


Short Report

Is perinatal substance abuse falling through the cracks?

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Abstract

Objectives: Perinatal substance abuse (PSA) is associated with increased risk of prematurity, low birth weight, neonatal abstinence syndrome, behavioral issues and learning difficulties. It is imperative that robust care pathways are in place for these high-risk pregnancies and that staff and patient education are optimized. The present study explores the knowledge and attitudes of healthcare professionals toward PSA to identify knowledge gaps to enhance care and reduce stigma.

Methods: This is a cross-sectional study using questionnaires to survey healthcare professionals (HCPs) working in a tertiary maternity unit ($n = 172$).

Results: The majority of HCPs were not confident in the antenatal management (75.6%, $n = 130$) or postnatal management (67.5%, $n = 116$) of PSA. More than half of HCPs surveyed (53.5%, $n = 92$) did not know the referral pathway and 32% ($n = 55$) did not know when to make a TUSLA referral. The vast majority (96.5%, $n = 166$) felt that they would benefit from further training, and 94.8% ($n = 163$) agreed or strongly agreed that the unit would benefit from a drug liaison midwife. Among study participants, 54.1% ($n = 93$) agreed or strongly agreed that PSA should be considered a form of child abuse and 58.7% ($n = 101$) believe that the mother is responsible for damage done to her child.

Conclusions: Our study highlights the urgent need for increased training on PSA to enhance care and reduce stigma. It is imperative that staff training, drug liaison midwives and dedicated clinics are introduced to hospitals as a matter of high priority.

Keywords: Fetal alcohol syndrome; Drug Liaison Midwife; National Maternity Strategy; perinatal psychiatry; Perinatal substance abuse

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Introduction

Perinatal substance abuse (PSA) is associated with increased risk of prematurity, low birth weight, neonatal abstinence syndrome, behavioral issues and learning difficulties (Covington *et al.*, 2002, Eogan *et al.*, 2021). It is also a major risk factor for maternal suicide which has been identified as a leading cause of direct maternal death (Esscher *et al.*, 2015, Khalifeh *et al.*, 2016, Knight *et al.*, 2022). It is imperative that robust care pathways are in place for these high-risk pregnancies and that staff and patient education are optimized (Eogan *et al.*, 2021). Ireland is ranked as one of the top five countries for prevalence of both alcohol use during pregnancy and fetal alcohol syndrome (Popova *et al.*, 2017). Stigmatising interactions, which decrease both quality and continuity of care as well as decreasing the likelihood of the patient disclosing substance use increase exponentially in pregnancy (Howard 2015, Nichols *et al.*, 2021). Both the National Maternity Strategy (HSE 2016) and the National Drugs Strategy have recommended that a Drug Liaison Midwife (DLM) be appointed to each maternity hospital and that PSA be managed with a multidisciplinary team approach. DLMs are currently only available in Dublin maternity hospitals with no hospital outside of Dublin having a dedicated clinic or DLM.

This study explored the knowledge and attitudes of healthcare professionals working in an Irish tertiary maternity unit toward PSA to identify knowledge gaps in the area to improve services and care available to pregnant and postnatal women with substance exposed pregnancies.

Methods

This is a cross-sectional study surveying health care professionals working in an Irish tertiary maternity hospital. Anonymous questionnaires were distributed consisting of three subsections: (1) demographic data (2) knowledge assessment and (3) an attitudinal scale. The attitudinal scale was adapted from the Attitudes About Drug Abuse in Pregnancy (AADAP) questionnaire (Coles *et al.*, 1992). Participants responded to knowledge items by answering true, false or not sure. A 5-point Likert-type scale was used for responses to the attitude items. The questionnaire was piloted on a sample of six people from the target population, and any issues or ambiguities were amended prior to distribution. We asked 84 healthcare professionals two further questions regarding alcohol use in pregnancy, namely, 'there is evidence that 1–2 standard units of alcohol weekly are not associated with adverse neonatal/childhood outcomes' and 'fetal alcohol spectrum disorder only occurs when a pregnant woman drinks alcohol throughout her pregnancy'. Participants responded to the alcohol-specific questions by answering true, false or not sure. Questionnaires were distributed to all non-consultant hospital doctors (NCHDs), consultants, midwives, student midwives, nurses and social

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Table 1. Demographics of participants

