



MONASH University

Medicine, Nursing and Health Sciences

PERINATAL MENTAL HEALTH PROBLEMS: NATURE, PREVALENCE, DETERMINANTS AND RESPONSES



JANE FISHER

Jean Hailes Research Unit

School of Public Health and Preventive Medicine

Monash University

jane.fisher@monash.edu

Geneva Foundation for Medical Education and Research
Training Course in Sexual and Reproductive Health Research 2015

Professor of Women's Health and Director of the Jean Hailes Research Unit, School of Public Health and Preventive Medicine, Monash University, Melbourne Australia;



- Academic Clinical and Health Psychologist;
- Interests in women's mental health in particular during pregnancy, following childbirth and in the years of caring for very young children;
- Research program in Australia, Vietnam and low and middle-income countries of the Asia Pacific region;
- Observational prospective and cross-sectional surveys, trial outcomes, systematic reviews, health service evaluations, and validations of psychometric instruments in international settings;
- Maintain clinical practice in a residential early parenting treatment program



SAFE MOTHERHOOD INITIATIVE

Established in Nairobi in 1987

- World Health Organization
- World Bank
- United Nations Fund for Population Activities
- National governments

SAFE MOTHERHOOD AND MAKING PREGNANCY SAFER INITIATIVES

Risks for poor maternal health outcomes:

- Reproductive choice;
- Nutritional status;
- Co-incident infectious diseases;
- Information needs;
- Access to services;
- Training and skill of health workers.

EARLY OBSERVATIONS

Traité de la folie des femmes enceintes, des nouvelles accouchées et des nourrices

Treatise on insanity in pregnant, newly delivered and lactating women

(Louis-Victor Marcé, 1858)

Puerperal insanity

(Robert Gooch, 1859)

MENTAL HEALTH PROBLEMS AND CHILDBEARING

- Epidemiology of ‘parapartum mental illness’ (Paffenberger, 1964)
- ‘Atypical depression’ following childbirth (Pitt, 1968);
- Subsequent major focus of research: >150,000 academic papers, lay accounts and resources;
- Debates about:
 - Depression alone or other disorders?
 - Perinatal specific?
 - Period of increased risk for poor mental health?
 - Nature and mechanisms of adverse consequences for children?

WORLD HEALTH REPORT 2001

- Global burden of mental illness

Need for accurate knowledge about:

- Risk factors;
- Nature and prevalence;
- Correlates and consequences;
- Effective strategies for promotion, prevention and treatment.



PERINATAL MENTAL HEALTH

PSYCHOLOGICAL ASPECTS OF:

- Pregnancy
- Childbirth
- Postpartum period and early years of parenthood

PSYCHOLOGICAL ASPECTS OF PREGNANCY

- Psychological wellbeing?
- Lower rates of hospital admission for psychiatric illness;
(Oppenheim, 1985; Kendell et al, 1987)
- Romantic ideals about women 'blooming' in pregnancy;
- Pregnancy symptoms or depression?
- Mental health problems occur in pregnancy



PSYCHOLOGICAL ASPECTS OF THE POSTPARTUM YEAR

Birth of a baby:

- Dramatic adaptation to change;
- Psychological disequilibrium and transition;
- Psychosocial and biological determinants;
- Three conditions of differing severity.

PSYCHOLOGICAL ASPECTS OF THE POSTPARTUM YEAR

MATERNITY, THIRD DAY OR POSTPARTUM BLUES

- 80% of women who have very recently given birth:
- Characterized by:
 - Lability of mood between euphoria and misery;
 - Heightened sensitivity;
 - Tearfulness, often without associated sadness;
 - Restlessness;
 - Poor concentration;
 - Anxiety and irritability;
 - Disturbed sleep;
 - Feelings of unreality and detachment from the baby.

PSYCHOLOGICAL ASPECTS OF THE POSTPARTUM YEAR

PUERPERAL OR POSTPARTUM PSYCHOSIS

- Incidence of 1 – 2: 1000
- Characterized by:
 - Acute onset;
 - Extreme affective variation, with mania and elation as well as sadness;
 - Thought disorder;
 - Delusions;
 - Hallucinations;
 - Disturbed behaviour;
 - Confusion.



