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## INTRODUCTION OF CONTEMPORARY TECHNIQUES IN KINESITHERAPY TRAINING AND THEIR IMPLEMENTATION IN CLINICAL PRACTICE

R. Paskaleva<sup>1\*</sup>, I. Koleva<sup>2</sup>, K. Kostov<sup>1</sup>

<sup>1</sup>Medical College, Trakia University, Stara Zagora,

<sup>2</sup>Department of Physical Medicine, Rehabilitation, Ergo therapy and Sport, Medical University, Pleven

### ABSTRACT

The tuition of students at the Medical College requires improvement of training of the medical specialists according to contemporary public health system standards with main emphasis on good theoretical and practical knowledge, critical thinking development, new patient-oriented attitude taking consideration to its personality and needs, improvement of curricula according to new conditions, including a better consciousness and relationship ethics.

**Key words:** tuition, theoretical and practical training, critical thinking, relationship ethics

### INTRODUCTION

The reform in Bulgarian public health system implies the use of new approaches in the training of medical specialists at different levels. New, higher standards to the overall organization of tuition, a higher quality of training of students in the different courses are needed, as well as new requirements to instructors together with a basically different approach to the structure of curriculum and subjects included in academic plans [1]. The training should be comprehensive enough, to be oriented to rehabilitation practice and to provide solutions to problems emerging throughout the work [2].

The training of students at the Medical College, Trakia University in Stara Zagora gives the background of knowledge to future public health practitioners. The training is organized and performed according to all state requirements, European Community Standards and the new circumstances and needs of health reform [2]. The curricula of the different courses are compatible with uniform state requirements and the Higher Education Act, as

well as with modern routine clinical practice requests. After graduating from the college, young specialists are enrolled in postgraduate studies at Faculties of Public Health [3].

The high level of professional competence is essential for medical specialists as it guarantees a successful professional realization and career. The care for the patient – either healthy or ill, is the main concern in healthcare training. According to Milcheva [2], the aim of the training at the Medical College in Stara Zagora is to assist students in the acquisition of knowledge, skills and competence, in the buildup of behaviour algorithms, evaluation of relationships, adoption of various styles of communication with patients, their relatives and the entire medical team.

Kinesitherapy (KT) is defined as a applied science that integrates knowledge from a number of fundamental sciences – physiology, anatomy, biomechanics, pathology, paedagogics and other medical specialties (orthopaedics and traumatology, cardiology, neurology, paediatrics, geriatrics etc.) aimed at improvement and maintenance of health, increase of functional abilities, prevention of recurrences and complications, maintenance of personal psychological and physical comfort [4]. The kinesitherapy course is essential for the training of students from the physical

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\*Correspondence to: R. Paskaleva, Medical College, Trakia University, 6000 Stara Zagora, e-mail: [ruska64@abv.bg](mailto:ruska64@abv.bg)

therapy major. The aim of kinesitherapy training is to produce competent young specialists with proper theoretical and practical skills for the public health system.

The improvement of the quality of tuition of kinesitherapy students and the adaptation of the rehabilitation studies to European standards has been the primary goal of our work for many years. [1]

In this study, we aimed to determine the relationship between the motivation of students, the introduction of modern kinesitherapy concepts and the contentment of students in physical therapy majoring at the Medical College in Stara Zagora, from the theoretical and practical training in kinesitherapy.

### MATERIAL AND METHODS

All students from the physical therapy major at the Medical College, Stara Zagora were included in the study, and this survey presents and analyzes the data from the answers of 35 second-year students in physical therapy, fall 2011. The survey was carried out anonymously using through closed questions tests twice: by the end of the first year of studies and by the end of the first semester of the second year of studies (January 2010). On the basis of thorough literature analysis and the

questionnaire surveys performed for many years, the kinesitherapy curriculum has been updated since the present academic year (2009/2010) with some new contemporary concepts (International Classification of Functioning, Disability and Health, kinetic prophylaxis etc.) as well as with elaboration of new practical skills [4]. Therefore, questionnaire surveys were performed prior to and after the kinesitherapy curriculum update. Data were statistically processed by ANOVA and non-parametric correlation analysis (Wilcoxon rank test), by means of SPSS statistical software. Differences were considered statistically significant at the  $P < 0.05$  level.

