

## MOTIVATIONAL STRATEGIES OF SPORT COACHES IN SOUTH AFRICA

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### **ABSTRACT**

*The purpose of this investigation was to establish what techniques or strategies are used by sports coaches in South Africa to motivate their athletes/players. Altogether 780 questionnaires were distributed to sports coaches, of which 274 were used for the interpretation of the data collected. A factor analysis showed that sports coaches in South Africa mainly make use of the following strategies to motivate their athletes/players: reward, the winning factor, cognitive techniques and the building of self-confidence. Significant differences were found with regard to the way in which sports coaches apply the motivation strategies identified according to the different sport types, levels of coaching, gender, and training in sport psychology. At the same time no significant differences could be noted for the variables institution (high school and primary school sports coaches), experience as a sports coach, and qualifications (training) as a sports coach.*

**Key words:** Motivation; Sports coach; Motivation strategies.

### **INTRODUCTION**

The coaching of sport is a complex task and at the centre of all sporting activities are the coaches, "... men and women who form the nucleus, giving life to the sport experience" (Vernacchia *et al.*, 1996: 3). They play the most important role in the success or failure, satisfaction or frustration, joy or disappointment of the sporting experience for athletes. To become a coach is a goal or dream that comes true for many. To become a coach means to have the skills and abilities, knowledge and wisdom to be receptive, to have insight and to be spurred on by an emotional dedication to sport, the self and others. To be a coach does not require a superhuman, but not everyone is suited to becoming a coach. Although coaches come from all spheres of society, they share a pride in and enthusiasm for sport, for their role as coach and, in particular, for their athletes.

Perhaps one of the most important problems in sports coaching is that coaches and their athletes/players do not always agree on specific coaching techniques and methods and, even more tragically, they are not even aware of these differences. Furthermore, coaches are not always aware of specific qualities in their athletes. Huddleston *et al.* (1995), for example, found that there is a significant difference between coaches' estimated scores of their athletes' competitive ability and measured scores of this competitive ability. DeVoe and Carrol (1994) investigated coaches' perceptions of why high school learners are motivated to participate in sport or to withdraw. They also found significant differences between what coaches regard as important motivators for sports participation (or not) for these learners and what learners themselves regard as important motivators.

According to the literature, it would appear that motivation is the one aspect that is highlighted by both coaches and athletes/players as being the most important contributory factor to the successful practice of sport (Le Roux, 1999). Potgieter (2003: 8) states for example: "Motivation, the why of behaviour, is the key to participation, enjoyment and adherence in physical activity and sport".

Le Roux (1999) investigated the possibility of having sports psychology included in the training programme of subject teachers who become involved in the coaching of sport. The respondents were asked among other things to arrange a total of 26 aspects related to sport psychology in order of most important to less important in terms of inclusion in their training programmes. According to the results of the investigation, motivation was repeatedly highlighted as the most important aspect. In addition, athletes and players involved in the study also maintained that motivation was the most important aspect of sports psychology that their coaches should have some knowledge of.

Exactly what it is that motivates athletes and keeps them motivated is probably one of the greatest issues that coaches have to contend with. We find for example those who have a "need" for achievement and who achieve in a positive way, and then there are those who are anxious and seek to avoid failure at any cost. These two types will react differently under the pressure of competition and should be approached differently. Athletes may also compete for various "awards", such as social approval, overcoming stress, the friendship of team mates, the approval of the coach, a feeling of excellence and the expression of aggression. "The difficult job of the coach is to ascertain what motive, or collection of motives, inspires a particular athlete to perform and then to aid him or her in acquiring these" (Cratty, 1983: 64).

A literature review could not find any evidence that sports coaches in South Africa make use of any specific motivation strategies to motivate their athletes/players. Accordingly, an investigation in this regard would seem to be justified.

## **EMPIRICAL INVESTIGATION**

### **Selection of respondents**

For the purposes of this study, sports coaches were included who were actively involved in coaching. Altogether 24 schools in the Tshwane region were randomly chosen to take part in the investigation. All sports coaches in these schools were included. Countrywide, all sports organisations affiliated to the South African Sports Commission and involved in team sports were sent questionnaires to complete. Team sports were chosen in order to involve as many sports coaches as possible in the research. To start with, a pilot study was undertaken to ensure that the layout and language in the questionnaire would be understood by the respondents. Altogether 20 sports coaches at schools and private institutions in the Gauteng area were involved. The completed questionnaire was studied carefully and slight adjustments were made to some of the concepts.