PSYCHOLOGICAL ASPECTS OF THE POSTPARTUM YEAR

PUERPERAL OR POSTPARTUM PSYCHOSIS

- Episodes of affective illness;
- Risk of recurrence after subsequent pregnancies;
- Biological or psychosocial etiology?
- Little international variation;
- Always a psychiatric emergency.



MOST COMMON PERINATAL MENTAL HEALTH PROBLEMS

DEPRESSION

Characterised by the persistent presence for at least two weeks of cognitive and affective symptoms including:

Low mood	Anhedonia
Irritability	Elevated anxiety
Impaired concentration	Self criticism
Guilt	Social withdrawal
Despondency	Changes in appetite → weight loss or gain

MOST COMMON PERINATAL MENTAL HEALTH PROBLEMS

ANXIETY (Acute and episodic or persistent)
Cognitive and physiological symptoms

Worry	Trembling or shaking	Shortness of breath
Apprehension or sense of dread	Palpitations or accelerated heart rate	Chest pain or discomfort
Confusion	Numbing or tingling sensations	Feeling of choking
Reduced clarity of thinking	Nausea	Dizziness
Altered perceptions	Chills or hot flushes	Sweating

MAJOR DEPRESSION

Unique

Low mood
Anhedonia
Weight gain /
loss
Loss of
interest
Suicidal
ideation

ANXIETY DISORDER

Unique

Hypervigilance
Agoraphobia
Compulsive
rituals

Shared

Fear
Apprehension
Chronic pain
GI symptoms
Worry
Agitation
Difficulty concentrating
Sleep disturbance
Fatigue
Low energy

COMMON [PERINATAL] MENTAL DISORDERS

- Non-psychotic ‘common mental disorders’, for example depressive, anxiety, adjustment and somatoform disorders, which compromise day-to-day functioning;
- ‘Common perinatal mental disorders’

Goldberg D, Huxley P. *Common Mental Disorders: A Biosocial Model*. London: 1992

PREVALENCE OF COMMON PERINATAL MENTAL DISORDERS in HIGH-INCOME COUNTRIES

- Self-report measures yield symptom scores rather than diagnoses;
- Variation in sampling, measures, cut-off scores, period of ascertainment and whether point or interval prevalence ascertained;
- Limited precision and comparability;

Women: Pregnancy

- Depression: 7.4% (T1), 12.8% (T2), 12.0% (T3) (Bennett et al, 2004)
- Anxiety: 10.4% - 16.2% (Matthey et al, 2003)

Postpartum:

- Depression: 6.8% (Woolhouse et al, 2012) to 20.7% (Webster et al, 2001)
- Anxiety: \approx 10% in the first six months postpartum (Fisher et al, 2010)

Perinatal depression among women in high-income countries:

- \pm 10% of pregnant women
- \pm 13% of mothers of infants (Hendrick, 1998; O'Hara and Swain, 1996)



PERINATAL MENTAL HEALTH

Women who live in low and lower middle income countries experience traditional ritualized care after birth including:

- Mandated periods of rest;
 - Honoured status;
 - Increased practical support and freedom from household and income-generating work;
 - Social seclusion;
 - Gift giving and prescribed foods
- These protect mental health and therefore;
 - They do not experience perinatal mental disorders.

Stern and Kruckman, 1983; Howard, 1993

PREVALENCE OF COMMON PERINATAL MENTAL DISORDERS AMONG WOMEN IN LOW AND LOWER MIDDLE INCOME COUNTRIES: A SYSTEMATIC REVIEW

Most published since 2000:

- 13 studies about antenatal CMD from 9 countries;
- No evidence from 103 / 112 (92%) LALMI countries;
- 34 studies about postnatal CMD from 17 countries;
- No evidence from 95 / 112 (85%) LALMI countries;
- Diverse methods and endpoints;
- Mental health problems in pregnant women and mothers of newborns detectable in all studies;
- Study settings contribute to selection biases;

Fisher, Cabral de Mello, Patel, Rahman, Tran, Holton, Holmes, *Bulletin of the World Health Organization*, 2012

