

**Effects of Coaching and Encouragement in Enhancing Performance in Sports among
Basketball Players**

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Coaching and Encouragement

It is customary that every team participating in sports to have a coach. This is due to the widely held belief that coaching influences sports performance. Gearity (2009) asserts that effective coaching has been linked to winning. It is for this reason that teams in all sports, both indoor and outdoor games, have coaches in their pecking. Gearity (2009) observes that in America, winning coaches are idolized both by the public and the American media. It is customary for winning coaches to grace cover of popular magazines, receive immense airtime on television and public discussion on their success. For example, it was observed that when Lady Vols won its millenniumth basketball game, their head coach Pat Head Summitt was reckoned as a heroine by the media, fans and the entire basketball fraternity. Similarly in the present American society, winning coaches are held with high esteem, pocketing highest salaries and receiving other societal recognitions. Due to the crucial role coaches play in molding a winning team, college teams are spending millions of dollars to attract good coaches. Edwards (2009) reports that the University of Alabama spent over \$4 million dollars to bring Nick Saban who was at the time the coach of Miami Dolphins, to the University of Alabama NFL team. This was done in an effort to transfer the winning ways that characterized Miami Dolphins to the University of Alabama. Similarly, this case applies in other games such as basketball and athletics. It is therefore imperative to study the role of a coach in facilitating successful sports performance. This study investigated whether basketball players who received encouragement and coaching recorded better shooting scores than their counterparts who did not receive coaching and encouragement or received encouragement only. The study will be of importance to coaches, academia and sports fraternity on deducing the importance of coaching and encouragement in enhancing sports performance.

Research Hypothesis

The experimental research study was guided by the following two research hypothesis:

H₀: Encouragement only does not affect shooting scores in a basketball game.

H₁: Encouragement only affects shooting scores in a basketball game.

H₀: Both encouragement and coaching does not affect shooting scores in a basketball game.

H₁: Both encouragement and coaching affect shooting scores in a basketball game.

Coaching and Sports Performance

Afsanepurak, Hossini and Seyfari (2012) acknowledge that superior sports performance, which is characterized by winnings, is an interplay of various factors. Gillbertson (2000) in studying factors that contribute to athletic success points out that there are seven factors that influence athletic success. The seven factors are: a) coach, b) financial resources, c) motivation, d) creativity, e) goals, f) structure and lastly g) skills (Gillbertson, 2000). Similar observations have been reported by other sports scholars who opine that a coach plays an immense role in team accomplishment. This is because coaches who act as human resource factor in a team play an important role in sports organization. Some scholars parallel a coach with an organizational leader since they employ leadership skills in driving a team to victory. For instance, McNeillis (1993) opines that elite teams can be likened to successful organizations.

According to Hackman and Wageman (2005) coaching is an act of helping a learner or an individual acquire skills. Therefore, a coach helps an individual carry out tasks. It is reckoned that coaching occurs throughout the life of an individual that is from childhood to adulthood. During childhood a coach teaches a child how to ride a bike, during schooling a teacher teaches a student how to conduct experiments and play different games and lastly into adulthood a coach

helps an employee enhance their job performance (Hackman & Wageman, 2005). Empirical studies suggest good coaching positively influence sports performance. In this case, scholars have resulted in studying the behaviors of winning coaches as they believe it constitute good coaching. Potrac, Jones and Armour (2002) observe that winning coaches are instructive, encouraging and information giving. They also offer compliments, both verbal and non-verbal, to their teams; instill self confidence in their players and impart psychological traits such as motivation in their teams (Becker & Wrisberg, 2008; Gallimore & Tharp, 2004).

According to Ramzaninezhad and Keshtan (2009) coaches play a critical role in team success by fostering team cohesion and teamwork within a team. It is therefore the reason why a coach job is pegged on success measures of a team. Sports scholars assert that coach's leadership style and behaviors contribute to the success of a team. In recent times, research studies conducted to ascertain the relationship between team success and coaching experiences have identified three coaching factors that influence success of a team. The three factors are highlighted as: a) behavioral approaches of a coach, b) cognitive structures of a coach and c) team satisfaction with a coach (Gearity, 2009). Horn (2002) observes that an effective coach educate a team to success and imparts favorable psychological responses in her team, critical for winning. Ramzaninezhad and Keshtan (2009) appreciates that effective coaching technique, which incorporate both technical and interpersonal skills, affects both physical and psychological preparedness of a team. Therefore, an effective coach should, besides imparting technical sporting skills, be able to motivate and encourage his team to success. Scholars agree that encouragement statements from a coach plays critical role in a team's success.

