Women and Birth xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Women and Birth

journal homepage: www.elsevier.com/locate/wombi

# Fear of childbirth in primiparous Italian pregnant women: The role of anxiety, depression, and couple adjustment

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ARTICLE INFO

*Article history:*
Received 10 October 2016
Received in revised form 19 May 2017
Accepted 22 June 2017
Available online xxx

*Keywords:*
Fear of childbirth
Severe fear of childbirth
Pregnancy
Risk factors
Primiparous women

ABSTRACT

*Background:* The prevalence of fear of childbirth in pregnant women is described to be about 20–25%, while 6–10% of expectant mothers report a severe fear that impairs their daily activities as well as their ability to cope with labour and childbirth. Research on fear of childbirth risk factors has produced heterogeneous results while being mostly done with expectant mothers from northern Europe, northern America, and Australia.
*Aims:* The present research investigates whether fear of childbirth can be predicted by socio-demographic variables, distressing experiences before pregnancy, medical-obstetric factors and psychological variables with a sample of 426 Italian primiparous pregnant women.
*Methods:* Subjects, recruited between the 34th and 36th week of pregnancy, completed a questionnaire packet that included the Wijma Delivery Expectancy Questionnaire, the Edinburgh Postnatal Depression Scale, the State-Trait Anxiety Inventory, the Dyadic Adjustment Scale, the Multidimensional Scale of Perceived Social Support, as well as demographic and anamnestic information. Fear of childbirth was treated as both a continuous and a dichotomous variable, in order to differentiate expectant mothers as with a severe fear of childbirth.
*Findings:* Results demonstrate that anxiety as well as couple adjustment predicted fear of childbirth when treated as a continuous variable, while clinical depression predicted severe fear of childbirth.
*Conclusions:* Findings support the key role of psychological variables in predicting fear of childbirth. Results suggest the importance of differentiating low levels of fear from intense levels of fear in order to promote adequate support interventions.


Statement of significance

**Problem or issue**

Although fear of childbirth is a common feeling among pregnant women, severe forms could affect both the mother's and fetus's well-being. Identifying fear risk factors helps realize early interventions for expectant mothers.

**What is already known**

About 20–25% of pregnant women experience fear of childbirth, and approximately 6–10% report severe fear of childbirth. Severe fear of childbirth can affect an expectant mother's daily life and impact on their ability to cope with labour and birth. Research has analysed fear risk factors reporting contrasting results. Research has been done largely with North Europe, North America and Australia populations.

**What this paper adds**

Fear risk factors are studied in an underrepresented sample of Italian primiparous women. Fear has been considered both as a continuous as well as a dichotomous variable, to

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http://dx.doi.org/10.1016/j.wombi.2017.06.022
1871-5192/

differentiate low levels of fear from severe fear. Fear is predicted by individual (anxiety) as well as relational variables (couple adjustment), while clinical fear is instead predicted only by individual variables (clinical depression). These results suggested the importance of differentiating the clinical fear as a specific distress condition.

## 1. Introduction

Fear of childbirth (FOC) is a common feeling among pregnant women. Overall, the prevalence of FOC is described to be about 20–25%,[1] while the prevalence of *severe* fear of childbirth (SFOC) is estimated at 14%,[2] although studies are significantly heterogeneous as they include different definition of fear as well as other methodological issues (e.g., trimester screening, parity, etc.).[2] SFOC is a dysfunctional emotion, also referred to as tokophobia,[3] which interferes with women's daily activities and may harm their ability to fully participate during labor and childbirth.[1,4–7] Even though previous research is not consistent,[8,9] several studies report that primiparous women experienced more FOC than parous women before birth[1] and were at increased risk to experience SFOC.[10,11]

Research has extensively investigated FOC risk factors. Some studies have found a connection between FOC and various socio-demographic variables with mixed results. For example, while younger expectant mothers with a lower educational level are more likely to experience FOC,[12] other research has indicated that older expectant mothers are more likely to experience FOC.[13]

Other studies have found that distressing and potentially traumatic experiences that occurred before pregnancy are connected to increased FOC during pregnancy. Specifically, expectant mothers who have experienced emotional, psychological, or sexual abuse during childhood are more likely to experience this feeling,[14] as well as expectant mothers who have had a miscarriage before the current pregnancy.[15]

Previous research has found a connection between FOC and some medical-obstetric variables that characterized high-risk pregnancies.[16] For example, the presence of gestational diabetes negatively influenced women's health experiences resulting in increased FOC.[17] However, no connection was found between other medical variables, such as the type of conception (spontaneous or assisted fertilization), and FOC.[18] Finally, no study has compared the potential difference between mothers with singleton fetuses and mothers with multiple fetuses regarding FOC.

