International Journal of Population Data Science

Journal Website: www.ijpds.org

Mental health multimorbidity, intimate partner violence and risk of delivery of small vulnerable newborn in pregnant women in Northern Ireland

Lisa Kent[1], Kelly-Ann Eastwood[2,3], Kathryn M Abel[4,5], Krishnarajah Nirantharakumar[6], and Aideen Maguire[1]

[1]ADRC NI, Queen's University Belfast, Belfast, United Kingdom

[2]Fetal Medicine Unit, St Michael's Hospital, University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, United Kingdom

[3]Centre for Public Health, Queen's University Belfast, Belfast, United Kingdom

[4]Centre for Women's Mental Health, University of Manchester, Manchester, United Kingdom

[5]Greater Manchester Mental Health NHS Foundation Trust, Manchester, United Kingdom

[6]Department of Applied Health Sciences, University of Birmingham, Birmingham, United Kingdom

Children born preterm, small for gestational age or low birthweight are at high risk of adverse outcomes in later life. This study aimed to examine the risk of having a small vulnerable newborn (SVN) in relation to maternal mental health multimorbidity and exposure to intimate partner violence (IPV).

Pregnancy records (NIMATS) were linked to community-dispensed prescriptions (EPD) and hospital diagnoses (PAS) for all Northern Ireland births between Jan 2011 and Dec 2021. Data for this project was provided by the HSC Honest Broker Service; any views or opinions presented are solely those of the author. IPV, maternal covariates, and SVN (preterm, small for gestational age, or low birthweight) were ascertained through maternity records. Mental health multimorbidity ($\geq$2 mental health conditions) was ascertained via medications or ICD-10 diagnosis codes. Modified Poisson regression was used to examine the likelihood of SVN given exposure to IPV and mental health multimorbidity.

From 248,645 eligible pregnancies, 11,388 (4.58%) women disclosed IPV (active: n=3,713, 1.49%; historical: n=7,675, 3.09%). The group with highest prevalence of IPV were teenage mothers (n=995, 12.2%). Mental health multimorbidity was seven times more prevalent in those who disclosed IPV compared to those who did not (n=1,900, 16.68% vs n=5,540, 2.34%). Fully adjusted regression models show an increased risk of SVN in those who reported active IPV (RR=1.28, 95%CI:1.20-1.37) and historical IPV (RR=1.25, 95%CI:1.18-1.31) independent of the number of coexisting mental health conditions and sociodemographic covariates. Mental health multimorbidity also increased the risk of SVN (RR=1.48, 95%CI:1.41-1.56) independent of IPV and covariates. When either active or historical IPV coexisted with mental health multimorbidity, the risk of SVN was highest (active: RR=1.66, 95%CI:1.47-1.88; historical: RR=1.601, 95%CI:1.44-1.78).

This study found high rates of IPV and mental health multimorbidity in pregnant women, particularly younger women. Both exposures, independently and additively, increased the likelihood of the high-risk birth outcome SVN. This finding adds to understanding of how the impact of maternal trauma, even historical, extends into the next generation.

https://doi.org/10.23889/ijpds.v10i3.3129