Abstract

Title: Analysis of the current development of downhill skiing technique with a focus on vertical movement.

Objective: Creation of an overview study of downhill skiing and turning techniques on alpine skis, based on content analysis focused on the vertical movement of the skier's center of gravity.

Methods: This work is conceived as a development-oriented overview study. It utilizes research methods and is based on content analysis. Within this study, open databases and specialized web browsers were explored for relevant literature. The parameter of focus was set as the vertical movement.

Results: From the studied literature and professional articles, we have found that the vertical movement of the body's center of gravity currently does not hold the same significance in skiing technique as it did in the past. Although vertical movement is present in modern technique, it is primarily utilized, for example, when traversing uneven terrain to maintain contact with the snow surface. Additionally, it is important to emphasize that the development of skiing technique goes hand in hand with advancements in ski equipment. Therefore, progress in equipment contributes to progress in technique.

Conclusions: This bachelor's thesis presents a comprehensive text in the form of a developmental study that focuses on the evolution of vertical movement of the body's center of gravity in the historical development of downhill skiing and turning techniques. In practice, it can serve as study material in skiing specialization courses or as educational material for the general public.

Keywords: Alpine skiing, biomechanics of skiing, skiing skills, vertical movement, center of gravity.