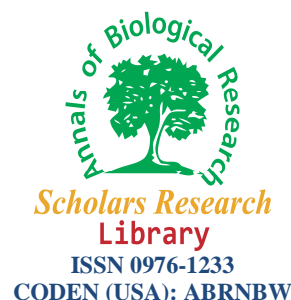




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The Effect of Motivational, Instructional, and Motivational-Instructional Self-Talk on Acquisition and Retention Stages of Basketball Shooting Skill

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ABSTRACT

The purpose of the present research was to study the effect of motivational, instructional, and motivational-instructional (Combined) self-talk on acquisition and retention of basketball shooting skill. The participants were randomly assigned to instructional, motivational, motivational-instructional, and control groups. The exercises were performed during 12 weeks, 2 sessions per week, and 30 minutes per session. The retention test was administered after two weeks of detraining. The results of one-way analysis of variance with repeated measures showed that all types of self-talk lead to improvement in performance and retention. Further, post hoc testing revealed motivational self-talk had a greater effect on the performance of basketball shooting skill than other types of self-talk. Considering the findings of the search, it is recommended to coaches to make use of different types of self-talk, in particular motivational self-talk, for improving the performance of basketball shooting skill.

Keywords: self-talk, motivational, instructional, motivational-instructional.

INTRODUCTION

Coaches have always been looking for ways to optimize the performance of their athletes. Previously, coaches mainly paid attention to the physical abilities of the athletes and considered it as the only factor affecting their optimal performance. However these days, with scientific advancements in the field of sport psychology, scientists have found that it is not just physical factors that affect the performance of athletes, but cognitive and psychological factors play a rather significant role. One of the most recent and beneficial cognitive and psychological skills applied by athletes and one that has preoccupied many researchers is self-talk. Self-talk is a strategic method and refers to a set of statements people make to themselves, whether internally or out loud [9]. Research has shown that athletes widely and consistently use self-talk to create

and increase motivation and provide cues for physical performance [12]. Zinsser et al. (2006) stated that self-talk improves performance through improving skill acquisition, creating self-confidence and self-efficiency, changing bad habits, and controlling effort. Thus, self-talk can be applied in different conditions and for various purposes. In addition, it has been suggested that positive self-talk reduces stress, increases effort and self-confidence, creates self-awareness, controls attention and motivation, and can help rehabilitation after injuries [5]. Weinberg and Gould (2003) suggested that athletes use self-talk for different purposes such as acquisition and retention of new skill, changing a bad habit, increasing motivation, controlling attention, creating and changing affect or mood, and for increasing self-confidence.

Although numerous research studies have examined the effects of various types of self-talk before sport tasks or during competitions, the results have been contradictory. Some studies have shown that instructional statements are more effective than motivational statements, while others have reported different results. Therefore, it is still uncertain which type of self-talk is more effective. On the other hand, research regarding the effect of a combination of motivational and instructional self-talk and the effect of this type of self-talk on learning is rare. Thus, the purpose of the present research was to study the effect of motivational, instructional, and motivational-instructional self-talk on acquisition and retention of basketball shooting skill.

MATERIALS AND METHODS

The present research was quasi-experimental, with a pretest-posttest design and a control group, in which the effect of self-talk on acquisition and retention of basketball shooting skill is studied.

Participants

The participants of the research consist of all the students of Islamic Azad University, Aliabad Katoul Branch, who had selected the course of Physical Education 1 in the period 2009-2010. 48 subjects were randomly selected and assigned to instructional, motivational, motivational-instructional, and control groups. All the participants in the present research were considered as novice in basketball shooting skill.

Measurement Material

A 3-minute basketball shooting task is used in this test. The participant is asked to shoot as many as they can from any point outside the two-point area which is at a distance of 3.66 meters from the center of the hoop. Besides, the participants were responsible for receiving the bounced back balls. In this test, any successful throw has one score. The reliability coefficient of this test is 0.91 [2, 8].

