4ᵗʰ International Conference and Exhibition on
Biometrics & Biostatistics

November 16-18, 2015   San Antonio, USA

Abbas F Jawad

University of Pennsylvania, USA

Cluster randomization trials in schools setting: Design and analysis

Cluster randomization trials (CRT) are commonly used in the evaluation of non-therapeutic interventions such as improvement of education programs, health educations and Enovation in behavioral and environmental improvement in schools and communities. Cluster as a unit of randomization varies in sizes; it could be households or families, entire communities, religious institution, hospitals units, classrooms. Unlike individual randomized trials, CRT can measure the interventions effect on a targeted group of individuals. However, it is prone to be less efficient and weaker statistical power hence requires more clusters. During the past two decades, CRT designs and methodology has been intensely improved, although scattered, it cover a wide range of applications. Fisher's theory of experimental designs assumed that the randomization unit is the same unit of analysis. The uniqueness of CRT is that the randomization unit is clusters, and the analysis target clusters' members. In school setting, measurements obtained from students within a school are expected to be more correlated than measurements obtained from students in different schools, similarly, for classes within schools. Such correlation should be accounted for during the statistical analysis stage. Another source of challenge is related to the collaboration of the gatekeepers and stakeholders in these schools, consistent reliability of tools used, consistency among therapists and teachers. Also, seasonal effects as well as uncontrolled school 'changes related to personnel's and budget cutting. CTR require approval of the ethical committees' designated within schools, which requires better understanding of study design since gatekeepers can't consent on behalf of students.

Biography

Abbas F Jawad has earned his MSc (1986) and PhD (1993) from the Graduate School of Public Health, University of Pittsburgh, USA. He is an Associate Professor of Biostatistics in Pediatrics at the University of Pennsylvania, Perelman School of Medicine, and Department of Pediatrics at the Children's Hospital of Philadelphia. He has published more than 100 papers in reputed journals and has been providing biostatistical support for medical pediatric research for more than 20 years.

jawad@email.chop.edu

Notes:

J Appl Computat Math 2015

ISSN: 2168-9679, JACM an open access journal

Biostatistics 2015
November 16-18, 2015

Volume 4 Issue 5

Page 25