



Fear of childbirth at third trimester in hung vuong hospital, Vietnam

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General Note



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ABSTRACT

Fear is a natural and necessary emotion, responding to exogenous factors to protect and bring about a sense of security for each individual. During pregnancy, fear helps pregnant women prepare fully a good birth. However, when fear is uncontrolled, it affects heavily to the physical and mental well-being of women known as "fear of childbirth - FOC". *Objectives:* To determine the prevalence

of FOC among pregnant women in the third trimester of pregnancy at Hung Vuong hospital and some related factors. *Methods:* A cross-sectional study of 385 women in the third trimester of antenatal care at Hung Vuong Hospital met the criteria for sample selection from November 1, 2018 to November 30, 2019. *Results:* The prevalence of FOB was 30.91% 95%CI [26.29 - 35.53]. In which: in comparison group, the nulliparity was 34.57% CI 95% [29.82-39.32] and the multiparity was 28.25% with 95% CI [26.41-35.41]. Some factors related to the fear of childbirth: (1) Living with husband with OR = 0.20; 95% CI [0.15 - 0.48]; p = 0.02; (2) Childbirth with vagina operator with OR = 47.87; 95% CI [16.7-136.8], p <0.001; (3) The increase of gestational age (for every standard deviation increase by 23 days) with OR = 2.3, 95% CI [1.9 - 2.7], p <0.001; (4) Refer to information from books and newspapers with OR = 2.5, 95% CI [1.7 - 3.5], p <0.001; (5) Refer to information from health workers with OR = 0.15; 95% confidence interval [0.1 - 0.2], p <0.001. *Conclusion:* Fear of childbirth is a very important issue in pregnancy examination and management.

Keywords: Fear of childbirth, cross-sectional study, cut-off, fear of birth scale

1. INTRODUCTION

Pregnancy and childbirth are a special event for a woman. However, not every mother goes through this process comfortably. Since 1858, the French psychologist Loius Victor Marcé (Victor et al., 1858). has described the feeling of instability in a child as a result of anxiety about labor and that the baby is due to "scary" experiences. in previous births. In 2000, the term "tokophobia" was first used by Hofberg and Brockington for "the fear of giving birth" (Kristina, 2000). Fear of childbirth has gained the growing attention between 5 and 20% of pregnant women fear childbirth (Rouhe et al., 2009). Fear of childbirth manifests itself in a variety of ways: fear of pain, fear of inability to give birth, fear of being hurt at birth, fear of being a parent, and soon and many influencing factors: personal mood, economic conditions - social, past birth experience, community support and medical staff. There are many factors that have been correlated with the increased prevalence of fear of childbirth such as young maternal age, nulliparity, pre-existing psychological problems, lack of social support and a history of abuse or adverse obstetric events (Rouhe et al. 2009).

The Wijma Delivery Expectancy / Experience Questionnaire (W-DEQ) is the most used tool for assessing fear of child birth. The scale is based on many different aspects of dementia but is designed to be a one-way tool. W-DEQ's alpha cronbach coefficient in recent studies is 0.92. The W-DEQ questionnaire consists of 33 questions divided into 6 groups to identify the fear of giving birth including emotions: "fear", "negative thinking", "feeling lonely", "feeling useless", "Lack of positive anticipation", "concern for the fetus". Each question has 6 levels of answers with scores from 1 to 6. The overall score of the questions from the W-DEQ questionnaire range from 0 to 165, in 2003, Johnson and Slade (Rebecca et al., 2002) conducted. Analyze the first factor and conclude that the questionnaire can clearly assess four distinct concepts: fear, loneliness, lack of positive preparation, danger. The 2009 Fenwick studies in Australia have similar results for the effectiveness of this questionnaire. A study by Oznur Korukcu in 2012 in Turkey showed that the survey with the classic WDEQ questionnaire was full scale and helpful in assessing the fear of childbirth in Turkish women.

