THE USE OF EBM AMONG THE REHABILITATION PROFESSIONALS OF THE CAMPANIA REGION

ABSTRACT

Scientific Research is carried out through various scientific studies based on the observation of specific populations. This form of research is known as epidemiology and has been used for centuries mainly in the field of public health. In close connection with the science and research, there is rehabilitation which represents a constantly evolving discipline. By its very nature it is not able to demonstrate nor produce undisputed absolute truths, rather it checks consistently and as best as possible hypotheses on the different aspects of the given method and when necessary he questions himself by reviewing theories in the light of the new data and observations. The Professional, therefore, with the insertion of Scientific knowledge in his own clinical practice, is called to ask himself a clinical question and to search for answers through a critical analysis on the use of such evidence. The main purpose of the work was to investigate the relationship between rehabilitation professionals and Scientific Research by identifying positive and negative factors and possible solutions to the findings. The methods of data collection has allowed a high adhesion by the rehabilitation professionals of the Campania Region. The data collected allowed to identify a profile of the professionals claiming to have conducted a postgraduate research study. Furthermore, it was possible to identify the perceived and critical issues in daily practice such as lack of incentives and poor training on how Scientific Research is applied.

INTRODUCTION

To date, it's evident in the healthcare context how Evidence Based Medicine increasingly plays a key role in ensuring quality, appropriateness and efficiency of healthcare. The survey is aimed at health professionals in the rehabilitation area working in the Campania Region. More precisely, the research project it was proposed to investigate what percentage of health professionals have ever carried out Scientific Research of any kind of postgraduate period, by evaluating how much they know and apply scientific evidence in their professional activity. The survey, has thus allowed to obtain the real state of health professionals of the rehabilitation of the Campania Region with regard to Scientific Research.

Methodology and materials

To undertake an observational study on these topics, a questionnaire addressed to a well-defined sample, the Professionals in the rehabilitation area working in the Campania region. The questionnaire is divided into four sections, each of which consist of multiple choice questions or open answers. The administration took place through a CAWI (computer assistance web interviewing) interview. This structure was used as well as the telematic method of dissemination of the questionnaire, to facilitate the collaboration of interviewees and make the analysis and data collection more effective and reliable.

Results and discussion

459 units joined the study of which: 35% speech therapist 31% physiotherapist 10% neuro and physiotherapists of developmental age 8% occupational therapist 7% professional educators 4% psychiatric rehabilitation technicians 3% orthoptists 2% podiatrists. The collected data were analyzed and processed both in aggregate form and in specific form for the individual professions for each of the four sections investigated. In reference to one of the aims of the work that is the evaluation of knowledge on EBM is the application of Scientific evidence in clinical practice by professionals, the data refers to a knowledge and the relevant application in about 60% of the subjects. In addition, the summery of the database consultation and the frequency of the iron use, is of considerable interest: In fact, about 85% say that they know how to consult them but only 29% report doing it frequently. Having regard also to the additional objectives particularly relevant data emerge as about 90% of the rehabilitation healthcare professionals did not carry out any type of research study after University course: in particular speech therapists, educators, podiatrist and psychiatric rehabilitation technicians. Despite this, 70% of the participants reported that...
Finally, the accurate analysis of the data highlights the importance of a university education that will integrate into the 3 years degree courses a more specific methodology and direction and aimed at undertaking research paths. However there remains significant relationship with other professions and with other European countries where health professionals have the opportunity to continue their training courses with research doctorates and have a greater availability for the use of technological material resources. So, from data processing, rehabilitation feels the need to reflect more on the modern approach to personal care and on choices aimed at improving the assistance and research and training activities.

The Health worker must have adequate tools to be able to critically undertake the results of scientific research, to translate his knowledge into appropriate practice styles (Evidence best practice) and measure the impact of your care activity on the person. If the new language of medical sciences presupposes knowledge of the principles of evidence it is not possible to avoid this cultural challenge and the practice of EMB from this point of view should provide a frame of reference with which we can constantly compare.

The world of research will find in it the stimulus to raise the quality of scientific contributions, based on stricter methodological criteria for data collection and study and for health professionals will be the opportunity to assert with greater scientific evidence their own specificity and professional competence on the common ground of new therapies.

Fig. 2 - Possible factors which lead to a lack of tools to carry out research

they are interested in undertaking a type of research study but in 80% of cases they show the lack of tools to be able to use. In the identification of possible causes related to a significantly reduced percentage of studies performed after University course, Health professionals have given greater motivation by indicating the lack of planning and strategic investments with homogeneous percentage (optimization search facilities, access to instrumentation, paid databases and resources of excellence).

