

# Features of 30-40 years old tourists-skiers' technical training in the preparation period

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**Purpose:** compare the test results of the level of tourists' technical readiness of 30-40 years old skiers in winter period of preparation. Determine the effectiveness of developed programs to improve the technical readiness of 30-40 years old tourists-skiers.

**Material & Methods:** 14 people aged 30 to 40 years old who have a different experience in water, hiking and mountain as well as ski-sport hiking took part in research. Analysis of scientific and methodical literature, pedagogical observations, pedagogical experiment, methods of mathematical statistics is used.

**Results:** the test results of 30-40 years old tourists skiers which are the participants in the experimental group received in winter period of preparation and preparatory period and the results after passing ski sports hiking of the third category of complexity are processed. Their comparative analysis is held.

**Conclusions:** It was found that the developed training program can effectively influence the increase of the level of tourists' and skiers' technical skills and preparedness, which contributes to the successful passage of ski sports categorized hiking.

**Keywords:** ski trip, technique, ski hiking, tourists-skiers.

## Introduction

The structure of the preparation of the tourist-skier to ski sports hike consists of many species that are closely related and complement each other, but due to the characteristics of movement in the hike (skiing), technical training is one of the main.

According to the travelers [2; 5], the development of a rational technique of walk (correct formulation of the feet, reliance on the alpenstock, lanyard through the alpenstock or ice-ax) on steep trails, slopes, in overcoming low obstacles is paid a great attention while preparing for hiking and mountain hikes, so the main in the pre preparation period of the tourist-skiers is the mastering and consolidation of the ski technique, which includes the ways of passing the climbing, descents, turns, braking, and just before a hike with the same method done with a backpack.

At the ski hike movement is mainly done on the virgin snow, therefore, 0 additional element in the technology in the ski tourism will be tracking trails, often with a backpack. Not only a backpack, but also special clothes which is often necessary because of the strong wind and the cold (and sometimes both at the same time), restrict movement, complicate the use of certain techniques. Theoretical preparation includes the study of: the various elements of technology in different reliefs on different tracks, the basic elements of skiing technology and ski technique, the fitting and preparing ski and tourist equipment, as well as the types and characteristics of the original cartographic material in ski hikes [9; 12].

When choosing a ski route you should take into account not only the areas of this route, but also the regulatory length in days and kilometers, which is impossible without the proper

technique of movement in extreme winter conditions.

The level of technical training of tourist must always correspond to the complexity and length of the route. The head of a hike must be sure in advance that each participant is able to pass the planned route with a certain margin of safety in case of an emergency, if the group is out of the schedule, and have to cover the distance over the daily task.

Considering that many ski hiking routes are carried out in a mountainous area with varied by nature and complexity of the relief, it is compulsory for tourists now to possess of special technique receptions [2; 5; 9; 14].

The basis of the technical preparation of the tourist-skier is classical technique of ski steps [1; 3; 6; 7; 11]:

- alternating two steps' walk (used in flat areas, climbs);
  - alternating four steps' walk (used on deep snow on the track with uneven natural obstacles);
  - simultaneous one step's walk (used on sloping downhill, plains);
  - simultaneous two steps' walk (used in the plain, sloping uphill);
  - simultaneous without steps' walk (used in the plain, up to sloping mountain);
- ski technics:
- kinds of stands from downhill;
  - turning with plow;
  - cutting (carving) turn;
  - sliding turns;
  - ways of braking.

**Connection with academic programs, plans, themes**

Studies carried out in accordance with the thematic plan of research of the Department of winter sports, cycling and tourism of Kharkov State Academy of Physical Culture (KSAPC) of the Ministry of Education and Science of Ukraine for 2013-17 years on the topic «Fundamentals of sport tourism in the recreational activities of different aged groups in Ukraine» (State registration number 0114U000366).

## Purpose of research

Develop the program to improve the technical training of 30-40 years old tourists-skiers and determine its effectiveness.

*Tasks of research:* 1. Develop the program of technical preparation of 30-40 years old tourists-skiers for the successful passage of the ski-sports hiking of II-IV categories of complexity. 2. Experimentally check the effectiveness of the proposed program of technical preparation of 30-40 years old tourists-skiers.

## Material and Methods of the research

Methods of research: analysis of scientific and methodical literature, pedagogical observations, pedagogical experiment, methods of mathematical statistics.

The research was held from December to January, 2013–2014. The experimental group consisted of 14 people at the age of 30 to 40, having different experience of water, hiking and mountain hiking. Over the years, all members of the group went in for different kinds of sports; many of them have sports categories. By the beginning of the experiment, all members of the group had had different experience of ski sports hikes. Winter period was 42 days preparation period.

## Results of the research and their discussion

After the autumn preparation stage, where is widely used simulation exercises, as well as the development of ski technique moves while moving on roller skis, which gave good results [12], the group started to winter training of preparation period.

With the advent of the snow cover we used the main means of ski preparation – movement on skis. In our studies, ski training included the period from December 15 to January 25, 2014. Training took place in Kharkov on the ski base «Temp» and ski complex «Ekstrimstil» on the slopes with artificial and natural snow cover.

