The Patient Observer: Eye-Movement Desensitization and Reprocessing for the Treatment of Posttraumatic Stress following Childbirth

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ABSTRACT: **Background:** *No standard intervention with proved effectiveness is available for women with posttraumatic stress following childbirth because of insufficient research. The objective of this paper was to evaluate the possibility of using eye-movement desensitization and reprocessing treatment for women with symptoms of posttraumatic stress disorder following childbirth. The treatment is internationally recognized as one of the interventions of choice for the condition, but little is known about its effects in women who experienced the delivery as traumatic.* **Methods:** *Three women suffering from posttraumatic stress symptoms following the birth of their first child were treated with eye-movement desensitization and reprocessing during their next pregnancy. Patient A developed posttraumatic stress symptoms following the lengthy labor of her first child that ended in an emergency cesarean section after unsuccessful vacuum extraction. Patient B suffered a second degree vaginal rupture, resulting in pain and inability to engage in sexual intercourse for years. Patient C developed severe preeclampsia postpartum requiring intravenous treatment.* **Results:** *Patients received eye-movement desensitization and reprocessing treatment during their second pregnancy, using the standard protocol. The treatment resulted in fewer posttraumatic stress symptoms and more confidence about their pregnancy and upcoming delivery compared with before the treatment. Despite delivery complications in Patient A (secondary cesarean section due to insufficient engaging of the fetal head); Patient B (second degree vaginal rupture, this time without subsequent dyspareunia); and Patient C (postpartum hemorrhage, postpartum hypertension requiring intravenous treatment), all three women looked back positively at the second delivery experience.* **Conclusions:** *Treatment with eye-movement desensitization and reprocessing reduced posttraumatic stress symptoms in these three women. They were all sufficiently confident to attempt vaginal birth rather than demanding an elective cesarean section. We advocate a large-scale, randomized controlled trial involving women with postpartum posttraumatic stress disorder to evaluate the effect of eye-movement desensitization and reprocessing in this patient group. (BIRTH 39: March 2012)*

Key words: *eye-movement desensitization and reprocessing, posttraumatic stress disorder, childbirth, pregnancy, postpartum*

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Posttraumatic stress disorder following childbirth is a serious condition affecting roughly 1 to 2 percent of childbearing women in developed countries (1–3). An additional 22 to 40 percent experience some posttraumatic stress symptoms without meeting all the criteria for the disorder (1). The article by Beck et al (4) in the September 2011 issue of *Birth* adds to the existing evidence about prevalence and risk factors. Previous studies indicated that women with posttraumatic stress following childbirth usually do not recover spontaneously (5). For those with the disorder (or clinically relevant symptoms), a subsequent pregnancy may act as a trigger, with possible negative consequences. Symptoms of hyperarousal may influence the fetal environment and development through their effect on the hypothalamic-pituitary-adrenal-axis. Furthermore, symptoms of avoidance may include denial of pregnancy, avoidance of care, or both. Women could also greatly fear the upcoming delivery, which is associated with more cesarean sections (6). Therefore, as Beck et al pointed out, ''it is important to develop more appropriate services ... to provide effective treatment'' (4, p 226). Thus far, unfortunately, there is no standard intervention with proved effectiveness for women with posttraumatic stress following childbirth because of insufficient research into the topic.

In international guidelines on the management of posttraumatic stress disorder, trauma-focused cognitive behavioral therapy and eye-movement desensitization and reprocessing are recommended as the treatments of choice for trauma victims (7,8). Eye-movement desensitization and reprocessing is a technique that consists of a structured treatment protocol (Table 1). The patient focuses on her or his traumatic memories, thoughts, and emotions, while engaging in bilateral stimulation (eye movements, tones, or hand tapping). The aim is to reduce stress and to replace negative perceptions of the traumatic event with more positive cognitions (9). Despite a lack of research into treatment of posttraumatic stress disorder following childbirth, a recent review described three possible treatment options (10); seven studies, of which six were randomized controlled trials, have evaluated the effect of debriefing or counseling. Their conclusions varied from effective, to no significant effect, to even a possible negative effect of the intervention on posttraumatic stress symptoms (10). One case report was published describing positive effects of cognitive behavioral therapy on the reduction of posttraumatic stress in two women (11). Thus far, one pilot study has been published using eye-movement desensitization and reprocessing for the treatment of posttraumatic stress following childbirth, with promising results (12). Sandström et al conducted a pilot study among four women (one in her second pregnancy and three nonpregnant). Although two women did not complete the treatment, the intervention proved effective in reducing posttraumatic stress symptoms in all four women, and its long-term effects remained in three of four women at 1 to 3 years following treatment.

