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Research report

# Patient preference for counselling predicts postpartum depression: a prospective 1-year follow up study in high-risk women

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## Abstract

**Background:** Patient preferences have been associated with a positive effect of depression treatment. Little is known about patient preferences in at-risk samples. The aim of this study was to examine the role of patient preference for counselling in the occurrence of postpartum depression in high-risk women.

**Method:** We conducted a prospective 1-year follow up study in two hospitals and four midwifery practices in The Netherlands. Participants were 90 pregnant women at high risk for postpartum depression: 45 high-risk women who preferred *no* counselling, 45 high-risk women who preferred counselling. Both groups received care as usual. The main outcome measure was clinical depression (Research Diagnostic Criteria) at 3, 6, and 12 months postpartum.

**Results:** Point-prevalence rates of clinical depression were significantly higher in high-risk women who preferred counselling compared with high-risk women who did not prefer counselling (24% versus 9%,  $P=0.048$ ; 19% versus 5%,  $P=0.048$ , at 3 and 6 months postpartum, respectively). No significant difference was found at 12 months postpartum. Across the first-year postpartum, high-risk women who preferred counselling were at seven-fold increased risk for clinical depression (OR=7.7, 95% CI 1.7–33.8,  $P=0.007$ ).

**Conclusions:** Patient preference for counselling is an important predictor of postpartum depression in pregnant women at high risk for postpartum depression. Patient preferences may reflect validly a perceived need for intervention in high-risk women. This finding emphasises the need to take patient preference for counselling into account as an important variable to identify a high-risk population.

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**Keywords:** Postpartum depression; Patient preference; Counselling

## 1. Introduction

Non-psychotic depression is common following childbirth, affecting 10–15% of women in the first-

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year postpartum (O'Hara and Swain, 1996). There is a need for effective means to prevent postpartum depression and its detrimental consequences. A number of studies of prevention reported that psychological intervention reduced the risk of postpartum depression in at-risk women (Chabrol et al., 2002; Elliott et al., 2000; Zlotnick et al., 2001). Other studies, however, failed to confirm these findings (Brugha et al., 2000; Small et al., 2000). This variability of findings suggests the involvement of variables in the effectiveness of interventions such as type of intervention, or patient-related factors, such as personality.

An important patient-related factor may be patient preference for psychosocial intervention aimed at improving postpartum psychological adjustment. Such preferences have been associated with a positive effect of depression treatment, in particular of counselling (Chilvers et al., 2001) and an increased likelihood of entering treatment (Dwight-Johnson et al., 2001). How-

ever, there is still a lack of empirical research concerning patient preferences in at-risk samples. Therefore, the aim of the present study was to examine the role of preference for early postpartum counselling on the occurrence of postpartum depression in high-risk women.

## 2. Methods

### 2.1. Design and procedure

An observational prospective study was carried out to compare the prevalence rates of clinical depression at 3, 6, and 12 months postpartum for high-risk women who preferred a *no* counselling condition as opposed to high-risk women who did prefer counselling. Both groups received cares as usual.

High-risk women were identified during the second trimester of pregnancy. Women who visited the