For the main investigation, all 24 of the selected schools in the Tshwane area were visited personally by the researcher and questionnaires were handed to either the school principal or the sports organisers. At the same time questionnaires were sent to 23 sports organisations with an accompanying letter explaining the purpose of the study and containing a request that

the inclosed questionnaires be completed by sports coaches within the organisation. Self-addressed envelopes were included for returning the completed questionnaires and appointments were made to visit the schools again to collect the completed questionnaires.

In total 780 questionnaires were sent to schools and sports institutions, of which 307 (39%) were returned. The response from the sports institutions in particular was disappointing. Of the 415 questionnaires sent to sports institutions, only 121 (29%) were returned. Of the 365 questionnaires sent to schools, 186 (51%) were returned. The fact that the questionnaires were personally distributed to and collected from the schools naturally increased the possibility of their return. The returned questionnaires were carefully inspected for any irregularities. Altogether eight questionnaires were declared spoilt which left a total of 299 for further processing and interpretation. Unfortunately the institution responsible for keying in the data lost 25 of the questionnaires, which left a total sample of 274 (148 male, 126 female).

### **Planning and designing a measuring instrument**

Survey research predominantly makes use of four methods of data collection: self-administered questionnaires, interviews, structured review of records (financial, medical) and structured observation (Creswell, 2003). For the purposes of this study, it was decided to make use of self-administered questionnaires. These can be given directly to respondents or they can be posted so that they can be completed and returned by post. According to Neuman (2000), self-administered questionnaires are the most economical way of obtaining data and can be undertaken by one researcher. The advantages of sending questionnaires through the post are that anonymity is increased and researcher bias is eliminated (Raubenheimer, 2006).

Through the exploration of reality, theories are formulated and through the implementation of the various theories, reality is explored further. As a starting point for drawing up a questionnaire for this research, about 18 theories of motivation were studied. The best known theories are the attribution theories, observed competency theory, the performance objective approach (or goal orientation theory), the functional model (also called the self-esteem model), performance need theory, self-determination theory, drive theory (related to the biological model), Freud's psychoanalytical theory, the humanistic approaches and the behaviourist theories (Gericke, 1991; Roberts, 1992; Woolfolk, 1993; Baron, 1995; Hardy *et al.*, 1996; Le Unes & Nation, 1996; Wann, 1997; Tollefson, 2000; Weiner, 2000; Steenkamp, 2001; Schuman, 2003). Each of the theories was carefully analysed to determine exactly how it attempts to explain motivation, specifically in the field of sport. A question or questions were then stated as to what the sports coach should do/usually does to implement a specific motivation theory in his or her coaching style. (It is important to note here that this implementation need not necessarily take place on a conscious level.) Then a number of statements were formulated for each theory which were related to the possible application of the different motivation theories by sports coaches. The following serves as an example of how this was done.

### **The cognitive motivation model**

Analysis: People with a low or a high need for achievement *think differently* about successes and failures. Thoughts or convictions make an important contribution to motivation, in other words *how* the person thinks about his or her achievements or is *convinced* about his or her abilities will determine the end product, namely motivation. It is about the perception of

control that people have about themselves or their behaviour. In sport the key question would be: How do athletes/players *think of* themselves, or what do they *think about* themselves?

The coach: Is the thinking of the athlete/player important to the coach? Does he or she give any attention to it? Does the coach know what the athlete/player thinks about himself or herself? Does the coach think that the thinking of his or her athletes/players is important for the motivation of his or her athletes/players? Does the coach know how his or her athletes/players think about success or failure?

Statements: I motivate my athletes/players by ...

- \* focusing their attention on the importance of their thinking in sport.
- \* giving them reading material on positive thinking in sport.
- \* encouraging them to think positively about their own abilities.
- \* teaching them to work through their failures in a cognitive (intellectual) way.
- \* discussing the role of thinking/ideas in motivation with them.
- \* inviting speakers to talk to them about the role of thinking (ideas) in sport.
- \* explaining the relationship between thinking (ideas) and motivation to them.

