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LEVELS OF ANXIETY IN HIGH-RISK PREGNANT WOMEN

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ABSTRACT

Objective: To identify the levels of anxiety in high-risk pregnant women. **Methods:** Cross-sectional study of quantitative-descriptive approach conducted with 112 pregnant women admitted to Agamenon Magalhães Hospital in Recife/PE in the period from April to June 2016. The data were processed in the programs Microsoft Office Excel and Word 2010, after individually applied, through tables, checked with descriptive statistics with values calculated in absolute frequency and analyzed according to national and international literature. **Results:** In this sample, the highest percentage, (39.3%) and (35.7%), were classified with no anxiety and mild to moderate anxiety, respectively, whereas 16.1% presented moderate to severe anxiety and 8.9%, severe. **Conclusion:** There was a relation between increased age and schooling of pregnant women in the group without anxiety, whereas in groups categorized with mild to moderate anxiety could be association with unplanned pregnancy or diseases during pregnancy, suggesting the need for strengthening of family planning by the family health strategy.

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INTRODUCTION

In Brazil, until December 2015, there were 371,869 pregnant women according to the Prenatal Information System (SISPRENATAL - Sistema de Informação em Pré-Natal in Portuguese), with approximately 95.97% (356,912) being assisted by health services, and of these, approximately

84.92% (315,803) initiated the appointments in the first trimester of pregnancy (Brazil, 2017). Pregnancy should be seen as natural among pregnant women and professionals involved, representing an intense and healthy life experience, in which both physical and psychological changes occur most often harmoniously along the months. However, this experience is not devoid of risks, and some women, due to

previous problems and particular characteristics, have increased risk for her and her fetus, thus classified as high-risk pregnant women (Brazil, 2013). The gestational risk factors may be related to individual characteristics or sociodemographic conditions, such as life habits, nutritional status, anomalies in reproductive organ, frequent abortions, gestational diabetes, previous pre-term birth and preexisting medical conditions such as heart disease, epilepsy and hypertension. Moreover, professionals should be attentive and trained for the early identification of these factors and send them, if necessary, to specialized assistance (Brazil, 2012). High-risk pregnancy includes conditions such as advanced maternal age, diabetes mellitus and pregnancy-related hypertension, and may evolve, in some cases, with fetal malformation (Saviani *et al.*, 2015). Pregnancy is a period of great transformations for the woman, and for her whole family. It has intense experiences and contradictory feelings of doubt and anxiety, especially in teenagers (Brazil, 2014). The anxiety in the gestational period should be identified and treated, otherwise it may lead to premature labor or even an abortion, lower scores of Apgar, deficit in fetal development, long-lasting injuries on the physical and psychological development of the fetus and obstetric complications, such as vaginal bleeding (Varela *et al.*, 2017; Betts, 2015). Considering the changes in mental health and levels of anxiety, Aaron Beck created the Beck Anxiety Inventory (BAI) or Beck Anxiety Scale (BAS) to specify reliably anxiety and depression. Aaron Beck is considered one of the most influential psychotherapists of all times, who transformed psychiatry and psychology around the world. His cognitive therapy proved to be invaluable in the treatment of various disorders (Cunha, 2001; Lacerda *et al.*, 2017). The BAI consists of a tool containing questions whose total score is the sum of the scores (0 through 63) with 21 items in total, using the following questions: "Not at all (it didn't bother me)"; "Mildly, but it didn't bother me much"; "Moderately - it wasn't pleasant at times"; and "Severely - it bothered me a lot". The results can be: 0 - 9 (minimum level of anxiety); 10 - 16 (mild anxiety); 17 - 29 (moderate anxiety) and 30 - 63 (severe anxiety), serving to discern the common symptoms of anxiety (Godoy and Godoy, 2002; Arrais, Araújo and Schiavo, 2019). In this way, the study aimed to identify the levels of anxiety in high-risk pregnant women, which required the assessment of sociodemographic and obstetric factors of these pregnant women.