Coaching involves skills acquisition. One of the skills acquisition techniques employed in sports is self talk. Landin (1994) observes that self talk is a collection of verbal prompts

delivered to a subject or learner to direct a subject attention to a specific stimuli or particular movement pattern. Various studies have been conducted to investigate the efficacy of self talk as an instructional technique on sports performance. Perkos, Theodorakis and Chroni (2002) in their study to investigate basketball performance of basketball neophyte in shooting, dribbling and passing where one group received self talk instructional techniques and the other did not receive self talk instructional techniques found that novices who were in the group that received self talk instructional technique performed better in passing and dribbling. Consistent findings are echoed by Cutton and Landlin (2007) who found that self talk strategy was more effective in teaching participants tennis forehand than the use of knowledge performance. Similarly, Boyce (1991) found out that participants who received instructional strategy coupled with knowledge performance feedback, which can be likened to coaching, scored better shooting scores than their counterparts who did not receive instructional strategy and knowledge performance feedback. This illustrates that coaching is instrumental in enhancing sports performance.

Effects of Positive Encouragement in Sports Performance

The use of encouraging statements has been shown to play a critical role in facilitating successful sports outcome. Sports and psychology scholars have found that encouragement is vital in sports as it gives hope and psychological hardiness before, during and after sports sessions. In a study to investigate the effects of encouragement in maximal exercising testing, Andreacci et al. (2002) found that verbal encouragement played a significant role in maximizing exercising efforts of participants in maximal exercise testing. The scholars, therefore, highlight that encouragement is a common feature in most maximal exercising testing. The participant in the testing exercise is encouraged using verbal statements such as “keep going!”, “that’s a great job!” and “keep it up”. Similarly, there have been extensive studies to investigate the effect of

cheering, which is a form of encouragement, on psychological conditions of participants. Andreacci et al. (2002) in their research study report a study conducted by McNair, Depledge, Brett Kelly and Stanley (1996) who found out that cheering of participants during MVCs or maximal voluntary contractions helped in reducing muscular fatigue brought about by altering psychological patterns of the participant. Similar results have been echoed by Campenelle, Mattacola and Kimura (2000) who found that verbal encouragement and visual feedback escalated exertion levels of subjects consequently increasing their torque scores. O'Sullivan and O'Sullivan (2008) also found consistent results that visual feedback and verbal encouragement among asymptomatic females enhanced peak torque performance. Nevertheless, there have been varied findings on the effect of verbal encouragement on increasing peak torque. Evans and Warren (2000) in their study on the effect of verbal encouragement and visual feedback on peak torque found that peak torque levels of subjects is not affected by verbal encouragement and visual feedback. These experimental studies are conducted by grouping subjects into two groups. One of the group receive no encouragement or visual feedback , which act as control group, while the other group receives encouragement and visual feedback. This experimental study employed the same procedure where one of the group acted as control group, receiving no treatment, while the other two groups received treatment; one group receiving encouragement and the other group receiving encouragement and coaching.

On the same note of investigating the effect of encouragement on influencing maximum effort in participants, some research studies, though few, have broadened their research to investigate the effect of encouragement statements on maximal oxygen consumption (VO_{2max}) in participants. One of the notable researches on effects of encouragement on maximal oxygen consumption (VO_{2max}) was carried out and reported in Moffatt, Chitwood and Biggerstaff

(1994). The study found that participants who were offered verbal encouragement recorded higher maximal oxygen consumption (VO_{2max}), exercise time, heart rate, respiratory exchange ratio or RER and lactate concentration in the blood after exercise than those who did not receive any encouragement. Contradictory, some research studies have reported contrary results.

Andreacci et al. (2002) reports that in another research conducted on cross country athletes, it was found that the athlete's performance was not influenced by verbal encouragement, and only heart rate and exercise time recorded significant increases due to encouragement. Similar findings are reported in Andreacci et al. (2002) study that cite Butts, Jensen and Lui (1982) research findings on a study done on 20 female cross country athletes to investigate the effects of verbal encouragement on sports performance. Butts et al. (1982) found that verbal encouragement did not result to any significant variations in pulmonary ventilation, maximal oxygen consumption and respiratory exchange ratio. However, just like in Moffat et al. (1994) verbal encouragement resulted in significant variations in heart rate and exercise duration in the 20 cross country runners.