In six European countries in 2014, severe fear of childbirth was seen in 11.2% of women (Mirjam et al., 2014). Rouhe reported a study describing 4575 pregnant women at the beginning of pregnancy with 8.1% getting severe fear of childbirth (Rouhe et al., 2015). Fear of giving birth causes women to suffer serious consequences if not prevented and intervened such as not giving birth, early termination of pregnancy, increased rates of cesarean delivery, depression and post-traumatic stress disorder; If the child himself is born, he will suffer many disadvantages because of the intimate relationship between mother and child and mental retardation. A meta-analysis of 2014 in Iran (Saber et al., 2014) showed that the fear of childbirth accounted for 39.33% of all caesarean sections without obstetric design and increased the rate of emergency caesarean section.

More recently, patient-rated visual analogue scales (VAS) have been tested and found to be simple and easy to use, with high levels of compliance (Rouhe et al., 2008). In a large Finnish study (Rouhe et al., 2008), a VAS was used, asking women to rate how afraid they were of childbirth on a scale from 0 to 10. Using a cutoff point of 5, the VAS was found to have a sensitivity of 97.8% against the W-DEQ (score of 100 or more). A total of 38.9% of women in this sample were classified as having a fear of childbirth (VAS score of 5 or more). VAS scores were higher for nulliparous women, and for those who reported a previous caesarean birth or vacuum extraction. FOBS concept - the Fear of Birth Scale is a visual scale that consists of two factors that measure anxiety and fear with the question "What do you think about giving birth". Pregnant women will respond by marking on two scales with the tips of the heads as "fearless - scared", "calm - worried". The ruler length is 100mm. Both values are then averaged and given a common score.

FOCS is used in Australia in the Haines study in 2011 (Helen et al., 2011) and Sweden in the 2014 Ternstrom study (Elin et al., 2015). According to a cohort study of Haines (2015) conducted in Australia, 1410 women used both the FOCS scale tool and the

WDEQ-A questionnaire. Correlation between the two tools according to the Spearman's Rho test = 0.66 with FOCS cut-off of 54 points. The calculated sensitivity is 89%, specific 79%, Youden index 0.68. Positive predictive value 85%, negative predictive value 79%.

In the current trend, the rate of cesarean delivery worldwide tends to increase, approximately 20% according to the 2014 Betran research results (Pilar et al., 2014) and mental health issues are getting attention. deeply concerned, the study of the proportion of pregnant women with "fear of childbirth" is necessary, helping to have a proper view of the situation of this psychological disorder, contributing to the foundation of intervention studies to reducing the rate of cesarean section as well as preparing the best mentally so that the woman can perform her function as a great experience in life.

Vietnam has an average annual delivery of about 1 million babies, with a caesarean birth rate of 27.2%. Hung Vuong Hospital is one of the big obstetric and gynecological hospitals with about 1,000 beds and an average annual birth of about 40,000. We decided to conduct a study on this issue among pregnant women in third trimester of pregnancy.

The aim of the current study was to build on existing research by conducting a cross-cultural study assessing the levels of fear of childbirth in a sample of Vietnam women using a VAS-based instrument. The impact of various factors, such as socio - demographic characteristics and previous birth experiences, on fear levels was also explored.

2. MATERIAL AND METHODS

Research design: Cross-sectional research

Subjects: Healthy pregnant women attending third trimester antenatal care at the Hung Vuong Hospital antenatal clinic.

Admission criteria: Healthy pregnant women coming for antenatal care at Hung Vuong maternity hospital clinic. This study was approved by the hospital's medical ethics committee.

The questionnaire was originally developed in English then translated into Vietnam and piloted in the Hungvuong hospital setting with some minor variations to reflect the cultural and systematic variations of the locations.

Women provide the information of their age, marital status, education level, and any previous birth experiences (vaginal, assisted vaginal, planned caesarean and emergency caesarean). They were asked to indicate their preferred mode of delivery (vaginal or caesarean)

The FOCS (Fear of Childbirth Scale) is a visual scale that consists of two factors that measure anxiety and fear with the question "What do you think about giving birth"? Pregnant women will respond by marking on two scales with the tips of the heads as "fearless - scared", "calm - worried". The ruler length is 100mm. Both values are then averaged and given a common score.