PREVALENCE OF COMMON PERINATAL MENTAL DISORDERS in LOW AND LOWER-MIDDLE INCOME COUNTRIES

	Total N (number of studies)	Range of prevalence	Weighted mean prevalence	95% CI
Pregnancy CMD (all studies)	5774 (13)	5.2-32.9	15.9	15.0–16.8
Tertiary hospitals	2190 (5)	5.2-14.4	10.3	10.1-10.4
Provincial or district health services	1526 (5)	8.3-32.9	17.8	17.4-18.3
Community	2058 (3)	12.0-33.0	19.7	19.2-20.1
Postnatal CMD (all studies)	11,581 (34)	4.9-59.4	19.8	19.2-20.6
Tertiary hospitals	3600 (11)	9.1-27.2	13.6	13.5-13.8
Tertiary hospital and community clinic(s)	2876 (7)	4.9-32.9	18.9	18.7-19.3
Provincial or district health services	3999 (12)	6.1-35.5	20.4	20.1-20.8
Community	1106 (4)	28.0-59.4	39.4	38.6-40.3

Fisher et al., Bulletin of the World Health Organization, 2012

PREVALENCE OF COMMON PERINATAL MENTAL DISORDERS in HIGH-INCOME COUNTRIES

- Much less evidence about men than women;

Men

Pregnancy:

Depression: 4.6% (Condon et al, 2004)

Anxiety: 4.4% - 9.7% (Matthey et al, 2003)

Excessive alcohol use: 27.5% (Condon et al, 2004)

Postpartum:

Depression: 1.5% - 4.7% (Matthey et al, 2000; Condon et al, 2004)

Depression and / or Anxiety: 6.3% - 11.5% (Matthey et al, 2003)

Excessive alcohol use: 23.9 - 25% (Condon et al, 2004)

PREVALENCE OF COMMON PERINATAL MENTAL DISORDERS in LOW AND LOWER-MIDDLE INCOME COUNTRIES

Very limited evidence about perinatal common mental disorders among men in low and lower-middle income countries:

Vietnam:

- PCMD only 10.8% (95%CI 7.4-15.6)
- Alcohol dependence only 26.8% (95%CI 21.6-33.1)
- Comorbid PCMD and Alcohol dependence 6.9% (95%CI 4.3-11.0)

Tran et al, 2012

PREVALENCE OF CPMD AMONG COUPLES IN LAMIC

Among 230 couples in Viet Nam, where diagnostic interviews were completed by both people:

	Perinatal CMD
Female partner	23.4% (54/230) (95%CI 18.4-29.4)
Male partner	10.4% (24/230) (95%CI 7.1-15.1)
Both partners	7.4 (17/230) (95%CI 4.6-11.6)
At least one partner	41.2% (95/230) (95%CI 35.1-47.8)

Tran et al, 2012)

MENTAL HEALTH AND MATERNAL MORTALITY

- Suicide rates are underestimated because maternal mortality data is restricted to the first 42 days after childbirth
- British Centre for Maternal and Child Enquiries (2006 – 2008) 0.57 deaths by suicide per 100,000 maternities; but
- increased to 1.27 per 100,000 if increased to first six postpartum months (Cantwell et al, 2011)

MENTAL HEALTH AND MATERNAL MORTALITY

Limited data from low and middle income countries;

- In Haryana, India, 20% of 219 deaths among 9894 women who had given birth in rural areas, in 1992, were due to suicide or accidental burns.
(Lal et al, 1995)
- At Maputo Central Hospital, Mozambique, 9 of 27 (33%) postpartum deaths (1991–1995) not attributable to pregnancy or coincidental illness were by suicide, 7 of these in women aged less than 25 years.

(Granja et al, 2002)

MENTAL HEALTH AND MATERNAL MORTALITY

- In Viet Nam, verbal autopsies of all maternal deaths in seven provinces (2000 – 2001) found that overall 8%, but in some provinces 16.5% were by suicide, with problematic ‘community behaviours towards women’ a contributing factor. (WHO WPRO 2005)
- In Nepal, the Department of Health Services examined maternal deaths 1998 – 2008 in 8 districts and found that while there was an overall reduction in deaths from 539 to 229 per 100,000 live births, suicide was the leading cause, accounting for 16%. (Karki, 2011)



RISKS FOR COMMON MENTAL DISORDERS

Bio-psycho-social model?

- Hormones and neurochemicals?
- Personality and ways of thinking?
- Social determinants?

