SW 712: Advanced Statistics in Social Work

SOCIAL WORK

This course will cover a wide range of research situations that require longitudinal and mediation analyses, comparisons between groups, and analyses that include data from multiple sources such as from parents, teachers, and children. The course will focus on using the Structural Equation Modeling (SEM) analyses, a widespread approach that gained popularity from the early '80s. SEM merges confirmatory factor analysis with path analysis and provides means for constructing, testing, and comparing comprehensive structural path models as well as comparing the goodness of fit of models and their adequacy across multiple groups (samples). Among other advantages of SEM over the traditional path analysis is that it provides adjustment for the relative unreliability of the observed measures, overall goodness of fit measures, and tests for comparing models. Without adjustment for reliability, results from traditional path analyses confound the substantive contribution of predictors with their relative methodological strength as indicated by their reliabilities. This confounding may lead to seriously flawed conclusions in the interpretation of the results. This course will cover the conceptual and technical issues relevant to the application of Structural Equation Modeling. Following the presentation of major conceptual issues, five basic structural models will be described in detail. The models vary from simple to more complex ones. The description and discussion of the models will provide students with the knowledge and skills to apply SEM techniques using Stata software for analyzing, evaluating, and reporting results produced by this analytic method. This knowledge is easily transferable to the use of EQS, LISREL, or AMOS software. Course work will require the students to construct and test a structural model using their own data or data from available data sets and produce a paper reporting their analysis.

3 Credits

Prerequisites

- SW 702: Research Design in Social Work
- SW 705: Applied and Inferential Statistics

Instruction Type(s)

- Lecture: Lecture for SW 712

Subject Areas

- Social Work

Related Areas

- Social Work, Other

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