

# Original Article: A comprehensive evaluation of the Sports Physiotherapy curriculum

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## ABSTRACT

**Introduction:** Evaluating the master's degree program in Sports Physiotherapy in order to improve the quality of education in this field. The need to pay attention to the effectiveness and efficiency of the education and improving the system of higher education by becoming more aware of the factors involved is necessary. The aim of this study is to evaluate the educational program for master's degree in Sports Physiotherapy.

**Method:** This is a hybrid study in which qualitative and quantitative methods for data collection were used. The research team consisted of faculty members and sports physiotherapy students. In the first part of the study, due to a lack of standard questionnaires, the method of an expert panel was used to build the tools. In the second part, the questionnaire was distributed among 22 professors and students, and the data was collected.

**Results:** The findings showed that according to the viewpoints of the faculty members and students, the courses in the program are necessary and facilitates the students to become qualified in meeting their future professional requirements. The findings of other research indicate the desirability of the content, implementation, and educational facilities of the program from the viewpoint of the professors, and unfavourable from the viewpoint of the students. Moreover, from the perspective of the professors and students, the teaching methods is appropriate to the type of course and there is no need to add a new course to the program. The findings of student evaluation methods showed that these methods were considered to be favourable from the viewpoint of the professors, and unfavourable from the viewpoint of the students.

**Conclusion:** As a result, the program of Sports Physiotherapy was evaluated, in terms of its favourability, with the existing courses. Nevertheless, the addition of practical and clinical units helps to improve the quality of the curriculum.

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## Introduction

**H**igher education in Iran has seen many changes due to social necessities, which has caused serious assessments of the educational system. The results of these assessments are used to select students, faculty members, curriculum, and, in general, other educational data within the educational system. Also, it helps to implement the teaching process, which, by assessing the outcomes, it directs the education system to a desirable path [1]. If we accept that all systems, including the educational system of universities have a tendency towards disorder, stagnation, and collapse, we must employ a set of scientific methods that can be developed to not only counteract this phenomenon (entropy), but also provide the potential for growth and development. To this end, assessment of the curriculum is essential, because evaluation is one of the most important tools for strategic development at the level of university [2]. Therefore, evaluating with an explicit value orientation, helps promote science and improve programs through self-evaluation [3,4]. Therefore, maintaining and improving the level of education in the university environment, the need to pay attention to the effectiveness and efficiency of education, and having sufficient knowledge of the indicators that play a role in improving the system of higher education through a systematic and accurate evaluation, all seems necessary [5]. The process of developments in the higher education system suggests that this system has faced many issues and challenges over the past two decades. Several factors have affected this, such as the reduction in the quality of education, inappropriateness of the academic teachings, inability to provide training that meets the needs of the society, increasing numbers of students and applicants entering higher education institutions, and a reduction in financial resources [6-8]. According to Tyler, in the curriculum, one of the main goals is to train students in accordance with the needs of the society. Since the job, social, and economic conditions of the students are different from each other, it is imperative to not only select the educational titles based on academic surveys,

but that the presentation methods should also be designed in such a way that the best and most effective learning takes place with the least negative impact on the professional performance of the students [9]. An educational program can only justify its worth when it presents credible and reliable evidence of the impact it has on improving the performance of its participants. This refers to an important aspect of education and educational evaluation that is usually referred to as the effectiveness of teaching or assessing the effectiveness of education. The mission of the Masters in Sports Physiotherapy is to educate graduate students to be able to have the ability to provide preventive, therapeutic, educational, and research services. The Master's program in sports physiotherapy is one of the courses in the field of physiotherapy, which was approved by the thirty-ninth session of the Supreme Council of Medical Sciences in 2009. It's courses include 32 primary units and 5 optional units. The educational program approved by the Ministry of Health for graduate physiotherapists is aimed at educating graduates to acquire professional skills and increase their knowledge in order to solve the problems and issues athletes encounter. The rapid growth of technology, social media, and the rapid changes that in educational environments affects the expectations of the educators and students. It seems that the traditional methods of teaching and learning do not meet the needs of society [11]. Therefore, the current state of the curriculum of Sports Physiotherapy should be evaluated in order to identify its strengths and weaknesses. If necessary, appropriate measure should be taken to modify and correct it. The purpose of this study is to evaluate the Master's degree program in Sports Physiotherapy.

## Method

This study collected data using a combination of both qualitative and quantitative methods. The research team consisted of faculty members and sport's physiotherapy students. In the first part of the study, due to the lack of a standard questionnaire the expert panel method was used. During 5 three-hour sessions, a questionnaire was discussed in a workshop

