



Stress Pós-traumático no nascimento e a construção
partilhada de significados nas mulheres

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Dissertação de Mestrado em Psicologia da Saúde e Neuropsicologia

Orientação: Professor Doutor José Carlos Rocha

Gandra, setembro de 2020



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Professor Doutor José Carlos Rocha

Gandra, setembro de 2020

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Resumo

O stress pós-traumático pós-nascimento é uma psicopatologia que é desenvolvida no seguimento de uma gravidez e/ou parto traumático. Esta psicopatologia afeta significativamente a vida das mulheres e de todos aqueles que dela fazem parte.

A presente investigação encontra-se dividida em três capítulos. O primeiro referente à tradução e validação de uma escala que avalia os sintomas de stress pós-traumático pós-nascimento, City – Escala de Trauma ao Nascimento. O segundo diz respeito ao desenvolvimento de uma escala que pretende avaliar o impacto da construção partilha de significado em situações potencialmente traumáticas, SMMS Shared Meaning Making Scale - Escala de Construção Partilhada de Significado. O terceiro e último capítulo é alusivo ao impacto que uma boa relação de casal e a construção partilhada de significado tem nos sintomas de stress pós-traumático pós-nascimento. Todos os artigos foram realizados em coautoria com outros investigadores sendo que, neste sentido, também foi realizado mais um artigo em coautoria com outra colega, Maria Ferreira, sobre a temática da relação de casal e construção partilhada de significado após perda perinatal. Embora não seja muito falado na população, o stress pós-traumático pós-nascimento é uma psicopatologia que atinge muitas mulheres e homens e cujas consequências que dela advêm têm um enorme impacto na vida destes indivíduos.

Palavras-chaves: trauma, nascimento, stress pós-traumático, stress pós-traumático pós-nascimento, satisfação de casal, construção partilhada de significado.

Abstract

Posttraumatic stress post-birth is a psychopathology that is developed following a traumatic pregnancy and / or childbirth. This psychopathology significantly affects the lives of women and all those who are part of it.

The present investigation is divided into three chapters. The first referring to the translation and validation of a scale that assesses the symptoms of posttraumatic stress post-birth, City - Trauma Birth Scale. The second concerns the development of a scale that aims to assess the impact of the shared meaning making in potentially traumatic situations, SMMS Shared Meaning Making Scale - Shared Meaning Construction Scale. The third and final chapter is allusive of the impact that a good couple relationship and the shared meaning making has on posttraumatic stress post-birth symptoms. All articles were co-authored with other researchers and, in this sense, another article was co-authored with another colleague, Maria Ferreira, on the theme of the couple relationship and shared meaning making after perinatal loss. Although not widely talked about in the population, posttraumatic stress post-birth is a psychopathology that affects many women and men and whose consequences that result from it have a huge impact on the lives of these individuals.

Keywords: trauma, birth, posttraumatic stress, posttraumatic stress post-birth, couple satisfaction, shared meaning making.

Chapter I: Translation and Validation of the City Birth Trauma Scale for the Portuguese population

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Abstract

Objective and Methods: Thus, we intend to translate, validate, and psychometrically characterize the City - Birth Trauma Scale for the Portuguese population. Through a mixed, clinical and Portuguese sampling consisting of 140 female participants, informed consent was presented following a sociodemographic survey and application of the research protocol consisting of the various assessment instruments, the City – Birth Trauma Scale; the Patient Health Questionnaire-9 and the Event Impact Scale-6.

Results: The results demonstrate a favorable internal consistency, according to Cronbach's alpha values obtained. In turn, the obtained values show that the instrument has a good internal and external validity and a good discriminatory capacity.

Conclusion: The development of this psychopathology and, consequently, the associated symptoms bring many consequences for women and for all those who live with them directly. Thus, this instrument is essential to screen PTSD post-birth so that there is, if necessary, a rapid intervention.

Keywords: trauma, childbirth, posttraumatic stress, posttraumatic stress post-birth.

Introduction

Throughout an individual's life, many events that go beyond the usual human experience may have happened, leading to harm at all levels. These experiences are design traumatic events (APA, 1987). In the face of this adverse event, the individual may not have the ability to respond adequately to it. Thus, this inability can trigger pathogenic effects in the psychic organization (Laplanche & Pontalis, 1970) and, in more extreme cases, can even lead to a Posttraumatic Stress Disorder (PTSD) (Van der Kolk, 2015).

Thus, PTSD is a psychopathology triggered by a traumatic event or an accumulation of traumatic events and whose symptoms may include flashbacks, nightmares, severe anxiety, as well as uncontrollable thoughts about the event. For a diagnosis of PTSD, the individual must have the following criteria, according to the DSM-5 (2014):

- A. Exposure to a specific episode or threat of death, serious injury or sexual violence in one (or more) of the following forms:
 - 1. Directly experience the traumatic event; 2. Personally witness the traumatic event that occurred with others; 3. To know that the traumatic event occurred with a family member or close friend. (In the case of specific episodes or threat of death involving a family member or friend, the event must have been violent or accidental); 4. Be repeatedly or extremely exposed to aversive details about the traumatic event Note: Criterion A4 does not apply to exposure by means of electronic communications, television, films or photographs, unless such exposure is work-related.
- B. Presence of one (or more) of the following intrusive symptoms associated with the traumatic event that began after its occurrence:
 - 1. Distressing, recurring and involuntary intrusive memories of the traumatic event;
 - 2. Recurring distressing dreams in which the content and/or feeling of the dream

are related to the traumatic event; 3. Dissociative reactions in which the individual feels or acts as if the traumatic event is occurring again; 4. Intense or prolonged psychological distress prior to exposure to internal or external signs symbolizing or similar some aspect of the traumatic event; 5. Intense physiological reactions to internal or external signals symbolizing or similar to some aspect of the traumatic event.

C. Persistently avoid stimuli associated with the traumatic event, and this avoidance begins after the occurrence of the event, as evidenced by one or both of the following aspects:

1. Avoid or strive to avoid memories, distressing thoughts or feelings about and/or associated with the traumatic event; 2. Avoid or strive to avoid external memories (people, places, conversations, activities, objects, situations) that awaken memories, thoughts or distressing feelings about the traumatic event.

D. Negative changes in cognitions and humor associated with the traumatic event that started or worsened after the occurrence of such an event, as evidenced by two (or more) of the following aspects:

1. Inability to recall any important aspect of the traumatic event (usually due to dissociative amnesia, and not to other factors such as head trauma, alcohol or drugs); 2. Persistent and exaggerated negative beliefs or expectations about yourself, others and the world; 3. Persistent distorted cognitions regarding the cause or consequences of the traumatic event that lead the individual to blame himself or others; 4. Persistent negative emotional state; 5. Greatly diminished interest or participation in significant activities; 6. Feelings of distancing and alienation from others; 7. Persistent inability to feel positive emotions.

- E. Marked changes in arousal and reactivity associated with the traumatic event, which began or worsened after the event, as evidenced by two (or more) of the following aspects:
1. Irritable behavior and outbreaks of anger (with little or no provocation) generally expressed in the form of verbal or physical aggression towards persons and objects;
 2. Reckless or self-destructive behavior;
 3. Hypervigilance;
 4. Over-the-top-of-the-same response;
 5. Concentration problems;
 6. Sleep disturbance.
- F. The disorder (Criteria B, C, D and E) lasts for more than one month.
- G. The disorder causes clinically significant suffering and social, professional, or other areas of the individual's life.
- H. The disorder is not due to physiological effects of a substance (e.g., medicines and alcohol) or other medical condition.

Although PTSD is immediately associated with catastrophic experiences, this psychopathology can have its etiology in matters of the daily life. Experiences related to their health are one of the main factors for the development of Posttraumatic Stress Disorder (Serra, 2003, p.20), and one of these experiences is often associated with its development is childbirth.

According to Beck, a traumatic birth is a:

"An event that occurs during labor and involves a real or imaginary fear that there is a physical injury, death of the woman or newborn. During this event, the woman experiences an intense fear, feeling of helpless and horror as well as the feeling of total loss of control" (Beck, 2004, p.25).

According to Van Son (2005) posttraumatic stress post-birth has a significant prevalence rate since 5% to 8.1% of women present symptoms in the first three to twelve

months after childbirth and that, in general terms, 1% to 6% of women develop of posttraumatic stress disorder symptoms one month after childbirth (Elmir et al., 2010). Symptoms such as intrusive memories about the moment of childbirth through images, ideas, persistent memories, dreams and negative emotions, avoidance of some situations, people, places and thoughts that remind them of the moment of birth, hyperactivation or affective apathy are the most frequent of PTSD post-birth (APA, 2000). Due to these symptoms are several consequences that this pathology brings to the life of a woman and to all who are part of it.

Thus, posttraumatic stress, in general, is a psychological disorder increasingly present in society. Given this influx, there are some evaluation instruments that were developed with the objective of improving the diagnosis and, consequently, the provision of counseling to individuals with histories of potentially traumatic events. However, these instruments are directly related to the evaluation for the general forms of posttraumatic stress. In this sense, there is no specific instrument to assess posttraumatic stress post-birth in Portugal. This instrument is essential due to the specificities of this type of PTSD and given the consequences of this type of specific disorder.

The objective of this study is to translate and validate an instrument developed by Ayers et al., (2018) at the University of London, “*City-Birth Trauma Scales*”, for the Portuguese population, with the proper authorization of the original authors, presenting the psychometric results. This instrument was constructed based on the diagnostic criteria of the DSM-5 for Posttraumatic Stress Disorder adapting them to the moment of birth.

Method

Participants

The target population consists exclusively of female individuals who have already had at least one childbirth experience. Thus, this study includes 140 Portuguese women with ages between 22 and 63 years ($M=36.79$; $SD=5.69$). About marital status, they are mostly married (71.4%). At the level of educational qualifications 31.9%, they finished higher education, 46.8% had 12th grade, 17.7% completed the 9th grade and 3.5% completed the 6th grade. Regarding the childbirth 58.9% of the participants said they had a complicated childbirth experience. About the type of childbirth that the woman experienced 38.3% had a childbirth by c-section, 22.0% had a vaginal childbirth without the use of forceps, 17.0% vaginal childbirth with forceps, 22.0% underwent vaginal cutting and 39.7% of the population had a childbirth with epidural use, 17.0% vaginal childbirth with forceps, 22.0% underwent vaginal cutting and 39.7% of the population had a childbirth with epidural use, unlike 9.2% of the population. Concerning the experience of childbirth itself, 34.0% of the participants claim to have had a long-term childbirth, 5.7% suffered severe postpartum hemorrhage, 5.0% suffered a severe laceration, 19.9% indicate that there were complications with the baby and 52.5% of women claim to have suffered emotionally during birth. About medical problems during pregnancy, 19.1% of the participants presented the most prevalent hypertension, placenta previa, followed by gestational diabetes and preeclampsia. 8.5% of the sample revealed that the baby had some associated medical problem, the most mentioned being the low development, followed by prematurity (Table 1).

Instruments

To collect demographic, social, clinical, and behavioral data from the participants, a sociodemographic and clinical questionnaire was developed. For this, we discussed the

information that was of interest to be present in the study based on the literature review on the theme. The questions were elaborated considering the ease and understanding of them by the participants.

