
CONFERENCE ABSTRACT

What is the Added Value of Social Network Analysis when Developing and Evaluating Complex Interventions

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Introduction

Most complex interventions target upon a network of multiple (health care) professionals. Social Network Analysis (SNA) is a powerful technique that aims to characterize and study how social relationships within a network establish and evolve. This study identified the added value of using SNA in the developing and evaluation of complex interventions.

Theory/Methods

A scoping review was conducted by identifying the research question, identifying relevant studies, selecting studies, charting the data; and collating, summarizing and reporting the results. EMBASE, PsycInfo, CINAHL and PubMed were searched with a timeframe of 15 years. Complex healthcare intervention studies using SNA were included. The study selection and data extraction were conducted by two researches independently. We identified the characteristics, the reported strengths and limitations and reported implications of SNA application in complex intervention studies.

Results

The search identified, after removal of duplicates, 2466 studies. After abstract screening, 40 full text studies were assessed for eligibility resulting in 25 studies that were included. Fifteen studies used SNA to examine effectiveness, one study in examining acceptability, one in identifying interventionists, five in process evaluation studies, and three in implementation studies.

Reported strengths of SNA application were that primary data can be collected through several methods, and the easy feasibility of data collection and visualization of results. A reported limitation in data analysis was the challenge for untrained researchers to use SNA programs.

Reported implications of using SNA when developing complex interventions was identifying key individuals who can be harnessed for dissemination of innovations or selected as interventionists. When evaluating complex interventions, SNA can support the conclusions from traditional analysis and generated new information such as revealing important intervention dynamics that would not have been found with classical methods.

SNA allows analysis of the network as whole system and on individual level. When implementing, SNA can provide understanding of the barriers and/or facilitators of the diffusion and implementation of the intervention which offers actionable insights.

Discussion

The application of SNA is wide but at the same time very underutilized in complex intervention research. The optimal use of SNA in developing and evaluating complex interventions is therefore currently underexposed.

Conclusion

SNA is a widely applicable method that can be used in different phases of complex intervention research. Studies reported more strengths than limitation in the application of SNA. The reported implications emphasized the diverse and added value of using SNA in the development and evaluation of complex interventions.

Lessons learned

The potential value of SNA in unravelling and characterizing networks in the development and evaluation of complex interventions needs more attention in health care research.

Limitation

There is no sharp boundary between simple and complex health care interventions. Therefore, search terms that widely cover complex interventions in health care were used and a hand search of reviews was performed.

Suggestion for future research

Routine use of SNA in developing and evaluating complex interventions could gain actionable insights which are useful in a transactional context as in complex interventions.