Introducing Preventing Perinatal Depression, Substance Use, and Self-Harm Ideation to Design Injury Related Maternal Early Warning Systems and Reduce Maternal Morbidity and Mortality

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Introduction

Respond to the trans-NIH Implementing a Maternal health and PRegnancy Outcomes Vision for Everyone (IMPROVE) initiative

Homicide, suicide, and drug overdose are the leading and preventable causes of pregnancy-associated deaths in the U.S.1 However, their risk factors, such as maternal depression (MD), substance use (SU), and self-harm ideation (SHI) have not been evaluated in maternal early warning systems for screening and prevention.

Relationship education is an evidence-based preventive intervention to address marital distress and partner violence.2

Objectives: To evaluate the effectiveness of a nurse home visiting program augmented with comprehensive relationship education on preventing MD, SU, and SHI.

Methods

We performed secondary analyses of a longitudinal randomized controlled trial with data collection from 2007 to 2010.3,4 In the Nurse Family Partnership (NFP) program in Oregon, 238 first-time, low-income pregnant women were randomized to a standard or augmented program when nurses delivered the Within My Reach comprehensive relationship education curriculum.

Results

Maternal characteristics and 3 risk factors were in Table 1. The augmented program did not reduce any of 3 targeted risk factors over the two-year follow-up. The wave and intervention interaction terms were not significant (p values >0.05) and had limited powers (e.g., <10%) in power analyses.

Conclusions

The NFP program augmented with relationship education did not affect MD, SU, or SHI.

These findings inform efforts to build a consortium, engage fathers, enhance coparenting, identify settings, and design and implement a hybrid effectiveness-implementation pilot trial of injury related maternal early warning systems to prevent these risk factors collectively.

Our study responds to RFA-MH-22-200 to address mental health disparities through aggregating and mining data sets and promote scientific equity.

Methods (Continued)

At pregnancy, and 1-year and 2-year follow-up, research assistants interviewed mothers using the Edinburgh Postpartum Depression Scale including an SHI item, Alcohol Use Disorder Identification Test, and Drug Abuse Screening Test. Multilevel zero-inflated negative binomial regression models and the proportional odds model of generalized estimating equations were performed, adjusting for age, race/ethnicity, educational level, and nativity status.

References

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