PRIME: IMPACT OF PREVIOUS MENTAL HEALTH PROBLEMS ON HEALTH RELATED QUALITY OF LIFE IN WOMEN WITH CHILDBIRTH TRAUMA.

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ABSTRACT

Purpose

We investigated the impact of pre-existing mental ill health on postpartum maternal outcomes.

Methods

Women reporting childbirth trauma received counselling (PRIME; n=137) or parenting support (n=125) at birth and six weeks. The EQ-5D measured health related quality of life at 6 weeks, 6 and 12 months.

Results

At 12 months, EQ-5D was better for women without mental health problems receiving PRIME (MD: 0.06; 95% CI: 0.02 to 0.10) or parenting support (MD: 0.08; 95% CI: 0.01 to 0.14).

Conclusions

Pre-existing mental health conditions influence quality of life in women with childbirth trauma.

KEYWORDS

Post-natal depression; health related quality of life; childbirth trauma; mental health

INTRODUCTION

Depression and anxiety have been identified as the primary burden of disease for females in Australia, with latest figures showing that mental health disability is rising (Perinatal Mental Health Consortium 2008). The identification of factors which cause the onset and perpetuate emotional distress (i.e. depression and anxiety) in women in the perinatal period is important to inform the delivery of healthcare and allocation of resources with this vulnerable population.

PRIME (Promoting Resilience In Mothers' Emotions) is a midwife-led counselling intervention based on cognitive-behavioural principles and designed to ameliorate childbirth distress (Gamble and Creedy 2009). It is offered face-to-face within 72 hours of childbirth and again around 6 weeks postpartum by phone. A randomised controlled trial was performed in Australia comparing PRIME with parenting support (Australian and New Zealand Clinical Trials Registry ACTRN12610000098033). Qualitative results of this clinical trial have been reported previously (Fenwick et al. 2013).

In this paper, we discuss the impact of previous mental health problems on the effectiveness of the PRIME intervention.

MATERIAL AND METHODS

Women in the third trimester of pregnancy (n = 890 out of 1040, response rate = 85.5%) were recruited from four public hospitals in Western Australia and Queensland (Australia) and screened within 24-72 hours of birth to determine if they met Criterion A of the American Psychiatric Association, Diagnosis and Statistical Manual of Mental Health Disorders (DSM IV-TR) for posttraumatic stress disorder (American Psychiatric Association 2000). Women were asked if during labour or birth they had been fearful for their life or their baby's life, or feared serious injury or permanent damage. Mothers screening positive were randomly allocated to receive the counselling intervention (PRIME; n=137) or parenting support (active control; n=125). PRIME aims to support the expression of feelings and provide a framework for women to identify and work through distressing elements of childbirth. Women were provided with an opportunity to review their birth and develop a realistic perception of events. There was a focus on developing individual situational supports for the present and near future, affirming that negative things can be managed and developing a simple plan for achieving this (Gamble and Creedy 2009). Both groups of women (intervention and control) received the same level of contact from the research midwives.

Participant characteristics were self-reported during pregnancy, and birth events were reported 24-72 hours after birth. Duration of the intervention (PRIME or Parenting) was reported by the research midwife and the health related quality of life (HRQoL) data were collected at six weeks, six and twelve months following birth by telephone.

HRQoL data were calculated using the EuroQol five dimensional (EQ-5D). The EQ-5D questionnaire is one of the most widely used generic preference-based instruments to measure HRQoL. The EQ-5D has five dimensions (mobility, self-care, usual activities, pain/discomfort, and anxiety/depression). Each dimension has three levels corresponding to no problems, some problems, and severe problems. Australian weights were used to generate utility values (Viney et al. 2011).

Data analyses

To assess differences in baseline characteristics between PRIME and parenting Pearson chi-squared tests were used for categorical data. For the intervention duration and the EQ-5D, data was analysed using general linear model repeated measures. Multiple imputation techniques were applied to adjust for missing data. For the duration of the intervention, treatment allocation and previous mental health help were used as indicators. For the EQ-5D, previous mental health help and EQ-5D values at other time points were used as indicators. All statistical analyses were performed using SPSS (version 20.0).

Ethical considerations

Approval was obtained from the Human Research Ethics Committees of all participating University and hospital sites. Women gave written informed consent. All women were monitored for psychological safety by research staff. A risk protocol with referral pathways was followed. One woman required additional support.

RESULTS

BASELINE CHARACTERISTICS

Numerically, more participants indicating they received previous mental health help were in PRIME (40%) compared to the parenting group (29%; p=0.054). The main previous mental health conditions reported were depression (53%), anxiety (18%) or both depression and anxiety (19%), with no differential between the two groups (p=0.643). All other baseline characteristics were comparable between the groups. In short, women had a mean age of 30 years, 50% were nulliparous, 85% of women feared for the life of self and or baby, and 60% feared for injury of self and or baby.

INTERVENTION

In both the PRIME and Parenting groups there was no difference in duration of intervention at birth for those women with or without pre-existing mental health problems. However, there was a trend for longer duration of the telephone counselling session at six weeks for participants who identified that they received previous mental health help (Table 1).