Altogether 112 statements were formulated for inclusion in the questionnaire. (Please note that initially it was decided to reduce the motivation theories by looking at levels of overlap, but after consulting with computer experts it was decided to retain all the theories and to compile items for all of them). The 112 statements were divided into sections A to C in order to make completing the questionnaire less monotonous for the respondents. Two further sections were added. In section D the knowledge of the respondent with regard to different concepts of sport psychology was tested. Section E required personal particulars of the respondent, which were necessary for completing the study successfully. These particulars included: sport types coached, institutions where coaches coach, experience as coaches, coaching qualifications (e.g., levels 1 to 4), highest level of coaching (e.g., national, provincial etc), and training in sport psychology.

A factor analysis was then carried out on the different items.

## THE RESULTS

### Factor analysis

A factor analysis is a generic name given to a group of multivariate statistical methods of which the primary goal is to determine the underlying structure in a data matrix. A factor analysis aims therefore to investigate the underlying patterns or correlations of a large number of variables to establish whether it is possible to condense or summarise the information into smaller sets of factors or components (Hair *et al.*, 1998). According to Hair *et al.* (1998) the sample should be five times larger than the number of variables to be analysed. For this study the sample size should have been at least 560 (112 x 5). In order to determine whether the existing sample was large enough to justify a factor analysis, the Kaiser-Meyer-Olkin test for sample size and Bartlett's test for sphericity were applied. The results appear in Table 1.

TABLE 1: RESULTS FOR THE KMO AND BARTLETT TESTS

KMO tests		0.902
Barlett test	Approx chi-square	18939.538
	df	6216
	Significance	p<0.01

The information in Table 1 confirms that the size of the sample in the current investigation is sufficient for a factor analysis.

Because the existing questionnaire contained too many items to be analysed individually, it was decided to carry out a factor analysis on the 112 items. Thus a base was provided to reduce the large number of items to single factors by grouping together the items that were significantly or highly correlated. The factor procedure followed in this study is the Iterated Principal Factor Analysis (also called the Principal Component Analysis). According to this method new variables are created on the basis of the correlations reflected by the data.

The number of factors that are extracted are influenced by various criteria (Hair *et al.*, 1998). In this study the Kaiser criterion (also called the Latent Root criterion) was used. The rationale behind this criterion is that the number of factors to be extracted is the same as the number of eigen values (also called latent roots) larger than one. In the current investigation 26 factors were identified according to the Kaiser criterion, which were too many. In order to reduce the number of factors, a scree test was used. The scree test reflects a graph on which eigen values are plotted against the number of items (each item is regarded as a possible factor). The point where the curve of the graph breaks is taken to be the maximum factors that can be extracted. According to the scree test five factors were extracted. These five factors were rotated according to the varimax method (which is an orthogonal rotation).

**Interpretation of factor 1:** Because 46 items with a loading of  $>0.3$  were grouped together under this factor, it was decided to use a stricter selection criterion and only items with a loading of  $>0.6$  were involved in the interpretation. (Please note that this selection procedure was also followed for factors 2 to 5). The items that were finally selected are mainly from the behaviourist theories, value expectation theory and drive theory. The underlying principle of these theories is one of social-biological reward and this factor is therefore labelled **REWARD**. The coach who uses reward to motivate his or her athletes/players does so through the use of suitable incentives, the satisfaction of physical needs and verbal acknowledgement.

**Interpretation of factor 2:** The items selected for factor 2 are mainly from the following theories of motivation: performance need theory, test anxiety theory and activation theory. The principle underlying these theories emphasises the winning factor and therefore factor 2 was labelled **WINNING**. Coaches who use this factor to motivate their athletes/players lay great emphasis on the importance of winning and will probably use slogans such as: "Winning is not everything, it is the only thing" (Well known saying of American coach Lombardi).

**Interpretation of factor 3:** The items selected for factor 3 are mainly from the cognitive and psychoanalytical theories and the underlying principle of these theories emphasises the role of ideas (thinking) in motivation. Factor 3 is therefore labelled **COGNITIVE**. Coaches who

motivate their athletes/players in a cognitive manner are those who emphasise the importance of positive and negative thinking in sport. These coaches will also emphasise the effect of self-talk.

**Interpretation of factor 4:** The items selected for factor 4 are mainly from self-effectiveness and cognitive theories and emphasise the role of a successful self in the motivation of the athlete/player. Therefore factor 4 is labelled **SELF-CONFIDENCE**. Coaches who support this factor make sure that they build up their athletes/players' self-confidence through positive feedback, constant support and close involvement. These coaches will probably also encourage task involvement rather than ego involvement in their athletes/players.