Posttraumatic stress post-birth levels were evaluated through the application of The *City-Birth Trauma Scales* already properly translated to Portuguese. This instrument consists of a questionnaire constituted of 29 items whose main objective is to evaluate the existence of posttraumatic stress post-birth disorder (Ayers et al., 2018). This scale takes into account the DSM-5 criteria for PTSD: stressors (A), symptoms of reexperience (B), avoidance (C), negative cognitions and humor (D) and hyperactivation (E), as well as the duration of symptoms (F), suffering or significant injury (E) and exclusion criteria or other causes (H). It is a scale of self-completion and is divided into several subscales, these being the subscale of intrusions, the subscale of cognitions and negative humor, the subscale of hyperactivation and denial. The first subscale is *likert* ranging from 0 ("nothing") to 3 ("5 or more times"). The higher the score, the higher the severity of PTSD symptoms. The second subscale, cognitions, and negative humor, assesses the frequency and duration of symptoms, is a dichotomic scale ranging between "yes" and "no". The subscale of anguish, disability and possible physical causes is also a scale in which the answer options vary between "yes", "no" and "maybe". The original scale presents a good internal consistency, both in terms of the total scale and the different subscales, which displays a Cronbach's alpha of .92 for the total scale, .88 for the subscale of the intrusions, .83 for the subscale of negative cognitions and humor, and .86 for the hyperactivation subscale (Ayers et al., 2018). The Portuguese version adapted from this instrument was adapted after a first translation, translation back into English and consensual version between the actors in the translations.

Impact of Events Scale-Revised-6 (IES-6) aims to evaluate symptoms and difficulties related to posttraumatic stress in both clinical and non-clinical populations (Thoresen et al., 2010). It consists of 6 items and has a *likert* response format ranging from 1 to 5 (1 = "never"; 2 = "a little"; 3 = "moderately"; 4 = "many times"; 5 = "extremely"). The cutoff calculated for the Portuguese population was 12.5, with a Cronbach's alpha of .84 for the total scale (Lopes & Rocha, 2013).

Patient Health Questionnaire-9 (PHQ-9) (Kroenke et al., 2001) aims to perform an evaluation of symptoms of depression and their severity. It consists of a subset of 9 items, with a four response types *likert* format (0 = "never"; 1 = "several days"; 2 = "in more than half the number of days"; 3 = "almost every day"). The score can range from 0 to 27, where a score between: 0 and 5 means absence of symptoms; 6 to 9 means brief symptomatology; from 10 to 14 means moderate symptomatology; from 15 to 19 means moderate to severe symptomatology; and more than 20 severe symptoms (Kroenke et al., 2001). The Portuguese validation of this instrument presented good psychometric characteristics, namely a Cronbach's alpha of .86 (Torres et al., 2013).

Procedure

This investigation obtained the approval of the Ethics Committees of the Centro Hospitalar Tâmega e Sousa. However, in view of the public health overview developed, presential collection was suspended and was carried out exclusively through an online platform, through the *LimeSurvey* program.

Regarding the translation process of one of the instruments used, "*The City Birth Trauma Scales*", three translations were made to Portuguese of the original English version: 1. Direct and independent translations for Portuguese performed by two teachers

and one by a Brazilian researcher who is translating the same scale to the Brazilian population; 2. Back-translation into English; 3. Consensus based on previous versions.

Inclusion criteria were: (1) only female participants; (2) participants are over 18 years of age; (3) have already gone through at least one childbirth experience.

Initially, to each participant was presented with an informed consent containing all the information about the nature and objectives of the study, as well as the ensures of the status of volunteer, and the confidentiality of personal data. That said, and after the acceptance of participation in the study, a Sociodemographic and Clinical Questionnaire was applied, with the purpose of collecting relevant data about the participant and the moment of childbirth. Then, the different instruments that are constituent of the research protocol were applied.

Data Analysis

Concerning the statistical analysis of the data, this was performed with the help of the statistical computer software IBM SPSS (*Statistical Package for the Social Sciences*), version 26 and the *Jasp Team* program version 0.13.10.

Measures of central tendency, dispersion (means and standard deviations) and frequency distribution were used to perform the sociodemographic characterization of the sample. Next, we used the reliability analysis of the items using Cronbach's alpha to evaluate the reliability of the instrument. To proceed to the validity study of the scale, we used Exploratory Factor Analysis (EAF) and *Pearson's* Coefficient analysis between the City - Birth Trauma Scale with IES-6 and the Patient Health Questionnaire-9 to verify convergent external validity. A *network analysis* was also used, carried out through the *Jasp Team* program, to verify the correlations between the items that constitute the scale.

Results

Reliability Analysis

The internal reliability of the City - Birth Trauma Scale was analyzed using the reliability indicator, Cronbach's alpha, which consists of an estimate of internal consistency from the variances of the items and the totals of the test per individual (Maroco & Garcia-Marques, 2006). Cronbach's alpha calculated for this scale was .97, which is considered a very good value. The same was also determined for the evident subscale, .90, of intrusions, .89, as well as for the subscale of negative cognitions and humor, .91 and hyperactivation, .91 (Table 2).

Exploratory Factor Analysis (EAF)

As for exploratory factor analysis, EAF, this allows to certify the internal consistency of the components in general terms and define the factors that best explain their covariance between the components of each instrument. Through this we can verify that the value of *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* (KMO) for the sample is .92. Thus, this value expresses that the data are very well correlated since, KMO has a value greater than .90. Similarly, the *Bartlett's Test of Sphericity* (BTS) test is statistically significant ($p < .00$). In both cases, the tests suggest that the data are adequate for factor analysis (Table 3).

In this sense, considering the Kaiser criterion, two factors that constitute the scale should be extracted: the first factor, which corresponds to the symptoms of intrusion, and the second factor that represents the symptoms of avoidance. Relate to the first factor, it presents an *Eigenvalue* of 12.55 having approximately 57% of the variance. In turn, the second factor presents *Eigenvalue* of 2.38, presenting, approximately, 11% of the variance. Together, these two factors explain approximately 68% of the variance of the original variables.

Relate to the data obtained in the *Component Matrix*, we should observe the factor loadings of each variable, as well as identify the variables that present high factorial loads, values greater than .40, in both components. Thus, most variables have values higher than .40 for factor 1. However, the variables: feeling disconnected from other people; feeling irritable or aggressive; feel self-destructive or act recklessly; feeling disconnected/distant or as if you were in a dream have values greater than .40 for both factors.

About the components that contributed to the formation of each of the factors individually, we can mention that the components: recurring unwanted memories about birth (item 1); bad dreams or nightmares about birth (item 2); be upset when you remember the birth (item 4); feeling tense or anxious when remembering birth (item 5); try to avoid thinking about birth (item 6); not being able to remember birth details (item 8); blame yourself or others for what happened during birth (item 9); feeling strong negative emotions about birth (item 10); feel bad about yourself or think that something terrible will happen (item 11); lose interest in activities that were important to you (item 12); feeling tense or at the limit (item 17); feeling apprehensive or easily frightened (item 18); concentration problems (item 19) and not sleeping well because of things that have nothing to do with the baby's sleep pattern (item 20) contributed to the construction of the first factor – symptoms of intrusion.

About the formation of factor two – avoidance symptoms, the components that contributed positively to its formation were: feel bad about yourself or think that something terrible will happen (item 11); lose interest in activities that were important to you (item 12); feeling disconnected from others (item 13); not being able to feel positive emotions (item 14); feeling irritable or aggressive (item 15); feeling self-destructive or acting recklessly (item 16); feeling tense or at the limit (item 17); feeling apprehensive or easily frightened

(item 18); concentration problems (item 19); feeling disconnected/ distant or as if you had a dream (item 21) and feel that things are distorted or not real (item 22) (Table 4).

Network Analysis

Network analysis allows you to perform an analysis of the connections between a set of elements (nodes). The elements that have a greater centrality are generally the most influential elements when compared to the rest (Borsboom & Cramer, 2013).

It turns out that the 22 items establish 121 connections of the 220 possible connections. The 3 items that demonstrate greater centrality are: item 7 ("Trying to avoid things that remind you of birth (e.g., people, places, TV shows)"), item 9 ("Blaming yourself or others for what happened during birth") and item 14 ("Not being able to feel positive emotions (e.g., happiness, animation)"). Centrality consists of a measure of the interconnection of nodes (Ross et al., 2018) (Figure 1).

Analysis of convergent external validity

To analyze the convergent validity of the City - Birth Trauma Scale *Pearson's* Correlations were made between the respective scale and the following instruments: IES-6 and PHQ-9. Thus, it is verified that demonstrates a strong positive correlation such as IES-6 ($r=.83$; $p<.01$) and PHQ-9 ($r=.88$; $p<.01$) (Table 5).

Discriminatory Capacity Analysis

Analyzing now the results of the area on the ROC Curve, it presents a value of .91 which is indicative of a good discriminatory capacity of the scale. Thus, from the reported results of posttraumatic stress post-birth symptoms there is a good probability of detecting positive results regarding the existence of psychopathology.

Description of PTSD symptoms

Starting to analyze the descriptive data extracted from this scale about this pathology, we can assess that the total value of PTSD symptoms was calculated by adding the scores of each of the items. Thus, the total score for PTSD symptoms ranges from 0 to 60. In the present sample, the total PTSD symptoms, according to the mentioned interval, presented the mean score of 13.00 ($SD=15.19$).

It was concluded that 6.9% of the participants thought that they or their baby would die and 11.5% believed that they would be severely injured during childbirth. 8.2% of these state that symptoms started in the first six months after childbirth, while 8.7% had symptoms after six months of childbirth. 17.7% of women declare that these symptoms last for three months or more, 8.7% of them also say that, these feelings cause them great suffering. 28.5% state that these feelings cannot be caused by medications, alcohol, drugs, or other physical diseases.

Of the study participants, 80.1% of them present symptoms of intrusion ($M=2.37$; $SD=3.49$), 80.1% reported having symptoms of avoidance in relation to childbirth ($M=1.30$; $SD=2.07$) and in relation to the percentage of women with cognitions and negative humor in relation to childbirth, this is 79.4% ($M=3.71$; $SD=4.83$). About symptoms of hyperactivation, 80.1% of the participating women reported having these symptoms ($M=5.60$; $SD=6.12$) (Table 6).

As there are relationships between symptoms of childbirth intrusion (Factor 1), trauma symptoms, assessed by IES-6, and depression symptoms, assessed by PHQ-9, we can verify that there is a moderate correlation between of childbirth intrusion symptoms and trauma symptoms, in general, ($r=.56$; $p<.01$) and depression symptoms ($r=.56$; $p<.01$).

Concerning symptoms of avoidance of childbirth (Factor 2) and the relationship between them, trauma symptoms and depression symptoms, we can conclude that there is a weak correlation between avoidance symptoms and trauma symptoms ($r=.32$; $p<.00$) and this same relationship is verified between avoidance symptoms and depression symptoms ($r=.34$; $p<.01$). We can also verify that there is a moderate correlation between these two factors ($r=.59$; $p<.00$) (Table 7).

Discussion

The City - Birth Trauma Scale is an instrument that allows evaluating the existence posttraumatic stress post-birth symptoms and thus reaching the diagnosis of a PTSD post-birth.

Comparing the results with the original English version, we found a slightly higher Cronbach's alpha in our .97 sample. Cronbach's alpha value allows us to evaluate the reliability of the instrument and the more the Cronbach's alpha coefficient value approaches one, the more consistent it is and, consequently, the more reliable the instrument is (Maroco & Garcia-Marques, 2006). The value of Cronbach's alpha obtained for our sample was .97, thus an indication that the instrument demonstrates good reliability (Murphy & Davidsholder, 1988).

