Assessing Current Mental Skills Levels of Netball Players for Collegiate Netball Players in Masvingo, Zimbabwe

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ABSTRACT

The objective of the study was to determine the current levels of mental skills of netball players at tertiary institutions in Masvingo Province and use this information to develop an appropriate mental skills training program for the tertiary netball players in Zimbabwe. Quantitative method of data collection was used and a Test of Performance Strategies (TOPS), questionnaire was used to collect data in this study. Responses revealed the existence of moderate correlations between the TOPS sub-scales. Tertiary education netball players reported more use of most of the given psychological skills and strategies. Descriptive results for practice strategies sub-scales for goal setting mean and standard deviation for practice were (M=14.50, SD=2.53), while self-talk mean and standard deviation was (M=13.70, SD=2.72). For competition strategies sub-scales for goal setting, the mean and standard deviation was (M=14.22, SD=2.07) whilst that for self-talk was (M=14.38, SD=3.2). These results indicated that self-talk during practice games was significantly and positively correlated with the following variables of competition relaxation (r=0.49), competition goal setting (r=0.47), competition attentional control (r=0.47) and competition self-talk (r=0.62). The results also show that there was a strong and significant correlation that existed between self-talk during practice games and activation during competition games of (r=0.60). A moderate significant relationship was found between practice goal setting and competition goal setting (r=0.52), while a moderate significant relationship was also noted of competition relaxation (r=0.34), competition self-talk (r=0.32) and competition activation (r=0.40). The results also revealed that there was another moderate and significant correlation that existed during practice between automaticity and competition goal setting of (r=0.30), competition self-talk of (r=0.47), and competition activation of (r=0.39). Similarly, the results also showed that there was a significant and positive correlation between practice attentional control and competition goal setting of (r=0.38), competition relaxation of (r=0.54), and competition activation of (r=0.31). It was also noted that there was a moderate significant correlation between practice activation and competition relaxation of (r=0.33), competition self-talk of (r=0.38), and competition activation of (r=0.34). Finally, the results also revealed that there was a moderate significant correlation between practice relaxation and competition relaxation of (r=0.31), competition self-talk of (r=0.47) and competition activation of (r=0.41). The results showed that there were no significant differences in the mean scores of the practice games measurement strategies for the five institutions under study in this research. Thus, the lack of significant differences was noted for all variables because of the p value of $p>0.05$. Therefore, these results show that the measurements for the variables were statistically the same between the institutions used in this study. However, it is not very clear whether these athletes were high on goal setting during practice games or scored substantially high on self-talk use of mental skills in practice games. The findings helped to inform the researcher to get a deeper understanding of certain aspects of mental skills used by players and be a useful guide in the development of the mental skills training program.

Keywords: Mental skills, netball players, tertiary institution, competition, TOPS, self-talk

INTRODUCTION

The purpose of this study was to explore current mental skills training programs used by tertiary netball players and use this information to develop an appropriate mental skills training program for the tertiary netball players in Zimbabwe. Physical and technical training can be important in sport training but a team or

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individual that wins is the one that has an upper hand on the mental aspect. Mental skills are critical to the overall development of a positive mindset and critical to high performance in sport.

Athletes will be able to deal with pressure resulting in confidence and enhanced sport performance. Athletes need to focus on their game and avoid any distractions that may affect their performance. Mental skills programs. should therefore be based on individual needs and be properly learnt, developed and practiced for higher success (Weinberg & Williams, 2001).

Mental Skills Training: Mental Skills Training (MST) generally help athletes to psychologically prepare to be, and stay, motivated and to be able to work under pressure during events. "It keeps them 'in the zone' of performance during competition" and includes skills such as concentration, motivation, performance anxiety, confidence, goal setting and self-talk (Behncke, 2004). Mental skills play a crucial role in an athlete's ability to focus, handle pressure, make decisions and perform consistently at a high level. These skills are all designed to enhance individual athletic performance, as well as overall team performance in sport (Behncke, 2004; Thelwell & Green lees, 2001; Wild, 2002; Williams & Straub, 2001). These skills are critical to the overall development of a positive mind-set in an athlete while developing a general ability to focus their concentration on the tasks at hand and enhance self-confidence in competitive sports. Thus, mental preparation is critical to high performance in sport, even though it is not the only aspect that determines success (Gould, Ryan & Bean, 2009). Recently, a lot of research has become more focused on developing the physical, technical or tactical components within general sports development (Durand-Bush & Salmela, 2002; Navin, 2012), with very few studies being done on the use of MST in netball (Einarsson, KristjansdOttir & Saavedra, 2019; Mazli, Khan & Hashim, 2018; Shaari, Hooi & Siswantoyo, 2019).