consisting of 8 individuals, rehabilitation specialists (6 people) and from medical education (2 people). Finally, with the consensus of experts, the master's degree in Sport's Physiotherapy appraisal questionnaire was compiled in 44 items and was drafted based on the 5 option Likert range. Item 23 was reversed. In order to determine the items, 5 items that seemed to be unnecessary were excluded. A questionnaire consisting of 39 items for determining its content validity, was distributed among 22 faculty members of the Faculty of Rehabilitation Sciences (17 people) and the medical education group (5 people). The content validity ratio ranges from 0 to 1, and finally the content validity index obtained was 0.70. As to clarify some of the options, the expression "is useful" was changed to "is not bad", and the expression "is not necessary" was changed to "is redundant" [12]. Although some of the items did not have suitable content validity, they still remained in the questionnaire. One of the reasons was the lower than acceptable content validity ratio of those items, which the professors rated "is not bad" among the three other options of (is necessary, is not bad, is redundant), because they believed that those items were related to the implementation of the program. From there, in order to determine the content validity, the participants chosen to do this were professors in the field of Sports Physiotherapy. Instead of evaluating the value of the content of the items, they seemed to criticise the items. But, according to the research team, the items that were related to the implementation of the program, were considered necessary. Therefore, the researchers decided to redistribute the questionnaire among the experts who were involved in the evaluation of the program in order to solve the issue of the low content validity index. Another solution the researchers came up with was to postpone the removal or maintenance of these items to data analysis after implementing the evaluation of the program on the target community, so as to decide whether to maintain or remove the data.

Finally, the questionnaire was arranged in two sections. In the first part, 32 items with the 5 Likert options of "none", "low", "moderate",

"high", "very high", were considered. In the second part, 7 items with a 6 option range of "none", "low", "moderate", "high", "very high", "don't know", were designed. In the first part of the questionnaire, the items were designed in a way that they evaluated the participant's awareness with 9 objectives in relation the educational program. During the second part, questions were designed so that the participants needed to be aware in order to be able to answer the questions. Therefore, the participants who answered that they were not aware (choosing the "none" option), were excluded from this section by selecting the "don't know" option, in order to prevent biases in data analysis. The nine objectives were: adaption of the content provided in the lesson to the content and objectives approved, the appropriateness of the teaching style with the type of lesson, the suitability of the methods used to evaluate students, the viewpoint of the professors and students regarding the implementation of the program, the appropriateness of educational facilities available from the viewpoint of both the professors and students, the attitudes of the faculty members and students about the necessity of the existing lessons, the attitudes of the professors and students with regards to the need for new lessons, determining the capabilities of graduate students, and determining the participants' awareness of the curriculum. A total of 36 questionnaires were distributed. This information was then analysed descriptively. Given that each of the questions were categorised according to the Likert scale from 0-4, the score 0 represents no response, the score of 1 represents minimum adequacy, and the score of 4 represent maximum adequacy. Then, from the scores given to each of the questions, the mean was taken by the professor and students, and the average score obtained was recorded against the question of the same item.

## Results

The findings of this study showed that the Sports Physiotherapy program curriculum was favourable for students and professors, although suggestions were made to improve and enhance this educational program.

### The areas under study included

The program objectives, the content of the program, the appropriateness of the teaching method with the type of course, the determination of the appropriateness of the methods used to assess students, the educational facilities, the necessity of the

courses, the evaluation methods, the abilities and knowledge of the graduate students in relation to the evaluation. Indicators and benchmarks of equal to or more than 50% were considered desirable. Since the options were scores from 0 to 4 on a 5-digit scale, the acceptable score for each item was considered desirable when it was average (2) and up.

**Table 1:** Results of the study

Row	objective	Objective title	Average rating of the professors	Average rating of the students	Results based on the perspective of the professors	Results based on the perspective of the students
1	Objective 1	Program content	2.62	1.78	Desirable	Undesirable
2	Objective 2	Appropriateness of the teaching methods with the course	2.08	1.8	Desirable	Undesirable
3	Objective 3	Determining the appropriateness of student evaluation methods	2.39	2.04	Desirable	Desirable
4	Objective 4	Viewpoints of the professors and students regarding the implementation of the program	2.53	1.86	Desirable	Undesirable
5	Objective 5	Suitable educational facilities	2.36	1.81	Desirable	Undesirable
6	Objective 6	Availability of necessary courses	2.65	2.45	Desirable	Desirable
7	Objective 7	The need for new courses	1.5	2.09	Undesirable	Desirable
8	Objective 8	Capabilities of graduate students	2.45	2.25	Desirable	Desirable
9	Objective 9	Participants' awareness of the curriculum	3.12	2.33	Desirable	Desirable

As shown in table 1, in this research the content of the program (first objective), which was measured with 4 items, was evaluated as being desirable by the professors and undesirable by the students. Considering the unequal number of samples in the faculty group and students group, the average score obtained from the professors was 2.62 and that of the students was 1.78. Evaluating the appropriateness of the teaching

method with the course (second objective) was studies using 4 items. The average score of the teachers was 2.08 and that of the students was 1.8. As a result, the appropriateness of the teaching method to the type of course was desirable to the professors but was considered undesirable by the students.