**Interpretation of factor 5:** All items included in this interpretation, emphasised the underlying role of the individual in his or her own motivation in sport, therefore factor 5 is labelled **INDIVIDUALITY**. It was, however, not retained (see item analysis).

The labelling of the different factors agrees to an extent with Tennenbaum (2001), who divides motivation into four categories according to needs: namely biological, cognitive, social and axiological needs. The latter refers to values, ideals and the meaning of life.

The above factors are thus explained as the motivation strategies that are applied by sports coaches in South Africa in order to motivate their athletes/players. Sports coaches in South Africa generally...

- use a reward strategy
- emphasise the winning factor in sport
- make use of a cognitive approach
- build self-confidence

to motivate their athletes/players.

Accordingly an item analysis was carried out.

### **Item analysis**

An item analysis was done to determine the correlation between each item and the total number of factors in which the item appears. If such a correlation is low or negative, the item can be omitted. If omitting such an item increases the alpha reliability coefficient considerably then omission may be considered. For this investigation it was found that all items of the factors reward, success, cognitive and self-confidence correlated positively with the totals of the factors and that the alpha reliability coefficient would not increase significantly if any of the items were omitted. All of the items of the identified factors were therefore retained. In the case of factor individuality, all items (with the exception of one item) showed a negative correlation with the total. In light of this all items for this factor were omitted and factor 5 was no longer considered for this study.

**TABLE 2: RELIABILITY COEFFICIENT FOR THE INDIVIDUAL FACTORS**

	<b>Reward</b>	<b>Winning</b>	<b>Cognitive</b>	<b>Self-confidence</b>
Alpha Cronbach coefficient	0.959	0.909	0.931	0.892
Number of items	46	23	13	13

N = 274

Accordingly the ANOVA (Univariate Analysis of Variance) procedure was applied to the acquired data. This procedure is meant to establish whether there are differences between the averages of sports coaches with regard to the following variables (section E of the questionnaire): sports types, institution where coaching, gender, years experience as coach, qualifications as coach, level of coaching and formal training in sport psychology. The results of the ANOVA with regard to the different sport types are reflected in Tables 3 to 7.

**TABLE 3: APPLICATION OF THE MOTIVATION STRATEGIES OF SPORTS COACHES IN THE DIFFERENT SPORTS TYPES**

		<b>Reward</b>		<b>Winning</b>		<b>Cognitive</b>		<b>Self-confidence</b>	
Sport type*		$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s
Athletics	69	214.68	29.19	91.90	20.53	49.54	13.38	65.80	7.43
Hockey	20	193.35	43.53	100.85	15.89	38.00	12.87	61.40	9.80
Netball	50	210.56	31.63	91.28	18.91	44.92	13.92	64.78	9.10
Cricket	20	214.60	27.57	90.50	14.99	46.85	13.00	66.50	7.44
Rugby	47	222.98	29.73	83.62	18.47	48.55	15.06	66.74	8.78
Soccer	40	236.55	22.52	70.48	18.96	61.43	12.26	69.68	6.81

\* The sport types cross-country running and tennis have been omitted owing to insufficient numbers.

For Reward:  $F(5,240) = 6.78$  ( $p < 0.01$ )

For Winning:  $F(5,240) = 10.22$  ( $p < 0.01$ )

For Cognitive:  $F(5,240) = 10.33$  ( $p < 0.01$ )

For Self-confidence:  $F(5,240) = 3.20$  ( $p < 0.01$ )

According to Table 3, it would seem that significant differences exist with regard to the way in which sports coaches apply the motivation strategies mentioned. Accordingly, Bonferonni (Dunn) t-tests were applied to establish between what specific types of sport the significant differences appear. The results appear in Tables 4 to 7.

TABLE 4: BONFERRONI TEST FOR REWARD

Sport type	Averages of differences
Soccer–rugby	13.571
Soccer–athletics	21.896 ***
Soccer–cricket	21.950
Soccer–netball	25.990 ***
Soccer–hockey	43.200 ***
Rugby–athletics	8.298
Rugby–cricket	8.379
Rugby–netball	12.419
Rugby–hockey	29.629 ***
Athletics–cricket	0.081
Athletics–netball	4.121
Athletics–hockey	21.331
Cricket–netball	4.040
Cricket–hockey	21.250
Netball–hockey	17.210

\*\*\* p&lt;0.05)

According to Table 4, soccer coaches make significantly more use of the reward strategy to motivate players than athletics, netball or hockey coaches. Rugby coaches also make significantly more use of reward as a motivation strategy than hockey coaches. According to Table 4 soccer coaches have a tendency to use the reward factor as a motivation strategy more than coaches of other types of sport.