Williams and Straub (2001) stated that athletes need to be mentally prepared to be strong in sport. This means that mental skills encourage individual players' reflection and awareness regarding their ultimate performance in a sporting game. This does not only enhance the overall performance of each player, but also enhances the general sporting experience of each athlete (Farres, 2000). Mental skills, therefore, help individual athletes to deal with pressures of unexpected events during training and in competitions and become used to assisting other individual players to overcome their own obstacles which may prevent them from reaching their optimum level of performance (Sharp, Woodcock, Holland & Duda, 2013). These mental skills are there to psychologically assist athletes who use them to motivate themselves and other players to avoid being negatively affected by game pressure and in order to keep themselves in their optimum zone of performance during competitions. However, mental skills must be taught and practiced for athletes to get the benefits. Since netball is a team sport, both individual and team mental skills need to be fully developed in each athlete so as to enhance performance levels. This study, however, only investigated the use of goal setting and self-talk MST.

The Importance Of Mental Skills Training

Williams and Straub (2001) say that, MST is a systematic training program that is used on athletes to enhance their sporting performance. This means that mental skills are an important aspect of overall athletic development that should be practiced by athletes if they are to be successful and benefit from it. They can be practiced anywhere, without restrictions and at any time, to benefit both the coach and the players. Mental Skills Training needs one to identify the nature of the sport in question and to establish whether it is individual or team based. Mental skills are a key factor in achieving success and, consequently, participants learn more about themselves, how to deal with failure and overcome setbacks. Athletes also learn how to prepare for difficult times and deal with stress and anxiety. Mental skills can help the coach integrate mental and physical aspects of performance for a proper mindset during competitions as this is likely to involve every player. Sporting prowess has been seen not to guarantee success, but rather mental toughness is an important attribute that drives coaches and trainers to train athletes through mental skills training (Gucciardi, Gordon & Dimmock, 2008). Thus, as athletes build competence and attain their goals, they also build their

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confidence, and this is the essence of mental skills training. This newfound confidence will help improve focus and performance since confidence builds competence.

There are two approaches or experiences which may be adopted to allow athletes to acquire and develop mental skills which are educational intervention experiences via psychological skills training program (Vealey, 1994; Weinberg & Comar, 1994) and natural learning experiences (Gould, Dieffenbach & Moffett, 2002). These are important considerations for research. This study will adopt the educational intervention strategy since it uses the cognitive-behavioural model (Murphy, 2005). The educational approach is premised on the philosophy that generally speaking, all athletes possess the mental skills that are needed for general success in sporting performance and that all athletes may need assistance to optimize their sporting performance skills. Educational Approach of Mental Skills Training uses a three-phase program (Gill, 2000; Horn, 2002).

METHODOLOGY

In this study quantitative methods of data collection were used. Test of Performance Strategies (TOPS), a questionnaire was used to collect data in this phase. Findings from the TOPS questionnaire were used to identify possible areas needing further clarification in the mental skills training program that was currently used by netball players at collegiate level in Zimbabwe. Furthermore, the findings helped to inform the researcher on how to get a deeper understanding of certain aspects of mental skills that were used by players before the research interventions. This was seen as a useful guide in the next phase. Thus, TOPS is a sports inventory that has been mostly used by sports psychologists to assess athletes' strengths and weaknesses in the usage of specific mental skills during practice and competition games (Weinberg & Gould, 2011). The inventory has been found to be the only instrument that specifically focuses on measuring the psychological mental skills of athletes during practice and competition settings (Weinberg & Forlenza, 2012). Each specific sporting situation set-up that is experienced by the athlete is properly described by the items in the TOPS inventory. If players truthfully respond to questions in the inventory, then a more correct measure can come out from it and players thereafter be assisted accordingly to reach their most optimum mental skills needs.

