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Brief report

Common perinatal mental disorders and alcohol dependence in men in northern Viet Nam

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ABSTRACT

Background: To establish the prevalence and correlates of the perinatal common mental disorders of depression and anxiety (PCMD) and alcohol dependence (AD) in men in northern Viet Nam.

Methods: A cross-sectional study of men whose wives were >28 weeks pregnant or mothers of newborns recruited from randomly-selected rural and urban communes. Data sources were Structured Clinical Interviews for DSM IV; CAGE assessment of alcohol use and study-specific questionnaires. Odds ratios and 95% CIs were calculated by multiple logistic regressions.

Results: Overall, 231/360 eligible men were recruited, of whom 17.7% [95% CI, 12.8–22.7] were diagnosed with a PCMD; 33.8% [95% CI, 27.9–40.1] with AD (CAGE score ≥ 2) and 6.9% [95% CI, 4.3–11.0] with co-morbid PCMD and AD. PCMD were associated with experiences of coincidental life adversity, intimate partner violence, age > 30; an unwelcome pregnancy and primiparity. AD was more common among men with low education, living in the poorest households and in unskilled work.

Conclusions: Common mental disorders and AD are prevalent, but currently unrecognised among men in northern Viet Nam whose wives are pregnant or have recently given birth.

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1. Introduction

Pregnancy, childbirth and early parenthood are major developmental milestones associated with increased demands on individual capacities, the intimate partner relationship and household economic resources, and a reduction in leisure time and opportunities to socialise, which can exert adverse effects on emotional wellbeing (O'Hara and Swain, 1996; Wisner et al., 2006). The psychological aspects of pregnancy, childbirth and adjustment to parenthood have been the subject of substantial scholarly research in women, but less in men (Ramchandani et al., 2011).

A recent meta-analysis (Paulson and Bazemore, 2010) included 43 investigations of depression in men during the perinatal period and reported substantial inter-study heterogeneity and a pooled prevalence of 9% (95% CI, 5%–15%). However, all studies were conducted in high- and upper-middle income countries, most in western cultural settings. Studies in high- and upper-middle income Asian countries report a wide depression prevalence range from 3.1% in Singapore (Chee et al., 2004) to 31.7% in Taiwan (Wang and Chen, 2006).

Depression and anxiety are more prevalent among women than men (Prince et al., 2007), however alcohol abuse is more prevalent among men than women (WHO, 2004, 2011; Wilsnack et al., 2009). There is only one systematic study of alcohol use in Viet Nam published in the English-language literature. It reported that 87.3% of men and 10.2% of women used alcohol and that 25.5% of men and 0.7% of women had alcohol problems (Giang et al., 2008). To our knowledge, there has been no study to date of alcohol use in men during the perinatal

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period in a low-income country from which prevalence and associated factors can be established.

The aim of this study was to establish the prevalence and correlates of perinatal depression, anxiety, and alcohol dependence (AD) among men in northern Viet Nam.

2. Methods

The study used a community-based, cross-sectional design.

2.1. Setting

Viet Nam is a densely-populated Southeast Asian country of about 84 million people, 75% of whom live in rural areas. In 2010 the World Bank re-classified it from being a low-income to a lower-middle income country. In order to obtain a representative sample for northern Viet Nam, the study was undertaken in randomly selected study sites in Ha Nam, which is a typical Red River delta rural province, and Hanoi the national capital and a major urban centre.

2.2. Participants and recruitment

A two-stage sampling protocol was used which has been described previously (Fisher et al., 2010; Tran et al., 2011, 2012). In brief, each district in the two provinces was assigned a number and four in Hanoi and six in Ha Nam were selected randomly. Using the same procedure one commune health centre was selected from each district. We undertook a systematic investigation of the prevalence of common perinatal mental disorders (PCMD) among women who were registered at commune health stations as being at least 28 weeks pregnant or a mother of a 4–6 week old baby. Pregnancies are registered with these centres and participation in routine perinatal health care by women is high. Men whose partners had contributed data to the study were also invited to participate.

2.3. Materials

2.3.1. Structured clinical psychiatric interview

All participants completed individual psychiatrist-administered Structured Clinical Interviews for DSM IV Axis 1 Diagnoses (SCID) modules for depression, generalised anxiety, and panic disorder (First et al., 1996). This is the established gold standard for ascertainment of perinatal mood disorder in diverse cultural settings and countries (Gorman et al., 2004).