Test Procedures

In the beginning of the experiment and before taking the pretest, the participants were familiarized with the training method and the self-talk statements they were to use before performance. All the participants were asked not to talk to their teammates during performance, while they could repeat their self-talk statements out loud or silently [2]. The participants in the instructional group were asked to use the term “wrist-center” in order to direct their attention to free bending of the wrist and the center of the hoop during basketball shooting. The participants in the motivational group were asked to use the term “I can do it”. The combined group used both terms before performing the tasks. The participants in the control group performed similar tasks as the experimental groups but without self-talk. Then, all the four groups performed the exercises for 12 weeks, 2 sessions per week, and 35 minutes per session (10 minutes of warming up, 20 minutes of exercise, and 5 minutes of cooling down). The basketball shooting test was

administered at the end of the exercise period. The retention test was also similar to the acquisition test and was administered two weeks after the acquisition stage.

Data Analysis

One-way analysis of variance and analysis of variance with repeated measures were used to compare the means of the research groups. Moreover, Tukey and Bonferroni's post hoc test was applied to examine between-group differences.

RESULTS

The results of one-way analysis of variance of the pretest scores showed that there is no significant difference between the mean scores of basketball shooting skill of the four groups, i.e. motivational, instructional, motivational-instructional, and control groups ($P = 0.925$, $F = 0.156$). Further, the results showed that there is a significant difference between the four groups in posttest scores of basketball shooting skill ($P = 0.015$, $F = 4.50$; figure 1). Tukey's post hoc test revealed that there is a significant difference between the motivational self-talk group and the control group in basketball shooting proficiency ($P = 0.006$). In other words, the motivational self-talk group had a higher basketball shooting proficiency in the posttest stage in comparison with the control group, yet no significant difference was observed between instructional and motivational-instructional groups and the control group.

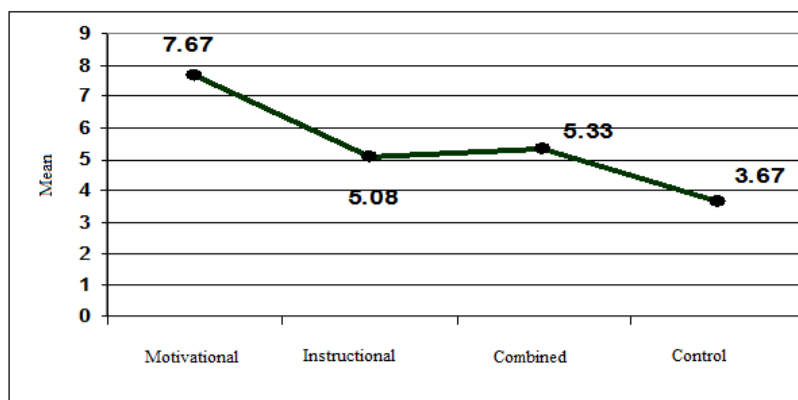


Figure 1. A comparison between the mean basketball shooting skill of the four groups (motivational, instructional, Combined, and control groups) in the posttest

Further, the results showed that there is a significant difference between the mean scores of the four groups in the retention stage ($P = 0.044$, $F = 2.92$; figure 2). Tukey's post hoc test revealed that there is a significant difference between the motivational self-talk group and the control group in basketball shooting skill ($P = 0.039$). In other words, the motivational self-talk group had a higher basketball shooting proficiency in the retention stage in comparison with the control group, yet no significant difference was observed between instructional and motivational-instructional groups and the control group.

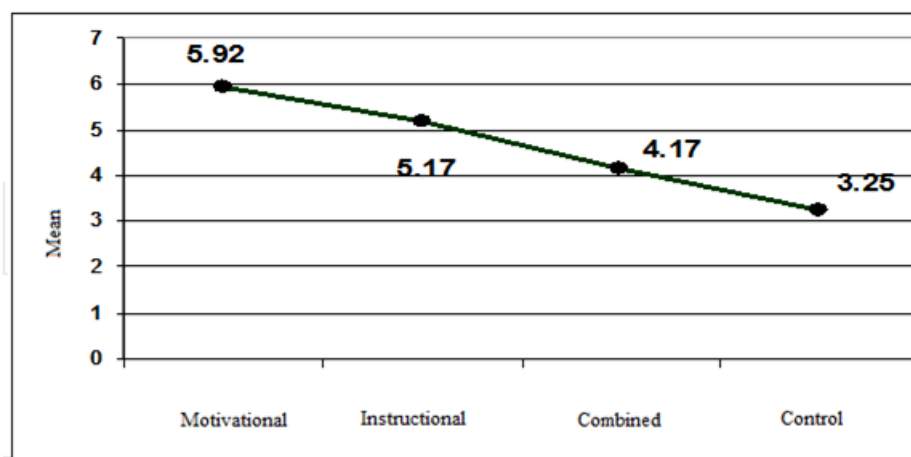


Figure 2. A comparison between the mean basketball shooting skill of the four groups (motivational, instructional, Combined, and control groups) in the retention stage