Fig. 3 - Profile of the professionals who carried out post-graduate research studies
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| Tab. 6 – Collected data relating to scans with optimized preset on Patient 5. |
|---|---|---|
| **Patient 5** | Gluteus | Popliteal Fossa | Femoral Quadriceps |
| **Gain** | sagittal | 55% | transverse | 55% | sagittal | 48% | transverse | 48% | sagittal | 55% | transverse | 54% |
| **Depth** | 4,5 cm | 4,5 cm | 5 cm | 5 cm | 4 cm | 3,5 cm |
| **Focus** | 2,5 cm | 2,5 cm | 3 cm | 3 cm | 2,25 cm | 2 cm |
| **Dynamic Range** | 45 dB | 45 dB | 45 dB | 45 dB | 44 dB | 46 dB |

| Tab. 7 – Average of the collected data relating to scans with optimized preset. |
|---|---|---|
| **Average** | Gluteus | Popliteal Fossa | Femoral Quadriceps |
| **Gain** | sagittal | 52% | transverse | 53% | sagittal | 50% | transverse | 50% | sagittal | 51% | transverse | 49% |
| **Depth** | 4,5 cm | 4,5 cm | 4,5 cm | 4,5 cm | 4,5 cm | 3,9 cm | 4,5 cm | 3,8 cm |
| **Focus** | 2,6 cm | 3 cm | 2,35 cm | 2,3 cm | 2,13 cm | 2,1 cm |
| **Dynamic Range** | 46,4 dB | 46,4 dB | 46,4 dB | 47,2 dB | 46,4 dB | 44,6 dB |

| Tab. 8 – Collected data relating to scans performed by a medical professional on Patient 1. |
|---|---|---|
| **Patient 1** | Gluteus | Popliteal Fossa | Femoral Quadriceps |
| **Gain** | sagittal | 45% | transverse | 39% | sagittal | 45% | transverse | 47% | sagittal | 47% | transverse | 47% |
| **Depth** | 5 cm | 5 cm | 5 cm | 5,5 cm | 5 cm | 5,5 cm |
| **Focus** | 2 cm | 2,5 cm | 3 cm | 3,5 cm | 2 cm | 2 cm |
| **Dynamic Range** | 55 dB | 55 dB | 55 dB | 55 dB | 55 dB | 55 dB |

| Tab. 9 – Collected data relating to scans performed by a medical professional on Patient 2. |
|---|---|---|
| **Patient 2** | Gluteus | Popliteal Fossa | Femoral Quadriceps |
| **Gain** | sagittal | 54% | transverse | 53% | sagittal | 53% | transverse | 52% | sagittal | 46% | transverse | 41% |
| **Depth** | 7 cm | 7 cm | 7 cm | 7 cm | 4,5 cm | 4,5 cm |
| **Focus** | 4,5 cm | 4,5 cm | 4,5 cm | 3,5 cm | 2,5 cm | 2,5 cm |
| **Dynamic Range** | 56 dB | 56 dB | 56 dB | 56 dB | 56 dB | 56 dB |

| Tab. 10 – Collected data relating to scans performed by a medical professional on Patient 3 |
|---|---|---|
| **Patient 3** | Gluteus | Popliteal Fossa | Femoral Quadriceps |
| **Gain** | sagittal | 54% | transverse | 54% | sagittal | 53% | transverse | 52% | sagittal | 56% | transverse | 55% |
| **Depth** | 4,5 cm | 4 cm | 4,5 cm | 4,5 cm | 5 cm | 5 cm |
| **Focus** | 2,5 cm | 2,25 cm | 2,75 cm | 3,25 cm | 3 cm | 3 cm |
| **Dynamic Range** | 48 dB | 43 dB | 44 dB | 44 dB | 45 dB | 44 dB |
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Tab. 11 – Collected data relating to scans performed by a medical professional on Patient 4.

Tab. 12 – Collected data relating to scans performed by a medical professional on Patient 5.

Tab. 13 – Average of the collected data relating to scans performed by a medical professional.

Tab. 14 – Average of the collected data using the optimized preset.

Tab. 15 – Average of the collected data using the optimized preset.

Tab. 16 – Average of the collected data relating to scans performed by a medical professional.

Tab. 17 – Gain (%) comparison in the three protocols.

Tab. 18 – Depth (cm) comparison in the three protocols.

Tab. 19 – Focus (cm) comparison in the three protocols.

Tab. 20 – Dynamic range (dB) comparison in the three protocols.
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