Engel, 1977

SOCIAL DETERMINANTS OF HEALTH

Public Health 

Social determinants of health inequalities

Michael Marmot

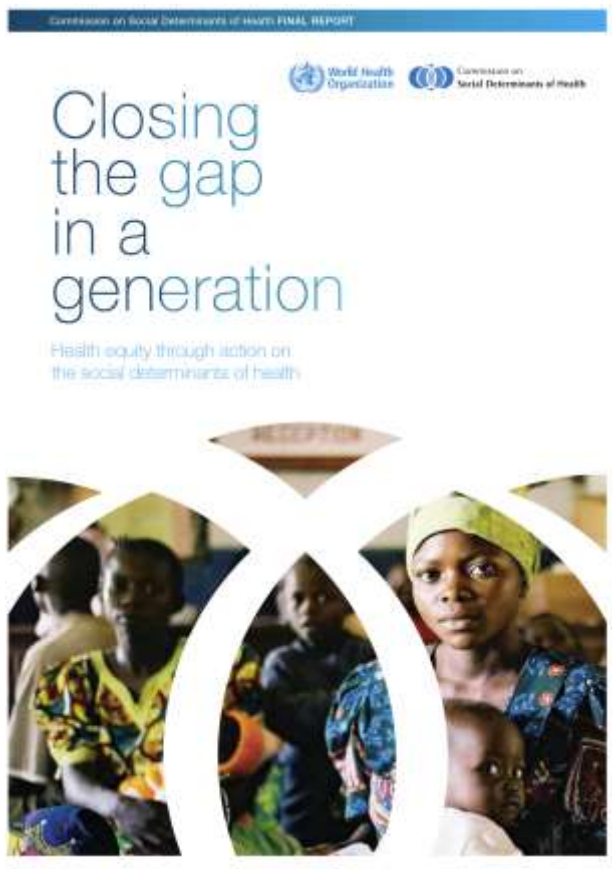
The gross inequalities in health that we see within and between countries present a challenge to the world. That there should be a spread of life expectancy of 48 years among countries and 20 years or more within countries is not inevitable. A burgeoning volume of research identifies social factors at the root of much of these inequalities in health. Social determinants are relevant to communicable and non-communicable disease alike. Health status, therefore, should be of concern to policy makers in every sector, not solely those involved in health policy. As a response to this global challenge, WHO is launching a Commission on Social Determinants of Health, which will review the evidence, raise societal debate, and recommend policies with the goal of improving health of the world's most vulnerable people. A major thrust of the Commission is turning public-health knowledge into political action.

Lancet 2005; 365: 1099-104

See Comment

International Centre for Health and Society, University College London, 1-19 Torrington Place, London WC1E 6BT, UK
(Prof Sir M. Marmot)
m.marmot@ucl.ac.uk

WHO COMMISSION ON THE SOCIAL DETERMINANTS OF HEALTH, 2008



Commission on Social Determinants of Health, WHO, 2008:

- Inequities in health and life expectancy reflect social circumstances;
- Grave disparities between and within countries reflect social disadvantage;

GENDER AND HEALTH

Gender norms :

- Restrict rights, opportunities and full development of all capacities of girls and women;
- Through discrimination, subordination and exploitation cause burdens of disease and social suffering.

(Keleher and Franklin, Women and Gender Equity Knowledge Network of the WHO Commission on the Social Determinants of Health 2007)

GENDER AND HEALTH

Women are more likely than men to experience:

- Violence;
- Discrimination;
- Limited participation in formal education;
- Restricted access to income generating opportunities;

Women are less likely than men to experience:

- Autonomous financial decision-making;
- Reproductive choice;

(Keleher and Franklin, Women and Gender Equity Knowledge Network of the
WHO Commission on the Social Determinants of Health 2007)

WHO COMMISSION ON THE SOCIAL DETERMINANTS OF HEALTH, 2008

- Structural inequalities reflecting the unequal distribution of:
 - power,
 - income,
 - goods, and services
- Circumstances of everyday life reflecting:
 - access to education, health care and leisure; and
 - the conditions of work, housing, family relationships and community resources

STRUCTURAL FACTORS AND CPMD

Comparison of depression symptoms (Centre for Epidemiological Studies Depression Scale) among 7789 participants in the National Maternal and Infant Health Survey living in 50 American states:

- Political participation
- Reproductive rights
- Economic autonomy
- Employment and earning

Chen, Subramanian,
Acevedo-Garcia, Kawachi,
2005

WOMEN'S STATUS AND DEPRESSION AFTER CHILDBIRTH

Women who lived in states in which:

- female political participation was high;
- reproductive rights recognised;
- and employment and economic autonomy assured

had significantly lower (all $p < 0.01$) average levels of depressive symptoms than women in other states.

