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**Using Path Analysis in Educational Program Evaluation**

**Presenting Authors**

Dr Liam O’Hare, and Dr Donncha Hanna

**Affiliation**

Centre for Evidence and Social Innovation, Queen’s University Belfast

**Country of residence**

Northern Ireland

**Objectives/aims**

The aim of this paper is to demonstrate the utility of the statistical approach Path Analysis during educational program evaluation. The paper will demonstrate how Path Analysis can be used in both the analysis of programme effects (i.e., outcome evaluation) and the investigation of program processes (i.e., process evaluation) including exploring a program’s logic model and it’s constituent theories of change. A worked example will show how Path Analysis aided ‘looking inside the black box’ of programme processes in an early years afterschool social learning program, which had led to negative effects on outcomes for both the parents and children enrolled in the program.

**Methods**

The study uses an archived data-set of a previously conducted randomised controlled trial (O’Hare et al. 2015) that found that an after-school programme had caused negative effects on the intervention group’s outcomes (i.e., parenting and child behaviour). Initially, the paper will show how Path Analysis was used to replicate the initial study findings (outcome evaluation). Then it will describe how Path Analysis was used to explain the program processes that led to these negative effects (process evaluation). The Path Analysis incorporated outcome measures (both proximal and distal) and implementation measures.

**Main findings**

The Path Analysis model successfully replicated the initial study outcome evaluation findings. Furthermore, the Path analysis identified that differential exposure to the programme (i.e., dosage) by parents and children led to negative changes in proximal outcomes of parenting style that had knock on effects on more distal outcomes of increasing anti-social behaviour of the children. These results suggest that the program set up social learning competition between parents and their children rather than social learning cooperation. Overall, the work suggests that Path Analysis is an untapped technique that is sufficiently flexible for use in the evaluation of complex interventions such as educational programs.