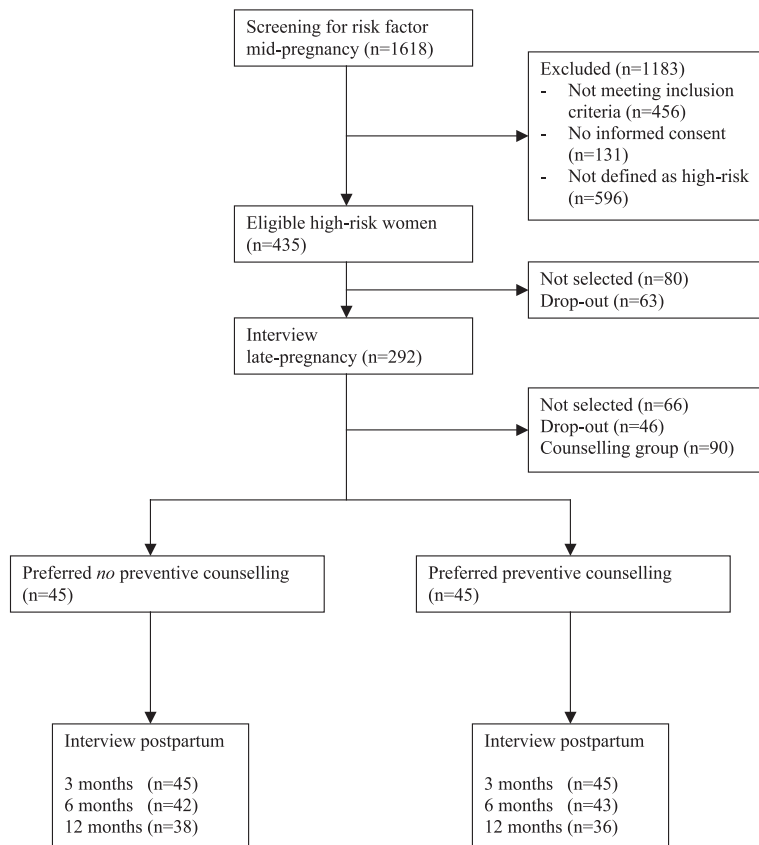


Fig. 1. Flow chart of participants in the study.

Table 1

Difference between high-risk women in the study and high-risk women not in the study (not selected or dropped out) on characteristics at 32 weeks gestation

Characteristics	Women in the study (N=90)	Women not in the study (N=345)	P value*
<i>Demographic characteristics</i>			
Age (years) mean (range)	30 (23–39)	30 (19–39)	0.84
Marital status (with partner)	86 (96)	308 (89)	0.19
Parity (primiparous)	41 (46)	161 (47)	0.85
Educational level			
Low	19 (21)	79 (23)	0.81
Middle	49 (54)	192 (56)	
High	22 (24)	74 (21)	
<i>Risk factors for postpartum depression</i>			
Personal history of depression	50 (56)	187 (54)	0.81
Family history of depression	40 (44)	123 (36)	0.14
Relationship problems between subject's parents	36 (40)	122 (35)	0.41
High depressive symptomatology	30 (33)	111 (32)	0.83

Values are numbers (percentages) unless stated otherwise.

\* Differences compared on  $\chi^2$  tests ( $df=1$ ), or two-tailed *t*-test.

obstetrician or midwife for antenatal care were screened on the following four risk factors for postpartum depression: (i) personal history of depression, (ii) family history (first degree) of depression, (iii) poor relationship between the parents during subjects' childhood, and (iv) severe depressive symptomatology during the second trimester of pregnancy. Only women who reported at least one risk factor were defined as high risk for postpartum depression. The assessment of the risk factors is described in Verkerk et al. (2003).

During an interview at late pregnancy, high-risk women were asked if they prefer the postpartum counselling offered in the intervention part of the study. The counselling consists of 10 half hour visits at home from 4 to 14 weeks after delivery to talk about their personal experiences and feelings. Women were told that talking about their personal experiences might be helpful in psychological adaptation after childbirth. They were informed that they would be selected for this form of intervention on a random basis.

## 2.2. Participants

Subjects were participants in a prospective longitudinal study of postpartum depression (Verkerk et al., 2003). A randomly selected group of high-risk women (292 of 435 high-risk women) were interviewed at 32

Table 2

Characteristics of high-risk women during pregnancy according to preference for early postpartum counselling

Characteristics	Preferred no counselling (N=45)	Preferred counselling (N=45)	P value*
<i>Demographic characteristics</i>			
Age (years) mean (range)	31 (23–39)	30 (19–39)	0.07
Marital status (with partner)	44 (97)	42 (93)	0.31
Parity (primiparous)	17 (38)	24 (53)	0.14
Educational level			
Low	10 (22)	9 (20)	0.62
Middle	26 (58)	23 (51)	
High	9 (20)	13 (29)	
<i>Social support</i>			
Partner, mean (S.D.)	12 (4.6)	13 (4.5)	0.36
Significant other, mean (S.D.)	14 (4.5)	13 (4.6)	0.44
<i>Depressive symptoms (EPDS)</i>			
Mid-pregnancy mean (S.D.)	9.1 (5.3)	8.6 (4.9)	0.62
Late-pregnancy mean (S.D.)	7.4 (4.6)	7.5 (4.3)	0.96
<i>Risk factors of postpartum depression</i>			
Personal history of depression	25 (56)	25 (56)	1.00
Family history of depression	20 (44)	20 (44)	1.00
Relationship problems between subject's parents	20 (44)	16 (36)	0.44
High depressive symptoms mid-pregnancy	14 (31)	16 (36)	0.66
<i>Number of risk factors</i>			
1	21 (47)	23 (51)	0.81
2	17 (38)	14 (31)	
3	4 (9)	6 (13)	
4	3 (7)	2 (4)	

Values are numbers (percentages) unless stated otherwise.

