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# Maternal Distress-Every Unhappy Pregnant Woman is Unhappy in Her Own Way

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## Abstract

Maternal distress varies in prevalence rates and displays various complaints, signs and symptoms. Additionally, multiple factors and causes contribute to both women's vulnerability and manifestation of maternal distress. Worldwide maternal distress prevalence rates are up to 41% and the evidence of short and long-term adverse consequences of maternal distress indicate that preventive strategies are required. Maternal distress unchains a negative spiral of disturbed health and thus has a profound effect on public health. Evidence on the effectiveness and utility of selective and indicative preventive strategies for maternal distress shows that women's individual predisposing factors and responses to maternal distress vary and individualization of findings from index or screening measures is required.

**Keywords:** Maternal distress; Pregnancy

## Introduction

Maternal distress is defined as being emotionally unbalanced or experiencing emotional strain during the distinct period of pregnancy, as a response to pregnancy or to non-pregnancy related issues that are manifested by different signs and symptoms of psychological distress. Depression and anxiety are the most frequently occurring serious complaints of maternal distress during pregnancy. Anxiety distinguishes between trait-anxiety and pregnancy-related anxiety - more related to the state of pregnancy [1]. Experiencing maternal distress means scoring above set cut-off points on psychometric measures of depression and/or (pregnancy-related) anxiety; indicating that women are more likely, or do suffer from maternal distress [2,3]. Prevalence rates of maternal distress among healthy pregnant women vary from 2% to 30% [1] while rates including all pregnant women vary between 2% and 41% [4].

The experience of maternal distress during pregnancy can be a predictor for negative outcomes for both mother and child. Adverse short and long-term postpartum mental health effects have been reported, for mothers [5], their partners [6], for their children from infancy through adolescence [7] and for society [8]. Even subclinical features of maternal distress, that do not meet diagnostic threshold, contribute to those adverse outcomes [2]. Despite good prospects for treatment of and recovery from maternal distress, maternal distress often goes unrecognized, and thus remains untreated during pregnancy and thereafter. This can result in the symptoms persisting for many years, affecting not only the mother but also her baby, family and society. Preventive strategies for maternal distress seem of crucial importance, but a rationale is needed to justify the most relevant and effective strategies for healthcare practitioners that are involved with pregnant women.

## Selective and Indicated Strategies

The findings of a systematic review and meta-analysis of randomized trials evaluating the effect of antenatal interventions to reduce maternal distress [9] indicate that universal preventive strategies (interventions

that are offered to all women with a healthy pregnancy) do not reduce maternal distress. However, the analyses show that treatment strategies for women with maternal distress (indicative prevention) have a small but significant reducing effect on maternal distress ( $n=270$ ; SMD -0.29; 95% CI -0.54 to -0.04) [9]. Preventive strategies that are offered to a selected sample of pregnant women with characteristics that make them more vulnerable to develop maternal distress (selective prevention) show a small but significant effect on the reduction of maternal distress intervention ( $n=1410$ ; SMD -0.25; 95% -0.37 to -0.14) [9].

Although the meta-analyses shows limitations with regard to sample size and the *post hoc* subgroup analysis of the vulnerable group of women, the findings of an integrative review [1] emphasize the importance and relevance of selective intervention strategies. This integrative review was structured according to the PRECEDE model (Predisposing Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation) [10]. The model includes behavioral and environmental factors and predisposing, reinforcing and enabling factors of that were either associated or correlated with or contribute to maternal distress. The results show characteristics that are significantly associated with the vulnerability and occurrence of maternal distress, which involve a wide range of factors and originate from various sources (Table 1). Depending on the circumstances and characteristics, women may perceive pregnancy in positive as well as negative terms, as health or as illness. Thus, the degree to which pregnancy is perceived as stressful may vary widely among women. Not all women who experience the same level of demands and challenges during pregnancy experience equivalent stress. This is in part attributable to the factors that offset stress but may also relate to a women's ability to cope with the stressors that confront them.