METHODS

This is a cross-sectional study with a quantitative-approach instrument of data descriptive-type, since the main goal of the study is to describe the characteristics of a given population and establish relations between variables, with data collection through questionnaire, applied at any given point of time (Gil, 2010). The study was carried out at the Agamenon Magalhães Maternity Hospital (HAM), located on Estrada do Arraial, n. 2723 - Casa Amarela, Recife - PE, CEP: 52.070-230, situated in Health District of the City of Recife-PE, being a reference in the service to high-risk cases of the Maternity. Sample included 112 pregnant women who met the selection criteria. The sample was non-probabilistic of the intentional type, because the chosen elements of the sample relate intentionally with the established characteristics. The participants were pregnant women, aged over 18 years, forwarded to the risk

sector of this institution, who agreed to participate in the research and did not have a previous diagnosis of mental disorder. Data collection was carried out during three months, through visits in the months from April to June 2016. The BAI was applied (Beck *et al.*, 1988), which describes the development of the instrument and provides information about its psychometric properties. This scale is built based on several self-reporting instruments, used at the Center for Cognitive Therapy to measure aspects of anxiety (Beck and Steer, 1993) of which were selected the items that became part of the inventory (Cunha, 2001). The total score of this scale is the sum of the scores (0 to 63) with 21 items in total, using the following questions: "Not at all (it didn't bother me)"; "Mildly, but it didn't bother me much"; "Moderately - it wasn't pleasant at times"; and "Severely - it bothered me a lot". The results can be: 0 - 9 (minimum level of anxiety); 10 - 16 (mild anxiety); 17 - 29 (moderate anxiety) and 30 - 63 (severe anxiety) (Godoy and Godoy, 2002). The data were processed in the programs Microsoft Office Excel and Word 2010, after individually applied with the aid of the researchers and presented through tables, checked with descriptive statistics and with values calculated in absolute frequency and analyzed according to national and international literature. This study complied with Resolution 466/12 of the National Health Council (NHC), which is based on ethical and legal principles that emanate declarations and guidelines on researches involving human beings, being approved by the Research Ethics Committee (REC) of the HAM under CAAE: 53579916.2.0000.5197, and opinion: 1.468.651 on 29 March 2016. This article is part of the Residency Completion Work (RCW) of the main author and advisor of this study: Liniker Scolfild Rodrigues da Silva.

RESULTS

The survey allowed for greater knowledge and understanding of the relation between certain factors and increased chances of developing anxiety in pregnant women, which can contribute to know how to identify anxiety in pregnancy and the possible risks of complication for the mother.

Table 1 presents the characteristics of the total group of pregnant women surveyed, highlighting that: the most prevalent age group was 21 through 25 years (38.4%) and the least frequent was 41 years or older (3.6%) and the percentage of other ages ranged from 9.8% to 18.8%; the percentage of unmarried, married, with stable union/living together ranged from 28.6% to 36.7%, with only one widow and one with another situation; the highest percentages relating to education were: complete secondary education (42.0%), incomplete basic education (19.6%) and incomplete secondary education (17.9%) and other categories had percentages that ranged from 0.9% (one participant) up to 7.1%; the income with greater frequency corresponded to a minimum wage (MW) with 47.3% of the group, followed by the income of 1 through 2 MW (29.5%) and less than one MW (16.1%); the majority (82.1%) lived in the urban area and 91.1% lived in houses, 2.7% in apartments, and 6.3% in farms. Table 2 highlights that: (67.9%) had occupation, with housekeeper as the most frequent (40.2%). Other occupations had percentages that ranged from 0.9%, corresponding to one participant to 3.6%; approximately half (50.9%) was evangelical, followed by 34.8% of catholic and 14.3% with no religion.

Table 1. Analysis of sociodemographic data of pregnant women hospitalized at the High Risk Sector of the HAM Maternity, Recife, Pernambuco (PE), Brazil, 2016

Variable	N	%
TOTAL	112	100.0
Age		
18 – 20	17	15.2
21 – 25	43	38.4
26 – 30	21	18.8
31 – 35	11	9.8
36 – 40	16	14.3
41 or more	4	3.6
Marital status		
Unmarried	32	28.6
Married	40	36.7
Stable union / living with partner	38	33.9
Widow	1	0.9
Others	1	0.9
Education		
Illiterate	1	0.9
Incomplete basic education	1	0.9
Complete basic education	1	0.9
Incomplete elementary education	22	19.6
Complete elementary education	8	7.1
Incomplete secondary education	20	17.9
Complete secondary education	47	42.0
Incomplete higher education	8	7.1
Complete higher education	2	1.8
Others (Complementary education)	2	1.8
Family income (minimum wages)		
Less than one	18	16.1
One	53	47.3
1 – 2	33	29.5
2 – 3	5	4.5
3 or more	3	2.7
Zone		
Rural zone	20	17.9
Urban zone	92	82.1
Housing		
House	102	91.1
Apartment	3	2.7
Farm	7	6.3