FINDINGS

Responses revealed the existence of moderate correlations between the TOPS sub-scales. Collegiate netball players reported more use of most of the given psychological skills and strategies. Athletes were asked four questions related to self-talk practice, 'I say things to myself to help my practice performance, 'I manage myself-talk effectively during practice', I motivate myself to train through positive self-talk' and 'I talk positively to myself to get the most out of practice. For competition, 'I have specific cue words or phrases that I say to myself to help my competitive performance', 'I manage myself-talk effectively during competition', and 'During competition I play/perform instinctively with little conscious effort. For goal setting practice athletes were asked 'I set realistic goals for practice', 'I set goals to help me use practice time effectively', 'I have very specific goals for practice' and 'I don't set goals for practices, I just go and do it'. For competition they answered the following: 'During competition, I set specific result goals', I evaluate whether I achieve my competition goals', I set very specific goals for competition' and I set personal performance goals for a competition. These questions were specific to goal setting and self-talk although a total of 64 questions were asked that encompassed sub-scales. However, it is not very clear whether these athletes were high on goal setting during practice games or scored substantially high on self-talk use of mental skills in practice games. Frey, Laguna & Ravizza (2003) report that the use of mental skills at practice games meant to prepare athletes for competition games normally use a lot of mental skills while practising physical skills sub-scales and tend to show good construct validity of Chronbach's alphas of 0.66 and 0.67. These are based on the confirmatory factor analysis and internal consistency reliability of competition levels and reliability of practice levels.

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Table 1.1: Correlations between scores on the competition and practice strategies subscales

	Comp Goal setting	CompEmotional Control	Comp Automacity	Comp Relaxation	Comp Self-Talk	Comp Imagery	Comp Negative Thinking	Comp Activation
Prac Goal setting	**0.52**	-0.25	-0.25	**0.34**	**0.32**	0.22	0.21	**0.40**
Prac Emotional control	0.04	0.27	0.27	0.13	0.17	0.46	0.07	0.26
PracAutomacity	**0.30**	0.19	0.19	0.27	**0.47**	0.18	0.18	**0.39**
Prac Relaxation	0.11	0.12	0.12	**0.31**	**0.47**	0.27	0.12	**0.41**
Prac Self-talk	**0.47**	-0.12	-0.12	**0.49**	**0.62**	0.43	**0.47**	**0.60**
Prac Imagery	0.16	0.09	0.09	**0.36**	0.23	0.03	0.07	0.23
Prac Attentional Control	**0.38**	-0.21	-0.21	**0.54**	0.28	0.14	0.22	**0.31**
Prac Activation	0.14	0.26	0.26	**0.33**	**0.38**	-0.07	0.01	**0.34**

The bolded values indicate significant correlations at $p < 0.05$.

These results of the current study were based on competitive collegiate female athletes that were involved in netball. These results indicated that self-talk during practice games was significantly and positively correlated with the following variables of competition relaxation (r=0.49), competition goal setting (r=0.47), competition attentional control (r=0.47) and competition self-talk (r=0.62). The results also show that there was a strong and significant correlation that existed between self-talk during practice games and activation during competition games of (r=0.60). A moderate significant relationship was found between practice goal setting and competition goal setting (r=0.52), while a moderate significant relationship was also noted of competition relaxation (r=0.34), competition self-talk (r=0.32) and competition activation (r=0.40). The results also revealed that there was another moderate and significant correlation that existed during practice between automaticity and competition goal setting of (r=0.30), competition self-talk of (r=0.47), and competition activation of (r=0.39). Similarly, the results also showed that there was a significant and positive correlation between practice attentional control and competition goal setting of (r=0.38), competition relaxation of (r=0.54), and competition activation of (r=0.31). It was also noted that there was a moderate significant correlation between practice activation and competition relaxation of (r=0.33), competition self-talk of (r=0.38), and competition activation of (r=0.34). Finally, the results also revealed that there was a moderate significant correlation between practice relaxation and competition relaxation of (r=0.31), competition self-talk of (r=0.47) and competition activation of (r=0.41). These results will be further demonstrated in the tables of results below.