PREGNANCY AND DISCRIMINATION

Employee entitlements and antenatal wellbeing in a consecutive cohort of 165 women at \approx 29 weeks gestation in Victoria:

- 69% workplace adversity:
 - No access to maternity entitlements, difficulty negotiating leave
- 18% workplace discrimination by HREOC definitions
 - *I was asked and expected to lift and move heavy objects and expected to perform an 11 hour straight shift (Waitress, 19 years old);*
 - *They made inappropriate comments... jokes all the way through (Accountant, 33 years old)*

Two factors contributed to higher scores on measures of symptoms of depression and anxiety:

- Public hospital care ($p = 0.02$)
- Experiencing workplace discrimination and adversity ($p = 0.05$)

(Cooklin, Rowe and Fisher, 2007)



Bac Yen - Viet Nam

2020
Photo
<http://www.baophoto.com>







Higberg - Vietnam







Bên đường - Sapa - Viet Nam





CIRCUMSTANCES OF DAY-TO-DAY LIFE

Aspects of day-to-day life which are gendered and relevant to perinatal CMD:

- Unpaid work of caregiving;
- Occupational fatigue;
- Exposure to interpersonal violence.



UNPAID WORKLOAD

Time Use Survey of New Mothers

(Smith and Ellwood, 2006)

Frequency of infant care

- Feeding
- Soothing
- Carrying
- Bathing
- Interacting

DISCRETIONARY TIME AND LEISURE

Total workload:

- Definition?
- Rest while the baby sleeps
- Weekends?
- He's working.....



WORK SATISFACTION

- Salary
- Social environment
- Creative and intellectual challenge
- Feeling valued and respected
- External recognition of contribution
- Constructive feedback
- Successful completion of tasks

(National Jobsite UK Survey, 2006)

OCCUPATIONAL HEALTH AND SAFETY

Occupational fatigue:

- Prolonged work hours
- Irregular work hours
- Circadian disturbance
- Particular kinds of work
- “Shift work sleep disorder”



(Rogers and Grunstein, MJA, 2005)

OCCUPATIONAL FATIGUE

Signs:

- Judgement
- Reaction time
- Skills
- Concentration
- Vigilance
- Memory

(Occupational Health and Safety Thesaurus, 2003)

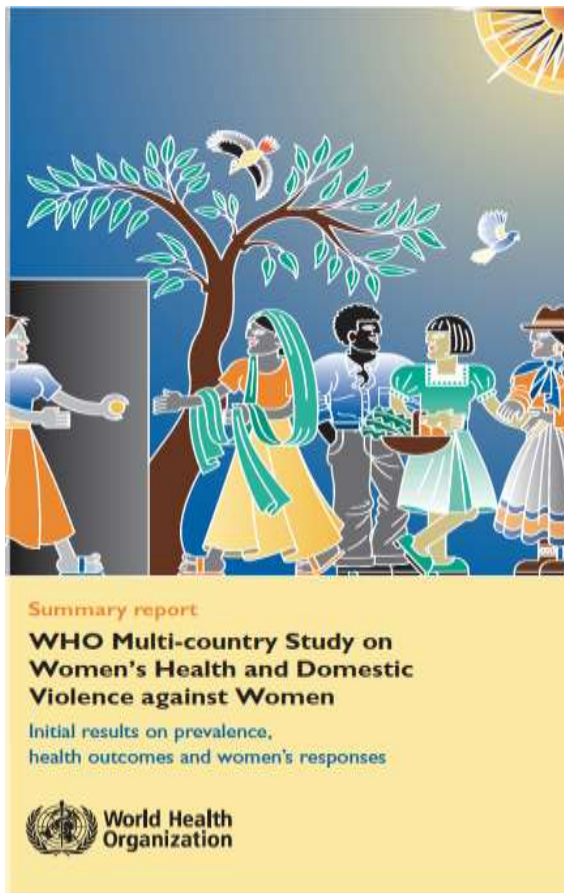
'PEACETIME' VIOLENCE

The term 'violence against women' means any act of gender-based violence that results in, or is likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life.