2.3.2. Alcohol dependence

Alcohol dependence (AD) was assessed by the CAGE questionnaire (Ewing, 1984). This brief, widely-used screening instrument includes four questions: Have you (1) felt the need to Cut down your drinking, (2) felt Annoyed by criticism of your drinking, (3) had Guilty feelings about drinking, and (4) taken a morning Eye opener. Dhalla and Kopec (2007) reviewed 16 validity and reliability studies on the CAGE which had used gold-standard comparators. It was found to be a valid tool for detecting alcohol dependence with average sensitivity of 0.71, specificity of 0.90, test–retest reliability of 0.80–0.95, and adequate correlations of 0.48–0.70 with other screening instruments. Most found a cut-off

of ≥ 2 for detecting alcohol dependence with sensitivity and specificity of more than 80%. Participants were also asked study-specific questions about the number of days per week on which they consumed alcohol and the number of days in the past month on which they had at least five alcoholic drinks.

2.3.3. Sociodemographic factors

Sociodemographic factors were assessed by study-specific fixed-choice questions about age and marital, educational and occupational status. Information about 17 household characteristics, services and durable assets was collected to calculate a household wealth index following the World Bank method (Tran, 2004; O'Donnell et al., 2008). Current co-incidental life adversity was assessed by an open-ended question.

2.3.4. Quality of emotional support

The quality of the intimate partner relationship was assessed by the 24-item Intimate Bond Measure (Wilhelm and Parker, 1988), which yields two subscale scores: Care, which assesses sensitivity, empathy and trust, and Control, which assesses criticism, coercion and dominance. We have demonstrated that it is comprehensible and culturally relevant in Viet Nam (Fisher et al., 2007). Scores on each subscale range from 0 to 36, with higher scores being positive on the Care, but negative on the Control subscale. Men's general appraisals of the quality of their relationships with their mother and mother-in-law were assessed by single fixed-choice items about experiences of trust and affection in these relationships.

2.3.5. Experiences of family violence

Experiences of family violence were ascertained through single items. Two dimensions of intimate partner abuse were assessed: current fear of the partner (an indicator of emotional abuse) or any experience of being hit, slapped, kicked, dragged, choked or punched (physical abuse) during the previous year. Participants were also asked to identify any other family members of whom they felt afraid.

2.4. Procedure

In Viet Nam self-report questionnaire completion is unfamiliar and data were collected in individual structured interviews which are preferred (Fisher et al., 2004). The SCIDs were conducted in a private room at commune health stations by Dr Buoi La, a senior Viet Nameese psychiatrist and the study-specific interviews in a separate room by Viet Nameese health research workers. Data collection was carried out in Ha Nam in November 2006 and in Hanoi in February and March 2007.

2.5. Statistical analysis

The primary outcomes were the prevalence of PCMD, specifically mild, moderate or severe major depressive episode or dysthymic disorder (DSM-IV code 300.4), panic disorder with or without agoraphobia (DSM-IV codes 300.01 and 300.21) and generalised anxiety disorder (DSM-IV code 300.02) and the prevalence of AD which was defined by positive responses to at least two of the four CAGE items (Dhalla and Kopec, 2007).

Associations with the primary outcomes were tested in bivariable comparisons and included in multivariable analyses if significant. A number of theoretically relevant variables, which were not associated with outcomes were also included. Multiple logistic regression was used to estimate odds ratios and 95% CIs. Data were analysed in STATA 11.

2.6. Ethics

The study was approved by the University of Melbourne's Human Research Ethics Committee and the Viet Nam Medical Association's Scientific Committee.

3. Results

3.1. Sociodemographic characteristics

A total of 231/360 (60%) of the husbands of eligible women participated in this study (133/230, 58%, in Ha Nam and 98/130, 75%, in Hanoi). The most common reason for non-participation was that men were unavailable because they were working on construction projects in Hanoi and not currently living in the rural province or employment commitments precluded attendance at the commune health station in business hours. There were no significant differences in the sociodemographic characteristics or the prevalence of PCMD between groups of women whose partners did or did not participate suggesting that there were no specific participation biases and that the group is representative of the population in these settings. Participants were on average 31 (± 6.3) (range 20 to 49) years old. A substantial proportion (16.4%) had not completed secondary school and 82.2% generated income through subsistence agriculture or manual work.

3.2. Prevalence of perinatal depression, anxiety, and alcohol dependence in men

Depressive disorders, generalised anxiety disorders, and comorbid depression and generalised anxiety were the most common PCMD (Table 1). There were no differences in the prevalence of depression or anxiety between men whose wives were pregnant or who had recently given birth. In total

71% (164/231) of participants reported alcohol use in the previous month.

