hall, and Forwell, 2000).

2. Objective of the study

To examine the effect of sport imagery on 50 m dash on sport performance among selected secondary school athletes in Ijebu-Igbo, Ogun State.

3. Statement of the problem

In most of our secondary school today, sport master/mistress learn nothing about some psychological skills that can affect the performance of their athletes such as anxiety, tension, motivation etc. They believe that athletes should go for competitions and come back with trophies, withoutconsidering how athletes can imagine their winning. Imagery has been used for different purposes in sports, including specific skills acquisition or rehearsal, goal oriented behaviour and the mediation of psychological states, such as confidence, arousal and anxiety.

The researchers discovered that sport imagery have not been used by the athletes during training for any competition (inter house sport, invited school relay and so on) and the use of sport imagery can be of assistant to the athlete to observe the outcome of the game and prepare them for success. since imagery has been shown to enhance self-confidence in athletes, therefore the purpose of this study is to examine the effect of sport imagery on 50 metres dash on sport performance among selected secondary school athletes in Ijebu Igbo, Ogun State.

4. Research Hypothesis

There will be no significant effect of sport imagery on 50 m dash on sport performance among selected secondary school athletes in Ijebu Igbo, Ogun State, Nigeria.

5. Methodology

5.1 Procedure

Thirty (30) participants were drawn from four selected secondary school in area of the study. Fifteen (15) of the participants were used for the experimental study and the remaining participants were used for control group, after approval was given by the school authority to use the athletes.

The purpose of the study was explained to the athletes by the researcher and his assistants. While doing this, participants who expressed their interest in the study were given the

questionnaire individually to fill and was collected immediately.

5.2 Measure

The SIQ, designed by Hall, Mack, Paivio, and Hausenblas (1998), is a 30-item self-report questionnaire for assessing athletes' use of imagery, and has been used to investigate imagery use in various sports (Callow and Hardy, 2001; Evans, Jones, and Mullen, 2004, Short and Short, 2005). The SIQ contains thirty 7-point Likert scale items grouped into five categories, one for each of the five functions of imagery: cognitive general (CG), cognitive specific (CS), motivational general-arousal (MG-A),motivational general-mastery (MG-M), and motivation specific (MS). The 7-point Likert scale, from 1(rarely) to 7(often), is used to report how frequently participants use each of the five functions of imagery. The test items are categorized as follows: cognitive specific (7 items), cognitive general (6 items), motivational specific (5 items), motivational general-arousal (6 items), and motivational general-mastery (6 items).Hall et al. found the SIQ to be a reliable and valid test of athletes with adequate psychometric properties with Cronbach alpha coefficients ranging from 0.70 to 0.88.

6. Result

Table 1: Sex of the Participants

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	20	66.7	66.7	66.7
	Female	10	33.3	33.3	100.0
		30	100.0	100.0	

The table above shows that 20 participants (66.7%) were male and 10 participants (33.3%) were female.

Table 2: Age of the Participants

		Frequency	Percent	Valid percent	Cumulative percent
Valid	12-15	27	90.0	90.0	90.0
	16-19	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

The table above shows that 27 participants (90%) were between 12-15 years while 3 participants (10%) were between 16-19 years.

Table 3: Types of Sport of the Participants

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Football	10	33.3	33.3	33.3
Athletics		20	66.7	66.7	100.0
	Total	30	100.0	100.0	

The table above shows that 10 participants (33.3%) play football while 20 participants (66.7%) were Athletes.

Testing of hypotheses

There will be no significant effect of imagery use in the pre-test and post-test in sport performance among selected secondary school athletes in Ijebu-Igbo

Table 4: Table showing the effect of imagery use in the pre-test and post-test in sport performance

Source	Sum of square	DF	Mean square	F	Sig.
Covariates	1896.330	1	1896.330	5.649	.025
Main effect					
Treatment group	1631.259	1	1631.259	4.859	.036
Explained	2403.431	2	3.580	3.580	
Residual	9063.536	27	335.687		
Total	11466.967	29			

The table above presents ANCOVA result on use of imagery techniques on sport performance, following the 4weeks training among selected secondary school athletes in Ijebu-Igbo.
It was observed in the training effect that there is a significant difference in the effect of treatment on sport performance among selected secondary school athletes in ijebu-igbo ($F(2,27)=4.859, P<.05$). Therefore,the null hypothesis which stated that there will be no significant effect of imagery use in the pre-test and post-test in sport performance among selected secondary school athletes in Ijebu-Igbo is not accepted.

7. Discussion

The purpose of this study was to examine the effect of sport imagery on 50 m dash on sport performance among selected secondary school athletes in Ijebu Igbo. Ogun State. Weinberg et al. (2003) asserted that there have been many quantitative and qualitative studies that have shown that the systematic use of imagery (under certain conditions) was associated with enhanced performance not only in motor performance and skill acquisition, but improvements were also found in confidence, concentration, and decreased anxiety.

Martin et al. (1999) postulated that sport psychologists encourages and trains athletes to use imagery for a number of purposes, such as enhancing motivation and self-confidence, coping with injury or pain, regulating arousal, and managing stress and anxiety.Orlick (2000) in his own submission view that mental imagery is a means for athletes to get the best out of themselves in both training and competition. He goes on to say that with refined imagery ability, an athlete can use it for such purposes as seeing success, motivation, perfection of skills, familiarization (e.g., with competition site, game plan, opponent, etc.), setting the stage for performance, and for refocusing (Orlick, 1986). He went further to note that, athletes who make the fastest progress and those who ultimately become their best make extensive use of performance imagery. They use it daily as a means of directing what will happen in training, and as a way of pre-experiencing their best competition performances." Clearly then, there is support from both research and application that mental imagery is a useful tool and can be employed for many purposes.

Morris,Spittle, and Watt (2005) noted that by performing imagery training sessions, athletes will increase their expectations and be more likely to expect success in a given skill. These increases in expectations are more likely to increase the chance of actual successful performances. To use imagery effectively to improve performance in any activity, athletes must perform the activity in their mind as though they are actually performing the activity.

8. Conclusion

In conclusion it was revealed that sport imagery has a significant effect on the performance on athletes in selected secondary schools in Ijebu-Igbo, Ogun State.

9. Recommendations

Base on the findings, the following recommendations were made:

- School authority should provide a suitable sporting equipment and environment conducive for teaching imagery techniques to the athletes.
- Imagery techniques should be used for athletes, most especially during the major competition such as intra and inter mural sport and invitation school relay.
- Emphasis should be placed by the school authority in the use of imagery by the sport master/mistress to reduce the tension, stress and anxiety of the athletes.
- Sport masters/mistress should pay particular attention to the demands of the tasks and assess which imagery functions would be most effective for the desired outcome.

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