### RESULTS AND ANALYSIS

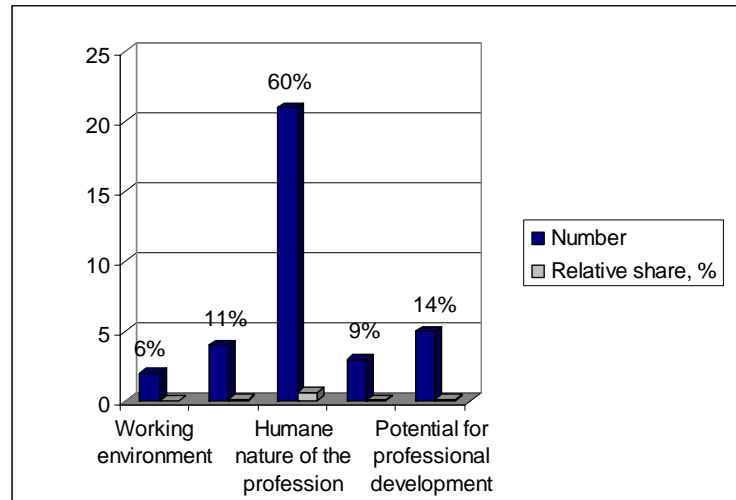
The term "motivation" is referred to a system of intrinsic stimuli as well as to an entity of dynamic factors that predetermine the behaviour of an individual. Being active, this phenomenon evolves and changes. The motivation of staff members is essential for their professional realization. It could be provoked by better work conditions, humane nature of the profession, better remuneration etc., but finally, its strength depends on the personal drives and wishes. What is more important, motivation is most commonly responsible for the results from the training.

**Table 1.** Motivation of future physical therapists when choosing a profession

Stimuli	Number	Relative share, %
Working environment	2	6%
Contact with different people	4	11%
Humane nature of the profession	21	60%
Good income	3	9%
Potential for professional development	5	14%

The analysis of data from **Table 1** and **Fig. 1** about the attractiveness of the physical therapy major, for 60% of students it comes from the humane nature of the professions and the possibility to help people. The other answers are various – 14% of respondents outline the possibility for professional development, 11%

- the contact with other people, 9% place the remuneration on the first place and only 6% - the working environment. These responses suggest unanimously that future physical therapists are well motivated as public health specialists and have a desire for professional development.



**Fig. 1.** Attractiveness of the chosen specialty

The kinesitherapy subject is a primary one among the courses taught to students from the physical therapy major. It is important for the training, skill improvement, motivation and practicing of the profession and is the

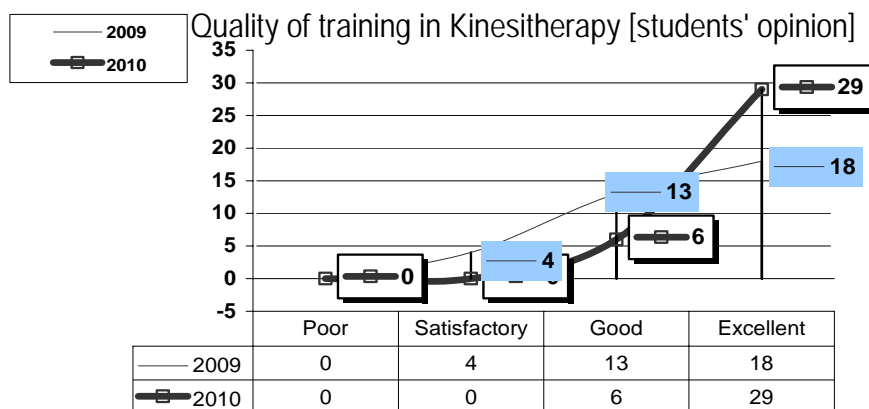
background for acquiring specific theoretical and practical knowledge and their implementation in the treatment, rehabilitation and recovery of both healthy and diseased people in the framework of the public health system.

**Table 2.** Student’s evaluation of the quality of training in kinesitherapy (years 2009 and 2010)

Quality of training	2009		2010	
	Number	Relative share, %	Number	Relative share, %
Excellent	18	52 %	29	83 %
Good	13	37 %	6	17 %
Satisfactory	4	11 %	0	0%
Poor	0	0%	0	0%

It should be emphasized that the survey of students’ opinion is very important for the

training in kinesitherapy and for improvement of the curriculum of this course (**Table 2 and Fig. 2**).



**Fig. 2.** Evaluation of the quality of training in kinesitherapy according to the opinion of students prior to and after the update of the curriculum

The quality of training in kinesitherapy guarantees the future professional realization in public health system establishments as students are taught to learn and work in a team, similarly to the routine working environment

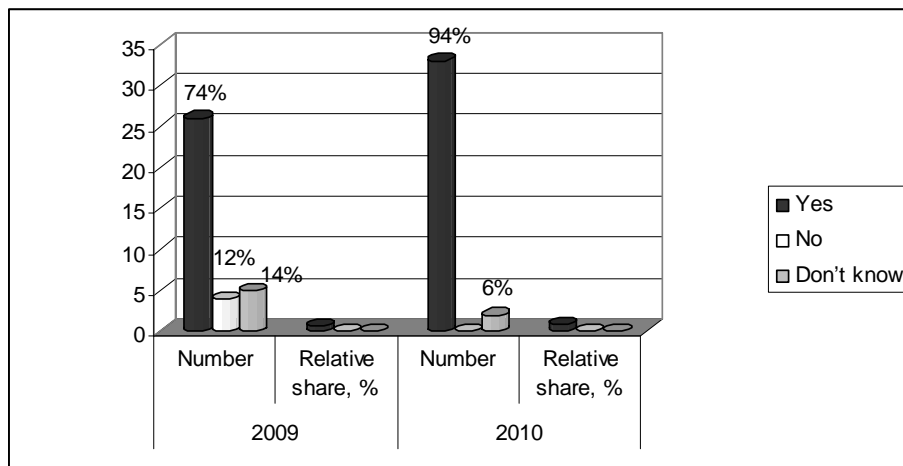
of the clinical practice. The quality of training at the Medical College is directly related to the level of the theoretical and practical knowledge provided by instructors.

