

CONFERENCE ABSTRACT

Social Capital and Migrant Maternal Depression. A Multilevel Bayesian Latent Variable Spatial Logistic Regression in South Western Sydney, Australia

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Introduction: We take as our starting point the proposition that antenatal and postnatal maternal stress and depression adversely impact on the developmental origins of health and disease. We cannot yet be certain of the biological level mechanisms that alter the genotypic and phenotypic response to perinatal adversity but the triggering of genetic, neuroendocrine and physiological mechanisms but psychological and nutritional stress are regarded as strong contenders. Little is known, however, of the role played by ecological constructs such as social capital.

Theory/Methods: In the study reported here we use multilevel Bayesian hierarchical spatial logistic regression to examine relationships between those ecological latent constructs and depressive symptoms among migrant mothers, while controlling for individual level co-variants. Migrant mothers (n=7256) delivering in 2002 and 2003 were assessed at 2-3 weeks after delivery for risk factors for depressive symptoms. The individual-level binary outcome variables were Edinburgh Depression Scale (EDS) >9 and >12. The association between social, demographic and ecological factors and aggregated outcome variables were investigated using exploratory factor analysis and Bayesian methods

Results: Migrant mothers had higher rates of depressive symptoms in communities with higher concentration of mothers born in Australia. The reverse was also true. The exploratory factor analysis identified six latent constructs: neighbourhood adversity, social cohesion, health behaviours, housing quality, social services, and social capital. Migrant mothers were at higher risk of depressive symptoms if they were living in communities with strong group-level social capital. .

Conclusions: These findings suggest that bonding capital may be a health liability rather than [the] force for health promotion that it is often assumed to be. The findings have implications for the distribution of health services including early nurse home visiting, which has recently been confirmed to be effective in preventing postnatal depression.

Lessons Learned: The study reported here was used to design and integrated care initiative in South Western Sydney. The paradoxical findings with respect to minority groups and social capital were used to inform intervention design. The methods used here can readily inform critical realist informed intervention designs.

Limitations: There were methodological limitations in that the latent variables were developed using frequentist rather than Bayesian methods.

Suggestions for future research: Analysis using multilevel spatial latent class analysis will add to our understanding of our population groups are influenced by population level social capital.

Keywords: critical realism; multilevel spatial analysis; vulnerable populations
