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Postnatal depression among Hong Kong Chinese fathers

Key Messages

1. The prevalence of postnatal depression in Hong Kong Chinese fathers was 4.9%.
2. Postnatal depression in fathers was closely linked with postnatal depression in mothers.
3. Risk factors differed between fathers and mothers. Fathers who had life events, stress, worries over unemployment, poor marital relationships, low social support, and *peiyue* care were more likely to have postnatal depression. Mothers who had antenatal depression, past depression, past neurasthenia, and unhelpful *peiyue* care were more likely to have postnatal depression.
4. The association between paternal and maternal postnatal depression was unlikely the result of commonly perceived risk factors. Instead, the partner's mood per se was an important factor in the aetiology of postnatal depression.

Introduction

Worldwide, postnatal depression affects 10 to 15% of recently delivered women. As paternal involvement in childcare becomes more prevalent, paternal postnatal depression is not uncommon and has been estimated to affect 5 to 24% of fathers in western societies. Paternal postnatal depression is closely linked to maternal postnatal depression. Hence, the affective experiences of the couple should be studied as a whole.

Factors that place fathers at risk of depression include unemployment, poor marital relationship, stress, life events, lack of social support, and a psychiatric history. Some of these factors are also related to maternal postnatal depression.

Sociocultural factors help shape the affective well being of Chinese mothers. The practice of *peiyue* (literally 'accompanying the month') mandates family support of the mother in the first postnatal month, which helps to reduce postnatal depression in mothers.¹ This practice could also be relevant to the adjustment of fathers in the postnatal period. However, men may have gender-specific risk factors that are absent or less influential in women. For example, work-related stress and the relationship with their partner may be more important for the adjustment of fathers than for mothers. Thus, it is vital to identify the psychosocial factors that predispose fathers to postnatal depression, and examine whether these factors are shared with maternal depression.

The present study attempted to determine the prevalence and incidence of postnatal depression among Hong Kong Chinese fathers, and identify psychosocial risk factors of paternal postnatal depression, and examine whether these risk factors are also present in maternal depression.

Method

Study design

This prospective cohort study was conducted from September 2005 to April 2007 at the Prince of Wales Hospital. All Chinese couples consecutively admitted to the postnatal ward were invited to participate. The inclusion criteria were Chinese ethnicity and permanent residency in Hong Kong.

Eligible participants were interviewed by trained research nurses immediately following delivery. Information on seven categories of risk factors was obtained. Participants completed the Chinese versions of the Edinburgh Postnatal Depression Scale (EPDS) and the Beck Depression Inventory (BDI).

At postpartum week 8, the participants repeated the EPDS and BDI. Information on *peiyue* care was solicited from the maternal participants. All participants who scored above a BDI cut-off score of 10.5 or the EPDS cut-off score of 9.5 (high scorers) were invited for a psychiatric diagnostic interview—the Chinese non-patient version of the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Forty percent of participants who scored below the BDI and EPDS cut-off (low scorers) were randomly selected for the interview. The prevalence and incidence of paternal postnatal depression were calculated by means of a two-phase design using reverse weighting.

Hong Kong Med J 2011;17(Suppl 2):S9-12

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HHSRF project number: 03040201

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Sample size

A total of 2351 couples were approached; the overall response rate was 44%. At postpartum week 8, 551 couples returned for the follow-up assessment.

Study instruments

The EPDS is a 10-item scale for assessing postnatal depression. Its reliability and validity has been demonstrated. The Chinese version of the EPDS has been validated among Chinese women and its psychometric performance is comparable to the original scale.

The BDI is a 21-item self-rating scale for measuring the severity of depression. The Chinese version of the BDI has been validated among Chinese women to identify postnatal depression and has been shown to have satisfactory psychometric properties.

The Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, 4th Edition is a semi-structured interview that allows the interviewer to use additional questions to enquire about indigenous idioms of distress so that it can be used in a culturally-informed way. It is widely used as the gold standard of psychiatric diagnosis and the Chinese version has been validated.