The proved effectiveness of eye-movement desensitization and reprocessing in nonchildbirth-related populations calls for further evaluation among women with posttraumatic stress following childbirth. Whether the treatment should be used with pregnant women has been topic of debate; Shapiro recommends caution since possible hyperarousal and increased stress after the treatment may negatively affect the mother and fetus (9). We present three cases of women with posttraumatic stress following childbirth. They were referred by their perinatologist to a health psychologist with certification for eye-movement desensitization and reprocessing treatment, who diagnosed posttraumatic stress following childbirth. The three women were treated during the subsequent pregnancy. The procedure used in this article is the Dutch translation of Shapiro's protocol (13). Other than reducing posttraumatic stress symptoms, treatment during pregnancy in this study was also aimed at increasing confidence and positive perceptions about the upcoming delivery.

Methods: Three Cases

The three cases describe women who were in their second pregnancy when they were referred by their perinatologist to a health psychologist, because the former suspected (symptoms) of posttraumatic stress following childbirth. The health psychologist proposed eye-movement desensitization and reprocessing treatment (hereafter, ''the treatment'') after confirming the diagnosis. Posttraumatic stress symptoms described by the women are listed in Table 2. All treatments were carried out according to the protocol in Table 1, unless mentioned otherwise. A description of the assessment stage (step 3 in the protocol) for each woman is listed in Table 3, including the key image they visualized, their negative cognition, the corresponding positive cognition and initial rating of the subjective units of distress (SUD). In line with the protocol, the treatment session continued until the subjective units of distress was 0 and the validity of cognition (VoC) was 7.

Patient A

Patient history

Patient A was a 29-year-old gravid 1 para 0 with a steady partner, with no medical history and insignificant family history. During pregnancy she reported

Table 1. Protocol for Eye-Movement Desensitization and Reprocessing (EMDR) (9)

Stage	*Contents*
1. Client history and treatment planning	Biopsychosocial evaluation, assessment of current and past medical status, family and childhood history, and the presenting problem.
2. Preparation	Developing a therapeutic and trusting relationship between patient and clinician, explanation of the theoretical background and actual steps in eye-movement desensitization and reprocessing.
3. Assessment	The patient visualizes the target incident and formulates a *negative cognition* (NC) about herself related to the traumatic experience. Subsequently, she formulates a *positive cognition* (PC) she would like to believe about herself, and quantifies this on a scale from 1 to 7 (*validity of cognition*, VoC). Then, the patient describes the emotions associated with the target event and scales the disturbance on an 11-point scale (*subjective units of distress*, SUD). Finally, she is asked to scan her body for the location of sensations of distress.
4. Desensitization	While the patient focuses on the distress she experiences, bilateral stimulation is applied for several seconds to minutes (depending on the patient's reaction). Subsequently, she is asked to clear her mind and describe what thought or feeling comes to mind. Several sets of bilateral stimulation are repeated until she repeatedly reports similar thoughts and the *subjective units of distress* is 0.
5. Installation	The *positive cognition* is revisited in relation to the original disturbing image, and its *validity of cognition* is rated. Sets of bilateral attention are applied until the positive thought is experienced as being totally valid (6–7 on the *validity of cognition* scale).
6. Body Scan	Patient closes her eyes, concentrates on the target experience, and mentally scans her entire body. If sensations are reported, short sets of bilateral stimulation are applied until the sensation subsides or a positive feeling is experienced.
7. Closure	Explanation of the session by the therapist, including guidance on dealing with uncomfortable feelings after the session.
8. Reevaluation	Reevaluation takes place at the beginning of the following session.

EMDR = eye-movement desensitization and reprocessing; NC = negative cognition; PC = positive cognition; SUD = subjective units of distress; VoC = validity of cognition.