3.3. Factors associated with perinatal depression and anxiety in men

As in women (Fisher et al., 2010) it appears that multiple social and individual factors are associated with PCMD in Vietnamese men (see Table 2). Overall 41 (17.7%) reported experiencing coincidental life adversity, attributed by all to at least one of two sources. The first was dissatisfaction with and worry about their jobs because they were poorly paid, had difficult or dangerous work, were in conflict with employers or workmates, had unreachable production goals or felt the constant threat of losing a job. The second was being too poor to support a household or having undergone a recent economic loss.

3.4. Factors associated with alcohol dependence

While problematic alcohol use was prevalent, it was most common among men who had only completed up to 9 years of education and who were unskilled workers living in the poorest households. No association was found between alcohol problems and either pre- or postnatal mental disorders.

4. Discussion

This study is to our knowledge the first to establish the prevalence and correlates of common perinatal disorders and alcohol dependence in men in a low or lower-middle income country and in Viet Nam. It used systematic sampling, the gold standard of a psychiatrist administered diagnostic interview to establish psychiatric diagnoses and standardised questions about alcohol use and therefore we believe that the findings can be generalised with some confidence. We found that the prevalence of PCMD in men (17.7%) was less than that in women in this setting (29.9%) (Fisher et al., 2010), but that alcohol dependence, which was not found in women, was widespread in men in both rural and urban areas (33.8%). We acknowledge the limitation that as 40% of the potential participants were unavailable principally because they were working away, our estimates might be inaccurate in either direction. It is possible that men with mental health problems have reduced

Table 1

Perinatal common mental disorders and alcohol dependence in 231 husbands of pregnant women and mothers of newborns in northern Viet Nam.

	Ha Nam (N = 133)	Hanoi (N = 98)	Total (N = 231)
Prevalence of any mental disorders, % [95% CI]	21.1 [14.0–28.1]	13.3 [6.4–20.1]	17.7 [12.8–22.7]
• Depressive episode (%)	6.0	4.1	5.2
• Dysthymia (%)	2.3	2.0	2.2
• Panic disorder (%)	0	2.0	0.9
• Generalised anxiety disorder (%)	6.8	1.0	4.3
• Co-morbid anxiety disorder and depression (%)	6.0	4.1	5.2
Alcohol problems (CAGE score ≥ 2), % [95% CI]	32.6 [24.1–42.6]	34.6 [27.0–43.1]	33.8 [27.9–40.1]
Co-morbidity of any PCMD and AD, % [95% CI]			
• Co-morbid PCMD and AD	9.8 [5.7–16.2]	3.1 [1–9.1]	6.9 [4.3–11.0]
• Only PCMD	11.3 [6.9–17.9]	10.2 [5.6–18.1]	10.8 [7.4–15.6]
• Only AD	24.8 [18.2–32.9]	29.6 [21.4–39.4]	26.8 [21.5–32.9]
• No disorder	54.1 [45.6–62.5]	57.1 [47.1–66.6]	55.4 [48.9–61.7]

Table 2

Sociodemographic and psychological characteristics associated with perinatal common mental disorders and alcohol dependence in 231 men in northern Viet Nam.

Factor	Perinatal depression and anxiety		Alcohol dependence	
	OR	95% CI	OR	95% CI
Province (1: Ha Nam; 0: Hanoi)	1.20	[0.3–4.5]	1.63	[0.6–4.4]
Perinatal period (1: husband of postpartum woman; 0: husband of pregnant woman)	0.64	[0.3–1.4]	1.26	[0.7–2.3]
Age group (1: 30 years and older; 0: up to 30 years old)	3.87	[1.5–10.1]	1.20	[0.6–2.4]
Education level				
University degree and higher	1	N/A	1	N/A
Completed high school	1.37	[0.2–8.5]	2.64	[0.7–9.6]
Up to completed secondary	0.80	[0.2–4.1]	3.58	[1.2–10.8]
Occupation				
Farmer and unemployed	1	N/A	1	N/A
Government officer	2.05	[0.5–8.2]	0.82	[0.3–2.4]
Waged worker	1.07	[0.4–2.7]	2.18	[1.1–4.3]
Number of children (1: first child; 0: two or more children)	3.03	[1.1–8.6]	0.80	[0.4–1.7]
Index pregnancy (1: unwelcome; 0: welcome)	4.22	[1.6–11.3]	1.12	[0.5–2.4]
Coincidental life adversity (1: yes; 0: no)	3.98	[1.7–9.2]	0.93	[0.5–1.8]
Emotional or physical violence by wife in previous year (1: yes; 0: no)	9.64	[3.5–26.3]	1.12	[0.5–2.7]
Affectionate and trusting relationship with own mother (1: no; 0: yes)	1.71	[0.7–4.3]	1.58	[0.8–3]
Fear of other family members (1: yes; 0: no)	1.22	[0.1–12.6]	3.77	[0.5–27.3]
Childhood physical abuse (1: yes; 0: no)	1.54	[0.5–4.6]	0.76	[0.3–2]
IBM Care (1: score ≥ 33 ; 0: score ≤ 32)	1.18	[0.5–2.9]	1.85	[0.9–3.6]
IBM control (1: score ≥ 11 ; score ≤ 11)	1.46	[0.6–3.7]	1.30	[0.7–2.5]
Household wealth index (1: lowest quintile; 0: four highest quintiles)	0.58	[0.1–2.6]	3.41	[1.2–7.1]
Alcohol dependence (1: yes; 0: no)	1.37	[0.6–3.1]	N/A	
Perinatal depression and anxiety (1: yes; 0: no)	N/A		1.21	[0.5–2.7]