All results obtained through exploratory factor analysis point to a good validity, making this instrument function as a good measure for the evaluation of posttraumatic stress post-birth. Through this, it was possible to verify that it is a multifactorial instrument consisting of two central factors of the scale, the intrusion symptoms (factor 1) and the avoidance symptoms (factor 2), causing some items to have different underlying constructs (Brown, 2006). The *network analysis* reveals that the most central symptoms of the City –

Birth Trauma Scale (ETN) are recurrent from avoidance, guilt, and negative emotions, with a configuration of connection between all symptoms.

About external validity, there are positive correlations between posttraumatic stress post-birth symptoms (ETN) with depression symptoms, PHQ-9, and posttraumatic stress symptoms (IES-6) using the different instruments.

In turn, analyzing the area of the ROC curve, this allows us to collect information about the discriminatory capacity that a diagnostic test has. Araújo (2015) state that the area below the ROC curve corresponds to the probability of correctly identifying two stimuli, that is, having or not having a certain characteristic measured by the instrument in question. Since this is a part of the unit square in the ROC space, the values vary between 0.5 and 1, and the closer to one the value, the greater the discriminatory capacity of the instrument (Araújo, 2015). Therefore, and analyzing the results obtained, our instrument presents a good discriminatory capacity.

Regarding clinical information, we can see that the symptoms with greater expression were the symptoms of intrusion through images, dreams and thoughts regarding the moment of delivery, avoidance of childbirth and everything involving hospitals and hyperactivation that is expressed in excess care for the baby. For most women, these symptoms started six months after birth, lasting for three months or more causing great psychological suffering. All these symptoms are reported in DSM-V for posttraumatic stress disorders (Furuta et al., 2018). In this sense, and considering all the results obtained, the City - Birth Trauma Scale is an important instrument that can continue with large-scale implementation in Portuguese language. This instrument will contribute to the diagnosis of this psychopathology more quickly by increasing the effectiveness of the intervention, if necessary.

Conclusion

The main objective of this study was the translation and validation for the Portuguese population of “*The City Birth Trauma Scales*”, City - Birth Trauma Scale. This instrument allows evaluating the existence the posttraumatic stress post-birth symptoms and, thus, reaching the diagnosis of this disorder.

The number of posttraumatic stress disorders has been increasing worldwide, notably in Portugal. Therefore, health services and psychological support increasingly need tools and instruments that help them to make a diagnosis quickly and effectively, as well as develop an efficient care for trauma. However, there is a panoply of types of posttraumatic stress, namely posttraumatic stress post-birth, making it difficult to diagnose as well as identifying the traumatic event that underlies this disorder. Most instruments developed for diagnosis allow us to diagnose PTSD in a generalized way and in Portugal there was no specific instrument that would allow us to do it for the post-birth. Thus, from the translation and validation of this instrument for the Portuguese population it will be possible to perform the diagnosis of posttraumatic stress post-birth more effectively and faster, which will help in the treatment of this same pathology and, of course, reduce the consequences that this type of disorder entails.

The main limitations of this investigation are the reduced sample size, due to the high rate of withdrawal of participants and having been collected through an online platform. In the future, the same scale will be published, but in a male version that also allows the evaluation PTSD post-birth symptoms for this gender. This new scale will be very important, since the partner is often neglected about issues related to pregnancy and childbirth in general as well as the psychopathologies that come from them.

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Tables and Figures

Table 1*Sociodemographic and Clinical Characteristics*

	Sample			
	N	%	<i>M</i>	<i>SD</i>
Sociodemographic Data				
Age	-	-	36.79	5.69
Civil Status				
Single	3	2.1	-	-
Married	100	71.4	-	-
De facto union	33	23.6	-	-
Divorced	4	2.9	-	-
Education				
4th grade	-	-	-	-
6th grade	5	3.6	-	-
9th grade	24	17.1	-	-
12th grade	66	47.1	-	-
Higher Education	45	32.1	-	-
Professional situation				
Employed	90	74	-	-
Unemployed	50	26	-	-
Number of children				
No children	2	1.4	-	-
1 child	51	36.4	-	-
2 or more children	87	62.1	-	-
Clinical data				
Type of childbirth				
1. caesarean section	54	38.6	-	-
2. vaginal without fórceps	31	22.1	-	-
3. vaginal with forcps	23	16.4	-	-
4. no vaginal cut	19	13.6	-	-
5. with vaginal cut	31	22.1	-	-
6. no epidural	13	9.3	-	-
7. with epidural	53	40.0	-	-
Complications in childbirth				
1. long duration	48	34.3	-	-
2. severe bleeding	8	5.7	-	-
3. severe lacerations	7	5.0	-	-
4. complications in the baby	27	19.3	-	-

Table 2*Cronbach's alpha for total scale and subscales*

	Cronbach's alfa
City-Birth Trauma Scale	.97
ETN – Avoidance	.90
ETN – Intrusions	.89
ETN - Cognitions and negative humor	.91
ETN – Hyperactivation	.91

Table 3*Sample suitability test*

Test	Observed values
KMO	.92
BTS	2877.62
df.	231
sig.	.00

Table 4*Rotated Component Matrix for the factors the ETN*

	Component		
	1	2	Uniqueness
Unwanted memories you have resorted to about birth.	.51		.55
Bad dreams or nightmares about birth.	.79		.36
Flashbacks of birth and/or feeling of being reliving the experience.	.36		.58
She gets upset when she remembers the birth.	1.08		.18
Feeling tense or anxious when you remember the birth.	.84		.22
Try to avoid thoughts about birth.	1.04		.12
Try to avoid things that resemble birth.	.85		.28
Not being able to remember the details of the birth.	.63		.41
Blame yourself or others for what happened during birth.	.79		.42
Feel strong negative emotions about birth.	.77		.34
Feeling bad about yourself or thinking something terrible is going to happen.		.65	.33
Lose interest in activities that were important to you.		.71	.32
Feeling disconnected from other people.		.99	.35
Not being able to feel positive emotions.		.77	.31
Feeling irritable or aggressive.		.92	.26
Feeling self-destructive or acting recklessly.		.82	.39
Feeling tense or on edge.		.74	.20
Feeling apprehensive or easily frightened.		.45	.32
Concentration problems.		.70	.34

Not sleeping well because of things that have nothing to do with the baby's sleep pattern.	.44	.37
Feeling disconnected/distant or as if you were in a dream.	.76	.48
Feel that things are distorted or not real.	.61	.62

Table 5

Pearson correlation between ETN, IES and PHQ-9

	IES-6	ETNS	PHQ-9
IES-6	.	.	.
ETNS	.83**	.	.
PHQ-9	.73**	.88**	.

** Correlation is significant at .01 level

Table 6*Subscale Descriptions the ETN*

	Frequency	Percentage	<i>M</i>	<i>DS</i>
Intrusions	113	80.1	<i>M</i> =2.37	<i>DS</i> =3.49
Avoidance	113	80.1	<i>M</i> =1.30	<i>DS</i> =2.07
Cognitions and negative humor	112	79.4	<i>M</i> =3.71	<i>DS</i> =4.83
Hyperactivation	113	80.1	<i>M</i> =5.60	<i>DS</i> =6.12

Table 7

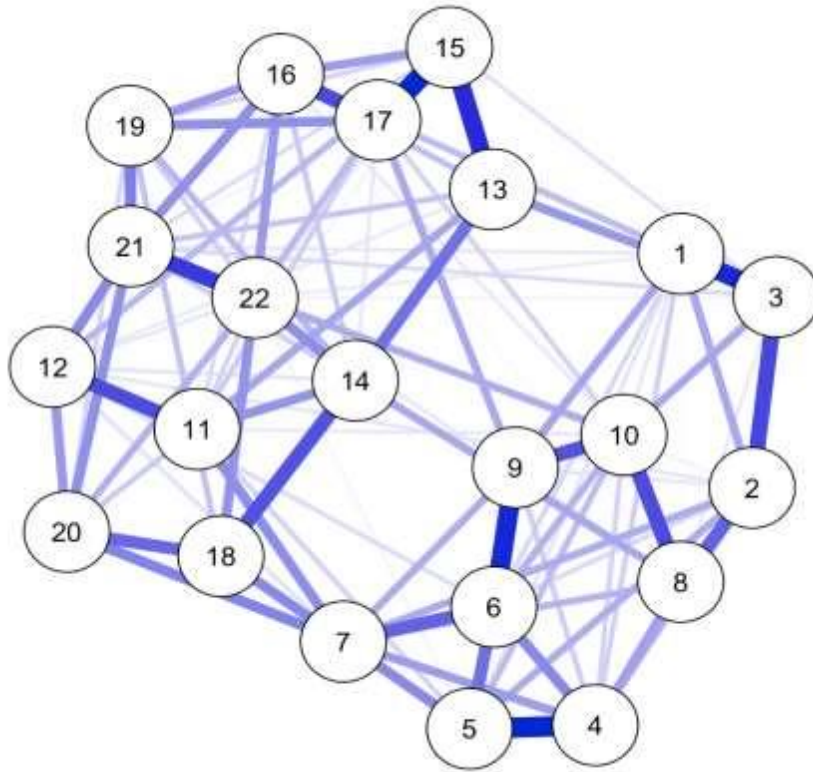
Correlation between intrusion and avoidance symptoms and IES-6 and PHQ-9

	IES-6	PHQ-9	Fator 1	Fator 2
Intrusion Symptoms (Factor 1)	.56**	.56**	1	.59**
Avoidance Symptoms (Factor 2)	.32**	.34**	.59**	1

** Correlation is significant at .01 level

Figure 1

Network Analysis for ETN



Legenda:

- 1: item 1
- 2: item 2
- 3: item 3
- 4: item 4
- 5: item 5
- 6: item 6
- 7: item 7
- 8: item 8
- 9: item 9
- 10: item 10
- 11: item 11
- 12: item 12
- 13: item 13
- 14: item 14
- 15: item 15
- 16: item 16
- 17: item 17
- 18: item 18
- 19: item 19
- 20: item 20
- 21: item 21
- 22: item 22

*Chapter II: Construction and validation of the Shared Meaning Making Scale
(SMMS)*

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Abstract

Objective and Methods: the aim of this study is construction and validation of a scale that evaluates the concept of shared meaning making. The design is transversal, with 234 women who lived at least a traumatic obstetric experience. The instruments used were: the Shared Meaning Making Scale; the Perinatal Grief Scale; the City- Birth Trauma Scale; the Relationship Assessment Scale; the Inventory of Complicated Grief; the Impact of Event Scale-6; the Patient Health Questionnaire-9.

Results: It was possible to obtain a unifactorial scale with a high reliability ($\alpha=.93$). Regarding external validity, there was a significant positive correlation with the Relational Assessment Scale. Through network analysis, it was verified that the items with greater centrality were the items 4, 9 and 11.

Conclusion: Shared Meaning Making Scale seemed to be demonstrated as a scale with good psychometric characteristics to evaluate the process of shared meaning making for an event. This scale can prove useful in clinical practice, especially in interventions directed to couple's therapy.

Keywords: meaning; remarkable events; perinatal loss; traumatic birth; shared meaning making

Introduction

Meaning is essential to a purposeful and goal-oriented life (Reker & Wong, 1988). However, this process can be interrupted by a negative and stressful event (Lazarus & Folkman, 1984), which can lead to the need to try to find the reason for the event in order to regain the sense of control and to reaffirm or readjust the meaning of life (Skaggs & Barron, 2006). In fact, finding meaning for negative life events is important to maintain mental health (Park, 2007), and individuals who are unable to do so may experience emotional distress and problems with adaptation (Skaggs & Barron, 2006). The attribution of meaning is a process that consists of a description and attribution of causality for an event of our life integrating it into a system of global meaning (O'Connor, 2003).

