

# Effect of focus of attention on motor skills acquisition, retention and transfer in children.

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## Abstract

**Background:** The focus of attention has been an on-going area of research in human movement science for the last decade. There is considerable evidence that directing attention externally to the effect of a movement on the environment (e.g., focusing on the flight of a ball in golf) improves performance compared to focusing internally on bodily movements involved in the execution of the motor skill (e.g., focusing on the motion of the arms in a golf swing). The advantage of an external focus of attention over an internal focus has been well documented across a wide variety of skills in adults but results are unclear in children. So the Aim of this study is to study the effect of focus of attention on motor skill Acquisition, Retention and Transfer in children.

**Materials and Methods:** 40 samples were selected. Subjects were randomly divided in 2 groups Throwing darts toward a static target was the motor skill. Instructions to direct their attention (internal/external) was given prior to the acquisition phase during which participants performed 50 trials. Retention and transfer trials were conducted 24 hours post acquisition phase.

**Results:** For acquisition and retention phases (unpaired t-test) the results were too significant ( $p < 0.05$ ). While for transfer phase (unpaired t-test) the results were non-significant ( $p > 0.05$ ).

**Conclusions:** Internal set of instructions was more beneficial in motor skill acquisition and retention phase in children. The study can be useful for the therapists, teachers who are dealing with the children.

**Keywords:** Internal focus, External focus, Acquisition, Physical therapists, Acquisition.

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## Introduction

Movement is critical aspect of life. Movement emerges from the interaction of 3 factors: The individual, the task, the environment. Motor control is the ability to regulate or direct the mechanisms to movement. The field of motor learning has traditionally referred to the study of the acquisition or modification of movement in normal subjects [1]. Learning has been described as the process of acquiring knowledge about the world. "Motor learning" refers to a set of internal processes associated with practice or experience leading to relatively permanent changes in motor behavior. The motor learning involves 3 main phases: Acquisition, retention and transfer. Acquisition refers to learning the motor task for the first time. Retention refers to performing the same task after a period of time and transfer refers to use this learnt knowledge and perform a similar motor task. "Attention focus is the act of directing attention to information sources or to objects of an individual's attention [2]. Focusing the attention on the object or the effect of the action is known as "external focus" and on the movement or action itself is known as "internal focus". Teaching of motor skill plays an important role in skill acquisition and it is a complicated process. Instructions are important when teaching motor skill and here physical

therapists play a major part by teaching several new motor tasks to the clients or patients [3]. There are many studies suggesting that external focus is more beneficial in adults but results are unclear in children. Children are less exposed to the environment has a slower information processing as compared to the adults. Some can say that they have less motor experience. Therefore need of this study is to focus on the influence of instructions on acquiring motor skills and transfer in children. Aim of this study is to find out effect of focus of attention on motor skill acquisition, retention and transfer in children. Objectives are to study and compare the effects of external and internal of focus of attention on motor skill acquisition, retention and transfer in children [4,5].

## Materials and Methods

Ethical committee clearance was obtained and permission was taken. Written consent was taken from the subjects who fulfilled the inclusion criteria. Sampling done by convenient sampling method.

## Inclusion criteria

- Children in age group of 8-12 year.
- Children going to elementary school.





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