Demographics	Number (Percentage) (<i>n</i> = 172)
Role	
Midwife	100 (58.1%)
Nurse	7 (4.1%)
Midwifery Student	23 (13.4%)
Non-consultant hospital doctor	32 (18.6%)
Consultant	7 (4.1%)
Specialty	
Obstetrics	31 (18%)
Neonatology	27 (15.7%)
Midwifery	102 (59.3%)
Not Applicable	12 (7%)
Years of Experience	
Less than 5 years	70 (40.7%)
5 to 10 years	35 (20.3%)
More than 10 years	67 (39%)
Experience with Perinatal Substance Abuse	
Little	99 (57.6%)
Moderate	61 (35.5%)
High	12 (7%)

workers working in University Maternity Hospital Limerick in August 2021. Descriptive statistics were conducted using the statistical software package SPSS (IBM v.27). We added the results of the attitudinal questions together to create an overall attitude score for each respondent. We then used the Kruskal–Wallis test to assess if differences existed between different groups, i.e., different roles, speciality or years of experience.

Results

Demographics

Participants (*n* = 172) included midwives, nurses, NCHDs, consultants, social workers, student midwives with varying experience (see Table 1).

Knowledge

Among study participants, 21.5% (*n* = 37) answered correctly that Ireland is ranked as one of the top five countries in the world in terms of prevalence of alcohol use in pregnancy and fetal alcohol syndrome, whereas 57.6% (*n* = 99) answered that it ranked between 6 and 10th highest and 20.9% (*n* = 36) responded that it ranked between 11 and 50th highest. Among HCPs surveyed, 9.9% (*n* = 17) did not routinely inquire about substance abuse in booking and antenatal clinic, with 57% (*n* = 98) responding that they did routinely ask and 33.1% (*n* = 57) choosing non applicable. See Table 2 for further questions examining healthcare professionals' knowledge of PSA.

The majority of respondents (75.6%, *n* = 130) were not confident in the antenatal management of PSA and 67.5% (*n* = 116) felt that they were not competent in the postnatal management. More than half of staff (53.5%, *n* = 92) did not know

the referral pathway and 32% (*n* = 55) did not know when it is appropriate to make a TUSLA referral or who is responsible for making the referral. Among study participants, 61.6% (*n* = 106) did not know the indications for toxicology screens and when they should be repeated. Almost all respondents (96.5%, *n* = 166) felt that they would benefit from further training (see Table 2).

Attitudes

Among staff surveyed, 35.5% (*n* = 61) agree or strongly agree that women who abuse substances in pregnancy are more concerned with themselves than their babies. More than half of respondents (54.1%, *n* = 93) agree or strongly agree that PSA should be considered a form of child abuse. Among study participants, 40.7% (*n* = 70) agree or strongly agree that taking care of sick infants due to PSA places an unfair burden on society. 48.8% (*n* = 84) feel angry at mothers when they hear about the effects on infants. 58.7% (*n* = 101) believe that the mother is responsible for any damage done to her child. Most respondents (94.8%, *n* = 163) agreed or strongly agreed that the unit would benefit from a DLM. Role (*p* = 0.56), speciality (*p* = 0.61) or number of years of experience (*p* = 0.45) did not affect attitude score.

Discussion

Our study showed that healthcare professionals have a good knowledge of the risks of PSA on the fetus and infant. No risk-free level of alcohol exposure has been established in pregnancy, and there is no point during fetal development where prenatal alcohol exposure lacks consequences (O'Neil, 2011). Even low to moderate levels of alcohol consumption during pregnancy are associated with adverse pregnancy and neonatal outcomes (Ikonomidou *et al.*, 2000, Sood *et al.*, 2001). Despite this, more than one-third of participants answered that 1–2 units of alcohol per week is not associated with adverse outcomes and a further 10.7% responded that they were not sure. 42.9% of participants responded that FASD only occurs with alcohol consumption throughout pregnancy and a further 16.7% responded that they were not sure. It is imperative that we improve staff education on gestational alcohol consumption to ensure that they can provide accurate preconception and antenatal advice to patients. Only 21.5% of participants answered correctly that Ireland is ranked between 1st and 5th highest in the world in terms of prevalence of alcohol use in pregnancy and fetal alcohol syndrome. It is important that staff are aware of the extent of the issue in Ireland so that they can be vigilant to alcohol use in pregnancy.