(Declaration and Platform for Action of the Fourth World Conference on Women, Beijing, 1995)

WHO MULTI-COUNTRY STUDY ON DOMESTIC VIOLENCE AND WOMEN'S HEALTH

Standardised population-based household surveys in ten countries, which aimed to establish the prevalence of all forms of violence against women, especially intimate partner violence (IPV)



Garcia Moreno et al, 2005

INTIMATE PARTNER VIOLENCE

- Descriptors,
- Means of ascertaining prevalence,
- Definitions:
 - Physical: hit, kicked, punched, dragged, choked, burnt, threatened with a weapon or having a weapon used against [her],
 - Emotional: insults, humiliation, coercion, intimidation and threats of harm including to others (children, pets), controlling behaviours,
 - Sexual: all acts of sexual violence

PREVALENCE OF IPV

- Wide inter-country variation in lifetime prevalence: 13% in Japan to 61% in Peru,
- Most countries in the range 23% to 49%,
- Of those exposed, up to 49% reported severe abuse;
- Sexual less common than physical violence
- Acts of violence co-occurred and were repeated

Garcia Moreno et al, 2005

MENTAL HEALTH EFFECTS OF IPV

Intimate Partner Violence is associated with increased risk of mental health problems:

- Distress: crying, lack of enjoyment and fatigue;
- Depression
- Anxiety
- Trauma symptoms
- Suicidal ideas and acts of self harm
- Substance abuse

(Astbury and Cabral de Mello, 2000; Garcia-Moreno et al, 2005)

PERINATAL MENTAL DISORDERS AND IPV

Domestic Violence and Perinatal Mental Disorders: A Systematic Review and Meta-Analysis

Louise M. Howard^{1*}, Sian Oram¹, Helen Galley², Kylee Trevillion¹, Gene Feder³

¹Section of Women's Mental Health, Institute of Psychiatry, King's College London, London, United Kingdom, ²South London and Maudsley NHS Foundation Trust, Greater London, United Kingdom, ³Academic Unit of Primary Health Care, School of Social and Community Medicine, University of Bristol, Bristol, United Kingdom

Abstract

Background: Domestic violence in the perinatal period is associated with adverse obstetric outcomes, but evidence is limited on its association with perinatal mental disorders. We aimed to estimate the prevalence and odds of having experienced domestic violence among women with antenatal and postnatal mental disorders (depression and anxiety disorders including post-traumatic stress disorder [PTSD], eating disorders, and psychoses).

Methods and Findings: We conducted a systematic review and meta-analysis (PROSPERO reference CRD42012002048). Data sources included searches of electronic databases (to 15 February 2013), hand searches, citation tracking, update of a review on victimisation and mental disorder, and expert recommendations. Included studies were peer-reviewed experimental or observational studies that reported on women aged 16 y or older, that assessed the prevalence and/or odds of having experienced domestic violence, and that assessed symptoms of perinatal mental disorder using a validated instrument. Two reviewers screened 1,125 full-text papers, extracted data, and independently appraised study quality. Odds ratios were pooled using meta-analysis. Sixty-seven papers were included. Pooled estimates from longitudinal studies suggest a 3-fold increase in the odds of high levels of depressive symptoms in the postnatal period after having experienced partner violence during pregnancy (odds ratio 3.1, 95% CI 2.7–3.6). Increased odds of having experienced domestic violence among women with high levels of depressive, anxiety, and PTSD symptoms in the antenatal and postnatal periods were consistently reported in cross-sectional studies. No studies were identified on eating disorders or puerperal psychosis. Analyses were limited because of study heterogeneity and lack of data on baseline symptoms, preventing clear findings on causal directionality.

Conclusions: High levels of symptoms of perinatal depression, anxiety, and PTSD are significantly associated with having experienced domestic violence. High-quality evidence is now needed on how maternity and mental health services should address domestic violence and improve health outcomes for women and their infants in the perinatal period.