Table 1.2: Descriptive statistics for the practice strategies sub-scales

	N	Minimum	Maximum	Mean	Std. Deviation
Goal setting	50	8	20	14.5	2.816
Emotional control	50	5	17	11.92	2.53
Automacity	50	7	19	13.66	2.715
Relaxation	50	8	20	13.34	3.317
Self-talk	50	8	20	14.46	3.259
Imagery	50	6	18	13.7	2.72
Attentional Control	50	8	19	13.64	2.632
Activation	50	7	19	12.42	2.331

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In the results in the table 1.2 above, the mean average for practice strategies sub-scales for goal setting and standard deviation were (M=14.50, SD=2.53), while that for emotional control was (M=11.92, SD=2.53). Automaticity mean and standard deviation were (M=13.66, SD=2.71), while that for relaxation was (M=13.34, SD=3.31). Self-talk mean and standard deviation was (M=14.46, SD=3.25), while imagery mean and standard deviation was (M=13.70, SD=2.72). Attentional control mean and standard deviation was (M=13.64, SD=2.63), and activation mean and standard deviation was (M=12.42, SD=2.33).

Table 1.3: Descriptive statistics for the competition strategies sub-scales

	N	Minimum	Maximum	Mean	Std. Deviation
Goal setting	50	9	18	14.22	2.073
Emotional Control	50	5	18	11.36	3.199
Automacity	50	5	18	11.36	3.199
Relaxation	50	7	20	14.58	2.984
Self-Talk	50	8	20	14.38	3.123
Imagery	50	7	20	13.96	3.09
Negative Thinking	50	9	20	14.82	3.082
Activation	50	8	20	14.7	3.183

In the results shown in the table 1.3 above, the mean average for competition strategies sub-scales for goal setting and standard deviation was (M=14.22, SD=2.07), whilst that for emotional control was (M=11.36, SD=3.19). Automaticity mean and standard deviation was (M=11.36, SD=3.19), while that for relaxation was (M=14.58, SD=2.98). Self-talk mean and standard deviation was (M=14.38, SD=3.12), while imagery mean and standard deviation was (M=13.96, SD=3.09). Negative thinking mean and standard deviation was (M=14.82, SD=3.08) and activation mean and standard deviation was (M=14.70, SD=3.18). These mean differences between each sub-scale are important to be assessed and evaluated.

In this current study, the Principal Component Analysis selects factors with an eigen value above 1 and, factor 1, 2 and 3 are the only factors with an eigen value above 1. Thus, the analysis will only use factor 1, 2 and 3. The eigen values is associated with each linear component (factor) before extraction, after extraction and after rotation. The eigen values associated with each factor represents the variance that is explained by that particular linear component in the current study, and factor 1 and 2 explain 62% of the variance in the variables, further explaining the practice games strategies.

Table 1.4: Analysis of variance practice skills strategies

Dependent variable	f-statistic	P
Goal setting	1.3418	0.269224
Emotional control	0.72	0.58246
Automacity	0.733854	0.573708
Relaxation	1.022355	0.406067
Imagery	0.748014	0.564522
Attentional control	1.473518	0.226081
Activation	0.415466	0.796581

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The results which are presented in Table 1.4 above show that there were no significant differences in the mean scores of the practice games measurement strategies for the five institutions under study in this research. Thus, the lack of significant differences was noted for all variables because of the p value of p>0.05. Therefore, these results show that the measurements for the variables were statistically the same between the institutions used in this particular study.

Table 1.5: Analysis of variance competition skills strategies

Dependent variable	f-statistic	P
Goal setting	1.604178	0.189726
Emotional control	0.733854	0.578708
Automacity	0.816082	0.521671
Relaxation	1.022355	0.406067
Imagery	**2.908419**	**0.031841**
Negative thinking	1.100849	0.367844
Activation	0.641899	636412

The above results of the current study that are indicated in Table 1.5 indicate that there were significant differences between groups with reference to imagery among institutions studied. Thus, there was a need to perform a post-hoc test to determine which groups were significantly different from others. The Least Squares Difference (LSD) test was used to determine the significantly different groups as indicated below:

LSD test; variable Comp Imagery Probabilities for Post Hoc Tests Error: Between MS = 8.2622, df = 45.000

{A}	**{B}**	**{C}**	**{D}**	**{E}**
	0.080311	0.12675	0.31728	0.168293
0.080311		0.816527	**0.007492**	0.699139
0.12675	0.816527		**0.013649**	0.877056
0.31728	**0.007492**	**0.013649**		**0.020027**
0.168293	0.699139	0.877056	**0.020027**	

Thus, these results indicate that institutions B and D have significant differences in scores for imagery (p=0.0074) whilst institutions D and C (0.0136) also had significant differences. Institutions D and E (0.0200) also have significant differences in terms of average scores for imagery. When such sub-scales are compared with each other, they help the coach to determine which categories need to be improved upon most

and these scores can also be compared with other samples such as the Olympic scales scored, which could be either higher or lower.