Evaluating the appropriateness of student evaluation methods (third objective) was performed using 4 items. The average score of the professors was 2.39 and the average score of the students was 2.4. Both the students and the professors thought the student evaluation methods were desirable. Evaluating the perspective of both the professors and students regarding the implementation of the program (fourth objective) was studied using 7 items. The average score of the professors was 2.53 and the average score of the students was 1.86. As a result, the professor's had favourable and the students had unfavourable viewpoints. Evaluating the appropriateness of the educational facilities (fifth objective) was studied using 5 items. The average score of the professors was 2.36 and that of the students was 1.1. The viewpoints of the professors were favourable, but that of the students was evaluated as being unfavourable. Evaluating the views of the professors and students regarding the necessity of existing courses (sixth objective) was studied using 5 items. The average score of the professors was 2.65 and the average score of the students was 2.45. As a result, the professors and students both had favourable views. Evaluating the need for new lessons (seventh objective) was studied using 1 item. The average score of the professors was 1.5 and that of the students was 2.9. From the perspective of the professors there is no need for new courses, while the students stated that there is indeed a need for a new course. Evaluating the capabilities of the graduate students (eighth objective) was done using 5 items. The average score of the professors was 2.45 and the average student score was 2.25. As a result, the evaluation of both the professors and students were favourable. The participant's awareness of the curriculum (ninth objective) was evaluated using 4 items. The average score of the professors was 3.23 and that of the students was 2.33. Therefore, the evaluation of both the professors and students were favourable in this regard.

### Discussion and conclusion

The curriculum should be tailored to meet the needs of the students and society they help. It

should be responsive to the changes and needs in accordance with the developments [13]. To be aware of this, curricula needs to be continuously evaluated, so as to identify the strengths and weaknesses of the program, as well as being able to provide the stakeholders with information in this regard [14,15]. The findings showed that according to the perspective of faculty members and students, the lessons are necessary in the program and provides the students with the required competence to meet their professional needs. In the questionnaire, in certain cases where the participants did not have the necessary knowledge, they would be taken into consideration and the number of participants would be reduced. Thus, the data that was analysed was collected from the participants who had awareness. This confirms the validity of the data obtained. Also, the findings of the student evaluation methods showed that these methods were considered to be desirable by the professors and undesirable by students. Perhaps this is because the existing evaluation methods are unable to distinguish the difference between the knowledge and skills of a capable student and that of an incapable student [5]. The findings of other research indicate the desirability of content, implementation, and educational facilities of the program from the perspective of the professors and unfavourable from the viewpoint of the students. The professors considered the above item appropriate, as well as their teaching style, according to the type of the course, and they thought that there is no need to add a new course to the program. Since the professors themselves are the presenter of the courses, they of course believe that the teaching style is appropriate with the type of course. The implementation of the program is a process that begins with the curriculum developers and through certain stages involves the faculty departments, department of education, faculty members, and professors. The professors, as the executors of the program, expect a more realistic expectation from the students, as they have knowledge of the difficulty of the work it takes and the availability of limited resources and facilities that they have [2,16]. Perhaps the professors are likely to consider the current situation to be favourable in comparison with previous years. However,

due to the availability of social media, the students seem to be more likely to compare their current situation with regard to the conditions and facilities in advanced countries, and so do not view their current state as favourable [17]. It seems that the dissatisfaction of the students is because of their idealistic views, which despite favourable results, in the objectives of the necessary courses available, student empowerment and ability, and the appropriateness of the course content with the style of teaching, was considered lower than the desired level. On the other hand, it is likely that the curriculum is not tailored to the needs of the students. Therefore, they have not been able to meet their professional needs and career prospects, which could be due to the inadequacy of the teaching methods used [18]. Based on the question at the end of the questionnaire, entitled "add suggestions for evaluating the program", the participants expressed their views in a descriptive manner. According to them, there is a need to add units such as "evidence-based performance", "movement control", as well as practical units such as "manual therapies". Furthermore, they suggested adding training units in competitive sports fields and the use of expert sports professors. According to the results obtained from the analysis of the opinions of the professors, the mean of the eight objective, which is related to the revision of the course syllabus, obtained the highest score. The mean for sixth objective, which was related to the suitability of the educational facilities for implementing the program, earned the lowest score. Objective number 44 (To what extent is it necessary to review the program?), with a score of 55, obtained the highest score from the professors. Objective number 25 (To what extent are the opinions and the suggestions made by the students taken into consideration in the formulation and implementation of educational programs?) with a score of 30, had the lowest score according to the professors.

According to the students, the mean of the eighth objective, which is related to the review of the course syllabus, had the highest score. The mean for objective number 5, which is related to the compliance of the program with the objectives of the syllabus, obtained the lowest

score. Objective number 22 (To what extent is the distribution and timing of the courses during the week appropriate?) with a score of 49, earned the highest score according to the students. Objective number 15 (To what extent is the training environment appropriate for the student?) with a score of 25, obtained the lowest score according to the students. As a result, the Sports Physiotherapy education program, with its existing course, was evaluated as being desirable. Even though, adding practical and clinical units will help improve the quality of the curriculum. It is suggested that in future research, the teaching and evaluation methods be considered in order to reduce the gap between theoretical knowledge with actual practical performance in the field. By conducting qualitative studies, student experiences can be used to further enrich the curriculum, making it more suitable to the current knowledge of the world. The results of this research are in the context of the universities in Tehran and can not be generalised to other situations.

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