Table 2. Symptoms Present in Each Patient During the Clinical Interview that Preceded Eye-Movement Desensitization and Reprocessing

Patient	*Criterion B Reexperiencing*	*Criterion C Avoidance and Numbing*	*Criterion D Hyperarousal*
A	Sweating, experiencing hot flushes, and crying when passing by the hospital	Trying to avoid thoughts or conversations associated with the delivery	Overwhelmed by emotions when hearing another woman's childbirth story
B	Intense distress at exposure to internal or external cues that symbolize or resemble an aspect of the delivery (sometimes with panic attacks)	Not looking at vagina and vulva; avoiding activities, thoughts, and conversations that arouse recollections of the delivery	Irritability; outbursts of anger
C	Flashbacks of the hospitalization postpartum; physical reactions when thinking about blood pressure measurements	Avoiding activities, places, and conversations associated with delivery. Trying to put away emotions to prevent herself from crying; avoiding hospital programs on television; unable to look at photos of son's birth	Difficulty concentrating; exaggerated startle response; anxious, nervous, sad, and insecure; headache and light-headedness

Table 3. Description of the Treatment for Each Patient (Assessment Stage)

	Patient A		*Patient B*		*Patient C*
Session	*1*	*2*	*1*	*2*	*1*
Image	Seeing my baby and dismay about having to take care of it	Lying in the hospital bed, wanting to call the nurse but the alarm was not working	Seeing the head of the baby being born	Seeing the head of the baby being born	Being moved out of the labor room with bells and whistles
Negative cognition	I am weak and selfish	I am helpless	I am helpless	I am helpless	I am helpless
Positive cognition	I am strong	I can handle it	I can handle it	I can handle it	I can handle it
Subjective units of distress	9	7	10	8	Unable to rate

frequent headaches and insomnia. Because she had developed pregnancy-induced hypertension, labor was induced using oxytocin infusion followed by artificial rupture of the membranes. During the course of labor she requested and received epidural analgesia. When she reached full dilatation, 17 hours into labor, the cardiotocogram showed persistent bradycardia and the 5th fetal scalp blood sample indicated fetal distress. The subsequently performed vacuum extraction was unsuccessful, and the patient was taken to the operating room for an emergency cesarean section. A healthy infant was born at 38 weeks and 4 days gestation with an Apgar score of 8 and 9 after 1 and 5 minutes, respectively.

Two and a half years later, during her second pregnancy, Patient A described her first delivery as ''a bruise''; she felt that obstetric staff had failed her, and that she had been unable to stand up for herself and take care of her baby.

Intervention

Four sessions took place: intake, two treatments, and a closing session. No indications of psychiatric disorders were present other than posttraumatic stress. After the second session, a future template was applied with respect to the upcoming delivery. Patient A imagined being able to stand up for herself when entering the delivery room. The session ended with her expressing the feeling, ''I am brave and I am a good mom.''

Follow-up

After the treatment, Patient A no longer reported physical symptoms when passing the hospital, and felt more relaxed and less emotional. In addition, she was no longer blaming staff for the proceedings of the first delivery, felt she did a good job giving birth, and was proud of having completed the treatment. For her second delivery, she did not prefer a cesarean section over vaginal birth or vice versa, as long as she ''would end up psychologically undamaged.'' At 39 + 4 weeks of gestation, spontaneous labor started. She progressed to 7 cm dilatation with epidural analgesia and oxytocin augmentation. Because of insufficient engagement of the fetal head, a secondary cesarean section was performed, resulting in the birth of a healthy infant (Apgar score 9/10), with a birthweight of 3,030 g. Patient A looks back positively on this birth.

Patient B

Patient history

Patient B was a 21-year-old primigravida in a steady relationship, with an unplanned but desired pregnancy. Her medical history included hypothyroidism (Hashimoto's disease) for which she used levothyroxine. Because she preferred female caregivers only, she decided to have her pregnancy checkups at an independent midwifery practice rather than the hospital. She did not report any negative sexual experiences. The family medical history is unknown, as she was adopted as an infant. At 31 1/7 weeks' gestation, she was admitted to the obstetrics unit for imminent preterm delivery, but she was diagnosed with cholelithiasis. At 39 3/7 weeks' gestation, ultrasound examination revealed unilateral hydronephrosis, and therefore labor was induced. After 3 hours of labor, she reached full dilatation, and 49 minutes later, after using the McRoberts maneuver for shoulder dystocia, a healthy infant was born (Apgar score 9/10) with a birthweight of 3,450 g. During the course of delivery, a second degree rupture occurred, with bilateral tearing of the vaginal mucosa and skin up to the anal sphincter.