The creation of meaning can contribute to a new understanding of the world and a new vision of the event that becomes more congruent with the global meaning. Thus, this construction can contribute to a better psychological adjustment after traumatic events if this construction is positive. On the other hand, when this construction of meaning is negative, the psychological adjustment and management of the event can also be negative (Currier et al., 2009; Neimeyer, 2001; Neimeyer et al., 2006).

However, in the experience of the same event, two people can construct an equal or different meaning to each other. When the assigned meanings are quite different and are based on different aspects, if there is no mutual understanding, it may lead to existence of conflicts and greater distancing from conceptions. However, the opposite can happen to, that is, in the presence of close relationships, such as in couples' relationships, it is possible to have a mutual influence in the construction of meaning (Samios & Baran, 2018). This event can occur through the process designed dyadic coping (Bodenmann, 2005). In this process, the elements of the couple are involved in a construction of meaning for the event among

themselves, trying to reduce the discrepancy between the meanings attributed individually, in order to maintain a positive relationship with each other and reduce the individual suffering of each member (Samios & Khatri, 2019). Although this process is very present in couple relationships (Samios & Baran, 2018) it is possible to create a shared meaning with other people, usually with someone with whom a close relationship is maintained, such as the family.

The shared meaning making essentially involves the acceptance and understanding of the different values, beliefs and emotions on which the attribution of meaning is based. Thus, for this process the two people do not need to have the same opinion or agree with each other's opinion, but rather sharing their perspective and what is meaningful to themselves, always with mutual respect, in order to build a future joint meaning. Therefore, an empathic attitude is necessary (Broome, 1991). This shared meaning can be an aid to dealing with negative events. According to Patterson (2005) families dealing with stressful events, such as trauma or loss tend to build a common understanding of the causes, effects and implications of the event, and these attributions of meanings are important in adapting to the event. In fact, in addition to a better adaptation to the event, this sharing can also contribute to strengthening the relationship between the individuals involved (Samios & Baran, 2018).

In this sense, the inclusion of the concept of shared meaning making in psychological interventions directed to individuals who lived an adverse situation may prove relevant. In a study conducted by Rocha et al., (2018), with a population that had undergone a medical interruption of pregnancy, it was found that after performing a Narrative Cognitive Intervention focused on the construction of meanings for the event, individuals demonstrated improvements in the level of the psychopathology developed.

Thus, there is a need for scales that allow the evaluation of the process of shared meaning making. Thus, our study aims to constructing and validate the Shared Meaning Making Scale (SMMS) for the Portuguese population.

Methods

Participants

The sample is subdivided into two subgroups, both consisting of women who experienced at least one obstetric complication (traumatic childbirth and/or pregnancy loss).

Sample 1, consisted by 93 women, aged between 18 years and 63 years ($M=30.98$; $SD=8.37$). Of the sample, 37.6 % are married, 34.4% are single, 23.7% cohabiting and 4.3% are divorced. Most of the women are childless (58.1%) and have higher education (55.9%).

Sample 2, consisted by 121 women, aged between 22 years and 42 years ($M=35.43$; $SD=4.20$). In the sample, 69.4% are married, 26.7% cohabiting, 2.5% are single and 1.7% are divorced. Most of the women have two children (57.7%). Regarding to the level of education, 35.5% have higher education, 43.8% have 12th grade, 18.2% have 9th grade and 2.5% have 6th grade.

The total of the sample is constituted by 214 Portuguese women, with ages between 18 years and 63 years ($M=34.44$; $SD=7.49$). Regarding the support perceived after the occurrence of adverse event, 75.6% of the participants reported feeling supported by someone significant and the main sources of support for the husband/partner and family (Table 1).

Instruments

The Relationship Assessment Scale (RAS) (Hendrick et al., 1998) aims to assess the level of satisfaction with the loving relationship that the individual maintains with the partner. It consists of 7 items and has a Likert response format ranging from 1 to 5 (1 = “low” and 5 = “high”). The highest scores indicate a higher relational satisfaction, namely scores equal to or higher than four. The Portuguese version translated by Santos et al. (2000) and reviewed by Lind (2008) presents a good internal reliability, namely a Cronbach's alpha of .93.

Shared Meaning Making Scale (SMMS) aims to evaluate the shared meaning making for a remarkable event that an individual makes together with someone significant. This scale was developed by Rocha et al. (2020). The SMMS is a self-report instrument consisting of 11 items with each item being answered according to a Likert scale that varies between 0 and 3 (0= "never"; 1= "rarely"; 2= "often"; 3= "very often"). The total score ranges from 0 to 33 in which higher values are associated with a greater sharing of meaning for a remarkable event.

Impact of Events Scale-Revised-6 (IES-6) (Thoresen et al., 2010) are screening instrument that the evaluate the symptoms and difficulties related to posttraumatic stress in both clinical and non-clinical populations (Thoresen et al, 2010). It consists of 6 items and has a Likert response format ranging from 1 to 5 (1= "never"; 2= "a little"; 3= "moderately"; 4= "many times"; 5= "extremely"). The cut-off for the Portuguese population is 12.5, having a Cronbach's alpha of .84 for the total scale (Lopes & Rocha, 2013).

Patient Health Questionnaire-9 (PHQ-9) (Kroenke et al., 2001) aims to evaluate the symptoms of depression and their severity (Torres et al., 2013). It consists of a subset of 9 items, with a 4-point Likert type answer (0 = “never”; 1 = “several days”; 2 = “more than

half the number of days”; 3 = “almost every day”). The Portuguese version of this instrument showed good psychometric characteristics, namely a .86 Cronbach's alpha (Torres et al., 2013).

City – Trauma Birth Scale (CTBS) (Ayers et al., 2018) aims to assess the existence of Posttraumatic Stress Disorder after birth. It is a scale of self-report and is divided into three subscales: the subscale of intrusions, the subscale of cognitions and negative mood, the subscale of hyperactivation and denial. The Portuguese version presents a good reliability, namely a Cronbach's alpha of .97 for the total scale (Gonçalves & Rocha, 2020).

Perinatal Grief Scale (PGS) (Toedter & Lasker, 198) aims to evaluate the symptomatology of current perinatal grief (Toedter et al., 1988). The scale is divided into three subscales: Active Grief, Despair and Coping Difficulties. Composed by 33 items, it presents a 5-point Likert response format (1= “strongly agree”; 2= “agree”; 3= “neither agree nor disagree”; 4= “disagree”; 5= “strongly disagree”) (Potvin et al., 1989). The score can range from 22 to 165 points, where a score higher than 91 may reflect a clinically more significant level of suffering (Toedter et al., 2001). In the Portuguese version, the scale has a Cronbach’s alpha of .96 for the total scale (Rocha, 2004).

Procedure

This study was approved by the Ethics Committee of the Tâmega e Sousa Hospital Center, CHTS, after being the subject of analysis by the same. However, due the Covid-19 pandemic, presential data collection was suspended. Thus, data collection was exclusively *online*, by LimeSurvey program.

The inclusion criteria in this study were: to be women; having experienced at least one traumatic childbirth and / or perinatal loss; having at least 18 years. For all the participants informed consent was applied, which contained information about the nature and objectives

of the study, as well as certification of volunteer status and the confidentiality of the personal data.

Statistical analysis

Reliability analysis

To perform the analysis of the instrument's reliability, the Cronbach's alpha was calculated. We also calculated the correlation between each of the eleven items of the SMMS.

Convergent external validity

To determine the analysis of the external validity of the SMMS, *Pearson* correlations were performed between the SMMS and the following instruments: Relational Assessment Scale, Scale of Impacts of Events-6, Questionnaire on Patient Health -9, City-Birth Trauma Scale and Perinatal Grief Scale.

Factorial Analysis

In order to determine which factors, explain the covariance between the components of the instrument, exploratory factor analysis was used.

Network Analysis

Network Analysis was performed to verify the existence of connectivity between the items of the instrument (SMMS) and to verify the centrality of the respective items

Results

General Characteristics of the scale

The SMMS is an instrument composed by 11 items, which evaluate the process of shared meaning making. As we perform the analysis of the general characteristics of the scale, we found that the average result 19.25 ($SD = 7.45$).

Reliability analysis

The reliability of the Shared Meaning Making Scale was accomplished through Cronbach's alpha. Cronbach's alpha calculated for the scale was .93, demonstrating a very good reliability index (Pestana & Gageiro, 2008).

Correlations between items of SMMS

Through the correlations between the items, it was found that most of the items had moderate positive correlations with each other. However, it was possible to verify the existence of weak positive correlations between items 5 and 6 ($r=.29$; $p=.000$), between items 10 and 5 ($r=.30$; $p=.000$) and high positive correlations between items 4 and 3 ($r=.76$; $p=.000$), between items 8 and 3 ($r=.78$; $p=.000$), between items 8 and 4 ($r=.73$; $p=.000$) and between items 8 and 7 ($r=.73$; $p=.000$) (Table 2).

Convergent external validity

The evidence of external validity is observed through the existence of positive and negative correlations between the SMMS and other instruments. Thus, it was verified that SMMS presents high significant positive correlations with RAS ($r=.72$; $p=.000$).

On the other hand, there are moderate significant negative correlations with IES-6 ($r=-.59$; $p=.000$), with PHQ-9 ($r=-.63$; $p=.000$), with ETN ($r=-.64$; $p=.000$) and PGS ($r=-.63$; $p=.000$) (Table 3).

Factorial Analysis

After taking into concern the correlation existent between the items, proceeded to the *Kaiser-Meyer-Olkin* test, which shows the value of .94 and the *Barlett* test ($p < .001$), that demonstrate the suitability of the sample for factor analysis. The obtained results in factor analysis show that the factor loadings of each item present values higher than .40 for a single component, that is, for a single factor. Thus, it is verified that the constituent items of the scale are presented in a unifactorial structure (Table 4).

Network Analysis

Network analysis allows the analyse the set of connections between a set of elements (nodes), in which the central elements, as a rule, are more influential than the others (Borsboom & Cramer, 2013).

It appears that the 11 items establish 40 connections of the 55 possible connections. The three items that demonstrate greater centrality are item 4 (“Including the partner's point of view enriches my perspective”), item 9 (“I don't feel alone when sharing what happened”) and item 11 (“When sharing what happened, new perspectives emerge”) (Figure 1).

Discussion

Our study had the main goal to perform the construction and validation of the Shared Meaning Making Scale, which aims to evaluate the process of the construction of shared meanings for an adverse event.

The results indicate that the instrument has very high reliability index, namely, a Cronbach's alpha of .93 (Murphy & Davissholder, 1988). In addition, it was found that most

of the correlations between the items of the scale were positive moderate correlations, which is a good indicator of internal consistency (Carvalho et al., 2011). Thus, it appears that the scale shows good internal consistency.

Regarding to the factor analysis, the results shows that the instrument is unifactorial, which indicate that the items of the scale have the same underlying construct (Brown, 2006).

In relation of external validity, it verifies that SMMS have positive correlations with The Relationship Assessment Scale and negative correlations with Inventory of Complicated Grief, Perinatal Grief Scale, Impact of Event Scale-6, Patient Health Questionnaire-9 and City- Birth Trauma Scale.

The Network analysis, reveal that the most central items of the SMMS are related with mutual sharing and the including the other's perspectives, and these items seem to have a greater possibility of influence from the other items (Borsboom & Cramer, 2013).

