

SPR - WORKSHOP





Speaker: Giorgio TASCA, Ph.D., C. Psych.

Visiting Professor, Human & Social Science Dpt., University of Bergamo, Italy

Associate Professor in Clinical Psychology, Member of the Faculty of Postdoctoral and Graduate Studies at the University of Ottawa, Canada Director of Clinical & Research, Centre for the Treatment of Eating Disorders, Ottawa Hospital, Canada

Chairperson: Angelo COMPARE, Ph.D.

Assistant Professor, Human & Social Science Dpt., University of Bergamo, Italy

The Society for Psychotherapy Research - Italian Chapter and University of Bergamo together present this workshop & streaming event

Introduction to Hierarchical Linear Modeling

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La partecipazione ai workshops è gratuita. Il numero di posti in presenza è limitato. I video dei workshops verranno caricati sulla piattaforma You The https://goo.gl/xuS8Di È richiesta una mail d'iscrizione da inviare a: <u>seminari.unibg@gmail.com</u>





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UNIBG-SPR WORKSHOP

Introduction

The goal of this workshop is to introduce to the participant to basic, intermediate, and advanced concepts related to hierarchical linear modeling. I will use a running example of a psychotherapy research study to illustrate these concepts. Hierarchical linear models (i.e., mixed or multilevel regression models) represent an important evolution in the analysis of hierarchically structured data and change/ development data. Data in psychotherapy research studies can be hierarchically structured (i.e., patients nested within groups; patients nested within therapists; or patients and therapists nested within sites). Nested data may violate the assumption of independence of observations in parametric tests; and this violation results in drastically increased Type I error rates. In addition, psychotherapy researchers are often interested in change or development over time (e.g., pre to post to follow up; or the development of process variables across multiple sessions). Traditional methods of assessing change and development are often unsatisfactory because of violations of statistical assumptions and because traditional methods do not model individual change. Modern longitudinal data analytic methods, including hierarchical linear models, provide an opportunity to model dynamic fluctuations in individual data across time.

Selected References

- Gallop, R., & Tasca, G.A. (2009). Multilevel modeling of longitudinal data for psychotherapy researchers: II. The complexities. Psychotherapy Research, 19, 438-452.

Stephen W. Raudenbush, & Anthony S. Bryk. (2002).

- Hierarchical linear models: Applications and data analysis methods (2nd ed.). London: Sage.

Singer, J. D., & Willett, J. B. (2003). Applied longitudinal data analysis: Modeling change and event occurrence. Oxford university press.

- Tasca, G.A., & Gallop, R. (2009). Multilevel modeling of longitudinal data for psychotherapy researchers: I. The basics. Psychotherapy Research, 19, 429-437.

- Tasca, G.A., Illing, V.A., Joyce, A., & Ogrodniczuk, J. (2009). Multilevel models for nested change data: A guide for group treatment researchers. Psychotherapy Research, 19, 453-461.

Learning Objectives

The learner will be able to:

1. To learn the fundamentals of mixed model regressions and when to apply these techniques in psychotherapy research.

2. To understand problems related to nested data and possible ways of correcting for these issues.

3. To understand problems with traditional methods of longitudinal data analysis and how mixed model regressions address some of these shortcomings.

4. To be able to consider new research questions based on mixed model regression techniques.

Video sharing: You Tube <u>https://goo.gl/xuS8</u>Di

Schedule

9:00-9:30 - Introduction

Prof. Compare Angelo, Chairperson, UNIBG Prof. Tasca Giorgio, Visiting professor, UNIBG

9:30-10:00 - Regression models and equations

10:00-10:30 - Hierarchically Nested Data and Designs

a. Sources and consequence of nonindependenceb. Advantages of multilevel modeling

10:30-11:00 Break

11:00-12:30 - Data Analysis of Hierarchically Nested Data

- a. Testing for dependence in the data
- b. Data analytic approaches
- c. Other approaches to addressing data dependence

12:30-14:00 - Lunch

14:00-14:30 - Review of Traditional Approaches to Longitudinal Analyses

14:30-16:00 - Longitudinal Data Analysis with Multilevel Models

- a. Advantages to multilevel models
- b. A psychotherapy research example
- c. Multilevel model for longitudinal data

16:00-16:30 *Break*

16:30-17:30 - Examples of Models, Data Files, and Outputs Using HLM Software

Intended Audience

Psychotherapy researchers and graduate students in psychology. The participant should have basic knowledge of regression equations. Intermediate to advanced.

Where

h. 9.00-12.30 - Via Moroni, Bergamo, Aula 6 h. 14.00-17.30 - Via dei Caniana, Bergamo Aula 2 - Sala Galeotti