

Perinatal Depression Support - an effective measure for peripartum depression

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Summary

Peripartum depression (PPD) affects many women and their families before and often long after the birth and can occur up to two years post partum.

These women are currently underserved, as diagnosis and treatment are not adequately established and the transition between still physiological *baby blues* and manifest PPD can be fluid.

In order to support the women affected, the postpartum crisis helpline (PDS) was established, an outreach support service in which a specially trained nurse can be contacted directly by those affected by mobile phone for support. The postpartum crisis helper visits the affected women at home as required and helps them to cope with their situation, provides information and supports the family.

As part of a pilot study, 125 affected women were visited an average of 5 times (min 1, max 15). The mean value of the *Edinburgh Postnatal Depression Scale* (EPDS) improved highly significantly and with a large effect size from 17.8 before to 8.4 after the interventions and thus below the threshold value of 9 for clinical conspicuousness. After EPDS, 63% of the women showed a clinical response. On average, 283 euros had to be spent per patient. The considerable improvement in the life situation of the affected mothers in relation to the low costs should lead to the postpartum crisis support being made available to all women with PPD.

Introduction

For most women, having a child means great happiness. But this happiness does not always materialise. While 50-80% of women temporarily experience the so-called baby blues a few days after giving birth, with exhaustion, mood swings, sadness and anxiety (1), peripartum depression (PPD), which occurs in 10-20% of all mothers, has a clear disease value. In some cases, feelings of guilt, fear of failure, ambivalent feelings towards the child, excessive demands, anxiety, panic attacks, obsessive thoughts with destructive ideas and even suicide and infanticide are experienced even before the birth and up to two years afterwards (2).

Current supply situation

Care for patients with PPD is inadequate. The fact that only 20 to 40% of women seek professional help (3, 4) is partly due to the fluid transition between baby blues and manifest PPD, but also to the fact that knowledge about the illness and support structures is insufficiently widespread. On the other hand, there are hardly any structures or resources for the diagnosis and treatment of PPD in large parts of Germany. The positive influence of supportive measures is also often underestimated by those affected.

If a young mother is not lucky enough for the midwife caring for her in the postpartum period to become aware of her symptoms, it takes a long time for the mother herself or her family to recognise the need for help and seek professional advice. In addition, psychotherapeutic treatment is often associated with long waiting times, during which the women with their babies and their families continue to suffer and the mother-child bond is often damaged. Those affected often resign themselves to seeking help.

The association "Schatten und Licht" (Shadow and Light), founded by Sabine Surholt, has taken on this problem and set up self-help groups and support networks in many parts of Germany (5). However, turning to self-help groups requires personal initiative, which the mother is often unable to muster due to her illness. It should be noted that PPD is a disease with varying degrees of severity and therefore medical intervention is not absolutely necessary in every case. The *Edinburgh Postnatal Depression Scale* (EPDS) is a reliable and economically applicable questionnaire which, with only 10 items, can provide initial indications of the presence of PPD in the sense of a screening (6, 7).

Perinatal depression support (PDS)

The low-threshold outreach concept aims to structure the affected mother's daily routine, involve the entire family and help her by providing relief options so that the women can live in their familiar environment despite the illness. The *PDS* should alleviate and shorten the illness, not separate mother and child and promote their bond.

The origin of the *PDS* goes back to the "Arbeitskreis Wochenbett" in Fulda. With the help of the German Family Foundation, this concept was structured, scientifically supported and incorporated into the foundation's work. Initial analyses were presented in 2014 (8).

The German Family Foundation offers a corresponding training programme (9)¹

¹ In approximately 45 hours spread over three weekends, participants are trained in the following topics, among others: Psychiatric clinical pictures, postpartum depression, communication, relationship building, basic attitude, documentation, organisation, working in the family system, interculturality, self-help, addiction and depression, promotion of the parent-child relationship, prevention of attachment disorders and self-reflection. The training ends with a final presentation by the participant. The course qualifies participants to provide postpartum crisis counselling. (9)

A nurse trained at the *PDS* is equipped with a mobile phone, which is used by the person concerned to make initial contact. A home visit is made within 48 hours. In addition to the visits, telephone calls and WhatsApp communication help to stabilise those affected. After the medical history has been taken, individual, couple and family counselling sessions are held to provide information on clinical pictures, risk factors, preventive measures and treatment options and, if necessary, referral to support systems is initiated. In the pilot study presented here, a subgroup of the affected women who took part in the *PDS* programme were examined before and after the interventions using a questionnaire (EPDS) in order to record possible changes and to establish links to the effort (number of appointments) and the costs of the *PDS*.

Methods

Design of the pilot study and patients

A subgroup of the total population that participated in the *PDS*'s services was included in the pilot study (N=125). In addition to demographic data, an Edinburgh Postnatal Depression Scale (EPDS) (6) was recorded for the women at enrolment. After the interventions, the end of which was determined according to clinical criteria, the EPDS was collected a second time and the number and costs of the intervention were calculated.

All women who contacted the *PDS* hotline with subjective symptoms and whose care was completed between July 2018 and June 2021 were included in the study.

Questionnaire

The Edinburgh Postnatal Depression Scale (EPDS) (6) is a questionnaire that uses 10 items to measure symptoms of PPD (e.g. sadness, guilt, anxiety). The total score can range from 0 to 30 points. The authors of the scale give the following threshold values for assessing the severity in the sense of a screening: At 0-9 points the probability of PPD is low, at 10-12 moderately present and from 13 points high. In our pilot study, we therefore used 9 points as a cut-off point to assess changes in the EPDS score and defined a change from over 9 points before the *PDS* interventions to 9 points or less after the *PDS* as a clinical response.