Conclusion

This study has the main goal to construction and validate, to the Portuguese population, of the Shared Meaning Making Scale.

Shared Meaning Making is a behaviour between two or more individuals that which consists of sharing the values, beliefs and opinions on which individuals based to assign meaning to an adverse event, always on the basis of respect, understanding and acceptance of the other. This concept can present itself as an essential factor to be addressed in psychotherapeutic interventions focused on couples who have experienced an adverse event.

The value of Cronbach's alpha of SMMS, indicating good reliability, the existence of moderate correlations between the items of the scale, the unifactorial structure of the scale present itself as strengths of the instrument. Because it presents a brief scale, and by the good

psychometric characteristics presented, it possibly presents itself as a good scale for application in clinical practice.

The main limitations of this study are: the small sample size; the fact that it contains only female individuals belonging exclusively to a clinical population and the fact that data collection was performed *online*. All this can limit the generalization of results.

For a future investigation it is necessary more male participants, in order to compare both genders, but it is also necessary a comparative study with non-clinic populations, in order to include a greater variability of population.

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Tables and Figures

Table 1*Clinical and Sociodemographic Characteristics*

	<i>Sample 1</i>				<i>Sample 2</i>			
	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Sociodemographic data								
Age	-	-	30.98	8.37	-	-	35.43	4.20
Marital Status	-	-	-	-	-	-	-	-
Single	32	34.4	-	-	46	17.8	-	-
Married	35	37.6	-	-	175	67.8	-	-
Cohabiting	22	23.7	-	-	30	11.6	-	-
Divorce	4	4.3	-	-	7	2.7	-	-
Level of Education	-	-	-	-	-	-	-	-
4 th grade	2	2.2	-	-	-	-	-	-
6 th grade	-	-	-	-	3	2.5	-	-
9 th grade	11	12.9	-	-	22	18.2	-	-
12 th grade	28	30.1	-	-	53	43.8	-	-
Higher Education	52	55.9	-	-	43	35.5	-	-
Professional Situation	-	-	-	-	-	-	-	-
Employed	69	74	-	-	254	98.4	-	-
Unemployed	24	26	-	-	4	1.6	-	-
Number of children	-	-	-	-	-	-	-	-
Childless	54	58.1	-	-	2	1.7	-	-
1 child	23	24.7	-	-	45	37.2	-	-
2 or more children	16	17.2	-	-	74	61.2	-	-
Clinical Data								
Type of perinatal losses	34	47.1	-	-	34	13.2	-	-
Miscarriage	26	28	-	-	26	10.1	-	-
TOP*	2	2.2	-	-	2	.8	-	-
VLP**	2	2.2	-	-	2	.8	-	-
Loss of late pregnancy	4	4.3	-	-	4	1.6	-	-
Number of pregnancy losses	34	47.1	-	-	-	-	-	-
1 pregnancy loss	13	14	-	-	-	-	-	-
2 pregnancy losses	15	16.1	-	-	-	-	-	-
3 or more pregnancy losses	6	17.6	-	-	-	-	-	-
Complications in childbirth	-	-	-	-	-	-	-	-
Long term	-	-	-	-	43	35.5	-	-
Severe bleeding	-	-	-	-	6	5.0	-	-
Severe lacerations	-	-	-	-	25	20.7	-	-

* *termination of pregnancy*; ** *voluntary loss of pregnancy*

Table 2*Pearson's correlation between SMMS's items*

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Q1	-	-	-	-	-	-	-	-	-	-	-
Q2	.42***	-	-	-	-	-	-	-	-	-	-
Q3	.60***	.54***	-	-	-	-	-	-	-	-	-
Q4	.52***	.49***	.76***	-	-	-	-	-	-	-	-
Q5	.52***	.40***	.49***	.44***	-	-	-	-	-	-	-
Q6	.45***	.41***	.56***	.54***	.29***	-	-	-	-	-	-
Q7	.46***	.45***	.63***	.63***	.39***	.60***	-	-	-	-	-
Q8	.62***	.53***	.78***	.73***	.44***	.64***	.73***	-	-	-	-
Q9	.58***	.52***	.68***	.69***	.43***	.53***	.57***	.72***	-	-	-
Q10	.31***	.53***	.48***	.49***	.30***	.40***	.42***	.55***	.51***	-	-
Q11	.49***	.57***	.61***	.64***	.46***	.50***	.56***	.66***	.64***	.58***	-

 $p < .001$

Table 3

Pearson's correlations between SMMS, RAS, IES-6, PHQ-9, ETN and PGS

	SMMS	RAS	IES-6	PHQ-9	ETNS	PGS
SMSS	-	-	-	-	-	-
RAS	.72***	-	-	-	-	-
IES-6	-.59***	-.41***	-	-	-	-
PHQ-9	-.63***	-.54***	.73***	-	-	-
ETN	-.64***	-.44***	.83***	.87***	-	-
PGS	-.63***	-.61***	.67***	.86***	.47***	-

*** $p < .001$

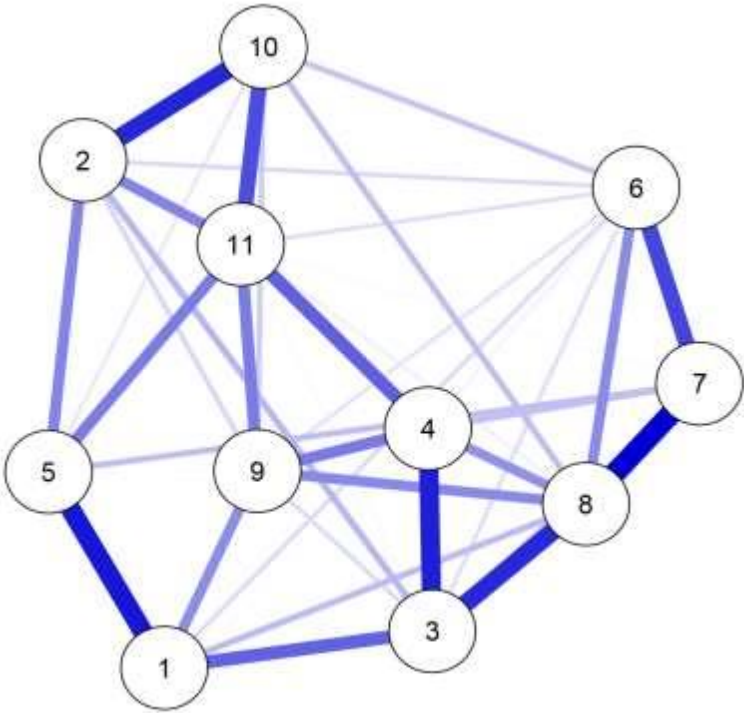
Table 4

Individual item statistics, alpha if item is deleted and factorial analysis (factor loadings and communalities) for Shared Meaning Making Scale

	<i>M(SD)</i>	Cronbach alpha if item is deleted	F 1	Communalities
I can share details that make me understand better what happened. (item 1)	1.74(.84)	.92	.67	.55
I like to know what the other thinks about what happened. (item 2)	1.95(.84)	.92	.65	.58
When I talk to a partner, I easily feel that I have become more clarified. (item 3)	1.76(.90)	.92	.85	.27
Including the partner's point of view enriches my perspective. (item 4)	1.94(.88)	.92	.82	.32
It is possible to be creative when I talk about what happened. (item 5)	1.20(.94)	.93	.55	.70
When I share the meaning for what happened, it has an impact with the other involved. (item 6)	1.64(.83)	.92	.67	.55
Although we think differently, we managed to value the other person's point. (item 7)	1.98(.81)	.92	.75	.44
When I talk to the partner about what happened I feel that everything makes more sense. (item 8)	1.88(.97)	.91	.90	.20
I don't feel alone when sharing what happened. (item 9)	2.01(1.01)	.92	.81	.35
I feel that the partner's perspective gets different when I share mine. (item 10)	1.54(.89)	.93	.61	.63
When we shar what happened, new perspectives emerge. (item 11)	1.61(.86)	.92	.78	.40

Figure 1

Network Analysis representation of SMMS



Legend

- 1: item 1
- 2: item 2
- 3: item 3
- 4: item 4
- 5: item 5
- 6: item 6
- 7: item 7
- 8: item 8
- 9: item 9
- 10: item 10
- 11: item 11

Chapter III - Evaluation of the influence of diadic, clinical and sociodemographic variables on the development of post-birth PTSD

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Abstract

Background: Childbirth is a special moment. However, labor does not always happen as expected. Some serious complications can happen, which can lead to the development of a posttraumatic stress disorder (PTSD). The transition to parenthood alone is associated with many changes that can compromise quality with the relationship, especially when a traumatic birth is experienced.

Objective: Verify the effect of shared meaning making on the quality of couple relationship in women with symptoms of PTSD post-birth and to define which sociodemographic, clinical and social variables have the greatest effect on the development of this psychopathology.

Method: This is a cross-sectional design correlated with mixed clinical sampling, composed of a sample of 140 female participants. The following were applied: The Relational Assessment Scale (EAS), Shared Meaning Making Scale (SMMS), City - Birth Trauma Scale, Impact of Events Scale-Revised-6 (IES-6), Patient Health Questionnaire-9 (PHQ-9). The collection was carried out exclusively through an online platform, *LimeSurvey*.

Results: There is a significant negative correlation between the symptomatology of traumatic stress and the quality of the couple relationship ($r=-.41$) and with the shared meaning making ($r=-.67$) and positive with the depression indicator ($r=.73$). The results show that the shared

construction of meanings has a greater predictor effect for the PTSD post-birth symptoms. It was also clear that sociodemographic factors, such as being single, divorced, clinical factors, such as medical problems with the woman and the baby, the type and moment of childbirth and social factors, such as the lack of support of a significant person, that is, the partners enhance the development of this psychopathology.

Conclusion: The shared meaning making and the quality of the couple relationship are factors that have an effect on the development and worsening of PTSD post-birth symptoms, however the shared construction of meaning is the factor with the greatest effect. Thus, these two factors should be work when intervening with women who have PTSD post-birth.

Keywords: quality of relationship, shared meaning making, complicated childbirth; post-traumatic stress post-birth; symptoms.

Introduction

Birth is a special moment and long awaited by the couple being therefore an event that is idealized by both elements and in which many expectations are deposited. However, this does not always occur as expected due to the event of unexpected situations. An emergency or instrumental childbirth, the occurrence of postpartum hemorrhages (Hofmeyr & Mohlala, 2001), severe lacerations during childbirth or the lack of perceived support during pregnancy and childbirth are some of the factors that can lead to this being perceived as traumatic.

According to Beck, a traumatic childbirth is such an event that "*(...) involves a physical, real, or imaginary injury, or death of the woman or newborn*" (Beck, 2004). This traumatic event can, in more complicated situations, lead to the development of a Posttraumatic Stress Disorder (PTSD) (Ayers, 2007). Once this type of disturbance has been developed, there are several negative consequences that this has, both for the woman herself and for the partner and for the relations established between these elements.

In terms of the effects for women, a traumatic childbirth has physical and psychological consequences. In emotional terms, these women report a mixture of emotions related to their experience of childbirth thus reporting high levels of anxiety, occurrence of panic attacks, depression, and suicidal thoughts (Ayers et al., 2006). According to Noblit and Hare (1988), these women still show feelings of deceit, anger, loss and have many memories about the experience of childbirth, and these extend for many years. All these feelings affect the performance of her role as a mother and the relationship with the baby. Beck (2004), report that they have less patience, it is difficult to sympathize with others, they feel isolated and this affects social relationships in general, but especially the relationship they have with their partner. In the couple's relationship they express the lack of interest

related to physical and sexual contact, often reporting sexual dysfunctions, feel neglected by their partners due to their lack of understanding and support and therefore difficult to maintain a healthy relationship (Nicholls & Ayers, 2007).