Finally, the results of analysis of variance with repeated measures revealed a significant difference between the measurement of shooting skill in the three stages of pretest, acquisition, and retention of the motivational group ($P = 0.002$, $F = 8.02$). The result of Bonferroni test for determining the source of variance revealed that the difference is between the pretest and the acquisition test measurements ($P = 0.014$) and between the pretest and the retention test measurements ($P = 0.014$). Moreover, a significant difference was observed between the shooting skill scores in the pretest, acquisition, and retention stages of the instructional group ($F = 4.01$, $P = 0.044$). The result of Bonferroni test for determining the source of variance revealed that the difference is between the pretest and the acquisition test measurements ($P = 0.020$) and between the pretest and the retention test measurements ($P = 0.047$). A significant difference was observed in the combined motivational-instructional group ($F = 4.14$, $P = 0.040$). The result of Bonferroni test for determining the source of variance revealed that the difference is between the pretest and the acquisition test measurements ($P = 0.045$) and no significant difference was observed between the pretest and the retention test measurements. In other words, motivational and instructional self-talk had a significant effect on acquisition and retention stages of basketball shooting skill, but the combined group significantly affected only the acquisition stage of shooting skill.

DISCUSSION AND CONCLUSION

The results of the research showed that motivational self-talk affected the acquisition and retention of basketball shooting skill and improved the performance of the subjects. These findings are consistent with the results of previous research such as Landin and Herbert (1999), Van Raalte et al. (2000), Theodorakis et al. (2000), and Hatzigeorgiadis et al. (2008), for they observed improved performance, attention, and mental readiness in their experiments and the groups with motivational self-talk exhibited better performance than the other groups. Chroni et al. (2007) studied the effect of positive motivational self-talk on passing, dribbling, and shooting tasks in adolescent basketball players. The results showed that motivational self-talk did not have a considerable effect on passing and dribbling performance, but it had a significant positive effect on shooting skill and effectively contributed to its performance which is in line with the results of the present research.

The results showed that instructional self-talk affects the acquisition and retention of basketball shooting skill and that it improves performance in the participants and these findings are consistent with the results of Van Raalte et al. (2000), Theodorakis et al. (2000), and Perkos et al.

(2002) carried out on novice basketball and tennis players. The findings of the research of Donohue et al. (2001), Harvey et al. (2002), and Borujeni (2011) carried out respectively on runners, golfers, and basketball players showed that the performance of the instructional group is slightly better than the motivational group. The reason for such an inconsistency between their findings and those of the present research may be due to the difference in skills and participants, since the participants in the mentioned studies have been adults.

The results also showed that the combined motivational-instructional self-talk affects the acquisition of basketball shooting skill and improved performance among novice players, but no significant effect was observed in the retention stage; as a result, it can be claimed that combined motivational-instructional self-talk is effective for acquisition but ineffective for retention. Unfortunately, no similar research was found that would deal with the combined form of self-talk so as to compare the findings with their results. The results of the present research shows that in the acquisition and retention stages of basketball shooting skill, the group with motivational self-talk had better performance than other groups. It seems that the reason for such an effect could be related to the nature of the task; in other words, motivational self-talk is more relevant to shooting skill in comparison with other forms of self-talk. The consistency or inconsistency of the result of the present research with other mentioned studies will provide an insight into the effects of different types of self-talk. Considering the results of the present and previous research, it can be asserted that using self-talk as a cognitive strategy is effective for skill performance, but whether any of self-talk forms has a more positive effect is not certain due to different, contradictory results in the literature. This difference may be due to the choice of skill – whether single or continuous, simple or complex, etc. – but what can be gathered from the present research is that different types of self-talk lead to improvement in acquisition and retention of basketball shooting skill in novice individuals and this improvement is more remarkably observed in the motivational self-talk group. The skill used in the present research is not per se able to generalize the results to all other skill, and certainly more research is required on the effect of instructional, motivational, and motivational- instructional self-talk on acquisition and retention of skills so as to reveal the short-term and long-term effects of these types of self-talk on skill performance.

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