Howard, Oram, Galley, Trevillion and Feder, 2013

Antenatal depression:

Lifetime: OR 3.04 (95%CI 2.31 to 4.01)

Past year: OR 2.82 (1.51 to 5.28)

Pregnancy: OR 5 (4.04 to 6.17)

Postnatal depression:

Lifetime: OR 2.94 (1.79 to 4.82)

Past year: OR 2.82 (1.72 to 4.64)

Pregnancy: OR 4.36 (2.93 to 6.48)

SUMMARY: RISKS FOR CPMD IN HIGH-INCOME COUNTRIES

Systematic reviews of evidence of risks for CPMD conclude:

Difficult to modify

- Past personal experiences or family history of anxiety, depression, substance abuse or eating disorder;
- Coincidental adverse or stressful life events (e.g. poverty, unemployment; insecure housing, bereavement)
- Unintended or unwanted pregnancy;
- Longer time to pregnancy, pregnancy complications, operative birth;
- Aspects of personality style (lack of assertiveness, timidity, over-eagerness to please others);

(Scottish Intercollegiate Guidelines for the Management of Perinatal Mood Disorders, 2012)

- Experiences of maltreatment or neglect as a child;



SUMMARY: POTENTIALLY MODIFIABLE RISKS FOR CPMD

Potentially modifiable

- Quality of relationship with the intimate partner: protective and potential to increase risk;
- Insufficient social support (in particular from own mother and father);
- Conflict with the ‘in-law’ family;

(Scottish Intercollegiate Guidelines for the Management of Perinatal Mood Disorders, 2012)

RISK FACTORS FOR CPMD IN LOW and LOWER MIDDLE-INCOME COUNTRIES

- **Socio economic disadvantage** (OR range: 2.1–13.2) : adolescent; religious or ethnic minority group; rural rather than an urban area; hunger in previous month, unable to pay for essential health care; low-income; holding a ‘poor card’ ;
- **Quality of relationship with intimate partner** (OR range: 2.0–9.4): unsupportive, rejecting the pregnancy; polygamy; alcoholism;
- **Family violence** (OR range 2.11–6.75): criticism, coercion, intimate partner violence, worse if the baby is a girl than a boy;
- **Quality of family relationships** (OR range 2.1–4.4): critical mother-in-law, geographic separation from own mother;
- **Reproductive health** (OR range: 1.6–8.8): unwanted or unintended pregnancy; previous stillbirth; coincidental illness; premature birth; caesarean birth
- **Past history of mental health problems** (OR range 5.1–5.6)

PROTECTIVE FACTORS FOR CPMD IN LOW and LOWER MIDDLE-INCOME COUNTRIES

- Education (RR 0.5; $p=0.03$) ;
- Employment (OR: 0.64; 95% CI: 0.4–1.0) including security while away from the workforce to care for an infant;
- Provision of structured direct care by a trusted person, preferably a woman's own mother (OR: 0.4; 95% CI: 0.3–0.6) ;
- Confiding affectionate relationship with the intimate partner (OR: 0.52; 95% CI: 0.3–0.9).

Fisher et al, 2012

CONSEQUENCES OF PERINATAL CMD FOR SELF-CARE

Iodine status in late pregnancy and psychosocial determinants of iodized salt use in rural northern Viet Nam

Jane Fisher,^a Thach Tran,^a Beverley Biggs,^b Tuan Tran,^c Terry Dwyer,^d Gerard Casey,^b Dang Hai Tho^c & Basil Hetzel^e

Objective To establish iodine status among pregnant women in rural northern Viet Nam and explore psychosocial predictors of the use of iodized salt in their households.

Methods This prospective study included pregnant women registered in health stations in randomly-selected communes in Ha Nam province. At recruitment (< 20 weeks of gestation), sociodemographic factors, reproductive health, intimate partner relationship, family violence, symptoms of common mental disorders and use of micronutrient supplements were assessed. During a second assessment (> 28 weeks of gestation) a urine specimen was collected to measure urinary iodine concentration (UIC) and iodized salt use was assessed. Predictors were explored through univariable analyses and multivariable linear and logistic regression.

Findings The 413 pregnant women who provided data for this study had a median UIC of 70 µg/l; nearly 83% had a UIC lower than the 150 µg/l recommended by the World Health Organization; only 73.6% reported using iodized salt in any form in their households. Iodized salt use was lower among nulliparous women (odds ratio, OR: 0.56; 95% confidence interval, CI: 0.32–0.96); less educated women (OR: 0.34; 95% CI: 0.16–0.71); factory workers or small-scale traders (OR: 0.52; 95% CI: 0.31–0.86), government workers (OR: 0.35; 95% CI: 0.13–0.89) and women with common mental disorders at recruitment (OR: 0.61; 95% CI: 0.38–0.98).