Regarding men, these report feelings of rejection by women, and this results from the lack of sexual contact that consequently leads to loss of intimacy. The partners also mention that there is a lack of understanding between them and mutual support, manifest feelings of irritability regarding the condition of the woman and a poorer communication between the elements of the couple. These consequences in turn affect the father baby bond (Reynolds, 1997).

Thus, a traumatic childbirth and consequently the development of symptoms of posttraumatic stress causes consequences for women and men as individual beings and as a couple. With the transition to parenthood there are many psychological, social, and biological changes for both elements of the couple and can compromise the quality of the relationship (Horsch & Ayers, 2016). All this has an even greater impact when the woman goes through a traumatic childbirth. In this sense, a traumatic childbirth has a negative impact on the couple's relationship (Delicate et al., 2017). Consequently there is a predominance of negative emotions in the couple, lack of understanding and support, loss of intimacy, pressure on the relationship, there is an increase in tension between the couple (Ayers et al., 2006), relationships become more demanding (Taghizadeh et al., 2013), barriers are created in relationships (Nicholls & Ayers, 2007) and there are feelings of frustration among partners (Van der Straten, 1998).

What can help these couples is to maintain positive ways of thinking about themselves and the event. Thus, the construction of meaning is essential after the experience of an event, whether positive or negative. This consists of a process of description and

attribution of causality for an event of our life integrating it into a system of global significance (O'Connor, 2003). For Frankl (1985), the creation of a meaning for the event aims to create a will to overcome the problem. It also states that the loss of this constructed meaning can lead to an increased risk of developing psychological and somatic diseases.

Regarding the development of meanings in the face of a complex event this process becomes quite complicated. Events in which the individual is exposed to high levels of stress and with great impact, the attribution of a subjective meaning to the situation tends to have a greater importance compared to more common situations and with less impact. According to Isaksen, this attribution of meaning seems to diminish the impact of the event as well as the associated stress levels. This decrease only occurs when the meaning attributed to the event is somehow positive (Isaksen, 2000).

As already mentioned, the attribution of meaning to an event is a subjective process. As already mentioned, assigning meaning to an event is a subjective process. However, when this meaning is shared with another person, it must demonstrate an empathic attitude, respect, understanding, and acceptance. Thus, in a marital situation it is normal for the couple to share the meaning it attributes to an event that can be experienced by both or only one of the elements – shared meaning making. Conjugality can be thought of as an opportunity for the subjective transformation of each of the couple's members, emerging possibilities for new subjective configurations (Palermo et al., 2016).

Thus, one of the main objectives of this investigation is to study the effect of Shared Meaning Making on the quality of couple relationship in women with PTSD post-birth symptoms. Another objective is to verify which sociodemographic, clinical, and social variables, such as support by the partner and/or those closest to them, have a greater impact on the development of posttraumatic stress post-birth symptoms.

Methods

Participants

The target population consists exclusively of female participants who have already had at least one childbirth experience. Thus, this study includes 140 women, all Portuguese and aged between 22 and 63 years ($M=36.79$; $SD=5.690$).

About marital status, the majority are married (70.9%), 23.4% of the participants are in de facto union, 2.1% are single and 3.5% are divorced/separated.

At the level of educational qualifications, 3.5% of the participants have the 6th year, 17.7% the 9th year, 46.8% of the participants completed the 12th year of schooling and 31.9% finished higher education.

Regarding the childbirth that took place within the normal range or is considered complicated, 58.9% of the participants said they had already had a complicated childbirth experience and 4.3% stated that they had already experienced two complicated childbirth.

Concerning the perceived support after the occurrence of adverse events, 53.2% of the participants reported feeling supported by someone significant, and the main sources of support presented themselves as husband/partner and family. Regarding the support perceived, specifically, by the partner after childbirth, 90.8% of the participants reported having received this support (Table 1).

Instruments

To collect demographic, social, clinical, and behavioral data from the participants, a sociodemographic and clinical questionnaire was developed.

Relationship Assessment Scale (RAS) (Hendrick et. al., 1998) aims to evaluate the level of satisfaction with the loving relationship that the individual maintains with his/her

partner. It consists of 7 items, with answers on a *likert* scale ranging from 1 = "very badly" to 5 = "very well". Higher scores indicate higher relational satisfaction, namely scores equal to or greater than four. The Portuguese version translated by Santos et al. (2000) and reviewed by Lind (2008) presents a good internal fidelity exposing a Cronbach's alpha of .93.

Shared Meaning Making Scale (SMMS) aims to evaluate the shared construction of meaning for a remarkable event that an individual. This instrument was developed by Rocha et. al., (2020). The SMMS is a self-completion instrument consisting of eleven items, each item being answered according to a *likert* scale ranging from 0 to 3 (0 = "never"; 1 = "rarely"; 2 = "frequent"; 3 = "very often"). The total score ranges from 0 to 33 in which higher values are associated with a greater sharing of meaning for a remarkable event.

City - Birth Trauma Scale (Ayers et al., 2018) has as main objective to evaluate the existence of PTSD post-birth. It is a self-completion scale and is divided into several subscales: the subscale of intrusions, the subscale of cognitions and negative humour, the subscale of hyperactivation and denial. The first subscale is likert ranging from 0 ("nothing") to 3 ("5 or more times"). The second subscale, cognitions, and negative humour, assesses the frequency and duration of symptoms, is a dichotomic scale that varies between "yes" and "no". In the subscale of anguish, disability, and possible physical causes, it is also a scale in which response options vary between "yes", "no" and "maybe". The Portuguese scale presents a good internal consistency thus presenting Cronbach's alpha of .97 for the total scale (Gonçalves & Rocha, 2020).

Impact of Events Scale-Revised-6 (IES-6) (Thoresen et al., 2010) aims to overcome symptoms and difficulties related to posttraumatic stress in both clinical and non-clinical populations (Thoresen et al, 2010). It consists of 6 items and has a likert response format

ranging from 1 to 5 (1 = "never"; 2 = "a little"; 3 = "moderately"; 4 = "many times"; 5 = "extremely"). The cutoff point calculated for the Portuguese population was 12.5, with a Cronbach's alpha of .84 for the total scale (Lopes & Rocha, 2013).

Patient Health Questionnaire-9 (PHQ-9) (Kroenke et al., 2001) aims to evaluate the symptoms of depression and their severity (Torres et al., 2013). It consists of a subset of 9 items, with a 4 responses *likert* response format (0 = "never"; 1 = "several days"; 2 = "in more than half the number of days"; 3 = "almost every day"). The score can range from 0 to 27, where a score between: 0 and 5 means absence of symptoms; 6 to 9 means brief symptomatology; from 10 to 14 means moderate symptomatology; from 15 to 19 means moderate to severe symptomatology; and more than 20 severe symptoms (Kroenke et al., 2001). The Portuguese validation of this instrument presented good psychometric characteristics presenting a Cronbach's alpha of 0.86 (Torres et al., 2013).

Procedure

This investigation obtained the approval of the Ethics Committees of the Centro Hospitalar Tâmega e Sousa. However, in view of the developed health landscape and the associated contingency rules, face-to-face collection has been suspended and is carried out online through a *LimeSurvey* platform.

Inclusion criteria were: (1) the participants are over 18 years old (2) have already undergone at least one experience of childbirth.

Initially, each participant was presented with an informed consent that contained all the information about the nature and objectives of the study, as well as certification of the status of volunteer and information on the total confidentiality of the data collected. That said, and after the acceptance of participation in the study, a Sociodemographic and Clinical

Questionnaire was applied. Then, the different instruments that are constituent sofa of the research protocol under appropriate conditions were applied.

Data Analysis

Relate to the statistical analysis of the data, this was performed with the help of the statistical computer software IBM SPSS (*Statistical Package for the Social Sciences*), version 26. Measures of central tendency, dispersion (means and standard deviations) and frequency distribution for the sociodemographic characterization of the sample were used.

To determine the associations between the quality of the couple's relationship, the shared construction of meaning and the symptoms of trauma at birth as well as, with the symptoms of depression, correlations were used through *Pearson's* Coefficient analysis. To study the influence that some sociodemographic, clinical and social variables have on the development of posttraumatic stress post-birth, the Independent Samples t Test as well as a linear regression by blocks to determine which of these variables contribute to the explanation of posttraumatic stress post-birth. The same procedure was applied to study the effect of shared meaning making on posttraumatic stress post-birth symptoms as well as on the quality of the couple relationship.

Results

Shared Meaning Making, Satisfaction with the relationship and ETN

Analyzing the correlations between the posttraumatic stress post-birth symptoms, the quality of the couple's relationship and the shared meaning making, it is possible to verify that there are significant correlations, whether positive or negative, between the various variables (Table 2).

The results show to the existence of a significant positive and moderate correlation between the shared meaning making and the quality of the couple relationship ($r=.65$; $p<.01$).

On the contrary, there is a moderate significant negative correlation between PTSD symptomatology and the quality of couple relationship ($r=-.45$; $p<.01$), with the shared meaning making ($r=-.68$; $p<.01$) and with depressive symptoms ($r=-.64$; $p<.01$). These results express that posttraumatic stress symptoms increase the quality of the marital relationship decreases. The same is confirmed in relation to the shared meaning making, that is, the greater the PTSD symptomatology related, the smaller the shared meaning making face of the event. Similarly, the more intense the depression symptoms, the lower the shared meaning making as well as the quality of the relationship ($r=-.54$; $p<.01$).

With regard to posttraumatic stress post-birth, the quality of a couple and the shared meaning making, we can conclude, in view of the results obtained, that there is a moderate negative relationship between PTSD post-birth symptomatology and the shared meaning making ($r=-.67$; $p<.01$). These results proved that the greater the shared meaning making face of the adverse event, in this case the childbirth, the lower the PTSD post-birth symptoms. It is confirmed that the same occurs in relation to the quality of the couple relationship ($r=-.45$; $p<.01$), the higher the frequency of symptoms associated with PTSD post-birth, the lower the quality of the relationship.

Linear Regression by Blocks

Regarding the predictive effect that shared meaning making and couple satisfaction have on the PTSD post-birth symptoms it has been shown that both of dyadic variables have some contribution for predict the PTSD post-birth symptoms. However, it was evidenced that the shared meaning making has a greater predictor effect on the PTSD post-birth symptoms ($B=-1.50$; $t=-9.39$; $p<.01$). Thus, the shared meaning making contributes 44% to

the development of PTSD post-birth symptoms when the woman goes through a complicated childbirth experience, with the results being statistically significant $F(2,107)=43.82$; $p<.01$; $R^2=.44$ (Table 3). On the contrary, the couple's satisfaction contributes 21% to the development of PTSD postpartum symptoms when the woman goes through a complicated experience of delivery, with statistically significant results $F(1,108)=29.30$; $p<.01$; $R^2=.21$.

Variables with impact on posttraumatic stress post-birth symptoms

As for the variables that have an impact on the perception of childbirth as a traumatic event, we can mention pregnancy being considered risky, the mother being diagnosed with medical problems during pregnancy and also the baby having medical problems at birth. All these variables also enhance the development trauma and depression symptoms.