\* Differences compared on  $\chi^2$  tests ( $df=1$ ), or two-tailed *t*-test.

weeks pregnancy (Fig. 1). Of the group of 246 (84%) women who consented to participate postpartum, 74 (30%) preferred *no* counselling, and 159 (64%) preferred counselling. Women who preferred counselling were randomised to the ‘care as usual’ or ‘counselling’ arm of the study. There were no significant differences with respect to demographic characteristics and prevalence of risk factors for depression between women who preferred counselling and those who did not.

### 2.3. Study groups

On the basis of patient preferences, two groups of high-risk women were matched on the point-prevalence rate of clinical depression at 32 weeks pregnancy (15.6% depressed in each group) in order to control for this predictor of postpartum depression (O’Hara and Swain, 1996): (i) high-risk women who preferred *no* counselling (PC– group,  $N=45$ ), and (ii) high-risk women who preferred counselling but were randomised in the ‘care as usual’ arm of the study (PC+ group,  $N=45$ ). Both groups did not actually participate in the counselling, reflecting a match (PC–) in the first group and a mismatch (PC+) in the second group regarding their preference for counselling.

In the two study groups, seven (15%) women dropped out of the study during the follow-up. One woman in the PC– and two women in the PC+ group had missing data. So, 37 women in the PC– group

and 36 women in the PC+ group had complete data. Women who completed the study were more likely to report a personal history of depression ( $P=0.029$ ) and lower levels of perceived social support provided by a closest confidant ( $P=0.001$ ) compared to women who dropped out of the study. There were no significant differences between the high-risk women in the study ( $N=90$ ) and those high-risk women eligible for the study who were not selected ( $N=236$ ) or dropped out ( $N=109$ ) on demographics or frequency of risk factors (Table 1).

### 2.4. Measures

Preference, a (positive or negative) attitude toward counselling as offered the study, was assessed by the question ‘do you prefer counselling?’. Clinical depression was assessed at 32 weeks pregnancy and at 3, 6, and 12 months postpartum with a semi-structured interview using the Research Diagnostic Criteria (RDC) (Spitzer et al., 1978). The assessor was blinded to the participants’ preference. At 32 weeks pregnancy, depressive symptoms were measured by means of the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987; Pop et al., 1992). In order to control for treatment of depression, we assessed the use of antidepressants at 3, 6 and 12 months postpartum. Perceived social support provided by partner and closest confidant was assessed using the Social Support Interview (SSI) (O’Hara et al., 1983) at 32 weeks pregnancy.

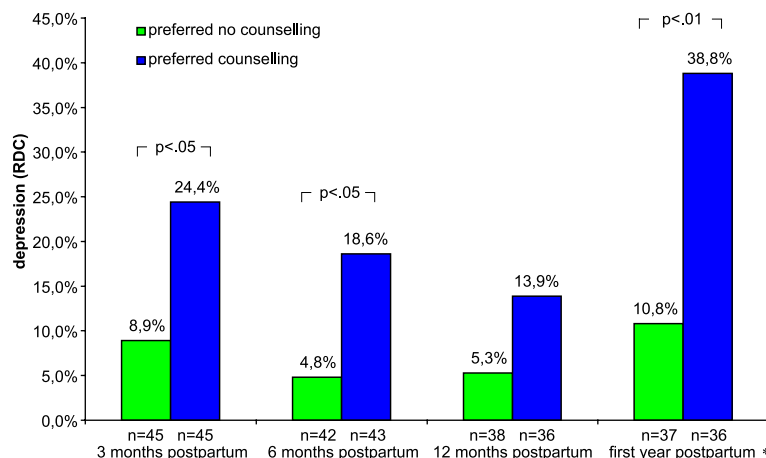


Fig. 2. Point-prevalence rates of clinical depression as function of preference for early postpartum counselling. \*Percentage of women depressed at one or more assessment points.

Table 3  
Use of antidepressants of high-risk women according to preference for early postpartum counselling

Outcome measures	Preferred no counselling	Preferred counselling	<i>P</i> value*
<i>Use of antidepressants</i>			
3 months postpartum	3/45 (7)	3/45 (7)	1.00
6 months postpartum	3/42 (7)	5/43 (12)	0.48
12 months postpartum	3/38 (8)	3/36 (8)	0.94
First-year postpartum†	4/37 (11)	5/36 (14)	0.69

Values are numbers (%) unless stated otherwise.

\* Differences compared on  $\chi^2$  tests ( $df=1$ ).

† Use of antidepressants at one or more assessment points across the first-year postpartum.

### 2.5. Statistical analysis

$\chi^2$  tests and *t*-tests were used to examine differences between the study groups as regards demographics, risk factors for depression, depressive symptoms, and prevalence of clinical depression. Multiple logistic regression analyses were used to determine whether preference for counselling was associated with clinical depression when controlled for demographics and clinical depression during late pregnancy. A sample size of 42 women in each group ( $\alpha=0.05$  and  $\beta=0.10$ ), assessing a large effect size (0.50) was required for the  $\chi^2$  tests (Cohen, 1987).