The use of encouragement statements in sports and maximal exercise testing is ubiquitous; however, there is a paucity of research on the effects of frequency of encouragement (Andreacci et al., 2002). To investigate the effect of frequency of encouragement statements on sports performance by measuring maximal oxygen consumption, lactate concentration in blood, exercise time and respiratory exchange ratio, Andreacci et al. (2002) carried out a study on 28 students from University of Pennsylvania. Verbal encouragement was offered in three intervals: after 20, 60 and 180 seconds. According to Andreacci et al. (2002) findings verbal encouragement offered frequently resulted to significant maximum effort, maximal oxygen concentration, respiratory exchange ratio and blood lactate concentration. In explaining the

possible reasons for significant variation caused by verbal encouragement Andreacci et al. (2002) postulate that verbal encouragement act as reinforces facilitating participants maintain pace, encouragement statements act as instructional commands which lead to enhanced performance and response since people are used to following commands and lastly encouragement statements help in establishing operations by enhancing the stimuli that underpins performance. Frequency of encouragement may also have profound effect on enhancing sports performance. However, this is an area that has largely remained under studied. This study recommends that future studies address this area to establish whether frequency of encouragement influences sports performance not only in basketball but also in other sports.

Methods

Participants

The purpose of this research study will be to investigate the effect of encouragement and coaching on the results of free throw shooting. The researcher conducted an experiment on 10-11 year old elementary school basket ball players to establish the aims of the study. The researcher using random sampling method selected 15 boys who were of the ages of 10-11 years, in the 5th grade and played basketball. The boys were randomly assigned random numbers and grouped into three groups of 5 boys each. One of the groups acted as a control group, the second group received encouragement only and the third group received encouragement and coaching techniques.

Procedure

Firstly the boys were given instruction on proper free throw shooting technique by coach of the team, after review of the proper technique with experiment supervisor. Each boy was then allowed to take five free throws with no additional instructions from team coach. For homogeneity and elimination of outside variable, all boys shot at the same basketball, using the same ball and within a measured timeframe. Afterwards, the boys were arranged in their specific groups and treatment of experiment done. Control group had no further instruction, just shot the free throws; they would go in order through the line and repeat through the four trials, shooting percentage would then be recorded and verified. The second group that was receiving treatment 1 or encouragement would have the coach with them and after every free throw would receive no coaching but one of the following encouraging phrases (Good job, You can do it, Good work, I'm proud of you), shooting percentages would then be recorded and verified. Importantly, coaches were not allowed to use ambiguous phrases such as "concentrate, look at where you're

aiming” that could be misconstrued as coaching technique. The third group that was receiving treatment 2 would receive encouraging phrases (Good job, You can do it, Good work, I’m proud of you) and coaching techniques on how to improve their shooting techniques, shooting percentage would then be recorded and verified.

Results

Pretest scores for the three groups, namely control, encouragement treatment group and encouragement and coaching group, are tabulated in table 1. The mean score for control group was recorded as 40.0 ± 6.325 , encouragement treatment group was recorded as 32.0 ± 4.899 and lastly encouragement and coaching group recorded mean score of 36.0 ± 7.483 . The overall mean for pretest scores was recorded as 36.00 ± 3.491 , tabulated in table 2. T-test carried out to establish whether the mean=36 revealed no significant difference between 36 and percentage scores, $p\text{-value} = 1.000$, which is greater than $\alpha = 0.05$, tabulated in table 3.

Percentage scores for control group, encouragement only group and encouragement and coaching group are tabulated in table 4. The results indicated that control group recorded a mean score of 32.00 ± 3.266 , the encouragement only group recorded mean percentage scores of 38.67 ± 3.065 and the third group that received encouragement and coaching techniques recorded mean scores of 45.33 ± 3.065 . The overall mean percentage scores for the three group are tabulated in table 5, the overall mean score is 38.67 ± 1.949 . T-test scores carried out to establish whether there is a significant difference between mean= 38 and the mean percentage scores of the three groups indicate that there is no significant difference between mean= 38 and the mean percentage scores of the three groups. The results are tabulated in table 6. The $p\text{-value} = 0.734$ which is greater than the level of significance ($\alpha = 0.05$).