Sample size formula $N = z^2_{1-\alpha} p(1-p)/d^2$

Choose $p = 0.5$ because this is the first study in Vietnam on this issue. With 95% confidence, with $z_{1-\alpha} = 1.96$; $d = 0.05$. Calculated: $N = \frac{1.96^2 \times \frac{0.5}{1-0.5}}{0.05^2} = 384.16$. Sample size is 385.

Data processing: Using Excel software to enter data and R statistical software to process results and analyze data. Calculate the prevalence of pregnancy during the third trimester of pregnancy, if there is a difference and the prevalence of 2 groups, analyze the factors leading to the difference by chi-square test. The difference is called statistically significant when $p < 0.05$. Multivariate analysis to control confounders and calculate OR corrections.

3. RESULTS

Table 1. Demographic and maternal characteristics of participants

Factors	n=385	%
Maternal age, year	29.1 ± 5.4	
Place of residence		
Rural	164	42.6
Urbal	221	57.4
Living with parents		
Yes	58	15.1
No	327	84.9

Live with her husband's parents		
Yes	173	44.9
No	212	55.1
Live with her husband		
Yes	372	96.6
No	13	3.4
Gestational age, week		
28 to 33 ^{6/7}	110	28.6
34 to 36 ^{6/7}	102	26.5
≥37	173	44.9
Number of births		
0	231	60.0
1	126	32.7
2	28	7.3
Number of normal births		
0	231	60.0
1	126	32.7
2	28	7.3
Number of operative births		
0	371	96.4
1	14	3.6
Experience from the previous birth		
Yes	202	47.5
No	183	52.5
Information from friends and relatives		
Yes	84	21.8
No	301	78.2
Information from books and newspapers, internet		
Yes	247	64.2
No	138	35.8
Information from medical staff		
Yes	102	26.5
No	283	73.5
Information from antenatal class		
Yes	7	1.8
No	378	98.2

Table 2. Univariate analysis of factors related to fear of childbirth

Factors	FOC -, (%)	FOC +, (%)	OR	95% CI	P value
Maternal age, year					
≤20	6 (54.5)	5 (45.5)	11.3	5.1-24.9	0.002
20-25	43 (58.9)	30 (41.1)	9.4	5.3-16.7	<0.001
25-30	101 (74.3)	35 (25.7)	4.7	2.7-8.1	0.005
30-35	58 (60.2)	38 (39.6)	8.8	5.1-15.5	<0.001
35-40	54 (93.1)	4 (6.9)	Ref	Ref	Ref
>40	4 (36.4)	7 (63.6)	23.6	10.5-53.3	0.4
Place of residence					
Rural	118 (71.9)	46 (28.1)	Ref	Ref	Ref
Urbal	148 (66.9)	73 (33.1)	1.3	0.8-1.9	0.3
Living with parents	41 (70.7)	17 (29.3)	0.9	0.7-1.3	0.8
Live with her husband's parents	130 (75.1)	43 (24.9)	0.6	0.5-0.7	0.02

Live with her husband	261 (70.1)	111 (29.8)	0.3	0.2-0.5	0.02
Primiparous	106 (65.4)	56 (34.6)	Ref	Ref	Ref
Multiparous	160 (71.8)	63 (28.3)	0.8	0.6-0.9	0.2
Vagina delivery					
1 time	95 (75.4)	31 (24.6)	0.6	0.4-0.7	0.02
2 times	25 (89.3)	3 (10.7)	0.2	0.1-0.4	0.01
Operative delivery	2 (14.3)	12 (85.7)	14.8	6.8-32.1	<0.001
Cesarean section					
1 time	27 (65.9)	14 (34.2)	1.2	0.8-1.6	0.7
2 times	13 (81.3)	3 (18.8)	0.5	0.3-0.9	0.3
Experience from the previous birth, yes	148 (73.3)	54 (26.7)	0.7	0.5-0.8	0.6
Information from friends and relatives	60 (71.4)	24 (28.6)	0.9	0.7-1.1	0.6
Information from books and newspapers, internet	153 (61.9)	94 (38.1)	2.8	2.2-3.6	<0.001
Information from medical staff	91 (89.2)	11 (10.8)	0.2	0.1-0.3	<0.001
Information from antenatal class	6 (85.7)	1 (14.3)	0.4	0.1-1.1	0.4

