HEALTH MEASUREMENT SCALES- A PRACTICAL GUIDE TO THEIR DEVELOPMENT AND USE. OXFORD PRESS. 5A.

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In the 5th edition of the book "Health Measurement Scales - A Practical Guide to Their Development and Use", David L. Streiner, Geofrey R. Norman, and John Cairney update the main work that guides studies focused on constructing and validating instruments used in epidemiological studies worldwide. Their academic efforts coincide with the exponential increase in the publication of specific studies in instrument development and validation in the same period.

One of the main aspects to be considered when analyzing epidemiological studies is the data accuracy. Assuming that epidemiology involves a measurement exercise, the use of valid instruments for data collection becomes challenging, especially when constructs are considered, which are characteristics of human life that cannot be directly evaluated, such as intelligence, pain, quality of life, and others.

In the first edition (1989), David and Steiner highlighted important aspects of this study. In the first situation, evaluating the validity of a scale or instrument for data collection consists of developing a new scale when other tools assessing the same or similar attributes are already available. In a second situation, some references are built to evaluate attributes that were not previously measured.

Therefore, the validation process consists of applying the experimental instrument (or under analysis) along with an already valid instrument (i.e., the gold standard) to a sample to correlate them. The gold standard means the measurement is a reference for certain attributes, such as measuring blood pressure with a mercury column tensiometer. This process is described in the literature as convergent validation, criterion validation, and concurrent validity. However, this method has two limitations. The first concerns justifying the need for a new scale when others already exist, and the second refers to the difficulty of identifying flaws when the correlation between the scales is not perfect.

In the second situation, the validation involves measuring attributes that are not yet measurable, which better justifies the construction of a new scale. This process is described in the literature as construct validity. Although the validation of a scale that has no previous valid instruments may seem impossible, a validation strategy consists of applying the instrument under analysis to two or more groups in which different levels of the attributes are expected.

If the correct differentiation of admittedly different conditions can be identified using the proposed scale, the validity hypothesis can be reinforced. However, given the need to build this type of validity, a single study is not enough to validate the new scale, even if it was well-planned and robust; thus, other convergent studies are needed. A universally recognized methodology must be consistently followed for this purpose, and this is the main contribution of Streiner and Norman.

By including John Carrey in the 5th Edition, David Streiner and Geoffrey Norman point out that its updating will be permanent, with the expansion regarding the chapter on Item Response Theory (IRT), the most discussed technique today with the epistemic density and considerations that the topic requires, being absolutely crucial. Similar broadening and deepening can be seen in the chapter on "Methods of Instrument Administration" and the inclusion of a chapter on reporting results in validation studies. Therefore, for those interested in this area of knowledge, this book can be considered essential reading for those interested in this area.

REFERENCES

1. STREINER, DL; NORMAN, GR; CAIRNEY, J Health measurement scales-a pratical guide to their development and use. 5a edition. Oxford Press. Oxford, United Kingdon, 2015, p. 391.