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Assault-related hospitalisation among mothers with psychotic illness: A population-based cohort study

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Short Report

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Abstract

Women with psychotic illness may be particularly vulnerable to interpersonal violence during motherhood. Using linked administrative data from a Western Australian birth cohort (1980–2001), we examined assault-related hospitalisation among mothers with psychotic illness and mothers with no history of mental illness. Mothers with psychotic illness had markedly increased odds of assault-related hospitalisation (aOR = 11.9, 95% CI 8.3–17.1). Findings support routine violence screening and trauma-informed care within psychiatric and perinatal services.

Article highlights

- Mothers with psychotic illness faced 12x higher odds of assault-related hospital stays
- Young, single and disadvantaged mothers were at highest risk of serious assault
- Violence risk stayed high even after accounting for social and family factors
- Findings support routine violence screening in mental health and maternity care

Introduction

An estimated 39% of Australian women aged over 18 have experienced physical and/or sexual assault since age 15 (Australian Bureau of Statistics, 2021-22). Pregnancy is a high-risk period for interpersonal violence (Taillieu & Brownridge, 2010), and violence among mothers is associated with increased maternal symptoms of depression, insecure mother-child attachment, and increased externalising behaviours in children (Boeckel et al., 2017; Miller-Graff et al., 2019). Studies have identified younger age, lower socioeconomic status, larger families, being Indigenous, and having a mental illness as risk factors for women experiencing interpersonal violence (Mouzos & Makkai, 2004; Pritadrajati, 2025). In Western Australia (WA), assault related hospitalisations among mothers increased between 1990 and 2009 in contrast to the decline in overall prevalence of women experiencing assault over the same period (Orr et al., 2019). Given this increase in assault-related hospitalisations among mothers, and the fact that a diagnosis of a psychotic disorder is a risk factor for exposure to assault (de Vries et al., 2018), we aimed to explore whether WA mothers with psychotic illness were at increased odds of being hospitalised due to assault compared to mothers with no history of mental illness.

Materials and Methods

Participants were drawn from a whole-population cohort of children born in WA between 1 January 1980 and 31 December 2001 (Morgan et al., 2011; Di Prinzio et al., 2023). The cohort included mothers with no recorded mental health service contact (N = 410,388) and mothers diagnosed with psychotic illness prior to 31 December 2015 (N = 21,552). Psychotic illness was defined according to ICD-9 criteria (codes 295–298), with ICD-8 and ICD-10 codes mapped accordingly. Mothers with a psychotic illness were identified through linkage of the Midwives Notification System, Hospital Morbidity Data Collection, and Mental Health Information Data Collection, which cover records of all inpatient hospital admissions, and public outpatient and ambulatory care contacts with mental health services across the State. Records were linked by Data Linkage Services, Department of Health WA.

Index children defining mother-child pairs of the study group were i) mothers' first born, ii) born after December 31, 1980, and iii) as well as their mother, alive at their tenth birthday. The study period spanned 12-months prior to birth to 10-years following birth. Mothers were included in the exposure group if they were diagnosed with psychotic illness at least 12-months prior to the index child's birth. Mothers with no mental health contact up to the index child's tenth birthday formed the comparison group. Mothers who received a diagnosis of psychotic illness at any time within the study period were excluded. In accordance with the Declaration of Helsinki, Human Research Ethics Committees at the WA Department of Health (2011/75) and the University of WA (RA/4/1/1322) granted approval. This was an approved retrospective study; all participant information was de-identified and participant consent was not required.

Assault-related hospitalisation was defined by relevant codes [ICD-9: E960 to E969, 995.81, V71.5; ICD-10-AM: T74.1, T74.2, T74.3, and Z04.4, X85 to Y09; Meuleners et al., 2008). Covariates included *maternal age*, *marital status*, *socioeconomic disadvantage* (SEIFA), and *remoteness* at time of index child's birth, along with *Indigenous status* and *family size* at time of index child's tenth birthday. Changes in coding trends over time were accounted for by adjusting for *birth year.* Counts and percentages were used to summarise the covariate profile of the study mothers. Logistic regression was used to calculate odds ratios (OR), adjusted and unadjusted.

