

Systematic Review of Quantitative Risk Assessment Tools and Their Effect on Racial Disproportionality in Child Welfare Systems

Authors : Bronwen Wade

Abstract : Over the last half-century, child welfare systems have increasingly relied on quantitative risk assessment tools, such as actuarial or predictive risk tools. These tools are developed by performing statistical analysis of how attributes captured in administrative data are related to future child maltreatment. Some scholars argue that attributes in administrative data can serve as proxies for race and that quantitative risk assessment tools reify racial bias in decision-making. Others argue that these tools provide more “objective” and “scientific” guides for decision-making instead of subjective social worker judgment. This study performs a systematic review of the literature on the impact of quantitative risk assessment tools on racial disproportionality; it examines methodological biases in work on this topic, summarizes key findings, and provides suggestions for further work. A search of CINAHL, PsychInfo, Proquest Social Science Premium Collection, and the ProQuest Dissertations and Theses Collection was performed. Academic and grey literature were included. The review includes studies that use quasi-experimental methods and development, validation, or re-validation studies of quantitative risk assessment tools. PROBAST (Prediction model Risk of Bias Assessment Tool) and CHARMS (CHECKlist for critical Appraisal and data extraction for systematic Reviews of prediction Modelling Studies) were used to assess the risk of bias and guide data extraction for risk development, validation, or re-validation studies. ROBINS-I (Risk of Bias in Non-Randomized Studies of Interventions) was used to assess for bias and guide data extraction for the quasi-experimental studies identified. Due to heterogeneity among papers, a meta-analysis was not feasible, and a narrative synthesis was conducted. 11 papers met the eligibility criteria, and each has an overall high risk of bias based on the PROBAST and ROBINS-I assessments. This is deeply concerning, as major policy decisions have been made based on a limited number of studies with a high risk of bias. The findings on racial disproportionality have been mixed and depend on the tool and approach used. Authors use various definitions for racial equity, fairness, or disproportionality. These concepts of statistical fairness are connected to theories about the reason for racial disproportionality in child welfare or social definitions of fairness that are usually not stated explicitly. Most findings from these studies are unreliable, given the high degree of bias. However, some of the less biased measures within studies suggest that quantitative risk assessment tools may worsen racial disproportionality, depending on how disproportionality is mathematically defined. Authors vary widely in their approach to defining and addressing racial disproportionality within studies, making it difficult to generalize findings or approaches across studies. This review demonstrates the power of authors to shape policy or discourse around racial justice based on their choice of statistical methods; it also demonstrates the need for improved rigor and transparency in studies of quantitative risk assessment tools. Finally, this review raises concerns about the impact that these tools have on child welfare systems and racial disproportionality.

Keywords : actuarial risk, child welfare, predictive risk, racial disproportionality

Conference Title : ICCAN 2024 : International Conference on Child Abuse and Neglect

Conference Location : Barcelona, Spain

Conference Dates : June 13-14, 2024