Source: Own authorship

Table 2. Analysis of occupation and type of occupation of pregnant women hospitalized at the High Risk Sector of the HAM Maternity, Recife, Pernambuco (PE), Brazil, 2016

Variable	n	%
TOTAL	112	100.0
With occupation		
Yes	76	67.9
No	36	32.1
Occupation		
Saleswoman	2	1.8
Freelancer	2	1.8
Cashier	2	1.8
Seamstress	4	3.6
Domestic servant	1	0.9
Housekeeper	45	40.2
Snack bar	1	0.9
Teacher	1	0.9
Cleanse assistant	1	0.9
Attendant	1	0.9
Cook	2	1.8
Farmer	3	2.7
Vigilant	1	0.9
CHA	1	0.9
Hairdresser	1	0.9
Accountant assistant	1	0.9
Call Center	1	0.9
Educator at children's hotel	1	0.9
Pedagogist	1	0.9
Ticket collector	1	0.9
Nursing technician	1	0.9
Money-changer	2	1.8
No occupation	36	32.1
Religion		
Catholic	39	34.8
Evangelical	57	50.9
No religion	16	14.3

Table 3 shows that: in relation to gestational age, over half (53.6%) of the participants were in early preterm, followed by (31.2%) late preterm, (14.3%) early term and only one was in term; the largest percentage corresponded to tertipara (29.5%), the smaller, to multiparas (20.5%) and primiparas and secondipara had (25.0%) each; (38.4%) had one delivery, 3 to 8 deliveries (14.3%) and those who underwent no delivery or two deliveries were respectively 25.0% and 22.3%; the majority (71.4%) had not abortion and (22.3%) corresponded to those who had had an abortion; (48.2%) of those who reported having had vaginal delivery in previous pregnancies was a little less than half and those who had had one vaginal delivery were (29.5%); (40.2%) had been submitted to caesarean section and, of this value, (28.6%) had had one cesarean. The majority (65.2%) had unplanned pregnancy.

Table 3. Analysis of obstetric data of pregnant women hospitalized at the High Risk Sector of the HAM Maternity, Recife, Pernambuco (PE), Brazil, 2016

Variable	n	%
TOTAL	112	100.0
Gestational age		
Early preterm (< 34 weeks)	60	53.6
Late preterm (34 - 36 weeks and 6 days)	35	31.2
Early term (37 - 38 weeks and 6 days)	16	14.3
Term (39 - 40 weeks and 6 days)	1	0.9
Number of pregnancies		
Primipara	28	25.0
Secondipara	28	25.0
Tertipara	33	29.5
Multipara	23	20.5
Number of deliveries		
0	28	25.0
1	43	38.4
2	25	22.3
3 – 8	16	14.3
Number of abortions		
0	80	71.4
1	25	22.3
2	4	3.6
4	3	2.7
Previous vaginal delivery routes		
Yes	54	48.2
No	58	51.8
Number of vaginal deliveries		
0	58	51.8
1	33	29.5
2	13	11.6
3 - 7	8	7.1
Caesarean section		
Yes	45	40.2
No	67	59.8
Number of caesarean sections		
0	67	59.8
1	32	28.6
2 – 3	13	11.6
Regarding pregnancy		
Desired / planned	39	34.8
Undesired / unplanned	73	65.2

Source: Own authorship.

The results contained in Table 4 emphasizes that, except for the questions "Fear of worst happening" and "Nervous", in which the percentages of the 4 categories of responses ranged from 20.5% to 33.0%, in the other questions, the answer "Not at all" was chosen by the majority of the sample. Table 5 shows that (72.3%) had poor self-esteem and (27.7%) of the others had the satisfactory self-esteem; (39.3%) had no anxiety and (35.7%) corresponded to those who had mild to moderate anxiety and the percentages of the other two categories had moderate to severe anxiety (16.1%) or severe anxiety (8.9%).