Table 7 indicate t-test to test whether the percentage score means of the control group is significant different from the players who received encouragement only. The Levene's test indicate that the variances are equal as $p\text{-value} = 0.173$, which is greater than level of significance ($\alpha = 0.05$). T-test scores reveal that there is no significant difference between percentage scores of control group and percentage scores of encouragement group ($p\text{-value} = 0.148$). Similarly, table 8

shows that there is no significant difference between the percentage scores of players in the encouragement group and the group of players who received encouragement and coaching, encouragement and coaching group. The Levene t-test of variance was recorded at 0.420, which is greater than level of significance ($\alpha=0.05$) while p-value of testing the significant difference was recorded at 0.135, which is greater than level of significance ($\alpha=0.05$). Table 9 tabulates the results testing significant difference between control group and the encouragement and coaching group, players who received encouragement and coaching. Levene test indicate that variances are equal as p-value = 0.497 is greater than level of significance ($\alpha=0.05$). T-test results indicates that there is significant difference between the percentage mean scores for control group and the group of players who received both encouragement and coaching skills. Since p-value=0.006, which is less than level of significance ($\alpha=0.05$).

Discussion

From the results above, it is evident that the players were at the same level of skills. This view is supported by lack of significant difference among the mean scores of the three different groups participating in the experimental study. Similarly the scores of the three different groups do not show significant variation from the mean. The findings show that there is no significant difference in mean percentage scores between players who receive encouragement and those who do not receive any form encouragement (control group). In this case a basketball player shooting success was not in any way influenced by encouraging statements he received from his coach as his scores were influenced by chance similar to the scores of those who did not receive any encouragement. This means that encouragement does not enhance performance. This is sharp contradiction from findings by various scholars who postulate that encouragement enhances sports performances (Andreacci et al., 2002). Possible causes of the disparity between the findings may be that the players in this study did not attain the motivational threshold levels that players in Andreacci et al. (2002) study attained.

Motivational level which can be viewed as a sub domain of encouragement plays a critical role in enhancing sports performance. This view is upheld by Berger and Pope (2011) who found out that motivating a team or individual athlete who is trailing his opponents significantly increases success chances. Another likelihood scenario that probably caused discrepancies between the two studies is the inconsistent frequency of encouragement in the two experimental studies. Andreacci et al. (2002) highlights that frequency of encouragement though rarely studied influences performance level in sports. Teams that receive frequent encouragement tend to record higher performance success levels than team that receive infrequent encouragement. Andreacci et al. (2002) explains that frequent encouragement statements help

runners maintain high running response, unlike runners who receive infrequent encouragement. Empirical findings from the study indicate that players who were in the group that received both encouragement and coaching techniques scored higher mean percentage scores than those in the control group who did not receive encouragement and coaching. This shows that coupling of coaching and encouragement results to enhanced sports performance. This may be explained by the fact that coaching improves playing efficacy while encouragement maintains performance, consequently, the combination of the two enhance performance level. Surprisingly, players who received both encouragement and coaching did not record higher scores than those who received encouragement only. Despite the fact that they recorded superior performance than those who received encouragement only when compared with control. This may mean that though coaching shows some slight efficacy, it is not effective enough to influence remarkable performance.

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Tables and Figures

Table 1. Pretest scores

	N	Mean	Std. Deviation	Std. Error Mean
Control group	5	40.00	14.142	6.325
Encouragement group	5	32.00	10.954	4.899
Encouragement & coaching group	5	36.00	16.733	7.483

Table 2. Descriptive statistics for pretest score

	Statistic	Std. Error
pretestscores Mean	36.00	3.491
95% Confidence Interval for Mean	Lower Bound Upper Bound	28.51 43.49
5% Trimmed Mean	35.56	
Median	40.00	
Variance	182.857	
Std. Deviation	13.522	
Minimum	20	
Maximum	60	
Range	40	
Interquartile Range	20	
Skewness	.256	.580
Kurtosis	-.505	1.121

Table 3. T-test to test whether mean=36

Test Value = 36						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
pretestscores	.000	14	1.000	.000	-7.49	7.49

Table 4. Percentage scores for the three groups

	N	Mean	Std. Deviation	Std. Error Mean
Control	15	32.00	12.649	3.266
Encouragement	15	38.67	11.872	3.065
Encouragement and Coaching	15	45.33	11.872	3.065

Table 5. Descriptive statistics for percentage scores for all the groups

	Statistic	Std. Error
scores Mean	38.67	1.949
95% Confidence Interval for Mean	Lower Bound Upper Bound	34.74 42.59
5% Trimmed Mean	38.52	
Median	40.00	
Variance	170.909	
Std. Deviation	13.073	
Minimum	20	
Maximum	60	
Range	40	
Interquartile Range	10	
Skewness	.066	.354
Kurtosis	-.547	.695

Table 6. T-test to test whether mean=38

Test Value = 38						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
scores	.342	44	.734	.667	-3.26	4.59

Table 7. Test of mean difference between control group and players in the group that received encouragement only