Over three-quarters of participating healthcare professionals reported that they were not confident in the antenatal management of PSA and more than two-thirds did not know how to care for these women and infants postnatally. More than half did not know the referral pathway for women with substance abuse issues and 61.6% did not know when to do a toxicology screen. Outside of the Dublin hospitals there are no appointed Drug Liaison Midwives. As mentioned previously, both the National Maternity Strategy (HSE 2016) and National Drug Strategy have endorsed the appointment of Drug Liaison Midwives in all maternity units and of dedicated multidisciplinary care in the management of women with substance abuse issues. This study highlights the urgent need for the same.

Our study shows high levels of negative attitudes amongst healthcare professionals towards substance abuse, which is similar among all roles, speciality and years of experience. Provider–patient interactions are critical in terms of engaging women with

Table 2. Healthcare professionals' knowledge of perinatal substance abuse

Question	True	False	Not Sure	Total
Substance abusers usually stick to a single drug rather than a variety of drugs	7.6% (n = 13)	83.7% (n = 144)	8.7% (n = 15)	172
SIDS occurs more frequently in alcohol, tobacco and other drug-exposed infants	90.1% (n = 155)	4.7% (n = 8)	5.2% (n = 9)	172
PSA is a risk factors for IUGR	99.4% (n = 171)	0	0.6% (n = 1)	172
PSA is a risk factors for preterm labour	97.7% (n = 168)	1.2% (n = 2)	2 (1.2%)	172
There is evidence that 1–2 standard units of alcohol weekly is not associated with adverse neonatal/childhood outcomes	34.5% (n = 29)	54.8% (n = 46)	10.7% (n = 9)	84
FASD only occurs when a woman drinks alcohol throughout her pregnancy	42.9% (n = 36)	40.5% (n = 34)	16.7% (n = 14)	84
Do you know the appropriate referral pathway for women presenting with PSA issues	45.9% (n = 79)		54.1% (n = 93)	172
Question	Yes	No	Total	
Are you confident in the antenatal management of PSA	24.4% (n = 42)	75.6% (n = 130)	172	
Are you confident in the postnatal management of PSA	32.6% (n = 56)	67.5% (n = 116)	172	
Do you know when it is appropriate to make a TUSLA referral and who is responsible for doing so	68% (n = 117)	32% (n = 55)	172	
Do you know the indications for toxicology screens on pregnant women and when they should be repeated	38.4% (n = 66)	61.6% (n = 106)	172	
Do you think you would benefit from more training on PSA	96.5% (n = 166)	3.5% (n = 6)	172	

Key: SIDS = sudden infant death syndrome. PSA = perinatal substance abuse. IUGR = intrauterine growth restriction. FASD = fetal alcohol spectrum disorder.

maternity services throughout pregnancy and the postpartum period (Harvey *et al.*, 2015, Howard 2015). Stigma can create barriers for women to access services and to disclose substance use (Howard 2015). Previous research affirmed that increased education is positively correlated with improved attitudes towards patients with addiction issues (Richmond and Foster 2003).

Maternal mental health is of the utmost importance. In recognition of the importance of maternal suicide and its direct link to pregnancy, the World Health Organization has recommended that maternal deaths due to suicide are classified as direct rather than indirect maternal deaths (World Health Organization 2012). MBRRACE-UK [Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries] and MDE [Maternal Death Inquiry] Ireland have adopted the changed classification (Maternal Death Enquiry Ireland 2019). Substance abuse has been identified as a major risk factor for maternal suicide (Esscher *et al.*, 2015, Khalifeh *et al.*, 2016). Deaths from suicide and substance abuse account for nearly 40% of deaths occurring within a year after the end of pregnancy with maternal suicide remaining the leading cause of direct deaths in this period (Knight *et al.*, 2022, Maternal Death Enquiry Ireland 2019).

A limitation to this study is the potential for selection bias through the use of questionnaires. We sought to minimize this by distributing the questionnaires to all NCHDs, consultants, midwives, student midwives, nurses and social workers working in the unit and have included a broad range of staff with different levels of experience and from different specialities.

This is a single centre study, and it is not fully clear how generalizable the findings are to other centers. However, the fact that this study was undertaken in a tertiary maternity unit and included a broad range of staff increase the likelihood that the findings are applicable throughout Irish maternity units who do not currently have a dedicated care pathway and DLM.

Our study highlights the urgent need for increased training in PSA in order to enhance care and reduce stigma. It is imperative

that staff training, drug liaison midwives and dedicated clinics are introduced to all Irish hospitals as a matter of high priority.

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Ethical approval. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. The authors assert that ethical approval for publication of this cross-sectional study has been provided by their local Ethics Committee.

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