

Editorial

On Methodology and Statistics

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The White book on physical and rehabilitation medicine in Europe,¹ states that - *PRM is guided by a bio-psycho-social approach* – from the research point of view it leads to a wide collection of variables and determinants in this area. The identification of human characteristics that contribute to the diagnosis and assessment of condition evolution offers a challenge since it involves three classes of information — biometric, psychometric, and sociometric. Biometric information comprises human physiological data, as body weight, blood tests like biochemical analysis etc. Psychometric information comprises traits of human cognition and emotion. Sociometric information covers organizational, cultural and society behaviors.

The combining of these three sources of information poses difficulties on the development of new tests and approaches concerning the promotion of physical and cognitive rehabilitation. Firstly, because study design has to account for which variables are important and how is it possible to collect them. Patients usually arrive referred by other medical specialists meaning that there is no access to “fresh” (primary) data. Secondly, because study model has to define the role of each variable (predictor, moderator, mediator, latent...), and only retains the significant information. Finally, rehabilitation is a time process conducting to

longitudinal studies and follows ups, therefore analysis has to include repeated measures.

A PRM project can be a quite cumbersome process since it involves a lot of information and resources. Forums like the Society and its journal can promote team work and lead to solid work from the very beginning.

Studies with small convenience samples, no covariates, or no follow up can only show a local scenario making any generalization impossible and in consequence no changes on clinical practice.

To produce quality scientific research, great investment has to be made on methodology and design to plan the phases of the study – sample, variables, duration, model, analysis etc. A good project can overcome some common weaknesses such as clinical vs statistical significance and low statistical power. Besides, it sets the foundations of new approaches and better results.

With a world of increasing globalization and rapid social and technological changes, research in PRM can bring quality of life to people by developing new instruments to promote and maintain health and wellbeing.

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Referências / References:

1. Union Européenne des Médecins Spécialistes. Section of Physical and Rehabilitation Medicine. Brussels: UEMS; 2013.