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differen ce	Std. Error Differen ce	Lower	Upper
scores	Equal variances assumed	1.957	.173	-	28	.148	-6.667	4.479	-15.842	2.509
	Equal variances not assumed			1.488						
				-	27.88	.148	-6.667	4.479	-15.844	2.510
				1.488	8					

Table 8. Test of mean difference between players in the group that received encouragement only and players in the group that received encouragement and coaching

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differen ce	Std. Error Differen ce	Lower	Upper
scores	Equal variances assumed	.669	.420	-	28	.135	-6.667	4.335	-15.547	2.214
	Equal variances not assumed			1.538						
				-	28.00	.135	-6.667	4.335	-15.547	2.214
				1.538	0					

Table 9. Test of mean difference between players in the control group and players in the group that received encouragement and coaching

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
scores	Equal variances assumed	.473	.497	-2.977	28	.006	-13.333	4.479	-22.509	-4.158
	Equal variances not assumed			-27.88	8	.006	-13.333	4.479	-22.510	-4.156

Appendix

Pre-test scores

Pre-test		
Player 1	2 for 5	40%
Player 2	1 for 5	20%
Player 3	2 for 5	60%
Player 4	1 for 5	40%
Player 5	2 for 5	40%
Average	8 for 25	32%
Player 6	2 for 5	40%
Player 7	1 for 5	20%
Player 8	1 for 5	20%
Player 9	1 for 5	40%
Player 10	2 for 5	40%
Average	7 for 25	28%
Player 11	2 for 5	40%
Player 12	1 for 5	20%
Player 13	1 for 5	20%
Player 14	2 for 5	40%
Player 15	2 for 5	60%
Average	8 for 25	32%
Total Pretest Percentage	23 for 75	31%

Control Group											
Trial 1			Trial 2			Trial 3			Trial 4		
Player 1	2 for 5	40%	Player 1	1 for 5	20%	Player 1	2 for 5	40%	Player 1	2 for 5	40%
Player 2	1 for 5	20%	Player 2	2 for 5	40%	Player 2	1 for 5	20%	Player 2	1 for 5	20%
Player 3	2 for 5	40%	Player 3	2 for 5	40%	Player 3	2 for 5	40%	Player 3	2 for 5	40%
Player 4	1 for 5	20%	Player 4	1 for 5	20%	Player 4	1 for 5	20%	Player 4	2 for 5	40%
Player 5	2 for 5	40%	Player 5	3 for 5	60%	Player 5	1 for 5	20%	Player 5	1 for 5	20%
Totals	8 for 25	32%		9 for 25	36%		7 for 25	28%		8 for 25	32%
Control Group shoot percentage of combined trials											
				32/125							

Treatment 1 -- Encouragement only											
Trial 1			Trial 2			Trial 3			Trial 4		
Player 6	3 for 5	60%	Player 6	2 for 5	40%	Player 6	2 for 5	40%	Player 6	2 for 5	40%
Player 7	2 for 5	40%	Player 7	2 for 5	40%	Player 7	1 for 5	20%	Player 7	2 for 5	40%
Player 8	2 for 5	40%	Player 8	1 for 5	20%	Player 8	2 for 5	40%	Player 8	2 for 5	40%
Player 9	2 for 5	40%	Player 9	2 for 5	40%	Player 9	2 for 5	40%	Player 9	2 for 5	40%
Player 10	1 for 5	20%	Player 10	2 for 5	40%	Player 10	3 for 5	60%	Player 10	2 for 5	40%
Totals	10 for 25	40%		9 for 25	36%		10 for 25	40%		10 for 25	40%
Treatment 1 shooting percentage of combined trials											
				39/125							

Treatment 2-- Encouragement plus coaching correction											
Trial 1			Trial 2			Trial 3			Trial 4		
Player 11	2 for 5	40%	Player 11	2 for 5	40%	Player 11	3 for 5	60%	Player 11	2 for 5	40%
Player 12	2 for 5	40%	Player 12	2 for 5	40%	Player 12	3 for 5	60%	Player 12	2 for 5	40%
Player 13	1 for 5	20%	Player 13	2 for 5	40%	Player 13	3 for 5	60%	Player 13	2 for 5	40%
Player 14	2 for 5	40%	Player 14	2 for 5	40%	Player 14	3 for 5	60%	Player 14	4 for 5	80%
Player 15	2 for 5	40%	Player 15	2 for 5	40%	Player 15	3 for 5	60%	Player 15	3 for 5	60%
Totals	9 for 25	36%		10 for 25	40%		15 for 25	60%		13 for 25	52%
Treatment 2 shooting percentage of combined trials											
				47/125							