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Mental training during pregnancy. Feelings and experiences during pregnancy and birth and parental stress 1 year after birth – A pilot study

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ABSTRACT

Background: Parental stress has been recognized as a problem despite governmental support of parent education programs aiming to prepare parents for parenthood.

Aim: to compare parents who underwent a mental training program during pregnancy with a control group to measure feelings and experiences during pregnancy and birth and perceived parental stress.

Methods: A comparative pilot study of 46 self-selected parents who underwent a mental training program during pregnancy, and 1408 parents living in the same catchment area (control group). Data was collected in mid-pregnancy, 2 months and 1 year after birth. The main outcome was parental stress.

Results: Parents in the mental training group were more often expecting their first baby and had a higher level of education compared to parents in the control group. Parents participating in the mental training program had less positive feelings about expecting a baby (OR 14.0; 6.7–29.3), the upcoming birth (OR 2.0; 1.1–3.8) and the newborn baby (OR 3.1; 1.6–6.2). Parents who attended the mental training program attended an antenatal parent education to a higher degree (OR 2.0; 1.6–2.4) and were more likely to stay in contact with other participants in the antenatal education (OR 4.1; 1.9–8.6). Mothers in the mental training program used psycho prophylaxis to a higher extent (OR 3.0; 1.2–7.1) There was no difference in the birth experience or the perceived parental stress.

Conclusion: Participating in a mental training program for birth and parenthood was not associated with the birth experience or the assessment of parental stress 1 year after birth.

Background

Becoming a parent is a major life event usually associated with happiness and joy, but for some parents, parenthood can be demanding and stressful [1]. Factors related to perceived difficulties or stress in parenthood include financial problems, a low level of education, a lack of partner support and the occurrence of intimate violence [2,3]. The adjustment to parenthood has been described as a vulnerable period in which the marital relationship is exposed to dramatic changes [4].

Parental stress was developed by Abidin in 1995 [5] and could be caused by a disparity between the perceived demands of parenting and the resources available to meet those demands [5]. Increased parental stress is a risk factor for dysfunctional parenting [6] and behavior problems in the child [7].

In a recent survey of the staff in child health clinics, a majority reported that contemporary new parents perceive parental stress to a high degree and that they, despite regular visits to the clinic, often seek additional help for themselves or their infant [8]. It was also reported that parents often regarded their parental expectations as going unmet and that they did not feel as happy as they thought they would be. Independent of biomedical risk, maternal prenatal stress was significantly associated with infant birth weight, gestational age at birth, miscarriage and pre-eclampsia; it is also known that stress also increases the risk of the child for developing diseases later in life [9].

Attempts at reducing parental stress during or after pregnancy have been introduced, such as antenatal education programs, individual or in group sessions [10]. A Cochrane review of educational programs after birth showed unclear benefits [11]. Several initiatives have been introduced in Sweden to prepare new parents for parenthood. These initiatives are incorporated into the parent education classes in antenatal and child healthcare offered for free to all parents in Sweden [12]. However, only first-time parents are offered antenatal education programs in most public antenatal clinics and mainly highly educated parents attend these types of programs [15]. The official purpose of parental support in antenatal and child health clinics is to provide knowledge and information, strengthen parents in their parenting role, and provide contact with other parents [13]. Government investigations have evaluated the effects of parental education and have found that participation is lower among parents of foreign origin [14], a finding also confirmed by a

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national Swedish survey [15]. Swedish government policies on health services have focused on both parents, and efforts have been made to get the expectant and new fathers more involved in parenting. Parental insurance has been revised, and currently 2 months of the 480 days of paid parental leave are allocated to the father and two are allocated to the mother (www.forsakringskassan.se). The rest of the days can be shared. In addition to the parent education provided by antenatal and child health clinics, private providers have introduced new approaches to parent education such as psycho prophylaxis classes and yoga classes. These private alternatives are usually paid by the parents themselves.

The effects of antenatal programs on labour and birth outcome are somewhat inconclusive. A recent national Swedish study showed that parental education during pregnancy helped the majority of attendants prepare for childbirth while preparing for parenting was less efficient. However, no differences were found in the birth experience or parental skills [16]. Participants in the antenatal education program used more epidurals, findings later confirmed by a recent study from Spain that showed that parent education did not reduce the use of epidurals [17]. A randomized controlled trial of parent education where parents were assigned to an antenatal program with a focus on natural childbirth preparation using training in psycho prophylaxis or a standard model of care without this method showed no difference in the use of epidurals or perceived parental stress [18]. On the other hand, a Danish randomized controlled trial of antenatal education (n = 1193) showed that parents allocated to antenatal education consisting of three different modules (birth, newborn, parenting) showed no difference in overall use of pain relief, but less use of epidural anesthesia [19].