Table 4. Distribution of the pregnant women hospitalized in the High Risk Sector of the HAM Maternity. Recife, Pernambuco (PE), Brazil, 2016

Variable	N	%
TOTAL	112	100.0
Numbness or tingling		
Not at all	84	75.0
Mildly	21	18.8
Moderately	5	4.5
Severely	2	1.8
Feeling hot		
Not at all	61	54.5
Mildly	25	22.3
Moderately	13	11.6
Severely	13	11.6
Wobbliness in legs		
Not at all	93	83.0
Mildly	10	8.9
Moderately	7	6.3
Severely	2	1.8
Unable to relax		
Not at all	51	45.5
Mildly	25	22.3
Moderately	26	23.2
Severely	10	8.9
Fear of worst happening		
Not at all	32	28.6
Mildly	28	25.0
Moderately	24	21.4
Severely	28	25.0
Dizzy or lightheaded		
Not at all	54	48.2
Mildly	39	34.8
Moderately	15	13.4
Severely	4	3.6
Heart pounding / racing		
Not at all	66	58.9
Mildly	22	19.6
Moderately	18	16.1
Severely	6	5.4
Unsteady		
Not at all	91	81.3
Mildly	17	15.2
Moderately	2	1.8
Severely	2	1.8
Terrified or afraid		
Not at all	82	73.2
Mildly	11	9.8
Moderately	14	12.5
Severely	5	4.5
Nervous		
Not at all	27	24.1
Mildly	37	33.0
Moderately	25	22.3
Severely	23	20.5
Feeling of choking		
Not at all	78	69.6
Mildly	18	16.1
Moderately	12	10.7
Severely	4	3.6
Hands trembling		
Not at all	97	86.6
Mildly	7	6.3
Moderately	7	6.3
Severely	1	0.9
Shaky / unsteady		
Not at all	97	86.6
Mildly	11	9.8
Moderately	3	2.7
Severely	1	0.9
Fear of losing control		
Not at all	63	56.3
Mildly	24	21.4
Moderately	12	10.7
Severely	13	11.6
Difficulty in breathing		
Not at all	68	60.7

Mildly	25	22.3
Moderately	14	12.5
Severely	5	4.5
Fear of dying		
Not at all	65	58.0
Mildly	15	13.4
Moderately	15	13.4
Severely	17	15.2
Scared		
Not at all	45	40.2
Mildly	30	26.8
Moderately	19	17.0
Severely	18	16.1
Indigestion		
Not at all	67	59.8
Mildly	25	22.3
Moderately	17	15.2
Severely	3	2.7
Faint / lightheaded		
Not at all	92	82.1
Mildly	14	12.5
Moderately	4	3.6
Severely	2	1.8
Face flushed		
Not at all	88	78.6
Mildly	18	16.1
Moderately	6	5.4
Severely	-	-
Hot / cold sweats		
Not at all	72	64.3
Mildly	21	18.8
Moderately	13	11.6
Severely	6	5.4

Source: Own authorship.

Table 5. Assessment of the BAS applied to the pregnant women hospitalized at the High Risk Sector of the HAM Maternity. Recife, Pernambuco (PE), Brazil, 2016

Variable	N	%
TOTAL	112	100.0
Anxiety		
No anxiety	44	39.3
Mild to moderate	40	35.7
Moderate to severe	18	16.1
Severe	10	8.9

Source: Own authorship.

DISCUSSION

The study sought to analyze the self-esteem and anxiety levels in pregnant women hospitalized at the high risk sector through the application of the Beck scale. The literature indicates that high-risk pregnant women have higher rates of anxiety in relation to pregnant women without risk (Saviani-Zeot; Petean, 2015), and in the context of self-esteem, body image is something complex and multifaceted among pregnant women (Meireles *et al.*, 2017). With respect to the characteristics of the surveyed pregnant women, there stood out: the age range from 21 to 25 years; marital status married; schooling, complete secondary education; living in the urban area and inhouses. Similar to the profile of a study conducted with 207 pregnant women in a service of emergency obstetric care in the Federal District whose prevalence was: married pregnant women; with secondary education; all lived in houses; with age range from 18 to 27 years. Santos (2016) brings that these data show similarity of the profile of pregnant women who are most affected by risk situations, confirming the need to develop strategies to meet this public in their uniqueness. A study conducted with 13 pregnant women enrolled in a FHS aiming to describe the socioeconomic and gynecological-