Conclusion The decline in the use of iodized salt in Viet Nam since the National Iodine Deficiency Disorders Control Programme was suspended in 2005 has placed pregnant women and their infants in rural areas at risk of iodine deficiency disorders.

Bulletin of the World Health Organization, 2011; 89: 813-820

THINKING HEALTHY PROGRAM CONDUCTED IN RURAL PAKISTAN (Rahman et al, 2009)

Manualised intervention involving CBT techniques of:

- Active listening, problem solving, collaboration with the family to increase empathy;
- Practice activities between sessions

Provided by Lady Health Workers (LHWs) who had no mental health training but were given:

- Two days THP training and one day refresher after 4 months;
- Half-day supervision per month.

THINKING HEALTHY PROGRAM (Rahman et al, 2009)

Cluster Randomised Controlled Trial:

- Participants were: married women aged 16 – 45 years, in third trimester of pregnancy, diagnosed with major depression by a psychiatrist using a structured clinical interview;
- Intervention clusters LHW's provided one THP session per week for last month of pregnancy; three sessions in first postpartum month and monthly sessions until ninth postpartum month (16 visits);
- Control group same number of visits, but from an untrained LHW without the THP

THINKING HEALTHY PROGRAM (Rahman et al, 2009)

Cluster Randomised Controlled Trial:

- Outcomes were assessed by interviewers using a structured schedule, blind to group allocation;
 - After adjusting for covariates, women in the intervention group were at 6 and 12 month follow-up:
 - Less likely to be depressed ($p < 0.0001$);
 - Less functional disability ($p < 0.0001$);
 - Better global functioning ($p < 0.0001$);
 - Higher perceived social support ($p < 0.0001$)
- than women in the control group

THINKING HEALTHY PROGRAM (Rahman et al, 2009)

At twelve month follow-up infants of mothers in the intervention group were:

- More likely to be fully immunized ($p = 0.001$);
- Had fewer episodes of diarrhoea in past two weeks ($p = 0.04$);

than infants of control group mothers

SUMMARY: NATURE AND PREVALENCE OF CPMD

- Mental health problems among women who are pregnant or who have recently given birth are observable in all countries and cultures;
- The most prevalent are the non-psychotic common mental disorders of depression and anxiety;
- Postnatal depression 'PND' is an umbrella term rather than a specific condition;
- Perinatal as mental health problems are at least as prevalent in pregnancy as after birth;
- Threefold increase in onset in first six weeks postpartum (Cox, Murray and Chapman, 1993);
- 70% of cases are 'de novo' and 30% are recurrences of earlier mental health problems (Cooper et al, 1988);
- Women and infants are in touch with health services at this life stage;
- Men's needs at this life stage are inadequately understood, but some experience CPMD and a high proportion misuse alcohol;

SUMMARY: FACTORS GOVERNING CPMD

- Multifactorial,
- Social >> biology or psychology (Chen et al, 2005)
- Entrapment and humiliation (Brown and Harris, 1979)
- Gender, work, violence; autonomy, poverty, coincidental adversity.



SUMMARY: NEGLECTED, BUT RELEVANT RISKS FOR CPMD

- Physical illness;
- Unsettled infant behaviour;
- Gender-based violence;
- Occupational fatigue.

HOW MMH AND ECD CAN BE ADDRESSED IN THE CONTEXT OF POVERTY

- Mental health problems can be identified in women in resource-constrained settings;
- Limit self-care and caregiving capacity;
- Women and infants are in touch with health services and integrated mental health promotion strategies are most likely to be acceptable and accessible;
- Integrated cross-sectoral approaches which care for the woman in her life context so that she can care for her very young children



RESEARCH

- Urgent need for high-quality local evidence on which to base practices and policies;
- Epidemiological data about nature, prevalence and determinants;
- Formal validation of psychometric instruments: translation, cultural adaptation and comparison with a gold-standard diagnostic assessment administered blind;
- Complex multi-component interventions tested in well-designed trials