A cross-sectional study amongst a specific group of 458 Dutch healthy pregnant women with a mean gestational age of 28 (9-43) weeks shows that there are specific factors that are associated with or predicted maternal distress [2]. Multiple linear regression analysis specify factors that formulate an index for obstetric healthcare practitioners providing care to this specific population of women, to identify women that are more

Factors	Source	Characteristics	
Behavioral factors	Personal past history	History of psychological/psychiatric problems	
		History of negative life-events	
		Negative, traumatic and/or complicated birth-experience	
	Present circumstances and lifestyle		History of miscarriage
			Unintended pregnancy
			Having (multiple) children
			Hassles in (daily) life
			Age < 25 years
			Body Mass Index $\geq 30$
			Low income
			Being single
			Other ethnicity than country of habituation
			Personal characteristics
Coping behavior		Little (self-)knowledge of coping with maternal distress	
		Worrying	
		Avoidance	
Environmental factors		Lack of partner support	
		Lack of social support	
Predisposing ( <i>facilitating</i> ) factors		Knowledge of coping with maternal distress	
Reinforcing ( <i>encouraging</i> ) factors		Relaxation	
		Partner support	
		Counselling experiences	
Enabling ( <i>conditional</i> ) factors		Positive interaction midwife/healthcare professional	
		Available support network	
		Available supportive facilities	

**Table 1:** Index of factors, sources and characteristics associated with maternal distress

vulnerable to have or develop maternal distress. The results show that women with issues such as a personal and family history of psychological problems ( $B=1.071$ ;  $p=.001$ ), the existence of current daily hassles ( $B=1.304$ ;  $p<.001$ ), and a negative perception of the forthcoming birth ( $B=.636$ ;  $p<.001$ ) are more likely to experience maternal distress. Also women who have young children ( $B=2.998$ ;  $p=.001$ ), women who tend to avoid problems in their life ( $B=1.047$ ,  $p<.001$ ), and women who translate emotional problems into somatic complaints ( $B=.484$ ;  $p=.004$ ) are more likely to experience maternal distress. Women are able to reduce maternal distress when they have the opportunity to self-disclose about what is bothering them ( $B=-.863$ ;  $p=-.004$ ) and when they learn how to accept troubling circumstances, and personal issues of concern in their lives ( $B=-.542$ ;  $p=-.008$ ). Although the generalizability of these findings is limited to similar populations of pregnant women, it acknowledges the fact that different populations may have different predictive factors for maternal distress. This implies that separate analyses, congruent with Fontein et al. [2] are necessary to gain insight or create an index for predisposing factors for different populations or settings of pregnant women.

The meta-analyses [9] show that screening and assessment of signs and symptoms of, and vulnerability for maternal distress to be a vital component of midwifery antenatal care. Screening and assessment allow healthcare practitioners to select those women that are currently experiencing distress or who are likely to develop maternal distress during pregnancy. Asking women how they feel, how they perceive, or how they experience certain aspects of their life stimulates self-disclosure. In the study among Dutch pregnant women [2] it was found that self-disclosure is significantly beneficial for the reduction of maternal distress.

As causes, factors, and circumstances for maternal distress vary in their extent; these also vary in their level of seriousness [1-3], varying from mild to severe. There is healthy stress, stress, and distress. For some women vulnerability in pregnancy is a physiological phenomenon leading to healthy stress but for others it goes beyond the expected normal stress of pregnancy and leads to distress. Healthy stress represents the

physiological challenges that a woman is faced with while being pregnant. Stress or short episodes of moderate maternal distress can facilitate mother-child bonding and interaction and have positive consequences for the infant's postpartum growth and development. Mild distress is reported as moderate distress and is considered as a physiological state and part of normal life, which does not interfere with normal social functioning. Moderate distress does not interfere with the maintenance of psychosocial homeostasis, although a woman may experience symptoms such as worry, irritability, tension and/or sleeping problems. However, longer periods of moderate maternal distress are known to have short and longer-term effects [11]. On the other hand, severe maternal distress [11,12] interferes with a woman's bio-psychosocial homeostasis and impairs her social functioning [13] and can also have detrimental short and longer-term effects [11,12].