Results

The sociodemographics of the participants are summarised in the Table. Fathers who completed the follow-up study did not differ from those who dropped out in terms of baseline EPDS and BDI scores. However, those who completed the study were more likely to be married and less likely to have a history of psychiatric illness.

Prevalence and incidence of paternal postnatal depression

The prevalence of paternal postnatal depression was 4.9% (2.4% major and 2.5% minor). The incidence was 3.5% (1.6% major and 1.9% minor) per year.

Relations between paternal and maternal depression

Paternal and maternal postnatal depression was significantly associated ($P=0.04$, McNemar test). When a father was diagnosed with depression, his partner had a 31% risk of suffering from depression.

Risk factors of postnatal depression

Multiple regression analysis indicated that paternal postnatal depression was predicted by maternal postnatal depression ($\beta=0.30$, $P=0.00$), life events ($\beta=0.13$, $P=0.00$),

Table. Sociodemographics of paternal participants

Characteristics	Fathers assessed at postpartum week 8 (n=551)		Fathers not assessed at postpartum week 8 (n=57)		Statistics	
	No.	%	No.	%	χ^2	P value
Place of birth					1.39	0.50
Hong Kong	476	86.4	51	89.5		
Mainland China	67	12.2	5	8.8		
Others	8	1.5	0	0		
Marital status					24.49	0.00
Married	533	96.7	47	82.5		
Cohabiting	17	3.1	9	15.8		
Separated or divorced	0	0	0	0		
Single	1	0.2	1	1.8		
Education level					1.56	0.82
No formal education	1	0.2	0	0		
Kindergarten	1	0.2	0	0		
Primary	18	3.3	2	3.5		
Secondary	309	56.1	27	47.4		
University	222	40.3	27	47.4		
Occupation					4.42	0.35
Unskilled	17	3.1	1	1.8		
Semi-skilled	18	3.3	0	0		
Skilled	323	58.6	29	50.8		
Semi-professional	145	26.3	19	33.3		
Professional	48	8.7	7	12.3		
Homemaker	0	0	0	0		
Social class					4.51	0.34
I	48	8.7	7	12.3		
II	144	26.1	19	33.3		
III	324	58.8	29	50.9		
IV	18	3.3	0	0		
V	17	3.1	1	1.8		
Medical history					1.91	0.38
Nil	460	83.5	42	73.7		
Inactive	19	3.4	0	0		
Active	69	12.5	5	8.8		
Psychiatric history					7.41	0.03
Nil	538	97.6	44	77.2		
Inactive	3	0.5	2	3.5		
Active	7	1.3	1	1.8		
	Mean	SD	Mean	SD	z	P value
Age (years)	33.4	5.9	32.4	5.5	-0.50	0.62
No. of children	1.3	0.5	1.3	0.5	-0.46	0.65
Monthly household income (HK\$)	37 493	85 823	45 075	101 300	-0.55	0.58
Edinburgh Postnatal Depression Scale score	4.9	4.3	5.4	5.2	-0.36	0.72
Beck Depression Inventory score	3.8	5.0	5.2	7.1	-0.71	0.48

perceived stress ($\beta=0.16$, $P=0.00$), potential threat of self unemployment ($\beta=0.14$, $P=0.00$), poor marital relationship ($\beta=-0.14$, $P=0.00$), lack of social support during pregnancy ($\beta=-0.11$, $P=0.00$), and the presence of *peiyue* care ($\beta=0.10$, $P=0.00$).

On the other hand, maternal postnatal depression was independently predicted by paternal postnatal depression ($\beta=0.31$, $P=0.00$), past depression ($\beta=0.21$, $P=0.00$), antenatal depression ($\beta=0.12$, $P=0.00$), past neurasthenia ($\beta=0.11$, $P=0.01$), and unhelpful *peiyue* care ($\beta=-0.16$, $P=0.00$).