Some researchers claim that the current changes in childbirth with increasingly medicalized birth methods have affected the attendance in childbirth education programs [20]. In addition to the decreased participation, older programs such as the Lamaze method with relaxation, breathing techniques and emotional support have been replaced in some places by new approaches such as hypno-birthing (self-hypnosis) and mindfulness-based childbirth [20].

Mental training is another cognitive technique that uses the systematic imagination of an event without actually performing it; this training has been widely and successfully used in professional sports [21–23] and in other contexts such as surgery [24] and dentistry [25]. No studies have been found with a systematic approach to preparing for parenthood using mental training, although it is possible that parent education in some places has adopted parts of the technique.

Problem area

Parental stress has been recognized as a problem in Sweden despite governmental support of parent education programs. New parental education programs have been introduced, but the outcomes of such programs are largely unknown. Therefore it is important to identify parents who use new methods aimed at reducing parental stress and compare them with parents not using such methods. Mental training has been used previously in sports, surgery and dentistry, but not in the context of pregnancy and parenting. The aim of this pilot study was to compare the feelings and experiences during pregnancy and birth and the perceived parental stress of parents who underwent a mental training program during pregnancy versus a control group.

Method

Design

This pilot study compared 46 parents (25 mothers, 21 fathers) who underwent a mental training program in 2007–2008 in six to nine group sessions during pregnancy with 1408 parents (758 mothers, 650 fathers) living in the same catchment area that were recruited to a prospective longitudinal study in 2007 (control group). Some of the participants in both groups were couples, but this study viewed them as individuals.

Study participants

Mental training group

The parents who chose to participate in the mental training program were self-selected. Information about the program was available at the antenatal clinics and the midwives at the antenatal clinics gave oral information about the program at the "booking visit," along with information about the parental classes provided at the antenatal clinics, health information and information about the content of the antenatal visiting program, which followed national guidelines [26]. Parents in the mental training program were informed that the program would be evaluated and that participation in the evaluation was voluntary and could be withdrawn at any time. Participants who agreed signed a consent form and filled out the baseline questionnaire at the beginning of the first session. In total, 46 parents in seven groups attended the mental training program in 2007–2008. One mother-to-be did not complete the first questionnaire due to mental health problems and background data on one father was not available because he was not able to attend all sessions due to problems with babysitting older children. However, he practiced the mental training technique at home and completed the other questionnaires. One father was lost to follow up 1 year after birth.

Control group

The control group consisted of 1408 parents included in a regional longitudinal survey covering the same catchment area as the Mental training group [27]. In gestational week 19–20, these parents were recruited in 2007 (a 1 year cohort) at the ultrasound clinics in the region. The inclusion criteria were mastery of the Swedish language and a normal routine ultrasound. These parents received the same antenatal care and parent education classes (if appropriate) and researchers followed up with them in a similar way with questionnaires 2 months and 1 year after childbirth, with the same procedure for reminders. Parents in the control group were asked to sign a consent form at the ultra sound clinic before receiving the first questionnaire that could be completed on site or taken home and returned in a pre-paid envelope (mean pregnancy week 22).

The mental training program

The mental training program was conducted by a physiotherapist experienced in working with people with stress-related conditions, anxiety and burn-out problems. In general, six to nine 2-h group sessions were held for each group of six to eight parents in each group. One group had an intensive course during one weekend. The parents were encouraged to practice exercises between the sessions. The course literature was a book and a training CD developed by the physiotherapist in collaboration with a midwife. The parents had to pay a small fee for the course that covered the costs of the course material and the physiotherapist's salary. The program started in gestational week 25–35 (mean pregnancy week 27) and researchers followed up with the parents 2 months and 1 year after the birth. Two letters of reminder were sent after two and four weeks to non-responders. The training sessions consisted of relaxation and breathing techniques, inspired by psycho prophylaxis, body scanning techniques to detect tenses, stress management, communication in relationship, visualization including target pictures of the birth and parenthood. The group members also had the opportunity to talk and share experiences. Between the group