Results

From 1981 to 2001, 160,284 mothers gave birth to their eldest child, with both being alive at the time of the eldest child's tenth birthday. Of these, 841 mothers had received a diagnosis of psychotic illness at least 1-year prior to the index child's birth and 156,370 had no recorded mental health contacts at any point up to the index child's tenth birthday. A further 3,073 mothers were diagnosed with a psychotic illness within the study period and were therefore excluded from the study.

A total of 822 mothers had been hospitalised due to assault during the study period (44 with a psychotic illness and 778 with no mental health contacts). See Table 1. Compared to the entire cohort, mothers hospitalised due to assault were more likely to be less than 20 years of age at time of index child's birth (60.0% vs 9.8%), be single at time of child's birth (54.0% vs 12.8%), have four or more children at time of index child's tenth birthday (28.0%, 7.3%), be Indigenous (55.7% vs 3.8%), reside in remote or very remote areas (35.4% vs 9.9%) and reside in most disadvantaged areas (39.5% vs 13.9%). Additionally, mothers with psychotic illness had substantially elevated odds of assault-related hospitalisation (OR = 11.0, 95% CI 8.1-15.1) compared to mothers with no history of mental illness. After adjusting for known risk factors and period effects, odds remained high (aOR= 11.9, 95% CI 8.3-17.1).

Discussion and Conclusions

Mothers with psychotic illness had twelve times higher odds of assault-related hospitalisation from one-year before childbirth to ten years following, compared to mothers with no mental health history. As interpersonal violence against women is most often perpetrated by a current or former intimate partner (Mouzos & Makkai, 2004) and is linked to adverse outcomes for both women and children (Boeckel et al., 2017; Hedtke et al., 2008), these findings are concerning. The findings that mothers hospitalised due to assault were more likely to be younger, live in more disadvantaged areas, have larger families, and be Indigenous are consistent with previous research (Mouzos & Makkai, 2004; Pritadrajati, 2025).

While usage of a large data-linked birth cohort is a strength of this study, we acknowledge limitations. The age of our data, the unavailability of data for mothers with diagnosed mental health conditions other than psychotic illness, and the unavailability of data for assault not requiring hospitalisation limit our understanding of the current situation. Additionally, we were unable to incorporate conflict codes and perpetrator information as this data was not available for much of the cohort.

Despite these limitations, the findings highlight a substantial disparity in assault-related harm experienced by mothers with a psychotic illness, placing this population at even greater physical and social disadvantage than that already experienced because of their mental health diagnosis. Mental health and perinatal services should recognise this elevated risk and incorporate routine screening for psychotic illness and interpersonal violence into assessment and care. Trauma-informed approaches are essential to minimise retraumatisation and support recovery (Wood et al., 2023). Future research should aim to address some of our limitations, including exploring the impact of assault on mothers with other diagnosed psychological conditions.

Declarations

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Author Contribution

T.M.H.: Writing – Original draft, Writing – Review and editing, Visualisation. P.D.P.: Conceptualisation, Methodology, Validation, Formal analysis, Data curation, Writing – Original draft, Writing – Review and editing. A.W.: Writing – Review and editing. V.A.M: Conceptualisation, Supervision, Writing – Review and editing.

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Data Availability

The datasets generated and analysed during the current study are not publicly available due to the terms of the ethics approval granted by the WA Health Central Human Research Ethics Committee (HREC) and data disclosure policies of the Data Providers. The datasets may be available from the corresponding author upon request and subject to approval from the HREC and relevant custodians.

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Table

Table 1. Mothers with eldest child born 1981-2001 hospitalised due to assault during the period 12-months prior to eldest child's birth to 10-years following eldest child's birth. Counts, percentages, unadjusted and adjusted[1] odds ratios (OR) and 95% confidence intervals (95%CI).

Mother's mental health classification	Any hospitalisations due to assault									
	No n=156389		Yes n=822		Total n=157211		Unadjusted association		Adjusted[1] association	
	n	%	n	%	n	%	OR	95%CI	aOR	95%CI
Diagnosis of psychotic illness	797	0.5	44	5.4	841	0.5	11.0	8.1-15.1	11.9	8.3-17.1
No mental health diagnosis	155592	99.5	778	94.6	156370	99.5	1.0	Reference	1.0	Reference

[1]Adjusted for child's birth year, mother's age, marital status, size of family, mother's Indigenous status, remoteness area and SEIFA level of disadvantage of residence.

N = number of mothers; OR = odds ratios; aOR – adjusted odds ratios; 95%CI = 95% confidence interval.