obstetric profile identified that 100% of the surveyed had an income from 1 to 3 minimum wages, and that low income may be associated with fetal malformations (Dias *et al.*, 2018). In this study, there was a prevalence of 1 minimum wage. Such data may be suggestive that the lower the income the greater the risks of illness. Pregnancy-related diseases are a factor that can cause more anxiety in pregnant women, bearing in mind that several studies show greater vulnerability for the development of anxiety in risk pregnant women (Silva *et al.*, 2017). As already seen that (39.3%) of the present study had no anxiety, this result may be related to higher age and schooling of the participants.

In relation to gestational age, a study carried out in Rio Grande do Sul, using sexii-year data, showed that, of the interviewees with PP, there was a greater percentage of cases of Preterm Birth, with gestational age characterized as late preterm, in relation to early preterm (Tabile *et al.*, 2016). In this research, regarding the gestational age, over half (53.6%) of the participants were in early preterm, followed by (31.2%) late preterm. However, this study was conducted with pregnant women and not with puerperal women as is the case of the aforementioned study. On the other hand, the aforementioned study (Tabile *et al.*, 2016) identifies a prevalence of births with late preterm gestational age, which may be related to the efficiency of prenatal care, with an emphasis on medical intervention in risk situations, since most participants attended more than 7 appointments during the prenatal period. Such a result may suggest the ability of maternities to extend pregnancy for more time, thus contributing to a birth with lower risk and causing less anxiety in pregnant women. Regarding the obstetric history, (29.5%) corresponded to tertiparas, (20.5%) to multiparas, differently from study conducted in Paraná, with high-risk pregnant women, which verified the prevalence of multiparas and primiparas (Costa *et al.*, 2016).

Also in this context, (38.4%) had only one delivery; (71.4%) had no abortion; less than half (48.2%) reported vaginal delivery in previous pregnancies; whereas (40.2%) had been submitted to caesarean section. Another study found similar data, revealing a higher number of pregnant women who had no and one to two births; small number of abortions; and more vaginal deliveries compared to caesarean sections (Menetrier and Almeida, 2016). According to Wechsler *et al.*, (2016) abortion is characterized as one of the important reasons for emotional changes, which may trigger anxiety episodes. A study conducted by Cardillo *et al.*, (2016), showed that (65.3%) of women had an unplanned pregnancy, (11.1%) undesired, noting that, of these, (2.8%) reported depression diagnosis during the prenatal period, making use of drugs as the only form of treatment. Concerning the application of the Beck scale among high-risk pregnant women, the issues that presented significant results were "Fear of worst happening" and "Nervous". A study that aimed to identify the feelings experienced by a group of pregnant women revealed that the formation of a group of pregnant women allows for the reception, interaction between people who experience similar situations and expression of emotions, factors that contribute to overcoming the difficulties imposed by pregnancy (Nunes *et al.*, 2017). A survey conducted in Coimbra with pregnant women showed that a greater number of risk factors was associated with more dysfunctional attitudes toward

motherhood (Costa, 2016), strengthening higher chances of pregnant women at risk have low self-esteem and anxiety.

Conclusion

The low self-esteem and anxiety were evidenced in a significant number of high-risk pregnant women studied, confirming the relation between gestational high risk and low self-esteem and anxiety, which other studies had already described. This points to the need to develop strategies that contribute to the satisfaction of pregnant women for their own pregnancy, adaptation to the disease, family and social support and assistance to quality healthcare provided by professionals of the maternal area, aiming to minimize the factors that cause low self-esteem and anxiety. Among the surveyed pregnant women, the majority presented no anxiety, which may have been associated with increased age and schooling of the participants. The second highest percentage corresponded to those who had mild to moderate anxiety that can be associated with unplanned pregnancy and pregnancy-related diseases. Finally, the content addressed in this study contributes to strengthening the debate on possible causes of anxiety in high-risk pregnancy, the need for expanding primary care programs, such as prenatal and hospital care, to pregnant women, being these tools essential to the development of mechanisms that work the emotional health of pregnant women aiming to minimize the fears and anxiety in pregnancy.

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