The bold text indicates which of these comparisons are statistically significant.

volition to seek work, including on construction sites distant from the province and therefore we have overestimated prevalence. However, it is also possible that men living away from their families experience sadness at this forced separation and, because they are living in hostel situations with their peers they might use alcohol excessively.

The prevalence of any depressive disorder in men in this study (12.6%) is higher than the pooled prevalence in high-income countries (9%) (Paulson and Bazemore, 2010) and much higher than in the studies which used the same diagnostic assessment in well-resourced Asian countries: Singapore (1.8%) (Chee et al., 2004) and Hong Kong (3.1%) (Lai et al., 2010). Panic and generalised anxiety disorders were apparent in 10.4%, but there are no data from other resource-constrained settings with which these can be compared.

None of the study participants had received mental health care and so it is not possible to ascertain whether these problems had arisen for the first time or recurred in the perinatal period. However, only 2% met the criteria for dysthymia suggesting that they were in fluctuating rather than chronic states. The factors associated with PCMD in this study were similar to those identified in other settings: being older than the average age at which men experience parenthood; having a first baby; an unwelcome pregnancy; experiencing emotional and less commonly physical abuse from their wives and coincidental life adversity. These factors are similar to those associated with maternal PCMD in this setting (Fisher et al., 2010).

There are no available comparison data on the prevalence of perinatal alcohol misuse among men in low-income countries. We acknowledge the limitation that the CAGE questionnaire has not been validated in Viet Nam. However, it has been

validated in other low-income countries and been found to have high sensitivity and specificity in detecting alcohol dependence among adult men in these settings (Dhalla and Kopeck, 2007). The proportion of men who reported any alcohol use (71%) was much higher than the recent WHO estimates for alcohol use among men in Viet Nam (16.1%) (WHO, 2011). The prevalence of alcohol dependence found in this study using the CAGE assessment (33.8%) was higher than that reported by Giang et al. (2008) using the AUDIT questionnaire (25.5%) among adult men in northern Viet Nam. The prevalence of alcohol problems in general male populations in low income settings using these two measures is highly variable from 1.5% in Ethiopia (Kebede and Alem, 1999) to 25.8% in Nepal (Jhingan et al., 2003) suggesting that socio-cultural factors are major determinants of alcohol use and misuse. As others have found, alcohol dependence was highest among men occupying the lowest socioeconomic position. However, unlike prior studies we found no association between PCMD and alcohol use (Conner et al., 2009; Fergusson et al., 2009; Sullivan et al., 2005). It is nevertheless possible that men use alcohol to manage the psychological consequences of chronic adversity, which might worsen as the responsibilities of parenthood are realised. In Viet Nam, the most common forms of alcohol are rice wine (often homemade and therefore of unknown alcohol concentration) and beer, which are usually drunk with friends at street restaurants after working hours, rather than at home. The poorest households are more likely to be occupied by multiple generations and to be crowded than those of more affluent families. It is possible that men living in these households are more readily drawn to these street gatherings than men living in more comfortable situations.

Non-psychotic mental health problems in men have been neglected not only in Viet Nam but also in other resource-constrained countries. The results of this study suggest strongly that perinatal mental health problems represent a significant public health concern not only among women but also among men in northern Viet Nam. These data suggest that interventions should not be confined to women, but should also include men and should be combined with community based strategies to reduce alcohol misuse and family violence.

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Conflict of interest

The authors declare that they have no conflicts of interest.

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