Regarding the participants who had a pregnancy considered at risk, we found that 19% of them had trauma symptoms ($M=11.16$; $SD=7.97$), 20% demonstrated depression symptoms ($M=8.80$; $SD=5.37$) and that 18% of the participants with at-risk pregnancies had PTSD post-birth symptoms ($M=24.44$; $SD=14.96$). About the participants who were diagnosed with a medical problem during pregnancy, it was found that 24% of them had PTSD symptoms ($M=10.92$; $SD=8.60$), 24% showed depression symptoms ($M=9.17$; $SD=6.22$) and that 23% of the participants with medical problems during pregnancy had PTSD post-birth symptoms ($M=22.91$; $SD=18.41$). In terms of medical problems with the baby, 11% participants had PTSD symptoms ($M=14.09$; $SD=6.32$), 11% showed depression symptoms ($M=10.36$; $SD=4.39$) and 11% of the participants whose children had had some medical problem at birth had PTSD post-birth symptoms ($M=29.18$; $SD=12.73$) (Table 4).

When analyzing the clinical factors that enhance the development of PTSD post-birth, we found that the fact of having a risk pregnancy has an effect on the development of PTSD symptoms ($t=-3.64$; $p<.00$), likewise, will also have an effect on the development of

PSTD post-birth symptoms ($t=-3.71$; $p<.00$) (Table 5). Regarding the second factor, the mother having been diagnosed with some medical problem during pregnancy, we can verify that this factor has an effect on the development of posttraumatic stress symptoms, in general ($t=-3.32$; $p<.00$), on the depression symptoms ($t=-3.43$; $p<.00$) and on the development of posttraumatic stress post-birth symptoms ($t=-3.13$; $p<.00$) (Table 6). With regard to the third and final factor, the baby has had some medical problem at birth, we can prove that this factor has an effect on the development of posttraumatic stress symptoms, in general, ($t=-4.26$; $p<.00$), on the depression symptoms ($t=-2.85$; $p<.01$) and on the development of posttraumatic stress post-birth symptoms ($t=-3.95$; $p<.00$) (Table 7).

Linear Regression by Blocks

Regarding the sociodemographic variables that influence the development of PTSD post-birth symptoms, we can verify that the level of education and marital status ($B=.49$; $t=1.60$; $p<.00$) are variables that predict 32% in the onset of posttraumatic stress post-birth symptoms when the woman goes through a complicated childbirth experience, with statistically significant results being $F(7,102)=7.43$; $p<0.00$; $R^2=.34$. In general, single, and divorced women are at higher risk of developing posttraumatic stress post-birth symptoms, 30% and 31% respectively, compared to women who are married or living in de facto union.

About clinical variables, the fact that the mother and baby require medical care, problems in pregnancy and infertility these factors also influence the development PTSD post-birth symptoms ($B=.37$; $t=4.24$; $p<0.00$). These variables predict 42% on the development of posttraumatic stress post-birth symptoms when women go through a complicated childbirth experience, with statistically significant results being $F(6,102)=12.39$; $p<.00$; $R^2=.42$. Of these clinical variables, the ones that have the greatest impact on the development of PTSD post-birth symptoms are: the baby has been diagnosed

with medical problems during pregnancy, 35%, having problems at birth, 34%, followed by the mother having problems during pregnancy, 33%, and this being considered a risky pregnancy, 33% (Table 8).

The type of childbirth, in generally, is also a variable that has an effect on the development of posttraumatic stress post-birth symptoms ($B=1.46$; $t=.55$; $p<.00$) and is a variable that allows predicting in 29% the development of PTSD post-birth when the woman goes through a complicated childbirth experience, with statistically significant results $F(1,107)=22.08$; $p<.00$; $R^2=.29$. However, it is possible to mention that childbirth by vaginal childbirth without the use of anesthesia the major factor for the development of PTSD, 30%, followed by childbirth with vaginal cutting and with the use of forceps, 29%, c-sections, childbirth without forceps and without vaginal cutting predict 28% of the onset of PTSD post-birth symptoms. Only 27% of childbirth using anesthesia can become traumatic (Table 9).

About the variables related to the moment of childbirth itself (duration, emotional distress, having suffered some severe hemorrhage) it was demonstrated that these variables also have an effect on the development of PTSD post-birth symptoms ($B=.46$; $t=5.08$; $p<.00$). These variables contribute 32% to the development of posttraumatic stress post-birth symptoms when women go through one or more complicated childbirth experiences, with statistically significant results $F(1,107)=27.29$; $p<.00$; $R^2=.32$. From this type of variables, we can highlight the complications with the baby that contribute about 33% to the development of PTSD post-birth symptoms, followed by a long-lasting childbirth, 32%. In turn, the variables having a severe hemorrhage, suffering a severe laceration, and experiencing emotional distress during childbirth contribute equally, approximately 30%, to the development of PTSD post-birth symptoms (Table 10).

Relate to the variables related to postpartum follow-up by someone significant, mainly, the husband was shown that they have, like the previous ones, an effect on the development of posttraumatic stress post-birth symptoms ($B=2.59$; $t=1.31$; $p<.00$). The non-follow-up by someone significant, especially by the partner, is a factor that contributes 29% to the development of PTSD post-birth symptoms when the woman goes through a complicated childbirth experience, with statistically significant results $F(1,108)=43.97$; $p<.00$; $R^2=.29$ (Table 11).

Discussion

The main objective of this study was to verify the effect of shared meaning making of meaning on the quality of couple relationship in women with post-birth PSPT symptoms. Another objective was to verify which sociodemographic, clinical, and social variables have a greater impact on the development symptoms of posttraumatic stress post-birth.

Posttraumatic stress post-birth is enhanced by some clinical, sociodemographic, and related factors to the moment of childbirth. Thus, in relation to clinical factors, we can highlight with greater impact, medical problems with the baby at birth and medical problems developed in pregnancy by the mother. According to Hernández- Martínez et al., (2019) factors such as low birth weight, prematurity, a low Apgar score and the baby's hospitalization are the main factors that enhance the development of PSPT by the mother. Medical problems with the mother during pregnancy, such as hypertension and pre-eclampsia, are the factors that have the greatest impact. These results were also verified in our study.

We also found that factors related to childbirth such as the type of delivery affect the development of this psychopathology. Vaginal childbirths without the use of an epidural are

those that have the greatest impact on the development of PSPT, followed by childbirths with vaginal cuts, with the use of forceps, c-sections, without the use of forceps and without vaginal cuts. Thus, the most traumatic births are those in which there is no use of analgesia. This can be explained by the correct use of analgesia since, it works as a protective factor against the development of PTSD (Loewenberg-Weisband et al., 2014). Thus, births where there is no analgesia are more likely to be perceived as traumatic and lead, consequently, to the development of postpartum PTSD. Studies developed by Hernández-Martínez et al., (2019) have shown that instrumental and c-sections childbirth are highly predisposing factors for postpartum PTSD, however c-section is the factor with the greatest predisposition. This was corroborated in our study since; our results point to the fact that instrumental childbirths are stronger predictors for the development of postpartum PSPT after c-sections.

Evidence was also found that variables such as marital status have an impact on the development of postpartum PTSD. Verified that divorced and single women are more likely to develop PTSD after childbirths. A possible explanatory cause for these two factors is the absence of a partner and, thus, less social support, both for the emotional issues of the woman, as well as for the necessary support for issues related to the newborn. For Friedman (2014), good social support is the most important protective factor against the development of PTSD in general, and the same is true for the development of post-birth PTSD. This social support is even more relevant when is a significant person for the woman, namely, her partner.

In view of the results on the effect of the shared meaning making and quality of the couple relationship, it became evident that these are an important predictor of post-birth PTSD symptoms. However, the shared meaning making is the strongest predictor. We can also conclude that the symptoms of post-birth posttraumatic stress, depression, and the

quality of the couple relationship play an important role in the communication and intimate construction of shared meanings affecting each other.

Regarding the post-birth PTSD symptomatology, it was demonstrated that the greater the shared construction of meaning in the face of childbirth, the lower the symptoms. Authors such as Ayers et al., (2008) have already argued that the construction of meaning in relation to childbirth is essential for women to be able to adapt to birth. This is essential for the reduction or worsening of post-traumatic stress symptoms after birth. Social support and meaning construction are factors that have been pointed out by the existing literature as essential factors for there to be a decrease in the symptoms of post-birth PTSD. Thus, and in view of the results obtained, we verified that the shared construction of meaning decreases the symptoms of post-birth PTSD. This decrease can be explained by the fact that the woman feels more understood by her partner, has greater social support and thus they are able to adapt in a more positive way to all changes resulting from childbirth.

The relationship between post-birth PTSD symptomatology and quality with the couple relationship implies that the higher the frequency of symptoms associated with post-birth PTSD, the lower the relationship quality. According to Nicholls and Ayers (2007) the symptoms of post-birth PTSD have a negative effect on the couple and, consequently, on the quality of the relationship. This effect is directly related to issues such as decreased intimacy, negative emotions from each of the couple's members, sexual dysfunction and poor communication between the elements of the relationship, which in turn is also related to the shared construction of meaning.

In short, when we speak of these two factors, shared meaning making and quality of the couple relationship, both have a great influence on the development of this psychopathology. However, we found that the shared meaning making as the most relevant

predictor in the face of the onset of symptoms of post-birth PTSD. These results can be explained by the multiple influence that these two factors have on each other. The quality of the couple is directly influenced, among other issues, by the communication and the support perceived by the partner. Thus, when there is a shared meaning making of an event, it is formed based on good communication between individuals (Samios & Baran, 2017). These communicate, respect the opinion of the other and form a common meaning for the event, in this case for a childbirth, but always respecting the meaning of the other in relation to the event. As a result, the woman feels more understood and less isolated, causing the quality of the relationship to increase, since these factors are interconnected (Samios & Baran, 2017). The shared meaning making is, therefore, a strong predictor and a means of coping for the non-development and / or worsening of post-birth posttraumatic stress symptoms.

Conclusion

The main objective of this study was to verify the effect of shared meaning making on the quality of a couple's relationship in women with PTSD post-birth symptoms. A conjugal relationship is built daily through the joint sharing of all events, whether positive or negative, among the elements of the couple and this is very favorable for there to be a good quality in the relationship. This sharing leads to the construction of meaning for the event by the companions, individually and shared, which is an important factor of adaptation and overcoming the situation. This construction and sharing of meaning are especially important when we are facing an adverse event. Childbirth can be, for numerous reasons, an adverse and traumatic event for women and may even lead to the development of posttraumatic stress post-birth. Thus, when this happens the construction and sharing of meaning for this event, childbirth, it is essential for there to be a decrease in symptoms

associated with this pathology as well as for the improvement of the quality of the relationship since these are interrelated factors.

Another objective was related to the description of the variables that have the greatest impact on the development of this psychopathology. Therefore, being single, divorced, the mother and baby having medical problems, having a risky pregnancy, a long-term labor, a painful childbirth, and emotional distress are conditions that significantly enhance the development of PTSD post-birth.

The main limitations of this research were the small sample size, due to the high rate of withdrawal of the participants and the fact that the study was carried out exclusively through an online platform. In the future, it would also be interesting to increase the sample as well as include in the study a group of male individuals, in order to compare the view on the couple's relationship by different genders and better understand the influence of the variables under study.