Table 3. Prevalence of FOC in the study subjects (n=385)

FOC	Number	Percentage % 95% CI
Yes	119/385	30.9 (26.3 – 35.5)
No	266/385	69.1 (64.5 – 73.7)

Table 4. Multivariate multinomial logistic regression analysis associated with fear of childbirth

Risk factors	OR	95% CI	P value
Living with her husband	0,2	0,15-0,48	0,022
History of operative delivery	47,9	16,7-136,8	<0,001
Gestational age	2,3	1,9-2,7	<0,001
Information from books and newspapers, internet	2,5	1,7-3,5	<0,001
Information from medical staff	0,15	0,1-0,2	<0,001

4. DISCUSSION

Fear of Childbirth (FOC) is a common problem affecting women's health and wellbeing, and a common reason for requesting caesarean section (Gosselin et al., 2003). The label "tokophobia" is also used (Mirjamet al., 2014), characterised as an "unreasoning dread of childbirth" in women, a "specific and harrowing condition" (Hofberg et al., 2000) including a "pathological dread" and "avoidance of childbirth". Moreover, FOC is strongly related to the increasing caesarean section (CS) rates in Western countries, as being a common cause for women requesting a surgical birth.

Prevalence of severe FOC, was measured in the same way, varied in different countries from 6.3 to 14.8%. One reason may be poor translation, or insufficient testing of the translated version of W-DEQ, both problems highlighted by previous authors (Johnson et al, 2002; Fenwick et al., 2009).

Another possible explanation is that some factors may remain unidentified when measuring with W-DEQ. For instance most scales measuring fear of childbirth do not consider important dimensions such as fear of abandonment by staff during birth (Roosevelt L, 2016), fear of medical interventions, loss of autonomy and control, as well as fear of mistreatment and obstetrical violence (Bohren et al., 2015).

In addition, the W-DEQ scale assesses a range of emotions about labour and birth, where fear is only one emotion among many others. However, despite its shortcomings, the W-DEQ has been highlighted in a recent systematic review on validated instruments used for measuring women's childbirth experiences as, currently, the best, most used and validated tool to measure FOC (Nilvér et al., 2017).

Culture-specific aspects in relation to fear of childbirth have been recognised in medicalised birth cultures, where young adults prefer CS over vaginal birth, and negative impressions of birth through visual media can be an important factor for generating fear (Stoll et al., 2014; Thomson et al., 2017).

Moreover, traditions surrounding birth, women's rights, how antenatal and maternity care is organised, CS rates, and which professions (midwives, GPs, obstetricians) are involved in pregnant and childbearing women's care, could all influence women's fear of childbirth.

The prevalence of FOC in our study is 39.1% higher with a meta-analysis of 33 studies by Maeve A. O'Connell (Saber et al., 2014), close to the rate of research groups in Asia (25%). However, the study of Maeve A. O'Connell that was eligible for inclusion was all observational studies regardless of gestational age, we only selected women in the third trimester.