## 3. Results

### 3.1. Characteristics of the sample

No significant differences between the study groups were found with regard to demographic variables,

levels of perceived social support, levels of depressive symptomatology, prevalence and number of risk factors for depression (Table 2).

### 3.2. Diagnosis of clinical depression

In the two study groups, women who preferred counselling (PC+ group) and women who did not (PC– group), point-prevalence rates of clinical depression were 15.6% at 32 weeks pregnancy. Point-prevalence rates were significantly lower for the PC– group compared to the PC+ group at 3 months ( $\chi^2=3.92$ ,  $df=1$ ,  $P=0.048$ ) and 6 months postpartum ( $\chi^2=3.19$ ,  $df=1$ ,  $P=0.048$ ), (Fig. 2). There were no significant differences between the study groups in the percentages of women being treated with antidepressants (Table 3).

### 3.3. Multivariate analyses

After controlling for demographic variables and clinical depression during late pregnancy, preference for intervention was still significantly associated with clinical depression at 3 months (OR=6.3,  $P=0.01$ ) and 6 months postpartum (OR=8.0,  $P=0.04$ ; Table 4). Across the first-year postpartum, high-risk women who preferred counselling were at seven-fold increased risk for clinical depression (OR=7.6,  $P=0.01$ ; Table 4).

## 4. Discussion

This study showed that preference for counselling during the early postpartum was an independent

Table 4  
Multiple logistic regression (method enter)

Variables	3 months postpartum, <i>n</i> =90			6 months postpartum, <i>n</i> =85			12 months postpartum, <i>n</i> =74			1-year postpartum*, <i>n</i> =63		
	OR	95% CI	<i>P</i> value	OR	95% CI	<i>P</i> value	OR	95% CI	<i>P</i> value	OR	95% CI	<i>P</i> value
Preference for counselling	6.3	1.4–27.6	0.01	8.0	1.1–58.4	0.04	3.9	0.6–26.1	0.16	7.6	1.7–33.8	0.01
Age	1.2	0.9–1.4	0.11	1.1	0.8–1.4	0.57	1.0	0.8–1.3	0.74	1.0	0.9–1.3	0.82
Parity	1.5	0.4–5.8	0.55	0.5	0.1–2.7	0.40	2.4	0.4–16.6	0.85	1.3	0.3–4.8	0.73
Educational level	0.9	0.3–2.5	0.78	1.6	0.4–6.8	0.51	0.9	0.2–3.4	0.35	1.3	0.3–3.9	0.73
Clinical depression pregnancy	6.71	1.5–29.4	0.01	30.1	3.5–62.8	0.02	5.1	0.8–32.2	0.09	12.1	2.2–66.0	0.00

Dependent variable: prevalence of clinical postpartum depression.

\* Percentage of women depressed at one or more assessment points in the first-year postpartum.

predictor for the occurrence of clinical depression in the first-year postpartum in high-risk women. High-risk pregnant women who preferred counselling were at seven-fold increased risk for clinical depression across the first-year postpartum. In contrast, Elliott et al. (2000) suggested that those women at-risk who choose not to participate in a preventive intervention are more vulnerable for postpartum depression. However, in that previous study vulnerability was only based on number of risk factors but not on actual prevalence rates of depression during the postpartum.

The findings in our study have important clinical implications. Assessment of preference for counselling in addition to standard risk factors may significantly improve the identification of women at increased risk for postpartum depression. Our findings suggest that preference for counselling may reflect validly a perceived need for intervention of pregnant high-risk women and should be taken seriously in clinical practice. Our findings indicate a statistical moderating effect of preference for counselling on the association between risk factors and prevalence of clinical depression. More research is needed to explore the possible personal and environmental determinants associated with preference for counselling.

One limitation of the study is its sample size; the power of the study might be insufficient to detect small differences in baseline characteristics and point-prevalence rates of depression. Another limitation is that assessment of preference was related to the specific form of counselling in this study. A replication of this study involving preference for counselling in general might strengthen the conclusions from this study.

The present study shows that patient preference for counselling is a predictor of postpartum depression in high-risk women. This finding emphasizes the need to take patient preference for counselling into account as an additional variable on standard risk factors for depression to identify women at high-risk for postpartum depression.

### Acknowledgement

The study protocol was approved by the Medical Ethical Committees of the St. Joseph Hospital,

Veldhoven and the Two Cities Hospital, Tilburg. All participants gave their fully informed consent.

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