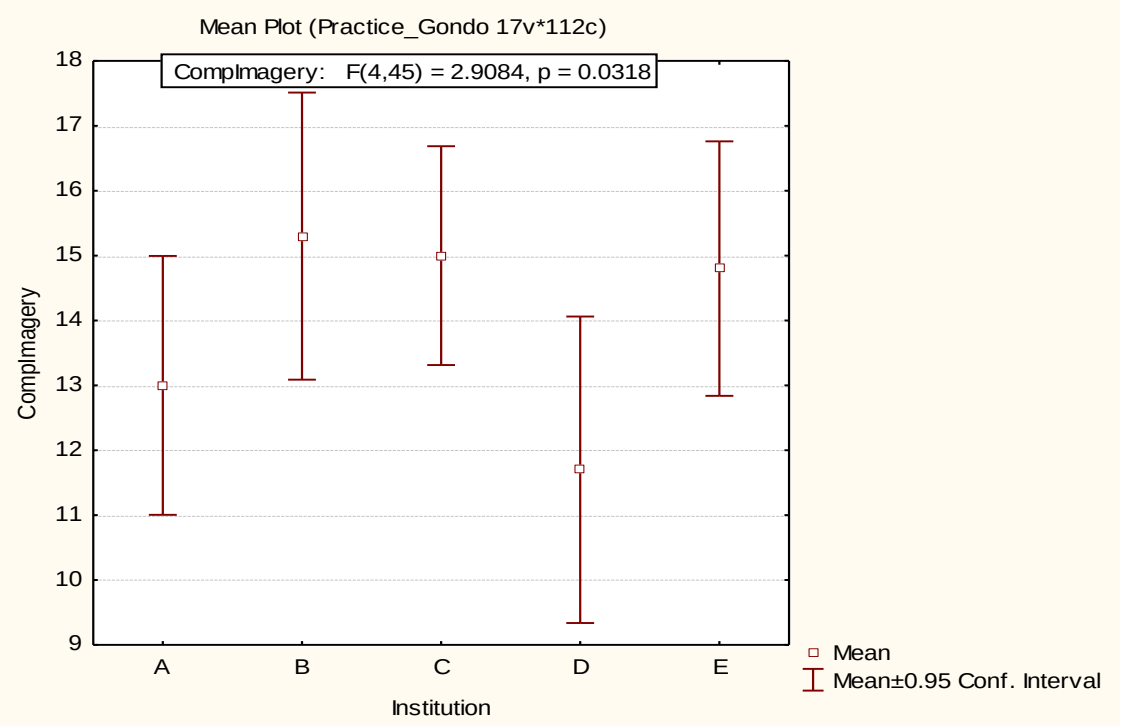

Fig 1.1: Competition imagery comparison among institutions

The above results for imagery in this current study in Figure 1.1, when compared among the five tertiary institutions, show that institutions B and D had significant scores of imagery. This would perhaps be attributable to the training techniques that were used by particular coaches to enhance sporting performance by their collegiate netball players. Considering the above results from collegiate female netball participants, one may conclude that the standard performance of the said players on their use of psychological mental skills in both practice and competition games is low. The findings from the study clearly support observations from previous studies that measured the use of psychological mental skills during practice and competition games in different sporting games. However, the data from the present study shows that there is a lot that can be done by coaches to improve mental skills performances for their collegiate netball players. This can be done by designing a new mental skills training program.

CONCLUSION

It can be concluded that there is a need to come up with a mental skills training program to enhance the performance of netball players in Zimbabwe. Results revealed the existence of moderate correlations between TOPS sub-scales. Data from the present study emphasized the need for coaches to try and improve performance of netball players. Results however revealed that the measurements for the variables were statistically the same between the institutions selected for this particular study.

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