Table1: Intervention time (in minutes)

	No previous mental health help		Previous mental health help		
	n/N	Mean (SD)	n/N	Mean (SD)	p-value
PRIME					
Birth	80/82	22 (21)	54/55	24 (23)	**0.033**
6 week	63/82	57 (29)	47/55	71 (33)	
Parenting					
Birth	85/89	15 (12)	36/36	17 (14)	**0.014**
6 week	72/89	33 (18)	26/36	45 (24)	

Using general linear model for repeated measures and multiple imputation techniques to adjust for missing data

HEALTH RELATED QUALITY OF LIFE

The EQ-5D for both groups (PRIME and Parenting) is presented and stratified by the antenatal question: “have you ever sought help for a mental health condition?” (Table 2). Women receiving PRIME with no previous mental health help had a higher EQ-5D score at all time-points compared to women who received previous mental health help (p=0.001), with a mean difference at 1 year of 0.06 (95% CI: 0.02 to 0.10). For the Parenting group there were also statistically significant differences when analysed by previous mental health help (p=0.001), with a mean difference at one year of 0.08 (95%: 0.01 to 0.14). Additionally, over time the PRIME intervention resulted in an increase in EQ-5D, from 0.89 (SD 0.12) at six weeks after birth to 0.91 (SD 0.11) at one year after birth for those women without previous mental health help. PRIME participants receiving previous mental health help had a small reduction in their EQ-5D from 0.87 (SD 0.11) at six weeks after birth to 0.85 (SD 0.12) one year after birth.

Table 2: EQ-5D for randomised trial, by intervention and previous mental health help

	No previous mental health help		Previous mental health help		
	n/N	Mean (SD)	n/N	Mean (SD)	p-value
PRIME					
6 week	66/82	0.89 (0.12)	48/55	0.87 (0.11)	
6 month	69/82	0.91 (0.11)	50/55	0.85 (0.11)	**0.001**
1 year	54/82	0.91 (0.11)	41/55	0.85 (0.12)	
Parenting					
6 week	76/89	0.91 (0.11)	28/36	0.86 (0.14)	
6 month	86/89	0.93 (0.11)	34/36	0.85 (0.19)	**0.001**
1 year	77/89	0.89 (0.15)	27/36	0.82 (0.17)	

Using general linear model for repeated measures and multiple imputation techniques to adjust for missing data

Analysing the EQ-5D responses by domain for those in the PRIME group, women with previous mental health help compared to women without previous mental health help were more often moderately anxious or depressed at 6 weeks (27% vs. 13%, p=0.043) and 6 months (42% vs. 20%, p=0.005), and indicated more often some problems with mobility at 12 months (9% vs. 1%, p=0.027). For the parenting support group, women who indicated previous mental health help compared to women without previous mental health help were more often moderately anxious or depressed at 6 weeks (31% vs. 10%, p=0.005) and 6 months (36% vs. 16%, p=0.022), with some problems with usual activities at 6 months (25% vs. 7%, p=0.004) and 12 months (39% vs. 13%, p=0.001).

DISCUSSION AND CONCLUSION

While women with previous mental health problems received longer intervention time, this did not result in an improvement in longer term health related quality of life. It appears that both interventions may be successful in the short-term, however, for those women with pre-existing mental health problems, a brief intervention at birth and six weeks may not be sufficient. This result differs from a previous trial without an active control group indicating positive effects (Gamble et al. 2005)

For those women who received previous mental health help, analyses of the five domains of the EQ-5D, indicated that the reduced HRQoL was partly due to depression and anxiety at six weeks and six months. The reductions in mobility and usual activities may indicate that these women have other underlying chronic conditions or that the mental health problems reduce recovery from psychological childbirth trauma. As we do not have information on other existing health problems, we cannot draw any conclusions.

Women in this study who had previously sought mental health help were more likely to report a traumatic birth. Investigations of antecedents to trauma in childbirth are limited but pre-existing psychopathology has been noted (Ayers et al. 2006; Beck et al. 2011). Our results also confirm previous findings linking the negative affect of traumatic childbirth on new mothers' quality of life for over 12 months (Beck 2006). An accumulation of physical postpartum health problems was found to be a significant predictor of elevated posttraumatic stress symptoms in distressed US women (Beck et al. 2011). These physical problems are often hidden, and an unrecognized aspect of maternal health.

Primary prevention can occur if women with previous mental health problems are assessed during pregnancy and offered one-to-one midwifery care throughout the perinatal period. Furthermore, antenatal education could include information on how past experiences may influence a woman's perceptions and/or experience of labour and birth.

Examining a woman's psychosocial functioning, including social support and expectations of the birth may facilitate access to appropriate services. Providing women with opportunities to discuss their expectations and develop realistic ideas of the range of birthing experiences and hospital procedures may be useful.

There are several limitations associated with this study. Women were not stratified to previous mental health problems and therefore, the analyses are a post-hoc analysis of the clinical trial. Information on the women's health, other than that related to their pregnancy or labour was not obtained, which may make generalisation of our findings somewhat limited. Further as we did not have complete follow-up for all women, with a lower follow-up for those women with previous mental health problems. To accommodate for this difference advanced statistical methods (multiple imputation technique) were applied.

In conclusion, a short-term intervention (i.e. PRIME and Parenting) at birth and six weeks is more effective in improving HRQoL for those women with a traumatic birth event who do not have mental health problems. Women with a pre-existing mental health problem will need ongoing support to improve their HRQoL.

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