After the delivery she could not stand up straight for 3 weeks. Two years after giving birth, Patient B reported

continuing pain at the site of the sutures, and impossibility to insert tampons and engage in sexual intercourse with vaginal penetration. The latter resulted at times in hyperventilation with panic attacks consistent with DSM-IV disorders criteria. She did not report incontinence, and mentioned a satisfying intimate and sexual relationship with her partner. She was taking oral contraceptives, thinking that she was not ready for another pregnancy. Gynecological examination revealed well-healed skin at the rupture site and overactive pelvic floor musculature, for which she received pelvic floor physical therapy. During her second pregnancy, 4 years after the first delivery, Patient B described the first birth as ''one big trauma'': her greatest fear (episiotomy or rupture requiring sutures) had become reality, and she felt that staff had not taken her seriously. She had not looked at her vagina and vulva since the delivery, thinking they were ruined and would never heal. In fact, she was avoiding everything that was related to the perinatal period, not wanting to talk or even think about it.

Intervention

After four sessions of clinical interview and counseling, two treatments took place. The treatment could not be carried out according to protocol because Patient B was very anxious to visualize the situation. She did feel calmer after the session. At the end of the second session she was unable to rate the subjective units of distress, but mentioned that the image was ''much further away.''

Follow-up

After the two treatment sessions, Patient B felt calmer, less alone, and was more confident about how to handle the upcoming birth. She requested an elective cesarean section at first, but felt confident enough to attempt vaginal delivery. Before the birth she had prepared a birth plan, in which she outlined her wishes about the labor and delivery. At 39 5/7 weeks' gestation, labor started spontaneously, and she progressed to full dilatation in less than 2 hours, resulting in the birth of a healthy infant (Apgar score 9/9) 15 minutes later. Again, a second-degree rupture occurred, which was sutured. Nonetheless, no dyspareunia occurred this time, and she reported looking back positively at the birth.

Patient C

Patient history

Patient C was a 25-year-old gravid 1 para 0 in a stable relationship. Her family history included two teen brothers who died of an inherited cardiac condition (arrhythmogenic right ventricular dysplasia) in her presence. She had cardiology checkups every 3 years, with no cardiac abnormalities, and according to the cardiologist, no special precautions were necessary related to a pregnancy or childbirth. Patient C prepared a birth plan. The pregnancy progressed without significant problems or complications, and at 39 + 4 weeks' gestation, labor started spontaneously. After artificial rupture of membranes and an expulsion stage of 105 minutes, a healthy infant was born, who did well (Apgar score 8/10).

During the first day postpartum, Patient C developed symptomatic preeclampsia, with headache, feeling shaky, hyperreflexia, and elevated liver enzymes (aspartate aminotransferase 112 U/l). She was admitted to the obstetric high care unit, received intravenous magnesium sulphate for 4 days and labetalol tablets for 3 weeks. She reported that the postpartum events had a great impact on both herself and her husband (partly due to her family history), and she still had difficulty concentrating 2 years after the childbirth. During the second pregnancy, 2 1/2 years after the first delivery, Patient C described that she still had flashbacks of the hospitalization postpartum, and that she tried to put away her emotions because she was afraid she might ''go crazy.''

Intervention

After the intake, four treatment sessions took place, the second of which involved the postpartum experience. At the end of this session, a future template was applied with respect to blood pressure measurements and upcoming visits to the cardiologist. The other treatments concerned the death of her brothers, hospitalization of her father, and fear of cardiac problems, which will not be further discussed. She displayed tendencies of obsessive-compulsive disorder (e.g., checking her pulse to see if her heart was still beating), but did not meet all the DSM-IV disorders criteria.