Previous research regarding the connection between FOC and individual psychological variables has found an association between fear, anxiety and depression,[8,10,11,19] however the relationship between these dimensions is complex. For example, although Storksen et al.[11] found that high levels of anxiety and depression were associated with increased FOC, the majority of women with FOC (i.e., women with a total score of fear more than the clinical cut-off; values $\geq$85, measured by W-DEQ) were neither anxious nor depressed.

Furthermore, Huizink et al.[20] defined FOC as an expression of a more generalized anxiety while Storksen et al.[11] suggested that depression is linked more to FOC than anxiety; and again, other authors[7,8,21] underlined the difference between fear, and anxiety and depression. Specifically, the narrative review of Rondung et al.[10] reported that FOC is generally positively associated – but not overlapped – neither with anxiety (general, state, trait, and sensitivity) nor with depression. These results suggest the specificity of FOC as a relative distinct syndrome, related to what is unknown, uncertain and out of control.[10]

Less research has been done on the connection between FOC and relational psychological variables. What has been found is that the quality of couple relationship affects a woman's feeling of FOC during pregnancy. Specifically, low levels of couple satisfaction – due particularly to the lack of support from partner – were connected to an increased probability of FOC.[6,22] Furthermore, the lack of a more generalized social support predicted an increased presence of FOC as well.[8,9,23]

Previous research on FOC has been done largely with northern European, northern American, and Australian expectant mothers,[1,8,21] while the current research was done with an underrepresented sample of Italian expectant mothers. Specifically, given the inconsistent results obtained in the literature, this study investigated whether FOC can be predicted by: (a) socio-demographic variables; (b) distressing or potentially traumatic experiences before pregnancy; (c) medical and obstetric variables; (d) individual psychological variables; (e) relational psychological variables.

## 2. Method

### 2.1. Procedure and participants

A cross-sectional research design was conducted on a convenience sample of 426 Italian primiparous pregnant women between the 34nd and 36th week of pregnancy living in different Italian regions (North, Central, and South). Participants were recruited from hospitals or family counseling units where they attended antenatal classes from January 2015 to October 2015. During each antenatal class, a university researcher and a hospital or family counselling midwife presented the research project, describing its global aims and instruments. All the women who accepted to participate and signed the informed consent completed an on-site questionnaire. Informed consent and all study materials were approved by the institution's ethics review board. Women in the final sample met the following inclusion criteria: (a) fluent in Italian; (b) primiparous; (c) between 34th and 36th week of pregnancy; (d) in a stable couple relationship. Women who completed the questionnaire and signed the informed consent but did not meet the inclusion criteria were excluded from the research (34 subjects). Incomplete questionnaires were also excluded from the study (12 subjects).

### 2.2. Measures

Participants completed a questionnaire packet that included five scales, all previously validated with an Italian sample:

#### 2.2.1. Wijma Delivery Expectancy Questionnaire (WDEQ(A), 14 item, Italian – see Appendix A)[24]

This self-report instrument measures childbirth expectations, with particular attention given to the fear of delivery. The original instrument[25] consists of 33 items with six-point response alternatives per item, but we used a 14-item version following a validation study conducted with a large sample of 522 Italian primiparous women which highlighted that this reduced version worked best with an Italian population.[24] For the 14-item version, the total score ranges between 0 and 70 (0–165 for the original version): the higher the score, the greater the fear of childbirth manifested. In the present study we used only 14 of the original scale 33 items; however, for simplicity and brevity, in the contribution we will refer to this as simply the Italian version of the WDEQ. To date, previous research has not achieved a consistent WDEQ(A) cut-off to identify clinical fear of childbirth; the differences are also due to the presence of specific populations to which the scale has been administered. Specifically, some studies report SFOC as the top quartile of the continuous measure[1,6]; other studies use a cut-off score $\geq$66[26] or $\geq$85[8] to indicate moderate or high fear. According to Rouhe et al.[27] and

Please cite this article in press as: S. Molgora, et al., Fear of childbirth in primiparous Italian pregnant women: The role of anxiety, depression, and couple adjustment, Women Birth (2017), http://dx.doi.org/10.1016/j.wombi.2017.06.022