These findings emphasize the importance and relevance of indicated intervention strategies. Both moderate and severe maternal distress can be identified using established cut-off point of psychometric scales [14]. It has to be considered that during pregnancy a woman's personal situation can change and her emotional balance can fluctuate resulting in unsettled feelings. Maternal distress can therefore emerge in any trimester [2,3], making a one-time screening at any one antenatal visit as insufficient for identifying the problem. Therefore continuous assessment throughout pregnancy is recommended [14]. It is advisable to use instruments that assess a wider range of emotional wellbeing and quality of life during pregnancy, adhering to a broad approach. A broad approach can be interpreted as viewing all aspects of health and wellbeing without emphasizing a specific construct [15]. There does not seem to be a need to prioritize or select between the above-mentioned mood disorders (i.e. *depression*, *anxiety*), as there is a recognized interrelation between them [2,15]. Restricting measurement to a single psychological construct will under-represent the degree of distress women experience during pregnancy. Therefore, the use of measuring different psychological constructs simultaneously may increase the accurate detection of distress experienced during pregnancy [15,16]. The General Health Questionnaire might be a suitable option [16].

## Individuality

Different women respond differently to the same situations and evaluate their condition based on their unique experiences and values [2]. This implies that healthcare practitioners cannot offer a definitive determination of a woman's burden. Furthermore, they are unable to determine whether a woman's level of emotional stamina will allow her to cope with or handle the situation. Because midwifery care affords the opinion and values of a woman are great respect, a woman's own evaluation of her life will figure prominently in assessing maternal distress. Therefore, healthcare practitioners depend on a woman's self-disclosure. This means that maternal distress can only be addressed if the right questions are asked and the critical circumstances that make a woman more vulnerable for maternal distress are mapped. Often psychometric measures are applied to assess severity of maternal distress. Considering the individual responses of women implies that healthcare practitioners are unable to rely only on routine antenatal risk indexes for vulnerability of maternal distress and on cut-off scores of psychometric measures for the identification of maternal distress. In addition healthcare practitioners must therefore also consider a woman's individual views, meaning and experiences. This approach to identification is not possible without a woman-centered approach where a healthcare professional values and respects the unique characteristics of the woman he or she is caring for.

Studies including samples of women with western origin, in their late twenties, in a relationship, with on average two children, and a good level of education [2,3] show cohorts of women that score above the cut-off points for maternal distress, varying between 21% and 27%, thus one on every four to five women. Healthcare practitioners can assume, based on these characteristics that most of these women are in a fairly stable and comfortable position in life, and on-face-value in stable conditions in life. These women are not statistically at risk for maternal distress. Confidential Enquiry into Maternal and Child Health (CEMACH) [17], however, reported in their report "Why mothers die" that it is women in this on-face-value 'untroubled' group that seem to be very vulnerable to develop maternal distress, and even being more at-risk for suicide within the first year postpartum. This underscores the fact that healthcare professionals may not 'label' at-risk women, or those assumed not at-risk, based on observations or assumptions. As these 'everyday women' are part of midwives' caseloads, it is important that midwives are aware that vulnerable women can be found among populations where distress is least expected. Again, midwives must depend on a woman's self-disclosure and a mutual relationship of trust, approaching women from a woman-centered perspective. Healthcare professionals can assume that the more difficult a situation is, the more impact this will have on a woman's emotional wellbeing. It is, however, the woman's perception of these events, her mood, feelings, and emotions that determine her level of maternal distress and color the impact of the quality of her life. Thus only the woman herself can determine and report the seriousness and the burden she is experiencing. Women themselves give meaning to past and present situations and weigh their severity and impact on their life. Clinical use of instruments like VAS scores or distress thermometers are therefore recommended to implement [18] as a practical and easy-to-use tool, to both support women as well as healthcare practitioners in order to identify and recognize the severity and impact of maternal distress. This implies that selective and indicated preventive strategies are relevant as case-finding instruments but further individualization of either or both antenatal risk indexes and assessment and screening instruments for maternal distress is required to address the individuality of women.