Results

A total of 125 women were included in the study. In the overall sample, a median of 23 women asked for help 90 days before the birth (min 6, max 205) and a median of 104 women asked for help 79 days after the birth (min 0, max 665). Table 1 shows the key parameters of the study, which are explained below.

	Mean value	Standard dev.	Minimum value	Maximum value
Mother's age (years)	31,6	5,2	19	42
EPDS score before <i>PDS</i>	17,8	4,4	6	28
EPDS score according to <i>PDS</i>	8,4	3,1	2	16
EPDS difference (before/after <i>PDS</i>)	-9,4	4,4	-22	0
Total number of visits	5,3	2,7	1	15
Total costs (in euros)	283,33	152,53	58,80	854

Table 1: Data of the women included in the pilot study

EPDS before and after PDS

Before the *PDS*, those affected had a mean EPDS score of 17.8. After an average of five visits, the mean score was only 8.4. This difference was significant (paired t-test before/after *PDS*: $T(123)=24.02$; $p<0.001$) and showed a large effect size (Cohen's $d = 2.16$). According to the EPDS, 63% of the women showed a clinical response (defined as a value before *PDS* of > 9 and after *PDS* ≤ 9).

The difference in the EPDS correlated significantly with the number of visits ($r=-0.21$; $p<0.05$) in the sense that more visits led to a greater reduction in the EPDS score. However, the EPDS difference did not correlate significantly with the costs of the respective *PDS*. A detailed analysis showed no significant correlations between the subgroup of responders and non-responders with regard to the number of visits or costs.

Referral and psychotherapeutic measures

28% of the women were referred to a psychosomatic clinic and 35% to outpatient psychotherapy. Overlaps are possible here. Approximately 35% of the women were taking psychotropic medication.

Discussion

This article briefly outlines the care situation for women with peripartum depression and describes postpartum crisis support as a low-threshold and cost-effective intervention. As part of a pilot study, a subgroup of 125 women who received postpartum crisis care were analysed before and after the intervention using an EPDS questionnaire in order to assess the effect of postpartum crisis care.

Effectiveness of the PDS

With a highly significant ($p < 0.001$) reduction in the EPDS mean score of all women from 17.8 points before to 8.4 points after *PDS*, there is an initial indication of the effectiveness of the measure in principle. The high effect size (Cohen's $d = 2.16$) emphasises this. Furthermore, 63% of the women fell below the threshold value for a PPD of 9 in the EPDS after the *PDS*, thus showing a clinically relevant response. However, it should be noted that these results lack a control group to test the differential effect of *PDS*, e.g. against a "placebo" intervention. Similarly, measures of effect size in a pure pre-post comparison without a control group tend to be too high and should therefore be viewed critically. For ethical and methodological reasons, we deliberately only conducted this pilot study in this early phase in order to demonstrate the principle effect of *PDS*. Future studies could investigate *PDS* at the level of a randomised controlled trial.

Interestingly, a small proportion of the women (just under 5%) already had EPDS scores below the 9-point threshold prior to the *PDS* and therefore, by definition, did not have PPD. However, these women were so impaired in their well-being that they felt the need for help. It does not appear to make sense to exclude these few women from the *PDS*. It would be conceivable to refer them directly to other support services. On the other hand, the low-cost *PDS* can make the utilisation of other support services superfluous.

Diagnosis of PPD

Even if the EPDS score is not sufficiently accurate for the prediction of peripartum depression in prepartum use (10), it does provide an initial approach to familiarising those affected with the topic of PPD and allowing other measures to follow.

Midwives and gynaecologists should be highly sensitive to this clinical picture. Two questions formulated by Whooley (11) can help to identify a depressive situation with a high degree of sensitivity in outpatient care:

- 1 "Have you often felt down, sad, depressed or hopeless in the last month?"
2. "In the last month, have you had significantly less pleasure and enjoyment in things that you usually like to do?"

A third question: "Is that why you need help?" can increase accuracy (12).

Age compared to the normal collective

The average age of women who utilised a *PDS* was 31.6 years. It was therefore no different from the average age of all mothers at 31.8 years (Destatis). First-time mothers in Germany are 30.5 years old in 2020. As the largest number of women with *PDS* were also first-time mothers, mothers with *PDS* are around one year older. This observation contradicts the assumption that young mothers in particular suffer from PPD.

Costs

With a general shortage of resources, a supportive service such as the *PDS* can only be established if it is not associated with high costs. Average costs of €283 per intervention are low compared to the costs that would be incurred if inpatient treatment had to be provided following a medical diagnosis. Some women could even be helped with just one visit. The costs for a complete *PDS* are only around half of the daily rate for full inpatient treatment. The low-threshold and rapid access to the *PDS* enables help to be provided at such an early stage that any deterioration and the resulting high costs can be avoided. A good €35,000 was used to effectively help 125 women.

Interestingly, the costs or number of *PDS* interventions do not appear to be significantly related to the therapeutic effect measured by the EPDS reduction. Apart from a significant, but not large ($r=-0.2$) correlation between EPDS reduction and number of appointments, there are no correlations. With low costs overall, this may emphasise that it is by no means the case that "a lot helps a lot".

It has not yet been possible to finance postnatal crisis care via the health insurance funds, as they only finance measures ordained by doctors. This regulation stands in the way of nationwide provision. It would be conceivable to pay a fee in line with midwives' remuneration.

Conclusion and outlook

- *PDS* is a low-threshold, low-cost and effective measure that can provide impressive help to women affected by PPD.
- State institutions should enable the health insurance funds to finance the *PDS*.
- Health authorities and other municipal structures should generously support the training and employment of postpartum crisis counsellors in order to help many affected women.
- Broad social awareness, removal of taboos and education for and about the great suffering of affected mothers and their families is necessary in order to reduce the inhibition threshold for seeking help

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