Our studies [13] confirm that 80% of injuries and accidents are connected with unpreparedness of tourists-skiers, especially with the lack of physical and technical preparedness, so passing «thread» of the route in ski hike is impossible without special preparation training.

In this connection, the relevant question is the construction of a rational program of special training in preparation period of 30–40 years old tourists-skiers to the most massive in complexity ski hike that is the hike of III category of complexity.

The content of the preparation program of tourists-skiers training included seven kinds of training: theoretical (11 hours), organizational (12 hours), physical (263 hours), technical (28 hours), tactical (13 hours), topographic (11 hours) psychological (19 h), medical (17), and tourist hiking (72 h) and tourist competitions (10 h) [13].

Throughout the spring and the autumn stage of preparation, hours allocated for technical training increased gradually [12] and reached its peak in December and January with snowfall [13]. It was during this period honing technique of classical skiing moves and skiing skills was held.

To determine the level of technical readiness of 30–40 years old tourists-skiers while skiing the level of technology movement by classical passages and ski technique was taken into account. Evaluation was carried out on a 10-point scale of evaluation criteria of ski moves technique (Table 1) [8].

Proper technique of movement on skis is a system of movements that allows the skier achieves maximum effectiveness of his/her actions.

Technique of tourist-skier movement is complex and diverse. The effectiveness of a particular method of movement depends on specific conditions of ski hike, and in particular on the terrain.

To better understand the variety of movements of the skier-tourist in the extreme conditions of a tourist hike, we have evaluated the moves on the whole movement on skiing. One of the main ways of the ski moves, the most frequently used by tourists-skiers, is alternating two steps' walk which consists of single sliding steps.

During the period of snow preparation (December 15 – January 25) technique of movement by classical style changed, so the assessing of alternating two steps' walk increased in 1,9 points ( $t=2,17$ ;  $p<0,05$ ), alternating four steps' walk in 1,9 points ( $t=2,57$ ;  $p<0,05$ ), simultaneous one step's walk in 1,9 points ( $t=2,20$ ;  $p<0,05$ ), simultaneous two step's walk 2,1 points ( $t=2,61$ ;  $p<0,05$ ), Ways of passage ups in 2,0 points ( $t=2,28$ ;  $p<0,05$ ) (table 2) [13].

In the modern ski technique the cutting slip defines the basic style and technical characteristics of skiing downs from the mountains. Skis in wide parallel position in arc carving-turn provides more even distribution of axle loading of embedded skis in all phases turn, thereby achieving minimum side skidding (which occurs during short-term discharge, inevitably leading to slippage cross-braking) [4; 10]. In the estimation of the ski technique we took into account the following: the rotation of the lock, turn with slipping and step-turn, turn on parallel skiing, synchronization of the knees work, shoulders turning.

During the same period of time ski technique when going downs improved by 1.7 points ( $t=2,39$ ;  $p<0,05$ ), in certain ways of braking by 2.4 points ( $t=2,48$ ;  $p<0,05$ ).

## Conclusions

It was found that the designed program of the preparation period of 30-40 years old tourists-skiers allows better mastering technique of skiing to participate in ski sports hikes of II–IV categories of complexity. 2. Proven in practice (ski sports hiking of III category of complexity) the effectiveness of the developed and the proposed program of technical training of 30–40 years old tourists-skiers to the ski sport hikes of II-IV categories of complexity.

**Further research** will focus on the development of physical training programs in preparation period in for water and mountaineering.

Table 1

Criteria for assessing the technique of ski moves

Points	Criteria for assessing
10	The move was done without mistakes, with the emphasis on each movement element
9	The move was done without mistakes, but one of the elements is not clearly identified
8	The move was done without any mistakes, but some elements are not clearly identified
7	The move was done correctly, but there is a mistake that does not influence the structure of the movement
6	The move was done basically correctly, but there are few small mistakes which distort movement structure
5	The move was done correctly in general, but there is a glaring mistake, distorting the structure of movements
4	The move was mainly done, however, with a failure in the performing of a cycle stopping the movement and then continue
3	The move was done with stops, giving meaning of the mistakes and then going on
2	The move structure was broken, only some elements of technique were done, in one of the cycles
1	The person cannot done the ski move

Table 2

Expert assessment of technique movement indicators on skis (according to a 10-point system) and theoretical training (according to a 100-point system) of 30-40 years old tourists-skiers during the preparation period (n=14)

Types of movement technique	Ski step	$\bar{X}_1 \pm m_1$	$\bar{X}_2 \pm m_2$	t	p
Technique of movement with classical style, points	alternating two steps' walk	7,3±0,69	9,2±0,50	2,17	<0,05
	alternating four steps' walk	7,4±0,69	9,3±0,51	2,57	<0,05
	simultaneous one step's walk	7,8±0,63	9,7±0,52	2,20	<0,05
	simultaneous two step's walk	7,2±0,75	9,3±0,44	2,61	<0,05
	ways of passage ups	7,5±0,36	9,5±0,61	2,28	<0,05
Mountaineering technique, points	ways of downs	7,5±0,39	9,2±0,62	2,39	<0,05
	ways of braking	7,3±0,88	9,7±0,54	2,48	<0,05

Note:  $\bar{X}_1$  – December;  $\bar{X}_2$  – January.

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