In our opinion, the care, support and sharing of experiences of family members during pregnancy is an important impact factor on the emotions of pregnant women. Our study noted that 96.62% of pregnant women live with their husbands, the remainder due to their husbands working far away. In 2019, Maeve A. O'Connell's research in Ireland (Mirjamet al., 2014) reported that 89.9% of pregnant women lived with their husbands or in the same house. The results of logistic regression analysis showed that living with husband reduces the rate of fear of having a child with statistical significance with OR = 0.2, $p = 0.022$. Similarly, Maeve A. O'Connell (2019) compared the W-DEQ A scores between two groups living with husband and living separately, while the group with a separate score was significantly higher with $p < 0.001$ (Maeve et al., 2019). With the birth method, it is shown that pregnant women who give birth once or twice often significantly reduce the fear of childbirth rate with OR of 0.56 and 0.21 with 95% confidence respectively. The women with operative delivery history had a higher fear of childbirth rate than women without operative delivery history, with an OR = 14.8 99% confidence level. Perhaps the operative delivery process allows pregnant women to have anxiety experiences that affect the fetus during operative delivery and affect the later pregnancy. After this study, we found that there was a need for more explanations on psychological counseling for pregnant women when operative delivery was required. Meanwhile, a history of caesarean section and no related caesarean section related to the fear of childbirth rate. In our study, when multivariate regression analysis was recorded, only the prognostic factor could help to maintain a close association with $p < 0.001$, adjusted OR was calculated from 16.7 to 136.8.

Currently recorded in Vietnam, the number of people using internet-connected devices is 62 million over a population of 96 million, accounting for 64.5%. Our research has found that information from the internet is quite high with 64.16% of reference women but increases the risk of fear of childbirth. Explaining this can only explain the sources of information on the media that have not been censored by a specialized agency by pregnant women to be more confused and worried. This is confirmed by our research, the proportion of pregnant women informed by health workers related to the fear of vaginal delivery is only 26.49% but helps reduce the rate fear of childbirth was statistically significant with 99% confidence with OR = 0.20. This result shows that in the near future, the need for a thorough explanation of the professional skills of the medical staff will greatly contribute to the psychological comfort of receiving pregnant women and the upcoming birth of pregnant women. can help to reduce the rate of cesarean section which is increasing in Vietnam. However, the proportion of pregnant women who have consultations and send questions to physicians for answers is not high. Health care workers need to be more open so that pregnant women can ask questions related to pregnancy as well as actively provide useful information. Both of the above factors, when included in the multivariate regression analysis, were adjusted ORs, respectively, of 1.7 - 3.5 for information sources from books, internet and 0.1 - 0.2 for information sources from medical staff.

Limitations of the study

Using the fear of childbirth scale can identify whether a woman is afraid of having a baby or not with high confidence but the limit is not helping group anxiety disorders that pregnant women have as WDEQ - A version such as: negative emotions, lack of positive emotions, lack of social relationships, etc. The cross-sectional study design showed that the situation at the time of the study should correlate the cause - the results are relatively low and have not accurately analyzed the psychological progress of pregnant women during pregnancy.

5. CONCLUSION

In the study of fertility disorders with a sample size of 385 cases, we recorded a prevalence of FOC of 30.91% with 95% CI [26.29 - 35.53]. Of which: in the group of pregnant women, the higher rate than the stubble was 34.57% and 28.25%. Some factors related to FOC: (1) Living with husband reduces FOC with OR = 0.20; 95% CI [0.15 - 0.48]; $p = 0.02$; (2) Prenatal history increased FOC with OR = 47.87; 95% CI [16.7 - 136.8], $p < 0.001$; (3) Increasing gestational age increased FOC (with each increase in standard deviation of 23 days respectively) with OR = 2.3, 95% CI [1.9 - 2.7], $p < 0.001$; (4) Refer to information from books and newspapers, internet increases

FOC with OR = 2.5, 95% CI [1.7 - 3.5], $p < 0.001$; (5) Refer to information from medical staff to reduce FOC with OR = 0.15; 95% CI [0.1 - 0.2], $p < 0.001$.

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Conflict of Interest: The authors declare that they have no conflict of interest.

Informed consent: Informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

Ethical approval for study protocol: The study was approved by the Medical Ethics Committee of Hung Vuong Hospital (ethical approval code: 28-HVH).

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