探討不同統計方式分析縱貫性研究之成效

Comparing Longitudinal Effects of an Intervention by Different Statistical Approaches

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摘要

縱貫性研究經常使用重複性測量變異量分析(Repeated measure ANOVA)與個人化回歸模式分析(Individual Regression Analysis)進行資料的分析及處理。本文籍由 Chang (2006)之研究資料作爲案例，分析兩種應用方式之相似及相異處，並探討其優缺點，以提供未來研究資料分析之參考。本文主要目的是探討餵食訓練對照顧服務員在知識及態度等變項上的成效。本文使用 Repeated measure ANOVA 分析，結果發現實驗組比控制組在接受訓練後，僅有知識及意圖呈現統計上的顯著改變。而採用 Individual Regression Analysis 方式分析，發現實驗組在知識、態度、認知行爲控制及意圖無的改變型態均與控制組呈現統計無的顯著不同。因此，Individual Regression Analysis 對變項的改變較具敏感度且可成爲未來在分析縱貫性資料的選擇。

Abstract

Repeated measures ANOVA and individual regression analysis are used in longitudinal data. Data from Chang (2006) study was illustrated the similarities and differences between them. The purpose of study was to test effects of a training program. Findings from RMANOVA concluded that treatment group had better knowledge ($F=56$, $p< 0.001$) and greater intention (belief: $F=4.4$, $p=0.03$) than control group. No conclusions could be drawn regarding direction, magnitude, and timing of change. Results from IRA indicated that there were significantly different patterns of change on knowledge ($t=-4.8$, $p< 0.001$), attitude ($t=1.8$, $p=0.07$), perceived behavior control ($t=1.9$, $p=0.06$), and intention (freq.: $t=-2.3$, $p=0.02$; beliefs: $t=-2.7$, $p=0.01$) between two groups. IRA and use of both methods as complementary are suggested.