TABLE 5: BONFERRONI TEST FOR WINNING

Sport type	Averages of differences
Hockey–athletics	8.951
Hockey–athletics	9.570
Hockey–cricket	10.350
Hockey–soccer	30.375 ***
Athletics–netball	0.619
Athletics–cricket	1.399
Athletics–rugby	8.282
Athletics–soccer	21.424 ***
Netball–cricket	0.780
Netball–rugby	7.663
Netball–soccer	20.805 ***
Cricket–rugby	6.883
Cricket–soccer	20.025 ***
Rugby–soccer	13.142 ***

\*\*\* p&lt;0.05)

According to Table 5 it would seem that hockey coaches lay significantly more emphasis on the winning factor than rugby coaches in motivating their players. Coaches of hockey, athletics, netball, cricket and rugby also lay significantly more emphasis on the winning factor than soccer coaches. According to Table 5, soccer coaches have a tendency to lay less emphasis on the winning factor as a motivation strategy than coaches of other types of sport.

**TABLE 6: BONFERRONI TEST FOR COGNITIVE**

Sport type	Averages of differences
Soccer–athletics	11.889 ***
Soccer–rugby	12.872 ***
Soccer–cricket	14.575 ***
Soccer–netball	16.505 ***
Soccer–hockey	23.425 ***
Athletics–rugby	0.983
Athletics–cricket	2.686
Athletics–netball	4.616
Athletics–hockey	11.536 ***
Rugby–cricket	1.703
Rugby–netball	3.633
Rugby–hockey	10.553
Cricket–netball	1.930
Cricket–hockey	8.850
Netball–hockey	6.920

\*\*\* p<0.05)

According to Table 6 it appears that soccer coaches make significantly more use of a cognitive approach to motivate their players than coaches of athletics, rugby, cricket, netball and hockey. Athletics coaches also make significantly more use of a cognitive approach than hockey coaches to motivate their athletes. According to Table 6, soccer coaches have a tendency to to make more use of cognition to motivate their players that coaches of other sports.

**TABLE 7: BONFERRONI TEST FOR SELF-CONFIDENCE**

Sport type	Averages of differences
Soccer–rugby	2.930
Soccer–cricket	3.175
Soccer–athletics	3.878
Soccer–netball	4.895
Soccer–hockey	8.275 ***
Rugby–cricket	0.245
Rugby–athletics	0.948
Rugby–netball	1.965
Rugby–hockey	5.345

Cricket–athletics	0.703
Cricket–netball	1.720
Cricket–hockey	5.100
Athletics–netball	1.017
Athletics–hockey	4.397
Netball–hockey	3.380

\*\*\*  $p < 0.05$ )

According to Table 7 it appears that it is only in the case of soccer that coaches make significantly more use of self-confidence as a motivation strategy than hockey coaches. Significant differences were not found in any of the other combinations.

The ANOVA results with regard to levels of coaching appear in Table 8.

**TABLE 8: APPLICATION OF THE MOTIVATION STRATEGIES OF SPORTS COACHES FOR LEVELS OF COACHING**

		Reward		Winning		Cognitive		Self-confidence	
Level of coaching *	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s
National	16	240.25	28.85	81.69	23.09	56.56	12.83	69.81	7.38
Provin. (club)	25	237.28	27.42	83.52	20.02	58.48	12.40	71.20	6.29
Provin. (school)	55	217.75	27.63	87.53	20.40	50.84	14.20	67.55	7.49
School level	156	210.96	33.08	89.85	21.17	45.61	15.41	64.17	8.72
Club level	20	219.00	24.42	79.50	16.64	53.85	12.29	67.00	7.23

\* Levels 1 and 7 have been omitted owing to insufficient numbers.

For Reward:  $F(4,267) = 6.53$  ( $p < 0.01$ )

For Winning:  $F(4,267) = 1.79$  ( $p > 0.05$ )

For Cognitive:  $F(4,267) = 6.60$  ( $p < 0.01$ )

For Self-confidence  $F(4,267) = 6.02$  ( $p < 0.01$ )

According to Table 8 it appears that there are significant differences with regard to the way in which sports coaches apply the motivation strategies mentioned according to the level of coaching. Bonferonni (Dunn) t-tests were also applied in this case to establish between what specific levels of coaching significant differences in averages appear. (Please note that instead of displaying the results in tables as for Table 4 to 7, results will be described in text.)

