**Abstract**

**Purpose of review:** Violence prevention research has enhanced our understanding of individual and community risk and protective factors for aggression and violence. However, our knowledge of risk and protective factors for violence is highly dependent on observational studies, since there are few randomized trials of risk and protective factors for violence. Observational studies are susceptible to systematic errors, specifically confounding, and may lack internal validity.

**Recent findings:** Many violence prevention studies utilize methods that do not correctly identify the set of covariates needed for statistical adjustment. This results in unwarranted matching and restriction leading to further confounding or selection bias. Covariate adjustment based on purely statistical criteria generates inconsistent results and uncertain conclusions.

**Summary:** Conventional methods used to identify confounding in violence prevention research are often inadequate. Causal diagrams have potential to improve the understanding and identification of potential confounding biases in observational violence prevention studies, and methods like sensitivity analysis using quantitative bias analysis can help to address unmeasured confounding. Violence research studies should make more use of these methods.