Follow-up

After the treatment, Patient C no longer reported post-traumatic stress symptoms, her anxiety was no longer debilitating, she felt calmer and better able to allow her emotions. During the second pregnancy, no complications occurred. At 39 + 0 weeks' gestation, she went into spontaneous labor and gave birth to a healthy boy (Apgar score 10/10). Postpartum hemorrhage occurred (1,100 ml), and due to postpartum hypertension, she had to take antihypertensive medication (labetalol). She looked back at the birth in a positive way.

Discussion

In all three women who were suffering from posttraumatic stress following childbirth, eye-movement desensitization and reprocessing during pregnancy resulted in stress reduction, fewer posttraumatic stress symptoms, and more confidence toward the upcoming delivery of their second child. Despite complications during their second deliveries (secondary cesarean section in Patient A, second-degree vaginal rupture in Patient B, and postpartum hemorrhage and hypertension in Patient C), all three women had a positive experience of the second birth.

For several years, these women were suffering from posttraumatic stress symptoms related to a previous delivery, which is in line with research indicating that spontaneous recovery from posttraumatic stress following childbirth is uncommon (5). These findings, although based on only three cases, are in line with previous findings by Sandström et al (12) and with studies on the effects of eye-movement desensitization and reprocessing in nonchildbirth-related trauma (14). The study by Sandström et al allows for more quantitative conclusions than our study does, as their design included the use of structured questionnaires (2) to measure the severity of posttraumatic stress symptoms before and after treatment. Nonetheless, their study is also based on a limited number of patients (four), two of whom did not complete the treatment sessions. In our sample, each patient was referred by the same perinatologist (M. van Pampus) to the health psychologist with extensive experience with eye-movement desensitization and reprocessing (J. van der Velde), which controls for interobserver bias. Even though a clinical interview was held with each woman to evaluate whether she suffered from posttraumatic stress disorder, for research purposes it would have been valuable also to have used standardized instruments to quantify the effects of treatment. We noticed that all three women mentioned that they felt they had not been taken seriously by hospital staff during the first birth. Lack of (perceived) support, communication, and care by staff members are known risk factors for the development of posttraumatic stress (2,15,16). Even though research on interventions to increase self-confidence and empowerment are scarce, the results of using a birth plan (as did Patients B and C) are promising (17,18).

As has been mentioned before, it may be more beneficial to perform the treatment before rather than during a subsequent pregnancy, not only because some researchers claim that treating during pregnancy could increase stress that may be harmful (9), but also because entering a pregnancy with untreated posttraumatic stress disorder may have negative effects on fetal development and maternal well-being, and prevent women from seeking adequate care. In practice, however, many women with posttraumatic stress following childbirth do not mention symptoms until during a subsequent pregnancy. In that case, the available time to treat birth-related trauma in the face of an upcoming delivery is limited. Eye-movement desensitization and reprocessing (as opposed to, for example, cognitive behavioral therapy) is often a brief (and therefore relatively inexpensive) intervention with immediate effect. In addition, insisting on a cesarean section is not uncommon (estimate 7–22%) among women with extreme fear of childbirth or posttraumatic stress following childbirth (19–21). In our sample, none of the women demanded an elective cesarean section after the treatment. The possibility that such a brief intervention could avoid unnecessary (and expensive) elective cesarean sections, with significant maternal morbidity, would be another argument in favor of using the treatment for women with posttraumatic stress following childbirth.

Treating women with this disorder before a subsequent delivery (and preferably even before another pregnancy) would require timely identification. Even though the prevalence of posttraumatic stress disorder following childbirth is low compared with, for example, postpartum depression, it may therefore be worthwhile to screen women for posttraumatic stress disorder at their postpartum checkup to prevent future suffering from symptoms for years and to avoid the emergence of symptoms in a subsequent pregnancy.

Conclusions

Treatment with eye-movement desensitization and reprocessing reduced posttraumatic stress disorder symptoms in these three women, and hence appears to be an effective intervention. Furthermore, all three women were confident enough to attempt vaginal birth rather than demanding an elective cesarean delivery. We suggest a large-scale, randomized controlled trial involving women with posttraumatic stress disorder following childbirth, as diagnosed using validated quantitative questionnaires. Such a study could allow for solid conclusions on the use of eye-movement desensitization and reprocessing for the treatment of posttraumatic stress following childbirth.

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