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Tables

Table 1*Sociodemographic and Clinical Characteristics*

Sociodemographic Data	Sample			
	N	%	<i>M</i>	<i>SD</i>
Gender: feminine	140	100	-	-
Age	-	-	36.79	5.69
Civil State	-	-	-	-
Single	3	2.1	-	-
Married	100	71.4	-	-
De facto union	33	23.6	-	-
Divorced	4	2.9	-	-
Education	-	-	-	-
4th grade	-	-	-	-
6th grade	5	3.6	-	-
9th grade	24	17.1	-	-
12th grade	66	47.1	-	-
Higher Education	45	32.1	-	-
Professional situation	-	-	-	-
Employed	90	74	-	-
Unemployed	50	26	-	-
Number of children	-	-	-	-
No children	2	1.4	-	-
1 child	51	36.4	-	-
2 or more children	87	62.1	-	-
Clinical data				
Type of childbirth	-	-	-	-
1 traumatic childbirth	82	58.9	-	-
2 or more traumatic childbirths	6	4.3	-	-
Perceived support	-	-	-	-
1. someone meaningful	75	53.2	-	-
2. Mate	128	90.8	-	-

Table 2*Pearson's correlation between ETN, IES-6, PHQ-9, SMMS and EAS*

	IES-6	PHQ-9	ETN	SMMS	EAS
IES-6	1	.69**	.82**	-.68**	-.45**
PHQ-9	---	1	.88**	-.64**	-.54**
ETN	---	---	1	-.67**	-.45**
SMMS	---	---	---	1	.65**
EAS	---	---	---	---	1

** Correlation is significant at the 0.01 level

Table 3*Hierarchical Regression blocks by ETN, SMMS, and EAS*

Posttraumatic stress post-birth										
<i>Model</i>	<i>R</i> ²	<i>R</i> ² <i>adjusted</i>	<i>SD</i>	<i>R</i> ² <i>change</i>	<i>F</i> <i>change</i>	<i>df1</i>	<i>df2</i>	<i>Sig. F</i> <i>change</i>	<i>B</i>	<i>t</i>
Shared Meaning Making	.45	.44	11.54	.45	88.15	1	108	.00	-1.50	-9.38
Shared Meaning Making e EAS	.45	.44	11.59	.00	.166	2	107	.68	-1.44	-.41*

**p* < 0.001

Table 4

Description of the variables and effects of posttraumatic stress symptoms, depression, and posttraumatic stress post-birth.

It was considered a risky pregnancy.	N	<i>M</i>	<i>SD</i>
IES-6	19	11.16	7.97
PHQ-9	20	8.80	5.37
ETN	18	24.44	14.96
The mother had medical problems in the pregnancy.	N	<i>M</i>	<i>SD</i>
IES-6	24	10.91	8.86
PHQ-9	24	9.17	6.22
ETN	23	22.91	18.46
The baby had medical problems at birth.	N	<i>M</i>	<i>SD</i>
IES-6	11	14.09	6.32
PHQ-9	11	10.36	4.39
ETN	11	29.18	12.73

Table 5*Independent Sample Test for the risk pregnancy variable IES-6, PHQ-9 and ETN*

	Levene's Test for Equality of Variances					t-test for Equality of Means		95% confidence interval f the difference	
	<i>F</i>	<i>Sig</i>	<i>t</i>	<i>df</i>	<i>Sig</i> <i>2</i>	<i>Mean</i> <i>Difference</i>	<i>Std. Error</i> <i>Difference</i>	<i>Lower</i>	<i>Upper</i>
IES-6	4.32	.04	-3.64	113	.00	-6.16	1.69	-9.51	-2.80
PHQ-9	.06	.81	-2.71	115	.01	-3.93	1.45	-6.81	-1.05
ETNS	.27	.61	-3.71	108	.00	-13.99	3.78	-21.47	-6.50

Table 6

Independent Sample Test for the variable the mother was diagnosed with medical problems in pregnancy the IES-6, PHQ-9 and ETN.

	Levene's Test for Equality of Variances					t-test for Equality of Means		95% confidence interval f the difference	
	<i>F</i>	<i>Sig</i>	<i>t</i>	<i>df</i>	<i>Sig</i> <i>2</i>	<i>Mean</i> <i>Difference</i>	<i>Std. Error</i> <i>Difference</i>	<i>Lower</i>	<i>Upper</i>
IES-6	15.04	.00	-3.32	29.29	.00	-6.19	1.87	-10.01	-2.37
PHQ-9	1.60	.21	-3.43	115	.00	-4.56	1.33	-7.20	-1.93
ETNS	9.20	.00	-3.13	28.50	.00	-12.86	4.11	-21.27	-4.44

Table 7

Independent Sample Test for the variable diagnosed with medical problems at birth the IES-6, PHQ-9 and ETN.

	Levene's Test for Equality of Variances					t-test for Equality of Means		95% confidence interval f the difference	
	<i>F</i>	<i>Sig</i>	<i>t</i>	<i>df</i>	<i>Sig</i> <i>2</i>	<i>Mean</i> <i>Difference</i>	<i>Std. Error</i> <i>Difference</i>	<i>Lower</i>	<i>Upper</i>
IES-6	.09	.76	-4.26	113	.00	-8.93	2.10	-13.08	-4.77
PHQ-9	.77	.38	-2.85	115	.01	-5.33	1.87	-9.03	-1.62
ETNS	.28	.60	-3.95	108	.00	18.26	4.62	-27.42	-9.10

Table 8*Hierarchical regression by blocks the clinical variables and ETN*

<i>Model</i>	Posttraumatic stress post-birth									
	<i>R</i> ²	<i>R</i> ² <i>adjusted</i>	<i>SD</i>	<i>R</i> ² <i>change</i>	<i>F</i> <i>change</i>	<i>df1</i>	<i>df2</i>	<i>Sig. F</i> <i>change</i>	<i>B</i>	<i>t</i>
Medical care for the mother, baby, problems, and risk in pregnancy and complicated births.	.65	.42	12.10	.39	12.39	6	102	.00	.37	4.24*
Medical care for the mother and complicated births.	.58	.34	12.82	.32	33.77	1	107	.00	.48	5.81*
Medical care for the baby at birth and complicated births.	.59	.35	12.59	.40	36.98	1	107	.00	2.30	1.21*
The mother has problems in pregnancy.	.54	.29	13.12	.28	43.97	1	108	.00	16.94	6.63*
Risky pregnancy and complicated births.	.58	.33	12.79	.32	34.76	1	108	.00	2.19	1.13*

Significative p<.001

Table 9*Hierarchical regression by blocks and type of delivery and ETN*

<i>Model</i>	Posttraumatic stress post-birth									
	<i>R</i> ²	<i>R</i> ² <i>adjusted</i>	<i>SD</i>	<i>R</i> ² <i>change</i>	<i>F</i> <i>change</i>	<i>df1</i>	<i>df2</i>	<i>Sig. F</i> <i>change</i>	<i>B</i>	<i>t</i>
Types of childbirth and complicated births.	.54	.29	15.16	.28	22.08	1	107	.00	1.46	.55*
C-section and complicated childbirths.	.54	.28	13.11	.28	43.96	1	108	.00	2.59	1.31*
Vaginal without forceps and complicated childbirths.	.54	.28	13.15	.24	36.53	1	107	.00	1.46	.55
Vaginal with complicated forceps and childbirths.	.54	.29	14.11	.29	43.97	1	108	.00	2.59	1.31*
No vaginal cutting and complicated childbirths.	.54	.28	13.17	.28	37.69	1	107	.00	2.81	1.23
With vaginal cutting and complicated childbirths.	.54	.29	13.11	.29	43.97	1	108	.00	2.59	1.31*
No epidural use and complicated childbirth.	.54	.30	13.11	.30	43.97	1	108	.00	2.59	1.31*
With the use of epidural and complicated childbirths.	.55	.27	13.05	.27	40.62	1	107	.00	4.61	7.88*

*p<.001

Table 10*Hierarchical regression by blocks and time of childbirth and ETN*

Posttraumatic stress post-birth										
Model	<i>R</i> ²	<i>R</i> ² <i>adjusted</i>	<i>SD</i>	<i>R</i> ² <i>change</i>	<i>F</i> <i>change</i>	<i>df1</i>	<i>df2</i>	<i>Sig. F</i> <i>change</i>	<i>B</i>	<i>t</i>
Moments of childbirth and complicated childbirths.	.59	.32	12.87	.17	27.29	1	107	.00	2.43	1.25
Long childbirth and complicated births.	.54	.29	13.11	.28	43.97	1	108	.00	2.59	1.31
Severe bleeding and complicated childbirths.	.54	.29	13.11	.28	43.97	1	108	.00	2.60	1.98*
Severe laceration and complicated childbirths.	.54	.29	13.12	.28	43.97	1	108	.00	2.69	1.31*
Complications with the baby.	.57	.32	12.87	.17	27.29	1	107	.00	2.43	1.25*
Emotional distress and complicated births.	.54	.29	13.12	.29	43.97	1	108	.00	2.59	1.31*

**p*<.001

Table 11

Hierarchical regression by blocks, social support by partner and ETN.

Posttraumatic stress post-birth										
Model	<i>R</i> ²	<i>R</i> ² <i>adjusted</i>	<i>SD</i>	<i>R</i> ² <i>change</i>	<i>F</i> <i>change</i>	<i>df1</i>	<i>df2</i>	<i>Sig. F</i> <i>change</i>	<i>B</i>	<i>t</i>
Companion follow-up and complicated childbirths.	.54	.29	13.12	.29	43.97	1	108	.00	2.59	1.31*

**p*<.001

Scientific Presentations

1. Oral Presentation, XXII Jornada Mineira de psiquiatria e IX Congresso Latino-Americano de Prevenção do Suicídio

A construção partilhada de significado e a relação de casal após perda perinatal

Maria Ferreira, Fátima Gonçalves, Olimpia Carmo, José Rocha

Background: Após a perda perinatal os pais experienciam frequentemente um luto severo, podendo levar ao desenvolvimento de graves consequências a nível da saúde mental. O luto perinatal tem características únicas por ser repentino e inesperado, com escassez de memórias para recordar e um corpo para aceitar perda. Apesar de ambos os pais exibirem elevados níveis de sofrimento, por norma as mães vivenciam a perda de forma mais intensa. Por ser um evento que afeta o casal, o sofrimento entre os pais é compartilhado. Assim, as relações conjugais que tenham comunicação, partilha e apoio mútuo, frequentemente têm também uma maior capacidade de adaptação à perda.

Objetivo e Métodos: O objetivo é avaliar o efeito da construção partilhada de significados no casal, na qualidade da relação e no desenvolvimento de luto complicado e psicopatologia após perda perinatal em mulheres. O desenho é transversal, correlacional, com 93 mulheres que preencheram os instrumentos: Inventário do Luto Complicado; Escala de Luto Perinatal; Escala de Construção Partilhada de Significados; Escala de Avaliação Relacional; Questionário de Saúde do Doente-9 e Escala de Impacto de Eventos-6. A recolha de dados foi online.

Resultados: Há correlações positivas, significativas, entre as variáveis de perturbação, contudo, a construção partilhada de significados tem correlações negativas com o Luto Complicado ($r=-0,66$), com a Depressão ($r=-0,70$) e com o Stress Traumático ($r=-0,46$). Por outro lado, existe uma relação muito positiva entre a construção partilhada de significados e a qualidade da relação de casal ($r=0,82$).

Conclusão: O papel da construção partilhada de significados, como variável modificável, tem agora evidência para ser um aspeto central nas intervenções que visam a prevenção e redução dos sintomas de perturbação após perda perinatal. Nesse sentido, o desenvolvimento de programas focados nesta dimensão sai aqui reforçado. Contudo, carece de análise destes efeitos sobre os/as companheiros/as.

Palavras-Chave: construção partilhada de significados; relação conjugal; luto perinatal; luto