**Table 3.** Contentment of students with the theoretical knowledge provided by the kinesitherapy curriculum prior to and after its update

Answers	2009		2010	
	Number	Relative share, %	Number	Relative share, %
Yes	26	74 %	33	94 %
No	4	12 %	0	0 %
Don't know	5	14 %	2	6 %

The theoretical competence in kinesitherapy is very important for the professional realization of physical therapy students. It is necessary to

make certain that they are well prepared and is a background of professional skills of the future rehabilitation specialist.



**Fig. 3** Contentment of students with the theoretical knowledge provided by the kinesitherapy curriculum (2009 and 2010).

The good theoretical foundation is the basis of practical implementation of the course in experimental training bases and throughout the practical training process, as well as of team work. The students work together in a hospital,

prehospital and primary healthcare settings with the purpose to be prepared to deal with all possible situations. Thus, the integrated nature of the training is useful for all participants in this process, and especially for patients.

**Table 4.** Contentment of students with the practical training provided by the kinesitherapy curriculum prior to and after its update

Answers	2009		2010	
	Number	Relative share, %	Number	Relative share, %
Yes	25	71 %	32	91 %
No	3	9 %	1	3 %
Don't know	7	20 %	2	6 %

As to the practical training, a fairly similar situation was observed (Table 4, Fig. 4). It could be seen that prior to the update of the curriculum, 71% of respondents believed that the practical training in kinesitherapy was

sufficient enough. After the update, 91% of students answered that they were satisfied with the practical training.

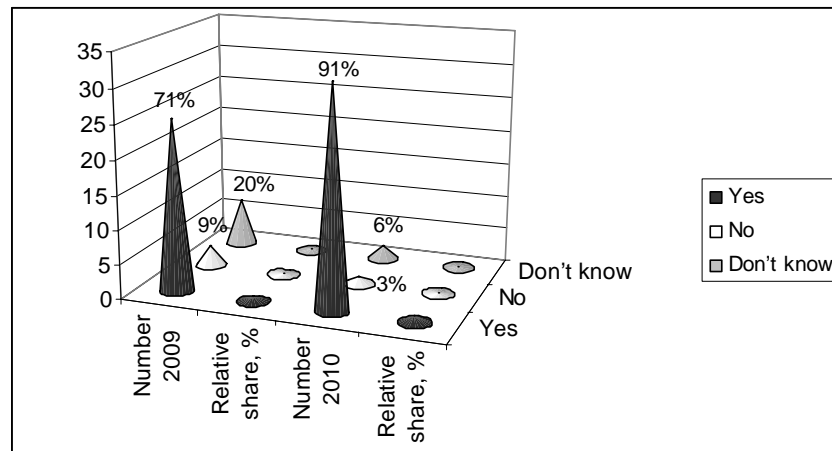


Fig. 4. Contentment of students with the practical training in kinesitherapy (2009 and 2010).

Students are aware that practical training sessions were very important as they allowed them to develop their practical skills and critical thinking in a conditionally real situation influenced also by the methods of tuition, the instructors' style and the matter taught. All this improve the quality of the real clinical practice and guarantee an efficient performance during the summer and pregraduation trainings.

The comparison of students' evaluation of the theoretical and practical training prior to and after curriculum update, the following facts could be observed:

- In 2009, 74 % of students were satisfied with theoretical training and 71% consider that the quality practical training was good enough. In 2010, the percentage of those satisfied with theoretical and practical knowledge is already 94% and 91%, respectively.
- In 2009 12% of students consider that theoretical training was inadequate and only 9% are not satisfied with practical training. In 2010, nobody expresses discontent from the theory taught and only 3% (1 student) – from the practical training (the same student has omitted 75% of practical sessions according to the information he provided).
- It is worthy that the number of students that responded with “don't know” when evaluating the theoretical and practical

trainings has decreased from 14% and 20% respectively in 2009 to 6% for both types of training in 2010.

- With regard to the insufficiency of both theoretical and practical training, the opinion of students was exactly the same (15%).

#### DISCUSSION AND CONCLUSION

The questionnaire surveys of students suggested that they were well motivated when choosing their future profession.

Most of students were satisfied with the training provided at the Medical College and the introduction of new, modern concepts in trainings increased their content in both theoretical and practical plan.

We recommend the update of the curriculum of kinesitherapy with inclusion of more practical training sessions, inclusion of more modern and special methods of tuition, as well as modernization of the material base of the Medical College in Stara Zagora with regard to improvement of the practical training quality.

In conclusion, kinesitherapy is the primary course taught to students majoring in physical therapy. The theoretical learning and the practical skills for work with patients are essential for becoming good professionals and for their realization in the public health system in conditions of the current health reform and

for maintaining a good health status of the population.

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*PASKALEVA R., et al.*