Discussion

The prevalence of Hong Kong Chinese fathers suffering from postnatal depression was 4.9%, which is similar to 1.8% reported in Singapore and 2.9% in Australia.^{2,3} This suggests that a substantial proportion of fathers experienced emotional problems during the transition to parenthood. The role of fathers has changed and they are expected to share greater responsibilities in childcare. Thus, postnatal depression should be conceptualised as a mental health problem affecting both fathers and mothers. It is essential for health care providers to be aware of the mental health needs of fathers during the transition to fatherhood.

Postnatal depression in one partner correlated with postnatal depression in the other. This association has been consistently demonstrated, but is not likely to be related to common risk factors.

Paternal postnatal depression was predicted by life events and stress (work-related stress in particular). Perhaps fathers are primary providers for material support for the family. The arrival of a new family member may increase economic pressure on the father, thus compromising his psychological well being. Social support and marital support also play an important role in the affective experiences of fathers during the early postnatal period. Perhaps men often rely on their spouse for emotional support as their social networks are more restricted. When the marital relationship is unsatisfactory and the amount of spousal support deteriorates, fathers may be more negative toward their paternal role and exhibit more adjustment problems.

For mothers, the most reliable predictor of postnatal depression is a history of depression. Our findings support this possibility, as maternal postnatal depression was associated with past depression, antenatal depression, and past neurasthenia.

The association between paternal and maternal depression was not likely to be the result of common risk factors. Instead, a partner's mood per se was a risk factor in the aetiology of postnatal depression. Mood emerged as the most important predictor when other risk factors were considered. This highlights the importance of studying the couple as a whole for a comprehensive understanding of

the affective experiences of new parents. Although routine screening in all fathers may not be plausible in clinical setting, our findings suggest that when the mothers are depressed, screening for paternal depression can be useful in identifying fathers at risk. In our hospital, it is a routine practice for mothers to complete the EPDS at postpartum weeks 6 to 8. Those who score above the cut-off score are referred to the postnatal depression care unit, so long as they consent. Male partners of these high scorers could also be evaluated for depressive symptoms using the EPDS. Fathers can also be involved in the management of maternal depression. When the father was involved in treatment, not only was the recovery of maternal postnatal depression expedited, but the father also benefited by lowering his own risk of becoming depressed.⁴

Health care providers should be cautioned about the gender-specific nature of risk factors when identifying new parents who are likely to develop postnatal depression. Each partner may have particular concerns, types of distress, and vulnerabilities that are specific to their gender role during the transition to parenthood. It is likely that their affective experiences are shaped by different types of factors. Hence, the intervention and management of postnatal depression should be designed in a way that addresses the specific needs of new parents.

The practice of *peiyue* care may render new parents vulnerable to depressive symptoms. The mere presence of *peiyue* placed fathers at a heightened risk of depression in the early postnatal period, as mother-in-laws were the most frequently reported providers of *peiyue* care in our sample. Conflicts between mother-in-law and daughter-in-law remain a common issue in modern Chinese families. The father is often caught in between the role of a filial son and a loving husband. Thus, the transgenerational in-law conflicts and its accompanying distress may further add onto the burden of new fathers. Mothers who perceived the *peiyue* care as unhelpful had a greater tendency to report depressive symptoms. Perhaps societal values have changed and discrepancies may exist in the attitudes towards childcare and customary practice between the two generations. Conflicts, instead of support, may arise and parents' affective well being is hampered. It is important to rethink whether cultural practices, which are legacies from the past, continue to benefit contemporary parents.

The present study highlights the importance of incorporating the fathers' affective experiences to derive a more comprehensive representation of postnatal mental health problems. Follow-up studies over a longer time period are needed to examine the course of paternal postnatal depression, and to develop intervention programmes to help fathers in need.

Acknowledgements

This study was supported by the Health and Health Services

Research Fund (#03040201), Food and Health Bureau, Hong Kong SAR Government. The authors would like to thank Terry Leung, Winnie Lam, Kam Yin Chan, and Fiona Lee for their contribution.

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