The findings highlight the need for midwifery healthcare practitioners to familiarize themselves with the personal history and life circumstances of their clients. Midwives need to be aware that antenatal care is a point of intensive contact with women during pregnancy and provides

opportunities to prevent or reduce maternal distress and perhaps promote long-term emotional wellbeing. For mapping out the factors that contribute to maternal distress, pregnancy seems to be a practical place to begin developing a strategy to reduce the prevalence and severity of maternal distress.

## Testing Selective and Indicative Strategies in Individualized Care

A recently developed antenatal intervention to prevent and reduce maternal distress in pregnancy has incorporated theory-based intervention strategies [18]. One of the main strategies was tailoring [19] where information given to women matches their personal characteristics and individual problems (*predisposing factors*), feelings and emotions (*emotional wellbeing* and *maternal distress* - Emotional wellbeing was measured with case-finding questions and levels of maternal distress with the Edinburgh Depression Questionnaire) [20,21], experiences (*emotional stamina* - Emotional stamina was measured with the emotion thermometer tool) [22], individual (supportive) wishes and needs and abilities (*coping mechanisms*). The effect of the intervention was evaluated among 433 healthy Dutch pregnant women with similar features as the women described earlier (age, marital status, family size, education, level of income) a non-randomized pre-post intervention study design with a sequential control and experimental group [3]. The control group (n=215) received antenatal care-as-usual. The experimental group (n=218) received the intervention. Data were collected at the first and third trimester of pregnancy. Maternal distress was measured with the Edinburgh Depression Scale (EDS) [21], State-Trait Anxiety Inventory (STAI) [23], and Pregnancy-Related Anxiety Questionnaire (PRAQ) [24]. The different individual measures were summed and scores above the cut-off level of one or more of the respective individual measures, was rated as having heightened levels of maternal distress [2,3]. Repeated measure analysis examined the across time changes of maternal distress in both the control and experimental group. In the control group, mean maternal distress scores significantly increased from first to third trimester of pregnancy ( $p < .001$ ). The proportion of maternal distress scores above cut-off level increased, but not significantly ( $p = .13$ ). In the experimental group, the mean maternal distress scores significantly decreased ( $p < .001$ ) and proportions of scores above cut-off level for maternal distress also significantly decreased ( $p = .009$ ) from first to third trimester of pregnancy. ANCOVA measured the differences between the control and experimental group and a moderate significant positive effect of the intervention on maternal distress scores ( $F(1,43) = 27.05, p < 0.001, d = 0.5$ ) [3].

The intervention with the focus on the individuality of women, tests the core proposition of this article and underpins the argument that care during pregnancy should be individualized and should include selective and indicative strategies, as vulnerable women for maternal distress are among those populations where, on face-value, least expected.

## Conclusions

The experience of maternal distress is unique to each woman who experiences this. Each woman has a personal reason for why and when maternal distress occurs and each woman has different signs and symptoms of maternal distress. Causes for maternal distress relate to personal characteristics and circumstances, behavior and the woman's environment. Various predisposing, reinforcing and enabling factors in turn, influence coping with maternal distress and the woman's environment. Different causes influence the character and occurrence of maternal distress. Levels of severity of maternal distress differ, as do the strategies a woman uses to cope with it. The variety of women's responses to the different predisposing factors for maternal distress underscores the individuality of maternal distress that should be considered by healthcare practitioners involved in the antenatal management of maternal distress.

Variability of different populations, healthcare settings and countries should be considered in practice, education, organization of care, interventions and research, which should subsequently be evaluated for its effectiveness.

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### Conflicts of Interest

There are no conflicts of interest.

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