USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN PHYSIOTHERAPY TEACHING IN PORTUGAL

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ABSTRACT

OBJECTIVE: This study aims to carry out a survey regarding the use of Information and Communication Technologies (ICT) in Physiotherapy teaching in Portugal, namely the characterization of the usage of the ICT by the institutions that offer the Physiotherapy course, as well as by Physiotherapy teachers and students. RELEVANCE: The European Region of the World Confederation for Physical Therapy refers in its document European Benchmark Statement that the Physiotherapist should have skills in the area of ICT, so that he/she is able to search for the required evidence to validate his/her practice, as well as managing the data and records stemming from his/her clinical practice. Therefore those skills should be developed during their basic training, and so should teachers be able to introduce the ICT in the teaching process, keeping in mind the institutional framework of this process. SAMPLE: The sample of teachers and students in the school year of 2003/2004 was taken from a population comprising a total of 16 institutions. MATERIAL AND METHODS: A questionnaire was especially set up and was validated by a panel of experts and by a pre-test. This questionnaire was subdivided into 6 dimensions (sample characterization, equipment characterization, usage characterization, attitudes and knowledge, barriers and necessities. STATISTICS: The procedures used were essentially descriptive statistics. RESULTS: Regarding accessing the Internet in the institution, 98% of the teachers and students refer to have access to Internet linked computers. When inquired about the usage of the computer for academic activities, 99% of the teachers and students answered affirmatively, of which 35% of the teachers use it more than 10 hours per week and 28% between 5 to 10 hours. As for the students, the percentage of weekly usage is of 42,6% between 0 and 3 hours and 36,7% between 3 and 5 hours. Furthermore 81% of the inquired teachers and 57,4% of the inquired students referred to fully agree regarding the importance of the usage of the ICT in school context. Although 84% of the inquired teachers reported to have knowledge in the area of the ICT, almost 51% pointed out the lack of specific training for integration/usage of the ICT as being the main barrier in the usage, then followed by the inexistence of strategies that facilitate the integration of the ICT in education/learning (44%). CONCLUSIONS: Through the analysis of the results of this study it is demonstrated that although the good accessibility to the ICT by teachers and students in their institutional and home environment, it is yet scarce due to the lack of specific training in this area. There seems to be the need to create institutional programs and projects that promote the usage of ICT by investing in the training of teachers and through the integration of those skills in the Physiotherapy course.

1. INTRODUCTION

Nowadays individuals are facing a globalized and influenced world by the Information and Communication Technologies (ICT), which according to Hughes, Bellis & Tocque (Hughes et al., 2002) are every support

that storages, retrieves, handles, receives and transmits electronic and digital information, including telecommunications, computers and multimedia technology in every sectors of society. According to Paiva (Paiva, 2002), the educational context is equally under those influences. Any school that doesn't integrate the ICT might become obsolete, because they are of added value in the educational setting to both teachers and students. (Bulhões, 2000)considers that, aside grammar and high school levels, ICT should, identically, endorse radical changes in the university level, by broadening competences and adapting roles. As for Physiotherapy teaching, the *Chartered Society of Physiotherapy* (Physiotherapy, 2002), in the document *Curriculum Framework for Qualifying Programmes in Physiotherapy*, considers that the way students learn has a significant impact on what they learn and how deep is the knowledge acquired. The teaching and learning process is of key importance to the students' preparation for the opportunities and challenges in their following professional practice, either in a qualified occupation, either in the Physiotherapy career. So the *European Region of the World Confederation for Physical Therapy* refers in its document *European Benchmark Statement* (ER-WCPT, 2003) that the Physiotherapist should have ICT competences, so that he/she is able to search for the required evidence to validate their interventions, as well as to process the data and records collected during the clinical practice. Therefore those skills should be developed during their basic training, and so should teachers be able to introduce the ICT in the teaching process, keeping in mind the institutional framework of this process. Bearing in mind what has been previously said, and realizing that we live in a globalized world, where the transmission of information and knowledge has become essential, it seems to be relevant, through this work, to set in motion a reflection about the consequences of the ICT introduction in the educational processes. For that reason, it's of key importance to characterize the way they have been integrated in the Physiotherapy teaching context, considering the several partners involved.

2. METHODOLOGY

The main objective of this work was to characterize how ICT integrate in the Physiotherapy teaching and learning in Portugal, aiming specifically to determine the available technological support, and which were the ICT integration projects in teaching and learning of the Physiotherapy Course, in the several institutions in Portugal, as well as the usage, in an teaching context, of ICT by both teachers and students. For that it was under carried a descriptive study, a survey of transversal and exploratory nature, using 4 questionnaires based on bibliographic review, submitted to a validation before a experts panel and a pre-test. The studied population comprised all the Portuguese institutions that offered the Physiotherapy Course, in the school year of 2003/2004. All the Physiotherapy and Computing Department Coordinators were inquired to characterize the institutions, as well as all the teachers who taught in the Physiotherapy Course (more than de 30 hours per semester) and students from the 1st and 2nd years of the Physiotherapy Course. The data collection took place between June and September 2004 and descriptive statistics were used (frequency, mean, standard deviation).

3. DATA

After the data retrieval the number of respondents was the following: Department of Physiotherapy - 14 (87,7%); Computing Department - 10 (62,2%); Physiotherapy teachers Course (more than de 30 hours per semester) - 119 (36,5%); students from the 1st and 2nd years of the Physiotherapy Course - 982 (69,2%).

4. CONCLUSION

The results of this study seem to point towards a recent and progressive ICT integration where the Physiotherapy Course is taught, because most institutions have ICT contents programmes in their core curricula. Regarding the technological support, all institutions are connected to the Internet, and there is an IT specialized support Department. However there is a lack of usage of these technologies, and we may conclude with this study that ICT are scarcely used in the classroom and that both students and teachers lack specific training in this area. These results contrast with the generic competences that should be acquired in a

Physiotherapy Course as referred in the *European Benchmark Statement* (ER-WCPT, 2003), regarding ICT, namely the ability to use mathematical and information technology competences, to present, organize and adequately data analyse, technology and information management systems usage in order to keep the patients registries and obtain sufficient competences in the evaluation and research processes to find and use the available evidence so that he/she may choose and evaluate his/her intervention in a secure and effective way. Therefore it is essential that teachers and students from the Physiotherapy Course realize the ICT importance in their educational process, and by that motivating themselves for the pursuit of competences in this field. It is also necessary that the institutions set forward strategies that consider the ongoing training of teachers and students, that organize specific areas that make the path easy for the usage of ICT, that establish partnerships that will ease information exchange about ICT integration experiences and the development of educational *software* especially in Physiotherapy.

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