For the factor REWARD significant differences were noted between the averages of sports coaches on national and school level and provincial and school level ( $t > 2.96$ ;  $p < 0.05$ ). Coaches on national level and provincial (club) level made significantly more use of reward as

a motivation strategy than coaches on school level. No significant differences were noted for any of the other coaching levels.

For the factor WINNING, no significant differences were noted between the averages of sports coaches insofar as the level of coaching is concerned.

For the COGNITIVE factor, significant differences were noted between the averages of sports coaches on provincial (club) and school level and national and school level ( $t > 2.96$ ;  $p < 0.05$ ). It would appear that sports coaches on provincial (club) level and national level make significantly more use of a cognitive approach to motivate their athletes/players than coaches on school level. No significant differences were noted for any of the other coaching levels for the cognitive factor.

For the SELF-CONFIDENCE factor significant differences were noted between the averages of sports coaches on provincial (club) level and school level ( $t > 2.96$ ;  $p < 0.05$ ). Coaches on provincial (club) level make significantly more use of self-confidence to motivate their athletes/players than coaches on school level. No significant differences were noted for any of the other coaching levels for self-confidence.

To establish whether there is a significant difference(s) between the ways in which coaches of different genders motivate their athletes/players, an ordinary t-test procedure was applied. The results appear in Table 9.

**TABLE 9: COMPARISON OF GENDER WITH REGARD TO MOTIVATION STRATEGIES**

		Reward		Winning		Cognitive		Self-confidence	
Gender	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s
Male	148	223.62	28.65	81.70	20.03	52.79	14.47	67.18	7.96
Female	125	209.53	33.99	94.88	19.72	44.97	14.71	64.87	8.66

For Reward:  $t(271) = 3.72$  ( $p < 0.05$ )

For Winning:  $t(271) = 5.45$  ( $p < 0.01$ )

For Cognitive:  $t(271) = 4.42$  ( $p < 0.01$ )

For Self-confidence:  $t(271) = 2.30$  ( $p < 0.05$ )

According to Table 9, it appears that male coaches make significantly more use of reward, the building of self-confidence and a cognitive approach for motivating their athletes/players than female coaches. Female coaches, on the other hand, make significantly more use of the winning factor as motivation strategy than male coaches.

To establish whether there is a significant difference between the way in which coaches who have received formal training in sport psychology and those who have no formal training in sport psychology motivate their athletes/players, an ordinary t-test procedure was applied. The results appear in Table 10.

**TABLE 10: COMPARISON OF TRAINING IN SPORT PSYCHOLOGY WITH REGARD TO MOTIVATION STRATEGIES**

		Reward		Winning		Cognitive		Self-confidence	
Training	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s
Yes	79	228.00	28.18	80.46	20.83	54.81	13.55	68.05	8.07
No	195	212.68	32.30	90.67	20.22	46.81	15.14	62.26	8.40

For Reward:  $t(272) = 3.68$  ( $p < 0.05$ )

For Winning:  $t(272) = 3.75$  ( $p < 0.05$ )

For Cognitive:  $t(272) = 4.08$  ( $p < 0.01$ )

For Self-confidence:  $t(272) = 2.52$  ( $p < 0.05$ )

According to Table 10, it would appear that coaches who have received formal training in sport psychology make significantly more use of reward, the building of self-confidence and a cognitive approach to motivate their athletes/players than coaches who have received no formal training in sport psychology. The latter, on the other hand, make significantly more use of the winning factor than the former.

A possible explanation for the similarity of the results in Table 9 and 10 is that more male coaches than female coaches have received formal training in sport psychology.

In conclusion, no significant differences were found between the motivation strategies of sports coaches with regard to the variables institution, experience as a sports coach and qualifications (training) as a sports coach.

## CONCLUSION

This study showed that sports coaches in South Africa mainly make use of the following strategies to motivate their athletes/players: reward, emphasis on winning, cognitive techniques, and the building of self-confidence. Sports coaches' application of the motivation strategies identified differs significantly in terms of sport type, level of coaching, gender, and training in sports psychology. No significant differences could be found with regard to institution, experience as a sports coach and qualifications (training) as a sports coach.

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